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SOCIO-ECONOMIC AND ECOLOGICAL ASPECTS OF THE DEVELOPMENT OF THE ECONOMY OF UKRAINE IN THE CONDITIONS OF EUROPEAN INTEGRATION

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**Kovalchuk S., Khaietska O., Feniak L., Tomashuk I., Baldynyuk V.,
Palamarenko Y., Sakhno A., Dotsiuk S., Tabenska O.**

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ABSTRACT

The agricultural sector was and remains a key component of social development. The current state of the agricultural sector of Ukraine shows the imbalance of its development, when priority is given to the economic component with secondary environmental and social determinants. Theoretical substantiation and practical development and implementation of determinants of sustainable development of agricultural enterprises of the national economy, which combines both internal contradictions and external challenges, become particularly relevant.

An important direction of the progressive reproduction of the agrarian sector of the national economy is the practical implementation of the concept of sustainable development adopted in Ukraine as a model in the context of state policy and the program of its pragmatic implementation at the level of individual economic entities. The dynamics of agrarian processes within the limits of certain constants - financial and economic, organizational, technical and technological, commercial, etc., as the most optimal at the relevant market stage, collectively reflects the principles of sustainable development in the sense of permanence, not static. Such measures will be possible under the condition of balancing the interests of society, the agricultural environment, a separate agricultural enterprise, man and the environment.

The monograph indicates that the process of improving the sectoral structure of agricultural enterprises involves the implementation of certain measures that precede the determination of the main directions and ways of developing and implementing a mechanism for ensuring the optimization of the production structure when using agricultural land.

It is impossible and impractical to determine the priority of one of the branches of agriculture. Since animal husbandry is based on plant products, the fodder base for which is hay, straw, green fodder, grain fodder and some other types of agricultural crops. In turn, animal husbandry waste, namely manure, is used in crop production as organic fertilizers, which ensure the improvement of soil quality indicators and the yield of agricultural crops. At the same time, it should also be noted the undeniably

important role of crop production in the social life of a person as a whole. This territory provides the population with food products and raw materials for the processing industry, including food, pharmaceutical, light, woodworking, etc.

In today's realities, the problem of ensuring the financial security of the enterprise is urgent. This problem is especially acute in the conditions of the current global economic and financial crisis. Today, in the conditions of an unstable political situation, economic crisis, martial law in the country and a drop in the solvent demand of the population, domestic enterprises suffer from significant financial problems.

The financial activity of the enterprise is associated with many risks, the degree of influence of which on the results of its activity increases significantly with the transition to a market economy. The risks accompanying this activity are allocated to a separate group of financial risks, which play a dominant role in the general "risk portfolio" of the enterprise.

The increase in the degree of influence of financial risks on the results of the company's financial activity is associated with rapid changes in the economic situation in the country and on the financial market, the expansion of the sphere of financial relations, the emergence of new financial technologies and tools. Risks arise in the field of corporate relations with banks and other financial institutions and are associated with the probability of loss of funds or their non-receipt.

It is emphasized that at the current stage of the development of the world economy, the integration of Ukraine into the European space, great attention is paid to the effective functioning of the enterprise, which in turn depends on the quality of products. Ignoring this factor, it is difficult to create optimal conditions for the development of any trade, sales and profitability of enterprises. Improving the quality system of enterprises' goods in modern conditions is a complex and urgent task that requires an immediate solution. The long-term course of sustainable development of the enterprise should be aimed at achieving not so much quantitative indicators as qualitative ones, therefore, the heads of enterprises should pay attention to the development of measures to increase competitiveness and reach the international level. The construction, implementation and certification of an integrated product quality

management system will provide them with a number of competitive advantages and confidence in the level of production and service that meets international standards and is able to win in competition on the domestic and foreign markets.

Scientific research was carried out within the framework of the research initiative topic "Organizational and economic aspects of the development of agroecosystems on the basis of ecologization of the economy" of the Vinnytsia National Agrarian University, state registration number: 0121U112882 for 2021-2024.

Greening of production is possible under the conditions of development of business relations of business entities and use of rural areas. In the conditions of a competitive economy, the main factor in the assessment of economic activity is efficiency, which allows determining the need for material, labor and financial resources. Taking into account the instability of the global economy, its impact on the economies of the world's leading countries, the need to plan and manage the development processes of enterprise activities by preserving and increasing the potential of rural areas is of particular importance. Greening is an important influencing factor that determines the characteristics of the distribution of both material, labor, and financial resources. Thus, there is a need to create and gradually develop the environment for the functioning of enterprises in rural areas, which will allow optimizing their activities based on the principles of achieving efficiency: choosing the most important types of activities in agriculture; to increase the volume of production; cost regulation, including labor costs.

The work uses general methods of modern rational and empirical systemology. The obtained results are substantiated by the fundamental principles of dialectics and systematic analysis of phenomena and processes.

The work is formed on the basis of the methodology of research on the impact of greening on the development of enterprises and rural areas, in particular, taking into account the organizational and economic mechanism of the disposal of agricultural waste as a component of energy security. The basis of the study is the hypothesis of the formation of the environment for the functioning of enterprises engaged in activities in agriculture, forestry and fisheries, taking into account the characteristics of rural

areas in the conditions of environmentalization, optimization of cause-and-effect relationships, adaptation and historical development.

The study of resource management of agricultural enterprises and rural areas in the conditions of greening will be conducted on the basis of functional and process approaches. The main methods are methods of quantitative comparison, system analysis, methods of statistical evaluation, methods of economic-mathematical modeling, methods of decision-making theory.

In the formation of separate theoretical propositions, in the process of fulfilling the assigned tasks, general scientific methods were used, such as: scientific abstraction, morphological analysis, generalization, decomposition and systematization, etc.

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1. Ecologization of agricultural production - the main vector of the green renewal of Ukraine

Globalization and integration processes of social development are accompanied by the aggravation of food security in the world, which refers it to the category of priority problems of humanity and necessitates deepening research on the study and practical use of opportunities for increasing food production in Ukraine and its export to foreign markets.

Despite the fact that the war continues, there is already a need to plan the recovery of the country. Obviously, different regions will have different needs for rebuilding. Note that agro-industrial production is important in terms of ensuring both food and environmental security of Ukraine. Today, a system based on large-scale and monocultural production, centralized logistics and processing becomes a target for an aggressor, which simultaneously disrupts the entire established system with corresponding systemic consequences for supply chains in Ukraine and the world[1].

The current state of development of the economy of Ukraine, an important component of which is the branch of agro-industrial development, is characterized by deepening and dynamism of integration processes.

Ukraine's entry into the world community, membership in the WTO, the operation of the free trade zone with the EU, and the recently acquired status of a candidate country for EU membership require in-depth attention to export-oriented industries, enterprises and productions, and the search for ways to ensure maximum adaptation of the agricultural sector to EU requirements. Cooperation in the international dimension opens up great opportunities for realizing the potential of the agricultural sector of the national economy and poses new challenges to it. Ukraine is under the influence of the processes of globalization of the economy and is an active participant in them, determining, as a main, the state's course for integration into the European Community and transatlantic structures [2, pp. 126-133]. In the world, Ukraine is positioned in the future as a powerful exporter of agricultural products and raw materials.

In the context of the topic and subject of research, we are primarily interested in the state of integration processes of agricultural production, the main function of which remains unchanged throughout the entire period of its existence. It can be formulated as ensuring the interaction of all elements of the world food system and all links of the food chain through the system of cross-border exchange to supply the population of the planet with nutrients necessary for life support [3].

Today, the economy of the regions develops mainly in the direction of self-development, and has a relatively separate reproductive system of management and management, and practically conducts its own export policy. Globalization processes are manifested in the growing dependence of the countries of the world community as a result of intensive international movements of goods and services, capital flows, and the rapid and wide spread of the latest technologies. The involvement of a significant number of countries in the globalization process of the world economy requires the combined efforts of the governments of these countries and international organizations in order to regulate its development on a global scale.

Under the influence of the processes of globalization and integration in agriculture, there are significant qualitative changes in material and personal factors of production. The material and technical base of agricultural production is changing quantitatively and qualitatively during the transition of this industry to the widespread use of machines, biotechnologies, innovations, and computer equipment. The professional level of employees is increasing, new forms of production organization are emerging and spreading.

The most significant among the latest processes in the agrarian sphere is the further deepening of the social division of labor under the influence of the globalization of these processes. It encompasses all types of division of labor and is accompanied by the differentiation and specialization of economic sectors, the increase in independent production, and the emergence of new types of services [4].

Agricultural production is only a stage on the way to creating goods from its raw materials. An objectively necessary condition for the latter is strong, constantly renewed inter-branch ties between agriculture and a set of branches related to it

technologically, economically and organizationally. As a result of the strengthening of these ties, agro-industrial integration is developing.

Integration processes create an objective need for increasingly close interaction and interdependence of individual elements of the economic system. All this characterizes agro-industrial integration as a multifaceted process that develops in various forms.

In the national economy of each country, the agro-industrial complex occupies one of the leading places and is one of the largest spheres of entrepreneurial activity, which in foreign economic literature received the name "agribusiness". It should be noted that the agro-industrial complex belongs to the basic national economic complexes, the functioning and development of which determine the conditions of life of society. The agro-industrial complex includes those types of production and production services of the national economy, the functioning and development of which are subordinated to the creation of final products from agricultural raw materials. The existence of this set of industries and industries outside the agro-industrial complex is not efficient enough.

Globalization processes taking place in the world contribute to the growth of volumes of production, consumption, and movement of goods. It becomes obvious that none of the countries can successfully solve economic problems without coordinating their national economic policies with those of other countries. The most important problem of economic growth depends on the formation of global international decisions in the field of ecology, and on the conditions of integration and post-war reconstruction of Ukraine. The only way to unite the indicated problems into a single channel is the greening of agricultural production. The undisputed leaders of world trade, within the framework of the liberalization of foreign trade relations, initiate the policy of environmental dumping, thus forcing the rest of the countries to accept the conditions proposed by it. The strategy of their behavior should change, since the realization of foreign trade interests will depend on the composition of the sphere of material production and the direction of ecologically safe development. The consequences of conducting a passive environmental policy will manifest themselves

in the reduction of export volumes and the formation of a raw material orientation of the economy. It is obvious that for most countries, the implementation of high-cost environmental measures, together with the solution of no less acute industrial and social problems, will be an overwhelming task in the near future. Products that do not meet the standards of environmental cleanliness will be considered as undesirable. Protectionist barriers will be created for it, which will lead to significant losses for all exporting countries [5, p. 66-73].

Given the current state of the country's economy, the complications associated with the state of war, the decrease in the standard of living of the population, orientation towards the economy of tomorrow appears to many business entities as a task of the distant future and causes reluctance to take certain steps in this direction. Therefore, today it is possible to outline the following contradictory trends that manifest themselves at the same time, namely:

- the rapid development of ecologically oriented business, which is connected in Ukraine mainly with alternative energy, organic agriculture and the formation of the market for ecologically clean products;

- the appropriate development of scientific research in the specified areas of greening, creation of enterprises for the production of biological types of fuel, centers of organic production ("Poltava-organic", Poltava; "Polyssia Organic", Zhytomyr"; "Pivden Organic", Mykolaiv) "Tavria Organic", Melitopol, Center for Natural Agriculture named after M.D. Rudenko, Dnipropetrovsk, etc.) and activation of the public movement, which contributes to the large-scale popularization of environmental knowledge;

- negative structural transformations associated with the monocultural specialization of enterprises, the destruction of the livestock sector by the reduction of highly productive fodder lands, the absence or non-acceptance by enterprises of the agro-food sector of the latest technologies, the polarization of enterprises by size, the destruction of the rural way of life, unemployment and poverty;

- almost complete lack of implementation of ecologically oriented innovations in the sectors of procurement, processing of agricultural raw materials, transportation and storage of food.

Meanwhile, Ukraine, as a full member of the Eastern Partnership countries that have joined the Program "Greening the economy in the Eastern Partnership countries", should switch to a model of development and business conduct in accordance with the approaches of the European Union[6, p. 165-178].

The European approach to the implementation of the principles of the green economy consists in ensuring a greater integration of three approaches to ensuring the sustainability of development: economic, social and environmental, and coordinating actions in this direction. The road map for the transition to a resource-efficient Europe by 2050, adopted by the European Commission in September 2011, defines specific directions of action and the main milestones on this path, but the emphasis is more on the integration of the tasks of the economic and environmental blocs.

The economic approach provides for the optimal use of both accumulated production and financial capital, as well as limited resources and environmental technologies (nature-, material- and energy-saving, including extraction and processing of raw materials, processing and elimination of waste, etc.). The dominance of the criterion of profit maximization in economic activity, provided that the natural resources used in production and consumption are not taken into account or are underestimated, leads to distortion of signals for making economic decisions, reduction of non-renewable natural resources, deterioration of the natural environment for people's livelihood. Therefore, the goal of the economic subsystem from the point of view of sustainable development is to improve the efficiency of resource use. An ecological approach involves preserving the integrity of biological and physical natural systems (natural capital, ecosystems and human-made habitats, including urban infrastructure), their capacity for self-regeneration and adaptation to constant change. The goal of the ecological subsystem should be to ensure the elasticity of the natural environment, its adaptive capacity to changing development conditions. The social component (an approach from the standpoint of sustainable human development) is

aimed at preserving and restoring social and cultural capital, fair distribution of benefits and stable livelihood conditions, maintaining the capacity of the human personality for self-reproduction, as well as reducing inequality by a wide range of criteria, and not only by income. The goal of the social subsystem is to increase social equality and transparent distribution of the income burden.

The transformation of the economy under such an approach requires the recognition of the interdependence between the economy, human well-being and natural capital and is aimed at overcoming barriers to improving resource efficiency, stimulating the transition to sustainable production and consumption, converting waste into resources, supporting research in the direction of green recovery of the agri-food sector of Ukraine [8, p. 17-25].

It should be noted that the agro-industrial complex, unlike other spheres of economic activity, is characterized by a much closer dependence of public interests on climate changes and natural factors. The inevitable intensification of production, not supported by environmental protection measures, activates the development of negative processes that exert pressure on the natural environment. The deterioration of the ecological situation in Ukraine is due to the high level of economic development of land, pollution of surface fresh water. Despite the decline in industrial and agricultural output during the crisis period of the 1990s, the almost complete destruction of the livestock sector, the decline in the use of mineral fertilizers and agrochemicals, the ecological condition of the environment did not improve. This indicates the loss of renewable, reproductive and assimilation potential of the natural resource potential.

It should be emphasized that Ukraine has significant strategic advantages due to natural resources, geographical location and the quality of human capital, which in general can become the basis for rapid economic growth of the state. Instead, a number of obstacles stand in the way of realizing one's own potential. Ukraine should strengthen its position on the world and regional arena, which will contribute to increasing the level of welfare of the population — the main goal of state policy.

Ukraine is one of the largest countries in Europe in terms of territory and population, but also one of the poorest. Despite the fact that Ukraine ranks 56th in the world in terms of gross domestic product (hereinafter referred to as GDP) in absolute terms, Ukraine ranks only 119th in terms of GDP per capita. According to the results of the audit, Ukraine failed to realize its potential in natural resources, geographical location and quality of human capital.

The reason for insufficient implementation of the mentioned potential is the implementation of inconsistent policies for many years. The non-completion of reforms prevented Ukraine, unlike other post-socialist countries, from transitioning to an effectively functioning market economy. As a result, the average rate of GDP growth in Ukraine in the period from 1996 to 2021 was only 3.8 percent, while in the countries of Central Europe it was 6.4 percent. In addition, Ukraine faced the armed aggression of the Russian Federation, as a result of which 7 percent of the territory of our state was temporarily occupied, on which, as of 2013, 13 percent of the population of Ukraine lived and 13.7 percent of the GDP was formed. The world is changing rapidly, and this requires an appropriate response from Ukraine. Population growth, global climate change, the rapid development of the digital economy, as well as the regionalization of international production create both challenges and new opportunities for Ukraine. Conducting a consistent state policy aimed at the European and Euro-Atlantic course, building relations with new Asian and Middle Eastern centers of gravity, creating a favorable business climate, developing entrepreneurship and supporting exports, attracting investments and developing capital markets, developing domestic consumption and other mechanisms will make it possible to strengthen position of the country as a regional subject and will become factors of economic growth. Ensuring innovative, anticipatory economic growth will contribute to human development through the appropriate quality of education, science, medicine, culture and the natural environment [9].

However, the current situation threatens the resource and ecological security of society, the food security of the country, and infringes on the national interests of the population. The increase in the resource intensity of agricultural products is the result

of ecologically unbalanced use of the resource potential of national and regional agro-industrial complex, the use of inefficient forms of management [10, pp. 71-78]. Unfortunately, the transformational processes of the agrarian industry took place without taking into account environmental factors and the requirements of resource and environmental security of economic activity. The accession of Ukraine to the countries producing ecologically clean products will facilitate adaptation to the rules and requirements of international trade relations, which are actively developing, and will consolidate the country's position in the international food markets. In turn, foreign exchange earnings from the sale of ecologically clean products on foreign markets can be considered as one of their sources of targeted financial funds intended for stabilizing production and solving agro-ecological problems.

Since non-compliance with environmental standards during its production may become an obstacle for the further export of Ukrainian products to the EU market. Currently, this is one of the key markets, the loss of which can negatively affect the country's economy. If the issue of requirements for the quality of food products is gradually being resolved, then ecological standards in the field of agricultural production currently do not exist in Ukraine. There are already problems with the export of corn and rapeseed, in which Ukraine has a leading position in the world. Ukraine ranks 4th and 2nd, respectively, in the world export of these crops in natural terms. According to the EU Directive on renewable energy sources, Ukraine must report on greenhouse gas emissions during the production of agricultural products. In 2017, pilot calculations of greenhouse gas emissions were carried out based on real data from farms producing corn and rapeseed in Ukraine, which showed an excess of permissible greenhouse gas emissions when growing both crops. From 2018, such calculations must be carried out on an ongoing basis. In addition, a new EU directive will enter into force in June 2021, which will significantly strengthen the requirements for reducing greenhouse gas emissions. With the adoption of the European Green Course and the approval of the "Farm to Fork" strategy, one can expect to strengthen measures to comply with environmental legislation and limit imports to the EU [11, p. 43].

Meanwhile, the formation of the basic parameters of Ukraine's equal participation in the EU simultaneously raises an extremely important domestic problem — the implementation of the concept of rational and safe food for the population. The development of innovative directions in the field of greening production and the creation of a new segment of the food market will not only preserve the environment, but also contribute to a "soft" entry into the system of world trade relations, opening access to the domestic markets of consumer countries of ecologically clean products that do not provide at the expense of own capabilities, the growing demand for similar products [12, p.162-169].

In modern industrial societies, the development of an effective direction of interaction of human activity with the biosphere is closely related to social dominance: everything for modern man, everything at the expense of nature. This path of human development is dictated by his self-worth. She believes that the laws of nature cannot and should not interfere with economic growth, scientific-technical and social progress, which ensure her well-being. Society is determined less and less by the positive logic of wealth accumulation and more by the negative logic of merciless exploitation of nature.

That is, the concept of anthropocentrism clearly prevails in society, according to which man and his scientific and technological achievements are placed above nature. At the same time, in conditions where the laws of ecological limits, irreversibility and selection really operate, society is faced with a choice: adaptation of people to nature and compliance with its laws as an inevitable value, or adherence to an ecocentric approach, which involves achieving a balance between the endurance of living nature and dependence from her human society. In this choice, civilized countries are inclined to the ecocentric way of solving environmental problems. Undoubtedly, this approach is a compromise and, in our opinion, the only correct way to achieve an ecological balance between living nature and human activity. Despite the obvious advantages of the ecocentric way of solving environmental problems, it is perceived differently by many scientists and economists. The direct connection between economic growth and an increase in the anthropogenic load on the biosphere mainly affects the adoption of

the choice of ways to improve environmental safety at the global level and at the level of any country. Therefore, almost all theories of conflict resolution between society and nature are based on ideas related to the limitation or preservation of economic growth.

The economic security of the state, as indicated in the "National Economic Strategy for the period until 2030" and the Law of Ukraine "On the Basic principles (strategy) of the state environmental policy of Ukraine for the period until 2030", is the main direction of ensuring national security, related to the achievement and maintenance of corresponding level:

- dynamics and structure of the gross domestic product (GDP), volumes and rates of industrial production;
- the state of the country's natural resources, production and scientific and technical potential;
- the ability of the economic mechanism to adapt to internal and external factors;
- the state of the financial, budgetary and credit systems; quality of life of the population [13, p.92-93].

At the same time, it is appropriate to emphasize that the goal of the state environmental policy is to achieve a good state of the environment by introducing an ecosystem approach to all areas of social and economic development of Ukraine in order to ensure the constitutional right of every citizen of Ukraine to a clean and safe environment, the introduction of balanced nature management and the preservation and restoration of natural ecosystems table 1.

Table 1
Strategic goals of the State environmental policy

Strategic goals	Tasks
Goal 1. Formation of ecological values and principles of sustainable consumption and production in society	implementation of education in the interests of balanced (sustainable) development; assessment of attitudes and raising the level of public awareness; development of partnership between sectors of society; ensuring public participation in management decision-making in the field of environmental protection and nature management;

Continuation of table 1

<p>Goal 2. Ensuring the sustainable development of Ukraine's natural resource potential</p>	<p>implementation of sustainable consumption and production tools; improvement of the system of natural resource cadastres, state statistical reporting on the use of natural resources and environmental pollution; creation of an ecologically and economically justified system of payments for the special use of natural resources; increase and expansion of the territories of the nature reserve fund (in particular, protected areas in national nature parks and regional landscape parks); reducing the negative impact of urbanization processes on the natural environment; ensuring sustainable use and protection of land, improving the condition of affected ecosystems and promoting the achievement of a neutral level of land degradation; introduction of the green procurement system in Ukraine;</p>
<p>Goal 3. Ensuring the integration of environmental policy into the decision-making process regarding the socio-economic development of Ukraine</p>	<p>development of industry strategies regarding: air quality improvement; improvement of water quality and management of water resources; preservation of the ozone layer; climate change prevention and adaptation; waste and resource management, return of resource-valuable materials to economic circulation; implementation of sustainable low-carbon development in all sectors of the economy in Ukraine;</p>
<p>Goal 4. Reduction of environmental risks in order to minimize their impact on ecosystems, socio-economic development and population health</p>	<p>reducing the level of atmospheric air and water pollution; reduction of anthropogenic impact on the ecosystems of the Black and Azov Seas; improving the quality of soils and implementing an effective system for increasing their fertility; introduction of environmental risk management based on its simulation in real time solving environmental problems, restoring and preserving the natural environment of the territories where military operations took place;</p>
<p>Goal 5. Improvement and development of the state system of environmental protection management</p>	<p>strengthening of institutional capacity for planning, monitoring and evaluating the effectiveness of environmental policy implementation; development and improvement of environmental protection legislation and raising the level of its compliance, including approximation of the legislation of Ukraine to the law (acquis) of the European Union.</p>

Source: compiled by the author using [9, c.11]

It should be noted that the modern agrarian policy has a strategic and systemic nature, and must correspond to the principles of sustainable development of the agrarian sector of the economy [14, c. 15].

The strategic vision of the future development of agrarian economic relations determines the formation of agricultural production, which is aimed at solving economic problems, ensuring the country's food security, increasing the competitiveness of agricultural products;

Given the understanding of the general trend of development, let's define the main principles of state environmental policy (Fig. 1).

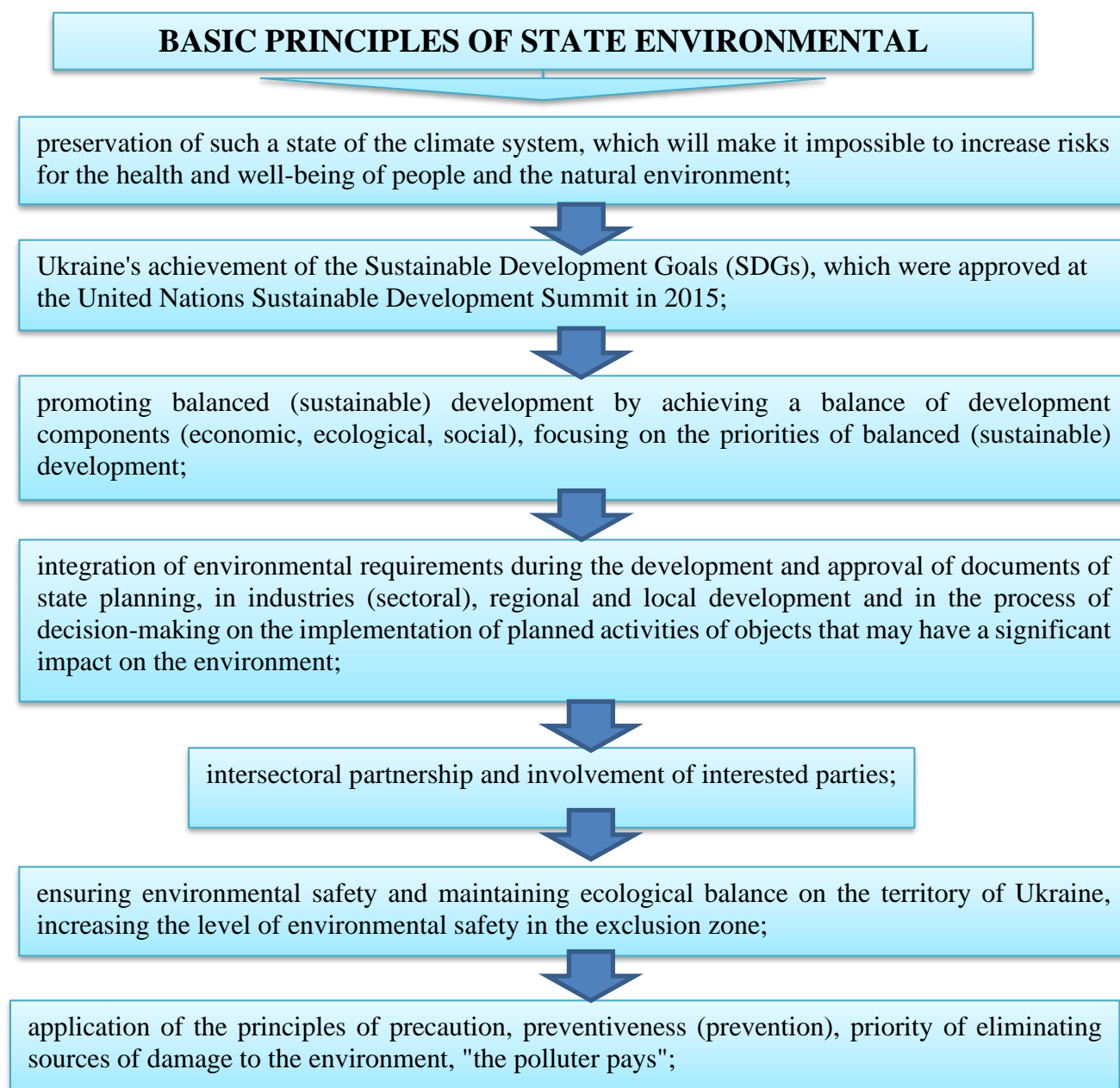


Fig. 1. Basic principles of state environmental policy

Source: generated by the author using [9, c.11]

Undoubtedly, environmental safety is a complex and multifaceted concept that

combines objective properties of the environment, including people's economic activity, and objectively motivated actions of society aimed at protecting people's livelihoods, primarily from anthropogenic stress. This means that as an objective reality in a certain historical period of society's development, environmental security must meet the basic principles of organizing higher forms of protection of society and the state against the action of negative internal and external factors.

The main internal factor of negative ecological impact on the environment in industrial-agrarian countries, which includes Ukraine, is industrial production, which exerts technogenic pressure on the natural environment and significantly affects the level of anthropogenic load. In our country, agreements are used in the sale of agricultural products to processing enterprises and trade, material and technical support and production service of agricultural production [15].

At the level of the primary link of social production, agro-industrial integration is manifested in the form of agro-industrial enterprises, combines, associations, agro-firms. It should be borne in mind that such agro-industrial formations arise in the presence of direct and established connections between agricultural, on the one hand, and processing, trading enterprises and organizations, on the other, with a high level of concentration and marketability of production. One-sided solution of ecological problems of socio-economic development by any state is no longer able to significantly influence the increase in the level of environmental security of business on the planet. Of course, regional and local environmental protection measures play a significant role in improving the environmental situation. However, due to the transboundary nature of environmental problems, primarily air and water pollution, these measures can only be considered partial. The relocation of environmentally harmful productions abroad and the export of hazardous waste under the conditions of global ecological interdependence of all countries of the world do not reduce the overall level of negative impact of anthropotechnogenic loads on the Earth's biosphere, but only postpone the deadlines for the exporting countries and change the form of dangerous ecological consequences of their economic activities [16, p.134-140].

Therefore, at the current stage of the development of human civilization, which

is characterized by the further acceleration of the pace of scientific and technical progress, new trends and approaches to the scales, methods and methods of business management are gaining strength. They are connected not only with the intensification and integration of many spheres and branches of production, but also with the need to use effective international environmental monitoring, effective international economic mechanisms for solving environmental problems, comprehensive rationalization of nature use and improvement of the reproduction of natural resources and the quality of the environment. Technologically complex, multi-nomenclature material production, especially in developed countries, should now be based on ecological and economic principles, i.e. it is about the production of high-quality and competitive products with the lowest resource consumption and minimal damage to the environment.

So, the task is to form a single ecologically safe economic and economic space on the planet, which will be the basis of the development of all countries of the world. This, first of all, requires deep structural, technical, technological, and organizational changes in social production from each state, a radical restructuring of macroeconomic policy, improvement of foreign economic relations, and the implementation of measures in the future in the areas of capital movements, foreign exchange funds, and optimization of balances. investments and savings, etc., taking into account the global nature of environmental and economic factors. And secondly, it involves coordinated international scientific, technical and economic cooperation based on the integration of forces, resources and funds in order to successfully solve global environmental problems.

The current situation in the nature management system is characterized by at least three features:

- 1) quantitative expansion of energy exchange between society and the environment;
- 2) globalization of human influence on the biosphere;
- 3) constantly growing negative anthropotechnogenic load on the environment.

The objective dialectical-contradictory process of interaction between nature and society acts as a process of development of natural and man-made productive forces.

The final subordination of natural productive forces to social ones, and thus the aggravation of contradictions (up to antagonism) between man and the environment occur at the stage of the industrial, and later the scientific and technological revolution. With the development of continuous industrialization of social production, the contradiction between man as a creator, transformer of the environment and as a constituent part of the biosphere deepens, since the physical existence and reproduction of society cannot be carried out outside of nature. Scientific and technical progress, deepening and spatially expanding the socialization of nature, introduces constant contradictions into the dialectic of the interaction of the social and the natural in the system "society-production-environment", sometimes violating not only the structural, but also the genetic determination of the social by the natural. At the same time, the use of natural resources, the exchange of material activities and energy flows between society and the environment are always subject to the economic needs and interests of people [9].

In the process of nature use, specific economic relations between people objectively arise regarding the appropriation, use, distribution and reproduction of environmental elements, which give a social orientation to the processes of exchange of substances between society and nature. Thus, the interaction of man with nature takes a social form, is included in the system of industrial relations. It is obvious that industrial relations as a socio-economic form of development of productive forces is the social shell in which, in fact, the technical-technological interaction of society with nature takes place, which constitutes the concept of nature management.

Given the understanding of the general trend of development, the course for "green" growth has the potential to support economic and social development and is able to provide conditions under which natural assets can continue to provide material goods and services on which the economy and welfare of people.

At the same time, it should be emphasized that the green transformation of the economy can bring many positive results, such as an increase in labor productivity and the level of innovation, the creation of new jobs and markets, as well as new budget revenues. Moreover, when ensuring greater resistance to climate changes, security of

water and energy resources, adequate functioning of agroecosystems, i.e. when achieving the ecological goals of green growth, the probability of drastic environmental changes that can cause economic and social upheavals is reduced.

It should be noted that in order to ensure the effectiveness of the "green" course, the national economic policy should stimulate innovative activities, the flow of investments in methods of sustainable management of natural capital and the extraction of higher and long-term profits and benefits from its use[17].

Therefore, every country now faces an extremely important task — the development and gradual implementation of the concept of transition to a model of sustainable, ecologically safe functioning of the national economy. This, in particular, requires the decision of the following key documents: "Global strategy for nature protection", "Our common future", "Agenda for the 21st century", "To a meeting in the "green" economy: ways to sustainable development and eradication of poverty", "Global Green New Deal", "2030 Agenda for Sustainable Development", EU Green Deal.

In fact, the model of sustainable ecological development means the survival of humanity. The transition to such a model can be carried out only under the condition of effective international cooperation and guaranteeing the national interests of each state. The implementation of green recovery in the direction of greening of agro-industrial production is also possible with the comprehensive implementation of organizational, technological, financial and credit, international legal and administrative measures, which will be carried out by the world community, its regional institutions and each country separately. Since the roots of solving environmental problems lie in the methods, technologies and methods of human economic activity, the core of the new socio-ecopolitics should be precisely the comprehensive greening of modern production.

The implementation of environmentalization of agricultural production will take place on condition of taking into account the peculiarities of the functioning of subjects of various forms of ownership and management, the formation of a responsible user (owner) of land interested in long-term effective management; the application of

differentiated approaches to the formation of state support for commodity producers that introduce ecologically oriented investment projects into business practice, the use of social partnership, the involvement of state, scientific, business institutions, authorities, public society institutions (association of enterprises, serving cooperatives), improvement of the sectoral system management and strategic planning. The focus of research in the direction of environmentalization of agricultural production is due to the leading importance of natural and economic factors of the functioning of agricultural production. Improving the quality and safety of agricultural raw materials and food is a priority task that requires the development of a national strategy in this area. The development of the production and market of environmentally friendly products is a progressive global trend.

Beyond any doubt, the radical increase in the role of agricultural production balances the structural proportions of social production. Agrarian relations have a positive effect on the dynamic characteristics of the resource base, regulate the rational use of land resources and contribute to the even distribution of man-made and anthropogenic loads in regional economic systems. So, as a result of the research conducted on the basis of a formal and logical analysis of legal and economic categories, normative and doctrinal definitions, individual general and special methods of scientific knowledge of phenomena and legal categories, the author formulated a number of conclusions, proposals and recommendations aimed at the improvement and practical implementation of measures regarding environmentalization of agricultural production. In particular:

1. The processes of greening should be considered as a component of national and international environmental regulation, the implementation of which is possible only under the condition of the formation of a single worldview in the countries and the determination of a single vector of further development for all.

2. Having a significant ecological potential, Ukraine needs a larger-scale use of the potential of greening and the creation of a new model of green growth that implements the evolutionary process of development without destroying the environment.

3. The post-war reconstruction of Ukraine should be aimed at a radical change in the structure of the economy, a transition from an agrarian-raw type to an industrial-innovative one based on the creation of a modern high-tech, digitalized industry in the context of the deployment of Industry 4.0 in the world.

3. Activation of the process of greening the economy is possible mainly under conditions of attractiveness for business or motivation of business entities.

4. Realization of the potential of greening is a result of purposeful economic-legal, technical-ecological organizational and educational activities. This is a time-consuming process, and therefore requires prudence, consistency and staged implementation.

5. Preservation of the natural resource potential requires the determination of systemic measures that, at certain costs, will be sufficient to ensure the restoration of natural systems.

6. The implementation of the specified measures is possible provided that appropriate mechanisms and tools are defined, which take into account the peculiarities and conditions of management, the distribution of land users (owners) according to a number of criteria, their financial condition, the degree of responsibility, motivation and stimulation of interest in environmentally-oriented management.

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2. Formation of strategic principles of quality management at the enterprises of Ukraine

At the present stage of development of the world economy, Ukraine's integration into the European space, much attention is paid to the effective functioning of the enterprise, which in turn depends on product quality. Ignoring this factor, it is difficult to create optimal conditions for the development of any trade, sales and profitability of enterprises. Improving the quality system of goods of enterprises in modern conditions is a complex and urgent task that requires immediate solution. The long-term course of sustainable development of the enterprise should be aimed at achieving not so much quantitative indicators as qualitative ones, so managers should pay attention to the development of measures to increase competitiveness and reach the international level. Construction, implementation and certification of an integrated product quality management system will give them a number of competitive advantages and confidence in a level of production and service that meets international standards and is able to win the competition in domestic and foreign markets.

The quality management system in enterprises should take into account the characteristics of each stage of the life cycle of products, the specifics of business entities that provide both the entire life cycle and its individual stages, the level of product innovation, based on quality control and technological processes. used in the creation of products and the introduction of value motivation of staff. All this necessitates the creation of integrated product quality management systems that will use an interconnected system of standards, moral and ethical values and will have a competitive advantage to ensure product quality.

An important role in the formation of an integrated quality management system at Ukrainian enterprises, especially in the context of European integration, is played by public policy, whose main tasks are to form the concept of improving and developing product quality management system in Ukraine, defining their strategic guidelines. State policy in terms of product quality assurance and its compliance with EU requirements should be aimed at choosing areas of quality management.

The issues of product quality management have been studied in depth in domestic and foreign economic literature. The following domestic and foreign scientists made a significant contribution to the development of the theory and practice of quality management: S. Bezrodna [18], A. Vakulenko [19], E. Wexler [20], O. Dukan [39], H. Kaletnik [21], O. Khaietska [40] A. Feihenbaum and others.

The problem of implementing a quality management system at Ukrainian enterprises is strategically important and requires further research, taking into account industry specifics, calculating its effectiveness and optimality.

Improving quality is the basis of the efficiency of the country's economy, allows to better meet the needs of consumers, increase productivity of social work, increase profits, reduce material consumption, increase the competitiveness of products in domestic and foreign markets.

Analyzing the development trends of ideas and practices of quality assurance, we should pay attention to two factors: the formation of a new type of thinking that affects the understanding of the value of quality, and the pervasive need for quality as a factor of competitiveness, strategy and efficiency.

The formulation of the concept of "quality" is based on several different points of view, with which you can reflect all the multifaceted nature of this concept.

1. From the point of view of objective assessment of product properties, quality can be accurately measured. Differences in quality can be quantified by certain product characteristics.

2. From the point of view of the buyer, the quality of the product is determined to a greater extent by the subjective assessment of the consumer and to a lesser extent by the characteristics of the product itself. Individual buyers have different needs, and those products that best meet these needs are considered to be of the highest quality.

3. From the point of view of the production process, quality is compliance with specifications, and any deviation from them leads to a decrease in quality. The highest quality implies well-done work, the result of which fully meets the requirements.

4. In terms of value for money, quality is expressed through costs and prices. A quality product performs a certain function at an affordable price, as well as in accordance with the specification at reasonable costs [18].

Studying the problem of quality management, first of all we will try to define the very concept of "quality". Its evolution dates back to the time of Aristotle and is generalized in the works of EM Wexler, W.M. Reef, L.F. Vasilevich. In the textbook "Quality Management" [20, p. 13] updated dynamics of definitions of quality concepts (table 1).

Table 1

Definition of "quality" [18, 20, 23]

Author	Formulation of quality definitions
Aristotle (III century BC)	Differences between subject grades; good-bad differentiation
Chinese version / Ancient China (I-II centuries BC)	The hieroglyph, which denotes quality, consists of two elements - "balance" and "money" (quality = balance + money), so quality is identical to the concept of "high quality", "expensive"
Hegel (XIX century)	Quality, first of all, is identical with being, certainty / certainty, which ceases to be what it is when it loses its quality
W. Schuhart (1931)	Quality has two aspects: objective physical characteristics and subjective assessments (how "good" the thing is)
K. Isikava (1950)	Quality is a property that really satisfies the consumer
J. Juran (1979)	Quality has two aspects: - suitability for use (compliance with the purpose); - subjective assessment - the degree of customer satisfaction (to achieve quality, the manufacturer must know the requirements of the consumer and make their products so that they meet these needs).
State standard DSTU 15467-79	Product quality - a set of product properties that determine its suitability to meet certain needs in accordance with its purpose
International standard ISO 8402-86	Quality - a set of properties and characteristics of products or services that give them the ability to meet predetermined or anticipated needs
American Standards Institute and American Quality Society (1990)	Quality - the total number of features and characteristics of a product or service, which extends to its ability to meet certain needs
International standard ISO 8402-94	Quality is the set of characteristics of an object in terms of its ability to meet established and anticipated needs

Continuation of table 1

New explanatory dictionary of the Ukrainian language (1998)	<p>Quality: The internal certainty of the subject, which is the specificity that distinguishes it from all others. The degree of value, value, suitability of something for its intended use; quality factor. One or another characteristic feature, property, trait of someone or something</p>
International standard ISO 9001-2000 / 2008 DSTU ISO 9001-2001 / 2009	The degree to which the set of own characteristics satisfies the requirements
EOY Secretary-General Bertrand De Norey (2000)	Quality is more than certification, standards of compliance. This is the concept of improvement, how to make the world better and how to implement improvement

T. Angibus commented on the importance of quality in terms of current and future business demands: "Quality will have to be everywhere and be integrated into all aspects of the winning organization" [25, p. 91]. Indeed, the more we pay attention to quality, the more we care about the future.

In the context of globalization, the problem of quality is relevant for all countries, industries, institutions and organizations, is multifaceted and has political, social, economic, scientific, technical and organizational aspects.

The political aspect of the problem is due primarily to the fact that mass production of high quality products is one of the criteria for the development of society, an indicator of the level of economic development of the state.

The social aspect of the problem. The need to improve quality reflects the need to bring the level of product quality to the level of consumer requirements and the need to improve the quality of work itself. There are other aspects of the social aspect of this problem: ensuring proper education, proper education, training, etc., without which the problem of quality improvement cannot be solved.

The economic aspect of the problem is that improving quality is the basis for improving the efficiency of the economy, because it allows to better meet the needs of consumers, increase productivity, increase profits, reduce material consumption, save raw materials and fuel and increase the competitiveness of domestic and foreign markets.

Scientific and technical aspect of the problem. Improving product quality and increasing the pace of scientific and technological progress is the only process.

There are the following main reasons why the problem of quality assurance is so relevant in modern production [18]:

- quality - the main criterion for making a purchase for the most important buyers. Losing an order with an insufficient level of quality is much worse than losing a high price: you can lose a customer forever;

- quality is a comprehensive concept. The company implements many separate measures to counter competition. Quality and quality management systems offer a set of activities that covers all stages of the production process - product policy, planning, marketing, sales, personnel, innovation and technology;

- quality - the main tool for reducing costs. It is always cheaper to do the right thing the first time than to correct the mistake later;

- quality leads to strengthening the company's position in the market. In open and liberalized markets, goods and services are becoming increasingly interchangeable. The level of quality of goods becomes crucial.

Based on the wording provided in the standard ISO 9000-2005 "Quality Management System. Basic provisions and glossary of terms" [30] in Fig. 1 presents an analysis of the term "quality".

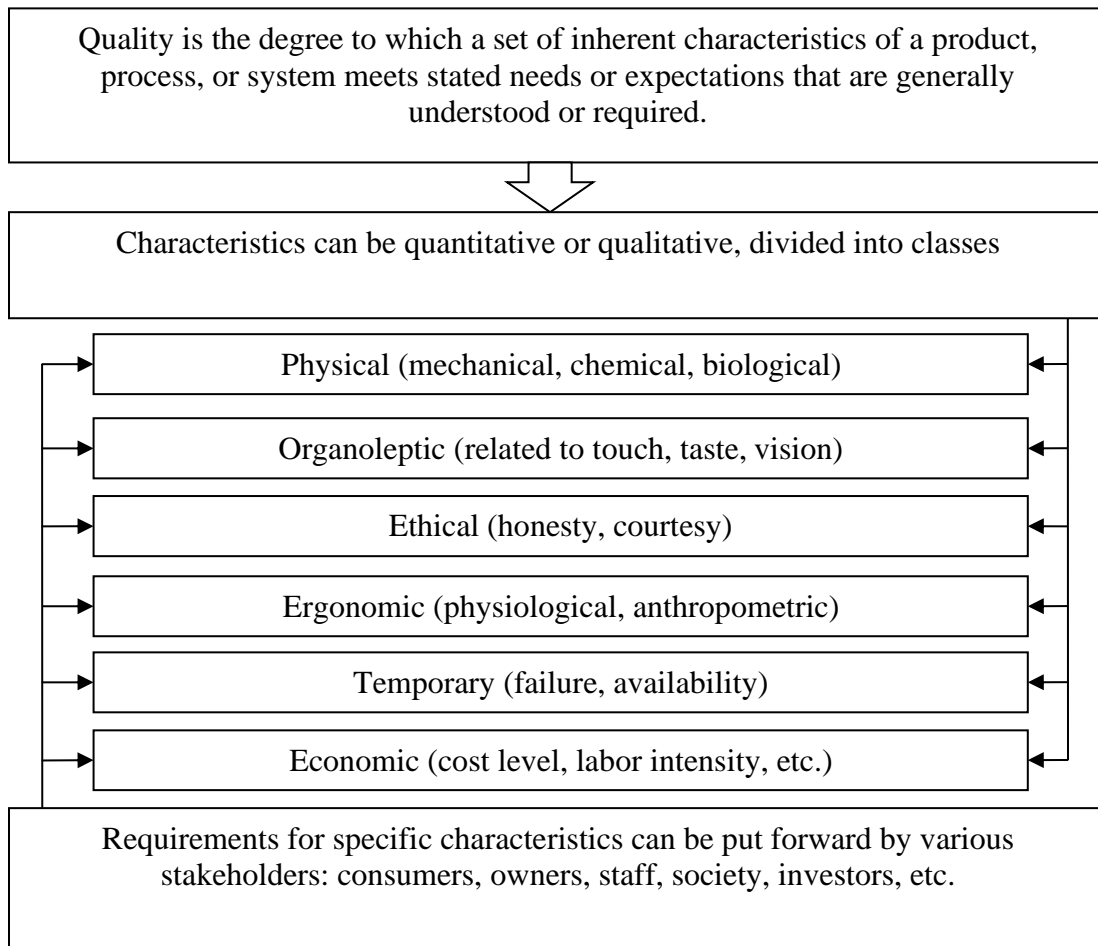


Fig. 1. Modern understanding of the category "quality"

Indicators of product quality, depending on the nature of the tasks to assess the level of product quality can be classified as follows (Table 2).

Table 2

Classification of product quality indicators

Sign of classification	Groups of product quality indicators
According to the properties that are characterized	Destination indicators; Indicators of reliability (reliability, durability, maintainability, safety); Ergonomic indicators; Aesthetic indicators; Indicators of manufacturability; Transportability indicators; Indicators of standardization and unification; Patent and legal indicators; Environmental indicators; Safety indicators

Continuation of table 2

By way of expression	Indicators expressed in natural units (kg, m, points, dimensionless) Indicators expressed in value units
By the number of properties characterized	Unit indicators; Complex indicators (group, generalized, integrated)
By use for evaluation	Basic indicators; Relative indicators
Depending on the stage of determining the values of indicators	Projected indicators; Project indicators; Production indicators; Performance

Quality management means the general function of organizational systems, which ensures the preservation of their structures, maintaining the mode of operation, implementing their programs, achieving goals.

Product properties can be characterized quantitatively and qualitatively. Quantitative characteristics of one or more properties of products that make up its quality is called an indicator of product quality. Product quality should be assessed only on the basis of a set of indicators that are directly related to it and established in accordance with the purpose of the product. Product quality indicators are relative. Regulation of the principles of selection of the system of indicators is reflected in the regulatory documentation, quantitative methods of quality assessment are an independent section in quality management - qualimetry [28].

Classification of types of technical quality control of the enterprise is presented in table. 3.

Table 3

Classification of types of technical quality control at the enterprise

Signs of classification	Basic types of control
Organizational form	Solid Selective Statistical Volatile Inspection
The nature of control operations	Visual Geometric Laboratory analysis Passing tests

Continuation of table 3

Stage of the production process	Incoming (resource control) Intermediate (process control) Output (product control)
Influence on the course of the technological process	Active Passive
Applied means of control	Automatic Mechanized Manual
Place of implementation	Stationary Variable

The most effective types of quality control are: statistical, active and automated.

According to the properties of quality indicators are divided into the following groups. Purpose indicators characterize the essence of the product, the properties that determine the ability of the product to perform its functions in the given conditions of use for its intended purpose. Reliability indicators reflect the ability of products to perform the required functions in a given mode. These are indicators of reliability, maintainability, durability, storage. Safety indicators assess the degree of safety in operation (consumption).

According to the elements of the business process, quality indicators are divided into the following groups:

- information (related to the receipt, processing and transmission of information);
- material (including ensuring the input control of raw materials, materials, semi-finished products);
- technical and technological (related to the maintenance of equipment and its condition);
- labor (show the qualifications of staff, the level of training of staff in the field of quality);
- organizational (reflect the use of progressive methods of organization of production) [29].

Under the management of the quality of products (services) are the actions carried out during its development, production (provision) or sale (consumption) in order to form, ensure and maintain a given level of quality.

A quality management mechanism is a set of interrelated objects and subjects of management, principles, methods and functions of management used at different stages of the product life cycle and levels of quality management.

The method of quality management means a set of techniques and rules of action on the objects of management, which are aimed at achieving a given quality.

In the table. 4 shows the main methods of quality management and examples of means of their implementation in the internal and external environment of the enterprise.

Table 4

Basic methods of quality management

Quality management methods	Parameters of implementation of quality management methods in relation to the enterprise	
	intrafirm	External
Organized (administrative)	<ul style="list-style-type: none"> - order of the director on creation of system of quality management at the enterprise - introduction of documentation of quality systems at the enterprise - Declaration of gratitude to employees for high performance in the company and awarding prizes 	<ul style="list-style-type: none"> - compliance with the Laws "On safety of buildings" - compliance with the regulations "On safety of machinery and equipment"
Socio-psychological	<ul style="list-style-type: none"> - - formation of corporate culture of quality improvement organization - - quality groups 	<ul style="list-style-type: none"> - holding competitions in the field of quality - awarding quality prizes (international, national)
Technical and technological	<ul style="list-style-type: none"> - statistical quality control at the enterprise - analysis of risks that increase in the technological process, which is critical to ensure safety at critical points of the process 	-
Diplomatic	<ul style="list-style-type: none"> - development of a system of material incentives for wages to promote the quality of work of employees встановлення цін according to quality categories - functioning of works on creation of a management system at the enterprise 	<ul style="list-style-type: none"> - optimization of quality costs to ensure competitiveness - payment for certification work enterprise quality management systems

Objects of quality management of products and services are indicators of quality of products and services, factors and conditions that determine their level, as well as the processes of forming the quality of products and services.

The subjects of service quality management are management bodies and individuals who implement quality management functions in accordance with established principles and methods.

Quality management methods are classified as follows:

- classical methods;
- "new methods";
- modern methods and tools of organization management that can be used in the process of creating a quality management system and mastering the principles of TQM.

The functions of quality management of products and services at the enterprise include:

- forecasting and planning the quality of products and services;
- assessment and analysis of product and service quality;
- quality control of products and services;
- promoting the quality of products and services and responsibility for it.

A separate function is implemented in the corresponding function of the product quality management system subsystem. Functions are implemented in the consistent implementation of planning, organization, control, regulation, activation and incentives [40].

A systematic approach to quality management involves the formation of a target subsystem of enterprise management - an ordered set of interconnected and interacting elements of production facilities, which are designed to achieve this goal - to create conditions to ensure a given level of quality at minimal cost.

A systematic approach to quality management in the enterprise involves the use of the following principles:

- purposefulness - allows you to set boundaries of management and targeting of management decisions;

- complexity - covers all stages of the life cycle of products and services, all departments, management and all personnel of the enterprise;

- continuity - provides a management process that focuses on continuous improvement of the system;

- objectivity - focuses on the use of adequate management methods, the choice of indicators that reflect the actual state of quality management, the selection of management staff with appropriate qualifications;

- optimality - implies the need to ensure the effectiveness and efficiency of quality management processes in particular and the system as a whole.

To form a quality strategy, it is necessary to identify its main elements: the goals set by the organization in the strategic perspective in the field of quality; directions of activity of the organization; tools for achieving strategic goals in the field of quality in the areas of the organization [19, p.128].

Improving one's own work is ensured through proper, experienced management, on the one hand, and the conscious behavior of each employee of the enterprise, his conscientious attitude to work - on the other.

Therefore, the main criterion of the quality strategy will be to ensure a balance of satisfaction of all stakeholders, which can be achieved by creating a quality management system in the enterprise.

The quality management system of the enterprise can be built on the basis of various models, methods and tools (technologies and tools) of quality management, which are selected based on the industry characteristics of the enterprise and its development strategy.

In fig. Figure 2 shows a diagram illustrating the contour of strategic quality management of the enterprise, which shows the relationship of strategy, policy, goals in the field of enterprise quality and quality management system [18, p.15].

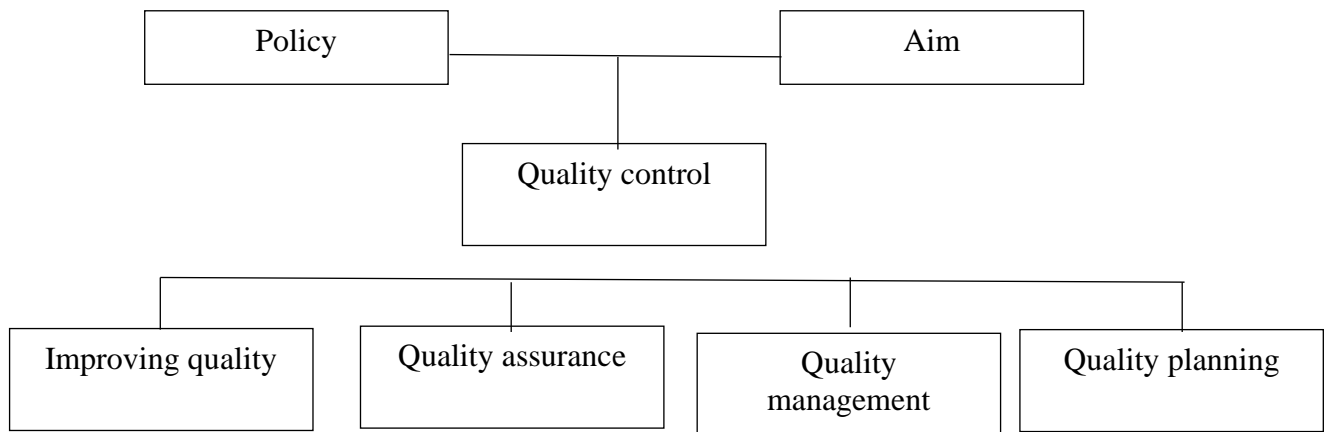


Fig. 2. Scheme of strategic quality management of the enterprise

The world is actively working on the problem of quality assurance. Its methodological basis is the so-called "quality loop", which in the classical version has the following form (Fig. 3).

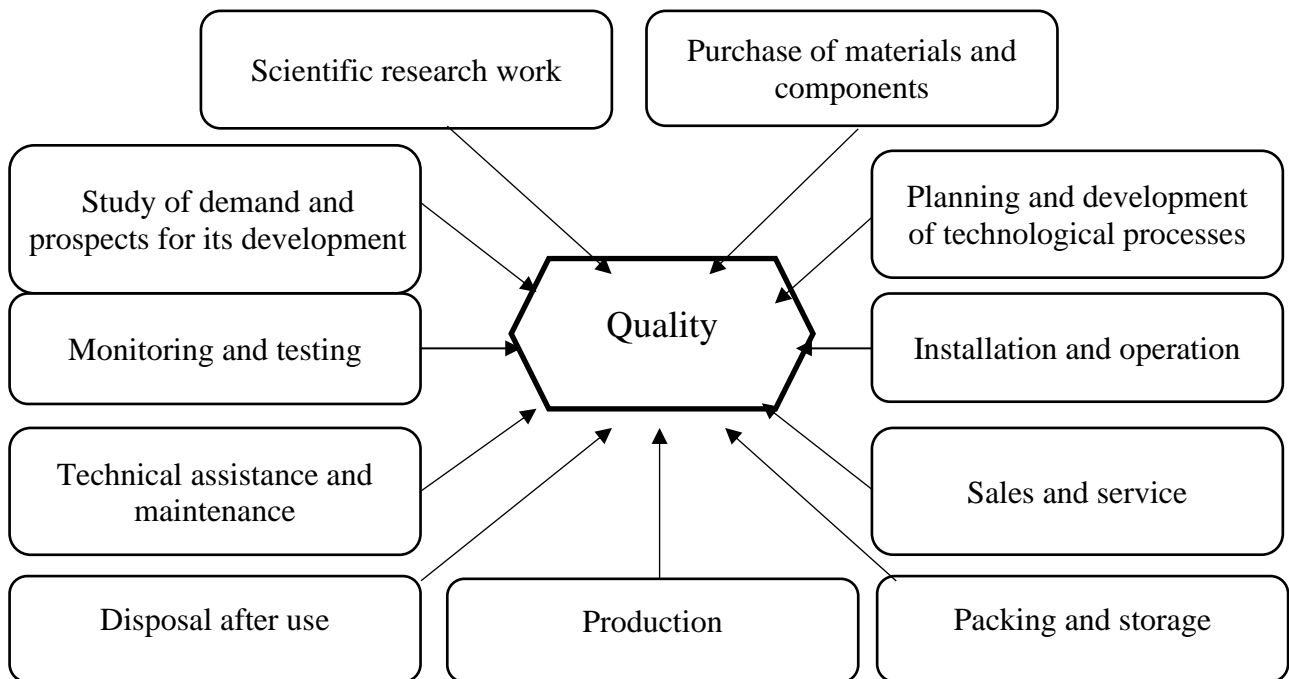


Fig. 3. "Quality loop" [18, p.19]

The strategic quality management of the enterprise is directly influenced by the mission, enterprise development strategy, legislative and regulatory framework, operational quality management. Defining the goals of quality management is expected to be carried out depending on the idea of the desired state of the organization and understanding of the goals.

Annual plans are formed and developed on the basis of quality goals. The implementation of tasks and annual plans is constantly monitored.

The data obtained are analyzed, and if necessary, adjustments to policies, goals and objectives in the field of quality, as well as strategies to achieve these goals.

One of the basic elements that should be included in the strategic plan of the organization is the process of identifying improvement initiatives. If the organization's strategic plan does not include improvement initiatives, it can be assumed that it will not receive adequate support from management and the resources needed to achieve the financial results set out in the plan.

Thus, strategic quality management allows you to direct resources to the activities necessary for the annual implementation of the organization's plans, the results of which may be increased customer satisfaction, reduce costs not related to the organization, as well as increase organizational value for investors.

It is also important to be aware of the need and urgency of making changes to existing quality management practices in terms of assessing the importance and value of strategic management.

So, in our opinion, quality is the degree to which the set of own characteristics satisfies the requirements. Quality management is not an isolated activity of the technical control department. To be effective, this process must cover the operations of all departments, including those involved in marketing, design, technology, production.

The presence of a quality management system in the enterprise is an indication that it is a competent partner that can produce competitive products.

The organization of work on product quality management at enterprises involves the development and implementation of quality management systems.

The quality system must meet the following groups of requirements:

- 1) requirements for quality management systems at all stages of the product life cycle;
- 2) requirements for the system of organization of production.

The strategic decision on its creation is made by the top management of the enterprise and is made out by the order. In most cases, the creation of quality management

systems and its certification are voluntary. In general, the main stages of developing a quality management system can be represented as follows:

1. Deciding on the establishment of a quality management system by senior management. Such a decision is made out by an order, in accordance with which the project manager (management representative) is appointed, the composition of the structural units of the quality system is determined; the main stages, executors, terms of development and implementation of the quality system are established, if necessary - terms of its certification.

2. Identification of elements (key processes) of the quality system, establishing their interaction. At this stage it is necessary to conduct a thorough analysis of the product creation process and present it in the form of a detailed list of works (processes). The list is based on the stages of the product life cycle, which are specific to a particular enterprise. The definition of the main elements (processes) of the quality management system is carried out taking into account the recommendations of ISO 9000 standards and the characteristics of the enterprise.

3. Development of regulatory documentation of the quality system. To perform the functions of the quality system, new normative documents are developed and revised or used. That is, the quality system is filled with the necessary internal content.

4. Carrying out an internal audit of quality management systems and eliminating identified discrepancies, which will mean the completion of the system.

5. Organization and certification of quality management system. Certification is the verification and confirmation by a third party of compliance with ISO 9001: 2000 standards [30].

Modern quality management system at the enterprise, regardless of ownership and scale of production, must optimally combine actions, methods and tools that provide, on the one hand, production that meets current market demands and needs, and on the other - the development of new products , able to meet future needs and future market demands (it is necessary to focus directly on the nature of needs, their structure and dynamics, capacity and market conditions).

World experience has formed not only the general features of existing quality management systems, but also the principles and methods that can be used in each of them, which is reflected in international standards ISO 9000. The main goal of quality systems based on these standards - quality assurance products required by the customer and providing him with evidence of the company's ability to achieve this. The mechanism of the quality system, methods and tools are focused on this goal. In most cases, the creation of quality management systems and its certification are voluntary.

The main goals and benefits of implementing modern quality management systems (Fig. 4):

- first, the successful implementation of quality management standards ensures the creation of a system that ensures the gradual growth of business performance. Due to the reengineering of processes in need, the possibility of their rapid and dramatic improvement in growth can be in some cases even drastic;
- secondly, due to the standardization of procedures there is a clear division and increased responsibility of participants in certified processes.

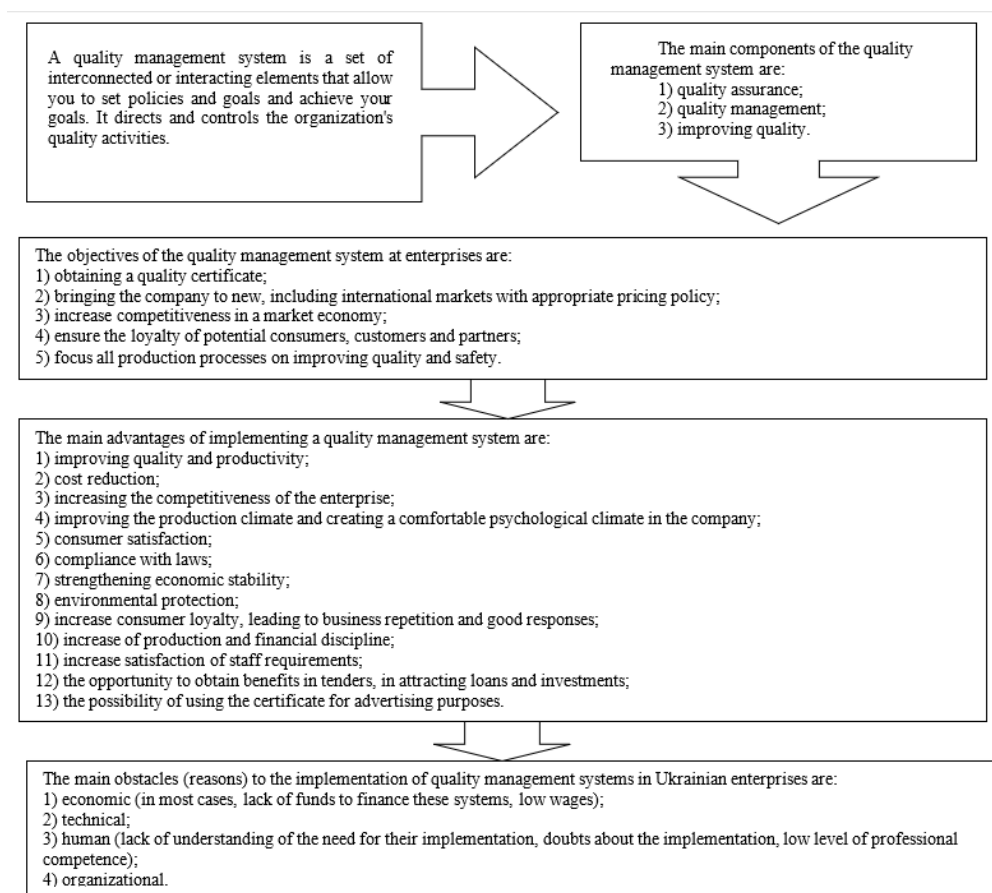


Fig. 4 The essence of the quality management system in the enterprise

The quality management system is focused, on the one hand, on identifying enterprising employees, their effective rotation, on the other hand, eliminates duplication of functions. As a result, the overall manageability of the organization increases;

- thirdly, according to statistics, the implementation of quality management systems reduces the share of marriage by 25%. The requirement of the standard is the implementation of phased quality control of products at all stages of the life cycle;

- fourth, the use of marketing is not as a sale of products, but as a way to find out what the product must be to buy it.

Building and implementing a quality management system in the organization is a complex procedure that requires significant time and resources and is focused on continuous improvement and improvement of activities. There are two main goals of developing quality management systems. The first is to optimize the work of the organization and ensure, in particular, the competitiveness of products and services produced, increase production efficiency. The second goal is to demonstrate to all potential consumers the ability to consistently produce products of a given level of quality that meets all their requirements and needs.

According to the state standard DSTU ISO 9001: 2016 [32], the introduction of quality management system should be a strategic decision of the organization. Its development and implementation in the organization are influenced by the following factors:

- a) the organization's environment, changes in that environment, and the risks associated with that environment;
- b) changing the needs of the organization;
- c) specific goals of the organization and its mission;
- d) existing processes for the production or provision of services; e) the size and structure of the organization.

In the process of creating a quality management system in the organization it is advisable to implement its basic principles and management methods.

The principles of quality management are the fundamental principles and ideas that underlie the construction and operation of quality management. The principles determine the mechanism of building a quality management system, help to understand DSTU ISO 9001: 2016, evaluate the existing management system. According to the standard, the construction of quality management systems is based on the following basic principles: 1) focus on the consumer (customer); 2) leadership; 3) involvement of employees; 4) process approach; 5) a systematic approach to management, 6) continuous improvement and improvement; 7) making decisions on the basis of facts; 8) mutually beneficial relationships with suppliers

An important element of creating a quality management system in the organization is the implementation of its process approach. The "process" approach is understood as the application within the organization of a system of processes together with their identification and interaction, as well as their management in order to obtain the established result. This approach involves the transition from a functional model of the organization to the integration of all operations aimed at meeting the needs of consumers in quality products. The process model is a kind of mechanism for organizing and structuring work in the organization and makes it possible to consider its activities in both vertical and horizontal directions on the principle of closed management.

The process of quality management in the enterprise is carried out in several stages and depends on the chosen concept of the enterprise and quality strategy. The content of operations of the quality management process and the conditions of their implementation are given in table. 5.

Table 5

The content of operations of the quality management process and the conditions of their implementation

<i>N</i> _o	The composition of operations	Conditions for successful operations
Goal setting		
1	<ol style="list-style-type: none"> 1. Defining goals 2. Justification of goals 3. Formation of goals 4. Goal setting 5. Adjustment of goals 	<ol style="list-style-type: none"> 1. Qualification level and professionalism 2. Consideration of objective laws 3. The system of interests 4. The amount and value of information
Option		
2	<ol style="list-style-type: none"> 1. Evaluation of the management mechanism 2. Choice of management methods 3. Substantiation of methods 4. Combining methods 	<ol style="list-style-type: none"> 1. Features of the control mechanism 2. The composition of the means of influence 3. Conformity of means of influence
Information work		
3	<ol style="list-style-type: none"> 1. Accumulation of information 2. Storage of information 3. Search for information 4. Information processing 5. Transfer of information 	<ol style="list-style-type: none"> 1. Amount of information 2. The value of information 3. The possibility of an information system 4. Automation of processing
Analytical work		
4	<ol style="list-style-type: none"> 1. Estimation of parameters 2. Calculation of indicators 3. Graphic work 4. Classification, analysis 	<ol style="list-style-type: none"> 1. Method of analysis 2. Qualification of workers 3. Automation of calculations and logical operations
Development and selection of options for action (type of solutions)		
5	<ol style="list-style-type: none"> 1. Search for options 2. Definition of selection criteria 3. Comparison of options 4. Organizational design 5. Decision making 	<ol style="list-style-type: none"> 1. Methods of development 2. Experience and qualifications of the head 3. Use of modern technology 4. Work style
Organizational and practical work (implementation of decisions)		
6	<ol style="list-style-type: none"> 1. Bringing the decision to the performers 2. Clarification and clarification of the decision 3. Distribution of tasks 4. Empowerment 5. Performance control 	<ol style="list-style-type: none"> 1. Type of organization 2. Discipline 3. Socio-psychological climate 4. The authority of the head 5. Management style

The organization of quality management provides that the top management of the enterprise establishes appropriate management and control procedures depending

on the chosen strategy. The implementation of the developed concept involves all the staff of the enterprise, including workers, who must understand the goals and objectives of management and product quality.

The purpose of the next stage is to determine and justify the requirements of consumers for certain goods, and these requirements may apply to suppliers of certain materials, spare parts, semi-finished products by the manufacturer and end consumers indirectly through product quality.

Closely related to the identification of consumer requirements and needs is the stage of control over the current levels of implementation of quality management decisions. To do this, it is necessary to determine the methodological tools for measuring deviations from a given level of quality. Such tools in the control of production procedures are various statistical methods of selective and continuous control, quality control maps, charts, pareto-analysis and more. The link between the third and fourth stages is usually made using a systematic approach and analysis. The general procedure of quality management is shown in fig. 5.

The next step is to implement the adopted quality strategy. The complexity of the implementation lies in the variety of aspects of quality associated with the many works performed by staff both directly to the manufacturer of finished products and intermediaries. The task of quality management is to develop a common ideology and understanding of the company's position in the adopted quality strategy for all categories of personnel: management, production, warehousing and other categories of workers, drivers, workers engaged in cargo handling and packaging, specific specialists in quality control in production and service [28 , p.69].

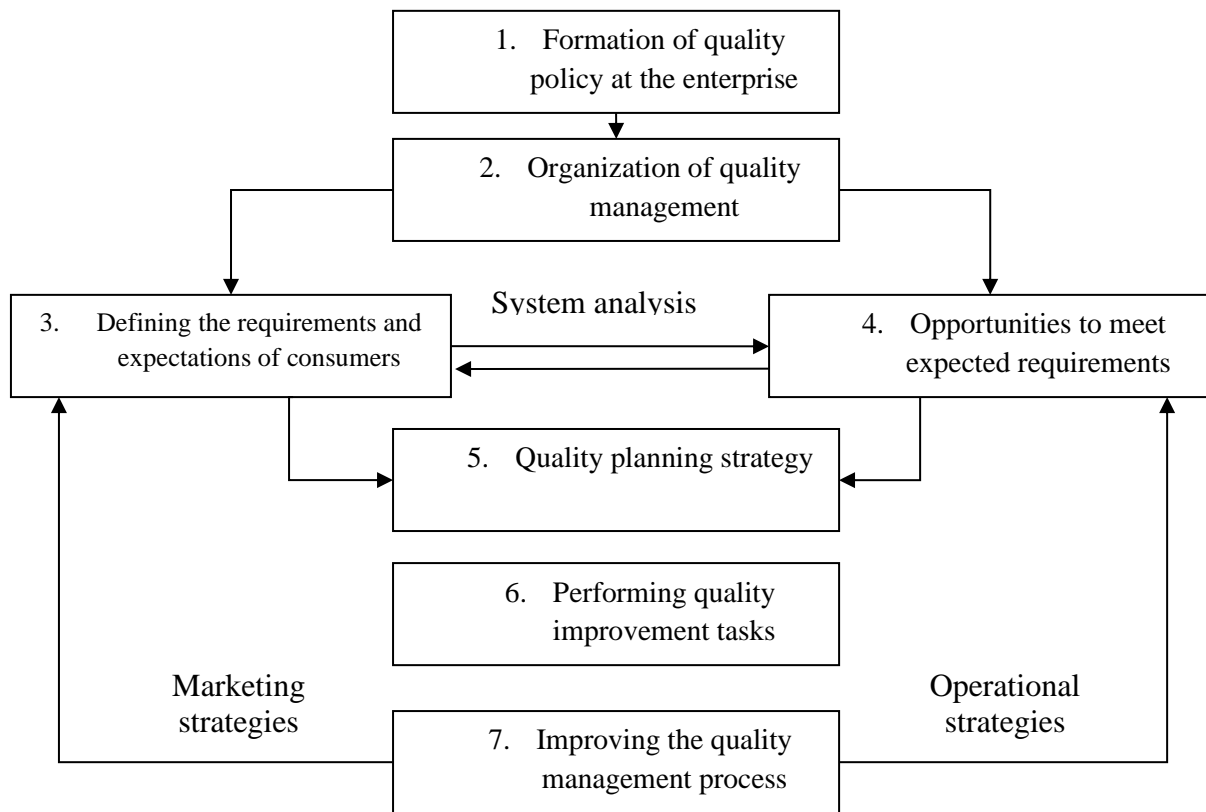


Fig. 5. The process of quality management in the enterprise

The quality management system is based on a set of certain standards - the requirements established by regulations for the volume, quality and conditions of service. Standards contain a list of services, regulations for service delivery processes, etc.

Today in quality management the certification of quality management systems is important, which is a guarantee of high stability and stability of product quality. A certificate of quality system allows the company to maintain a competitive advantage in the market.

In international practice, the safety of products for humans and the environment has long been confirmed by certification and, although its cost is significant, the manufacturer is forced to obtain a certificate in order to have a market and avoid losses when selling their products.

Among the existing and widely used methods of ensuring production, the leading place is occupied by in-house technical quality control. At the enterprises the functions of direct quality control of components and in general ready-to-eat products are

performed by technical control departments. The main task of technical control is to constantly ensure the necessary quality control, recorded in regulations, by direct inspection of each product and targeted impact on the conditions and factors that shape it.

Successful solution of this problem can be achieved with the right choice of objects and methods of quality control. The objects of control should be all components of all components of the production system and its interconnected elements, ie input (resources), the production process itself, output (products).

The need to control resources (materials, energy, tools, information, personnel) at the entrance to the system is due to the fact that their quality determines the competitiveness of the finished product.

Product quality is largely determined during the production process. This necessitates careful control of the technology of its manufacture. The objects of control here are full compliance with production and labor discipline, technological modes of processing and assembly of products. The main output control of the production system (enterprise and its divisions) is to prevent the transfer of defective products to the consumer or the next technological phases (stages) at the same enterprise with the ensuing consequences. In addition, such control makes it possible to determine the degree of fulfillment of production tasks of economic results of production.

The object of control is the level of product quality. The level of quality is a quantitative characteristic of the degree of suitability of a particular type of product to meet a specific demand for it as compared with the relevant baseline indicators under fixed conditions of consumption. Product quality assessment involves determining the absolute, relative, future and optimal levels.

The absolute level of quality of a product is found by calculating the indicators selected for its measurement, without comparing them with the corresponding indicators of similar products. Determining the absolute level of quality is insufficient, because the absolute values of quality meters do not reflect the degree of its compliance with modern requirements. Therefore, at the same time the relative level of quality of certain types of products is determined by comparing its indicators with the absolute

quality indicators of the best domestic and foreign counterparts. However, the level of product quality under the influence of scientific and technological progress and consumer demands must constantly grow. Therefore, there is a need to assess the quality of products based on its promising level, taking into account the priority areas and rates of development of science and technology. For new types of products and especially tools, it is advisable to determine the optimal level of quality, ie its level at which the total social costs of production and use (operation) of products under certain conditions of consumption would be minimal.

The main advantage of building an effective management system and quality assurance is the guarantee of ordering manufacturers, survival in market conditions and competition.

An effective means of product quality management is its standardization, which includes a set of norms, rules, requirements for the quality of specific products.

The product standard is the main normative and technical document in which quality indicators are set based on the latest advances in science, technology, best practices and consumer demand.

Quality indicators, which are standardized in food standards, guarantee consumers the nutritional value of products, their high taste, safety and more. The standard regulates the requirements not only for a specific type of product, but also for technological processes and modes, raw materials, equipment, control, measuring instruments and more. It is a normative and technical document, as the indicators provided for in it correspond to the minimum level of quality, at the reduction of which the products are considered to be of poor quality.

Standards can be:

- international - adopted by international standardization bodies;
- regional - adopted at the appropriate regional level by the competent authorities of certain geographical or economic areas, such as Asia, Europe, etc .;
- national - state standards of Ukraine, adopted by the central executive body for standardization.

Today, the normative documents that set the basic requirements for quality management systems are the international standards of the ISO series and the state standards of Ukraine developed on their basis.

ISO standards are the minimum set of rules that should be followed by every organization whose activities are aimed at continuous improvement and reducing the number of problems both internally and when interacting with external consumers. The ideology of the quality management system according to the ISO model is based on the use of the system of international standards developed by the International Organization for Standardization (ISO). ISO is a non-governmental global federation of national standardization bodies. Work on the preparation of international standards in this organization is carried out through ISO technical committees, which involve both governmental and non-governmental quality organizations.

The total portfolio of the current base of international ISO standards includes about 19 thousand documents, which can be divided into three groups: basic (standards that contain guidelines for the construction, implementation and application of quality management systems); support standards (provide assistance in conducting audits, risk management, use of statistical methods of analysis and quality control, measurement management, quality economics management, etc.); sectoral (the largest group that sets specific requirements for quality management systems in various fields and industries) 14.

The fundamental standards in the ISO 9000 series of standards are: ISO 9000: 2015 - Quality Management System. Basic principles and concepts. This standard establishes the basic principles and defines the terminology required for the correct application in practice of implemented quality management systems.

ISO 9001: 2016 - Quality management systems. Requirements. The standard specifies the requirements that the organization will meet to meet the needs and expectations of consumers regarding quality.

ISO 9004: 2009 - Management of sustainable success of the organization. Quality management approach. The standard provides guidelines for managing an organization in a complex and changing environment from a quality perspective. The

standard is aimed at: improving the performance of the organization; satisfaction of consumers and other stakeholders; involvement of all employees in these processes; implementation of preventive and corrective actions.

ISO 19011: 2009 - Guidance on the audit of quality management systems and environmental management systems. The document contains recommendations for the audit of quality management systems and environmental management systems [32].

All these standards have been introduced in Ukraine through national standards: DSTU ISO 9000-2016, DSTU ISO 9001-2016, DSTU ISO 9004-2009, DSTU ISO 19011: 2009. This allows for the development of a coherent set of standards that promotes mutual understanding in national and international trade through the common recognition of quality management approaches, principles and methods.

In addition to general standards, a system of industry quality standards is being developed, based on ISO 9000 series standards, which reflect the special requirements for certain areas of economic activity, as well as complement each other. Such standards, in particular, are as follows.

ISO 14000 - Environmental management system. The system of standards is focused on reducing the negative impact on the environment and at three levels: organizational (through improving the "environmental behavior" of the organization as a result of compliance with environmental standards); national (through the use of standards in public environmental policy); international (through improving the conditions of international trade in environmentally friendly goods). The introduction of environmental management approaches in the organization provides improvement of its image in the field of environmental protection, the introduction of resource-saving production technologies, expanding the segment of environmentally friendly products, improving the management system and more.

OHSAS 18000 (Occupational Health and Safety Management Systems) - Occupational Health and Safety Management Systems. The requirements of the standard are aimed at ensuring occupational safety, protection and reduction of human losses and disability. The standard was developed with the participation of companies and research organizations in the UK, Japan, South Africa and Ireland. Includes the

following main elements of the occupational health and safety management system in the organization: development of the organization's policy in the field of occupational safety and health; use of quantitative methods to assess the state of occupational safety; calculation of indicators of efficiency of labor safety management; analysis of events and critical situations; conducting safety audits, production and technical inspections; investigation of events; division of responsibilities; event prevention and first aid; implementation of fire prevention measures; protection of property and information; formation of culture and labor safety, etc.

SA 8000 (Social Accountability) - Standard of social responsibility. The standard is aimed at implementing a system of social and ethical management on a voluntary basis. It was developed in 1977 and is based on the norms of corporate social responsibility. The following international documents were used in the development of the standard: conventions of the International Labor Organization and related international human rights instruments, the UN Universal Declaration of Human Rights, the UN Convention on the Rights of the Child, etc. The standard sets requirements for the regulation of the following issues: child labor; forced labor; health and safety; freedom of association and the right to negotiate when concluding a collective agreement; inadmissibility of discrimination; disciplinary measures; working hours; guarantees of wages and social security; management systems.

Within the framework of Ukraine's integration into the world community, the quality of agricultural products, in particular the quality of food products, is given special attention. Consumer demands for food safety are constantly growing, which leads to a significant number of standards in this area.

In order to avoid contradictions related to different standards adopted in the world, the world standard ISO 22000: 2010 was developed. It is based on the international concept of HACCP - Hazard Analysis and Critical Control Points (HACCP), which is a tool for food safety risk management.

HACCP (system of risk analysis and control (regulation) at critical points) - a system for identifying, assessing, analyzing and controlling risks that are important for food safety. It is a scientifically sound, rational and systematic approach to product

identification, assessment and control of risks that may arise during the production, processing, storage and use of food.

Today, the HACCP food safety management system is recognized as the most reliable system in the world that prevents the production of unsafe food.

The ISO 22000: 2010 standard is a flexible system of requirements that guarantees the safety of food products in the technological process of their production in a chain "from the field to the table". Implementing a food safety management system helps organizations focus on the risks that affect food safety and food hygiene.

For modern organizations it is important to build integrated management systems as a condition for purposeful development of the organization aimed at excellence. An integrated management system is one that meets the requirements of more than one system standard (ISO 9001, ISO 14001, OHSAS 18000, SA 8000, ISO 26000, ISO 27001, etc.), and is focused on meeting the needs of stakeholders: owners, staff, consumers, suppliers, society as a whole.

A sign of integrated management systems is the following: development of general policy of the organization, where the main goal - improving quality, complemented by other goals in the strategic development of the organization, increasing financial stability and profitability, compliance with environmental safety, health and safety, occupational safety; formation of a common model of processes. At the same time, the common processes inherent in the systems implemented in the management of the organization are built. Such processes are: analysis by management; documentation management; HR; monitoring and measurement; internal information; continuous improvement; corrective and precautionary measures; data analysis; drawing up a joint document on the management of the integrated system, which describes the relationship of all processes, establishes inputs and outputs of processes and determines the criteria for their effectiveness of processes, develops a matrix of staff responsibilities according to organizational structure, etc.

The other side of the process of setting standards and requirements for products, processes, procedures, etc. and certification of compliance with these requirements is certification.

Certification is a procedure by which the authorized body documents the conformity of products, quality systems of the environmental management system, personnel, the requirements established by law [36].

Product certification is carried out in order to:

- prevention of the sale of products dangerous to life, health and property of citizens and the environment;
- assisting the consumer in the competent choice of products;
- creating conditions for the participation of business entities in international economic, scientific and technical cooperation and international trade.

In world practice, the system of standardization and certification of products is based on the initiative of consumers and producers. In Ukraine, there is mandatory and voluntary certification (Fig. 6) [33, p. 263].

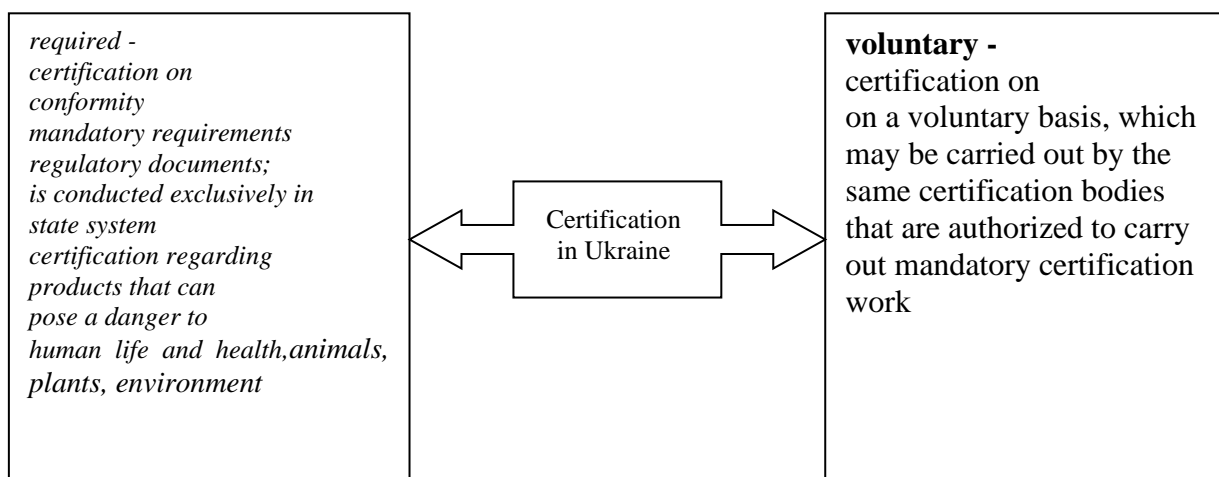


Fig. 6. Types of certification in Ukraine

Certification ends with the issuance of a certificate. A certificate is a document that confirms compliance with the requirements of a specific standard or other regulatory document of product quality, quality system, quality management system, etc.

Ukraine has a state system of product certification - UkrSEPRO. This organization conducts voluntary and mandatory product quality certification. Work in the UkrSEPRO system is organized by the State Inspectorate of Ukraine for Consumer

Protection (State Consumer Inspectorate of Ukraine), which is a national certification body.

The most famous certification bodies for management systems, accredited in accordance with the requirements of ISO / IEC 17021: 2011 (DSTU ISO 22000: 2007 Food safety management systems. Requirements for any food chain organization), which have the right to issue certificates of conformity to agricultural enterprises in Ukraine, are: LLC "Intersectoral Quality Center" GROWTH (Kyiv), Certification Authority Management System LLC Testing Certification Center "PIVDENTEST" (Dnipro), Certification Authority Management System State Enterprise "Nikolaev Research and Production Center for Standardization, Metrology and Certification" (Mykolaiv), SE "Kyiv Regional Standard Metrology" (Bila Tserkva), Management Systems Certification Body "GLOBAL CERTIFICATE" LLC (Kyiv), etc. [35].

Internationally known accreditation centers providing services in agriculture are: NSF International (Belgium), United Kingdom Accreditation Service (UK), National Accreditation Board for Certification Bodies (India), Dubai Accreditation Center (UAE), Singapore Accreditation Council (Singapore), Deutsche Akkreditierungsstelle (Germany) and others. [34].

At the international level, there are different international schemes of certification of agriculture [21, 24], and in the markets of different countries, buyers prefer different schemes. The most common of them in agriculture include:

1. Global GAP Integrated Farm Assurance (IFA) - a scheme of international certification for compliance with the standard of good agricultural practice, which applies to crop production, animal husbandry, feed production. It allows to improve the practice of agricultural enterprise management and compliance with legislation in key areas of food safety, environmental protection, health and safety of workers, animal care [35].

2. Primus GFS is an international certification scheme that focuses on the food safety of fresh or minimally processed products from the agricultural sector and is intended for human consumption. This scheme covers the chain of agricultural

activities from production to delivery to the final consumer. Covers HACCP, GAP, and food safety management systems.

3. BRC - Global Food Safety Standard covers food safety and product quality management in packaging and processed agricultural products. This certificate helps to ensure the consistency of ingredients in finished food products.

4. FSCS 22000 - certification system designed for enterprises that process or produce products of animal origin, perishable products, vegetable products, long-term storage products, as well as various supplements and vitamins.

5. IFS - certification scheme for compliance with international standards IFS and GFSI to verify food safety and quality of food production processes. IFS includes requirements for senior management systems, food quality and safety management systems, resource management, production process, measurement, analysis, improvement and protection of food.

In addition to the significant benefits of implementing international certification, there are a number of caveats and deterrents for Ukrainian agricultural producers. Thus, the most common reasons for the reluctance of agricultural producers to certify their production, experts include:

- low level of production infrastructure development. The facilities most often required for certification are often missing: storage facilities for products, designated storage areas for fertilizers and pesticides, and facilities for processing products;

Disposal of fertilizers and pesticides remains a rather difficult issue. Sometimes these containers are simply burned or reused in the household, which is unacceptable;

- use of agricultural machinery that does not meet technical standards;
- the need for certain investments to obtain a certificate and for its annual confirmation, etc. [36].

The study of some international certification systems allowed to form a typical algorithm for domestic agricultural producers (Fig. 7) [37, p. 137].

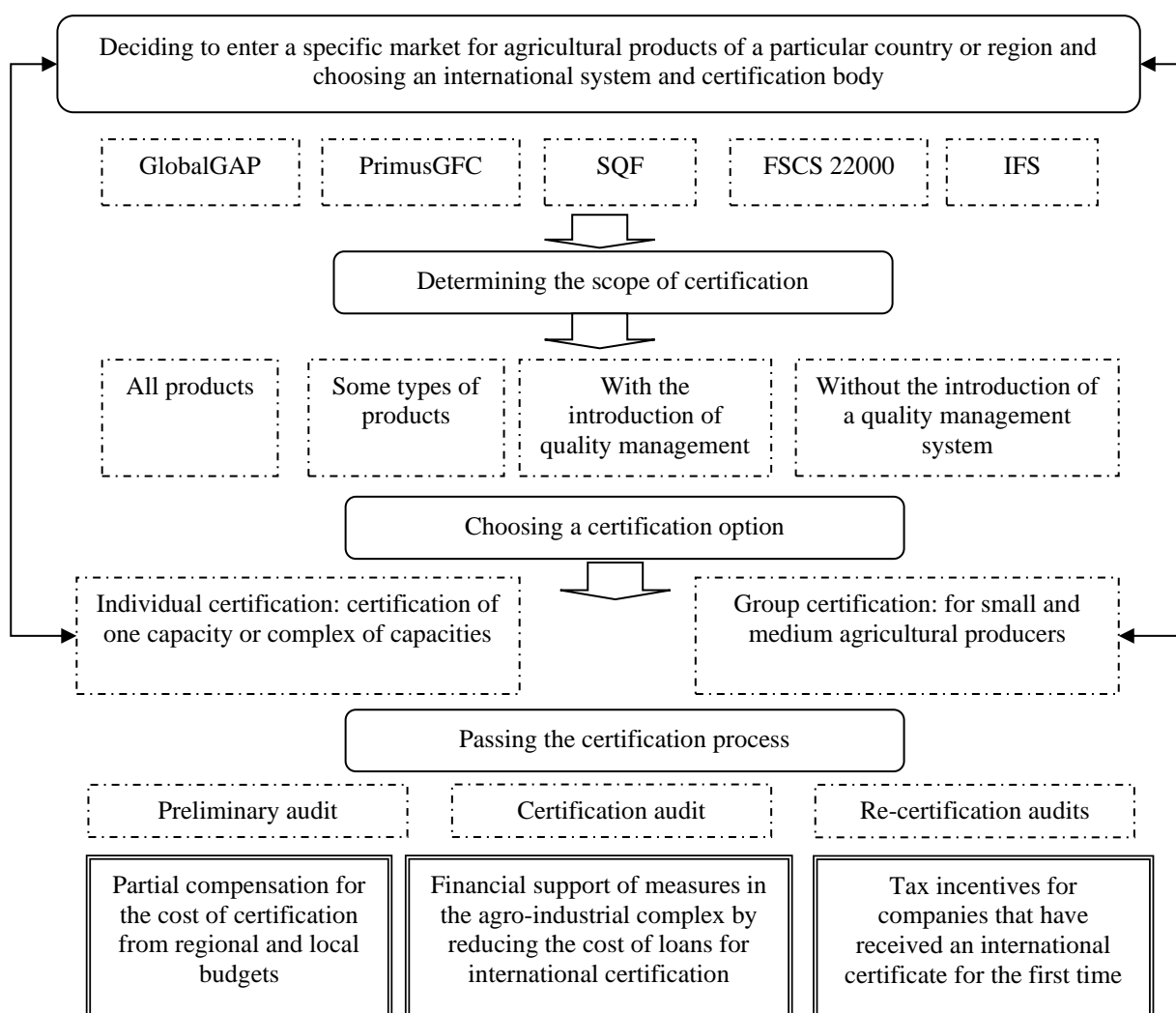


Fig. 7. Typical algorithm for certification of agricultural producers of Ukraine in accordance with the requirements of international systems in the context of forming a quality management strategy at the enterprise

It is established that the most vulnerable point in the development of certification of agricultural producers to meet the requirements of international systems, regardless of their activities (crop, livestock, organic production), is the cost of certification.

In order to reduce the cost of the international certification process, it is appropriate for research subjects to certify only those products that are exported when entering the world market. In this case, the certification of all economic activities of the agricultural producer, if desired, may take place later.

Certification, as part of the strategy of quality management of agricultural producers, can not only form their competitive advantages in the world market, but also

improve the quality of agricultural products and food products in the domestic market, which in turn has a positive impact on the overall economic situation. demographic problems. Therefore, this problem should be solved with the assistance of state, regional and local authorities.

Globalization of the world economy, Ukraine's integration into the European space expand the boundaries of markets for domestic enterprises. Open economy makes high demands on the quality of domestic enterprises, ensuring their competitive advantages, which necessitates improving the efficiency of production management in terms of quality management. Modern and effective quality management system should take into account the characteristics of each stage of the product life cycle, the specifics of entities that provide both the entire life cycle and its individual stages, the level of product innovation, based on quality control not of products but project procedures and technological processes used in the creation of products and the introduction of cultural and value motivation of staff.

An important role in the formation of an integrated quality management system at Ukrainian enterprises, especially in the context of European integration, is played by public policy, whose main tasks are to form the concept of improving and developing product quality management system in Ukraine, defining their strategic guidelines. Conditions for the functioning of enterprises and organizations are changing at the macro- and microeconomic level. Thus, enterprises in a mixed economy differed from similar market-oriented enterprises both in individual characteristics, such as size and "behavior" in the external environment.

Figure 8 shows the "concept of the enterprise": resource, information, behavior and more. The concept of the enterprise as an "open system" is gaining more and more supporters.

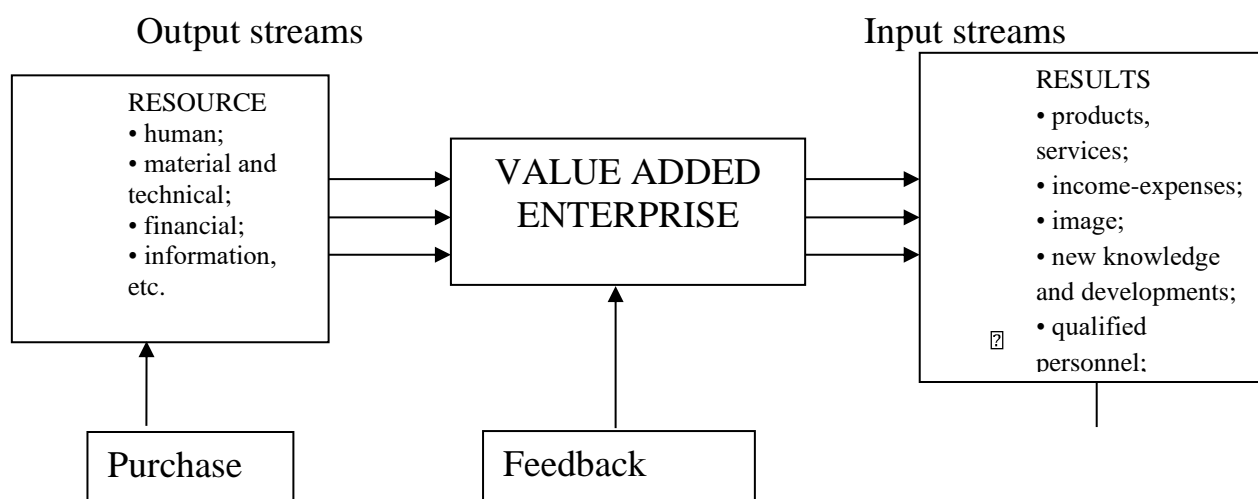


Fig. 8. The concept of enterprise as an "open system"

In fig. 8 presents a comparative description of "closed" and "open" enterprises, which allows to determine the advantages of the latter.

The activities of any enterprise can be described in terms of the model "entry - exit": at the entrance of the enterprise are all kinds of tangible and intangible resources (raw materials, equipment, personnel, finance, information, etc.), and at the "exit" - goods, services, highly qualified staff, etc.

Strategic planning as a phenomenon and process of predicting the future and preparing for the future is interpreted quite broadly: as an integrated process of preparation and decision-making of a certain type, as formulating goals and identifying ways to achieve them, as preparing the company to compete in markets and more. Strategic planning covers a system of long-, medium- and short-term plans, projects and programs, but the main substantive emphasis is placed on long-term goals and strategies to achieve them.

Initially, strategic planning was limited to defining goals and strategies to achieve them, ie defining the strategic policy of the enterprise in the system "product - market".

The initial idea, which reflects the essence of the concept of strategic management, is the idea of the need to take into account the relationship and interaction of external and internal environment in determining the goals of the enterprise; strategies in this case act as tools to achieve goals, and to implement strategies it is

necessary that the whole enterprise operates in a strategic mode.

The concept of strategic management underlies strategic thinking and finds expression in certain characteristics of its application:

1. It is based on a certain combination of theory: systemic, situational and targeted approaches to the activities of the enterprise, which is interpreted as an open socio-economic system. The use of only one of these principles does not allow to achieve the desired results - the development of the enterprise in the long run.

2. Focuses on the study of the conditions in which the enterprise operates. This allows you to create adequate to these conditions strategic management systems that will differ from each other depending on the characteristics of the enterprise and the characteristics of the external environment.

3. Focuses on the need to collect and use strategic information databases. Analysis, interpretation and application of information for strategic decision-making allows to determine the content and sequence of actions for change in the enterprise by reducing the uncertainty of the situation.

4. Allows you to predict the consequences of decisions made by influencing the situation through the appropriate allocation of resources, establishing effective relationships and forming strategic behavior of staff.

5. Provides for the use of certain tools and methods of enterprise development (goals, "goal tree", strategies, "strategic set"), strategic plans, projects and programs, strategic planning and control.

Strategic management is a multifaceted, formal-behavioral management process that helps to formulate and implement effective strategies that help balance the relationship between the organization, including its parts, and the external environment, as well as achieve goals.

Just as it is difficult to imagine two identical companies, it is impossible to create identical strategic management systems. Characteristic features of the strategic management system of a particular enterprise depend on the interaction of the following factors:

- industry affiliation;

- the size of the enterprise;
- type of production, level of specialization, concentration and cooperation;
- characteristic features of production potential;
- presence (absence) of scientific and technical potential.

General competitive strategies exist in the following types:

- leadership in reducing costs (prices);
- differentiation;
- focusing.

These strategies link the goals set by managers to fill the strategic gap with the competitive advantages that allow the company to achieve them (more detailed description of strategies according to M. Porter).

Table 6

**Characteristic features of competitive strategies
(according to the approach of M. Porter)**

Strategy	The main features	Risks
Leadership based on cost reduction (prices)	Production characteristics: "No one will make it cheaper." Marketing features: «Price calculations / low costs" Standardized products: only a few varieties, limited choice No significant changes in the conduct of business: "the reputation of a modest and reliable company." Taking into account the features of the "experience curve": lower prices ® additional income due to increased sales and market share ® reduced conditional fixed costs per unit of output due to the effect of scale. High productivity per 1 worker. Reduce the cost of innovation. Possibilities of setting the lower limit of market prices: the leading position allows you to use prices as an offensive or defensive weapon. Permissible low marginal profit at high speeds.	With a technological breakthrough (invention, creation of new technology) - the risk of losing the advantage Convergence of previously made investments. The need for additional costs ("conversion costs") for the reconstruction (liquidation) of mass production. Competitors' research on the same indicators due to imitation and targeted cost reduction measures. Delays in reacting to changes in the market due to over-focusing on cost issues. Investment growth costs, as a result of which it is impossible to minimize the benefits of differentiation.

Continuation of table 6

<p>Differentiation</p>	<p>Production characteristics: "no one will do it better". Marketing features: "our products (services) are the best among others". The basis - variety, choice of models, batches, parts, service, etc. Creating more than one distinctive feature of a product (service). Various innovations. Individual prices that exceed the cost of obtaining various features. Intensive advertising and sales activities.</p>	<p>The attractiveness of differentiation (ie the peculiarity of the range, additional services) may be less than economic motivators, because differentiation is usually expensive (compared to serial and mass production of similar products). The need for differentiation will decrease due to increased consumer awareness of the market situation in general and for individual product groups. Imitation can hide the difference between goods (especially at the stage of maturity of the industry).</p>
<p>Forcing</p>	<p>Production characteristics: "made just for you". Marketing features: "we meet your needs best of all." Specialization in a certain niche: customer segment, geographical region, final consumption. Competitive advantages are protected: a) leadership based on cost reduction in a particular market segment or b) in-depth differentiation (manufacturing a product or providing a service to meet the special needs of consumers in the target segment).</p>	<p>Reducing the effect of differentiation by focusing by increasing the cost of servicing a narrow strategic target group (movement to the left of the break-even point). Reduction of differences in the characteristics of the needs of a narrow strategic group and the market in general (potential consumption of consumers). Due to further market segmentation within the strategic target group of the competitor (loss of consumers).</p>

The combination of general and general competitive strategies depends on the characteristics of the industry, the overall competitive position of the firm in the environment, as well as the characteristics of the enterprise itself.

When developing the overall strategy of the enterprise take into account certain factors that are under the direct influence of managers. General strategies set the parameters of the strategic set, so each time they are researched, justified and implemented.

Determining the main course of Ukraine's European integration involves bringing the products of national producers in line with the requirements of the

European Union aimed at ensuring consumer protection, namely technical, environmental and requirements in the field of sanitary and phytosanitary measures. The main problems of implementing a progressive quality management system include [38]:

- contradictions and inconsistencies of regulations of national legislation to ensure quality in accordance with European requirements;

- lack of practical experience in implementing a quality management system. Unfortunately, the quality management system of national enterprises began to implement when there was a need to move to international standards, while the world's leading countries have extensive experience in implementing management systems, a strong theoretical and methodological basis;

- lack of qualified specialists in the field of quality management. There are few specialists in Ukraine who are well-versed in quality management systems and their implementation in enterprises, taking into account the specifics of each enterprise.

In Ukraine, there is a tendency for most business leaders and organizations to be aware that without modern management systems they will not have stability and growth in the near future, and the concept of quality is reduced to the need to comply with technical conditions and requirements. Ukraine is actively working to reform the technical regulation system. The Laws of Ukraine “On Metrology and Metrological Activity”, “On Standardization” were developed and adopted, which provide for the harmonization of legislative acts with documents of International Organizations of Standardization, Legislative Metrology, and acts of EU legislation. The implementation of these laws is aimed at improving national legal and organizational principles in relevant areas, bringing them into line with European models. The functions of the national standardization body are entrusted to the state enterprise "Ukrainian Research and Training Center for Standardization, Certification and Quality". The state is working to bring national standards to European standards. We offer a three-level system of strategic guidelines for improving the management system and quality assurance, the areas of which are divided into the following groups:

organizational and legal, economic, cultural and value [33]. The strategic guidelines of the first level - the state level - include:

- harmonization and improvement of the regulatory framework in the field of quality, - obtaining the right of Ukrainian institutions in the field of quality to issue certificates of European standard, adoption of international standards in the field of quality management, approval of national standards;

- development of theoretical and methodological recommendations for the implementation of quality management system;

- creation of units in the executive authorities to promote the implementation of quality management system, the main task of which is to monitor the status of work on the development and implementation of modern quality management systems;

- creation of a multilevel and extensive system of education in the field of quality, an extensive network of methodological and advisory centers, the development of research in the field of quality management;

- development and implementation of the program of state support of domestic enterprises that are at the initial stage of implementation of the quality management system;

- investment support for standardization and product quality assurance;

- formation of a unified national system of values; -development and implementation of ethical principles of doing business;

- coverage in the media of the experience of domestic enterprises in the implementation of quality management system, quality issues, business excellence and social orientation [39].

The second level of strategic guidelines for the implementation of quality management systems, improvement of existing ones is the regional level. It includes the following guidelines:

- formation of a regional center of standardization, certification, which will have the right to issue quality certificates of national standard;

- harmonization of regional regulations on quality assurance and implementation of its management system, which will meet the requirements of partner countries;

- creation of a progressive system of training specialists in quality management;
- stimulating the development of enterprises that are at the stage of implementing a quality management system;
- stimulating the development of enterprises whose activities are aimed at providing services for the development and implementation of quality management systems for enterprises;
- creation of a regional monitoring system for product quality and the state of work on the development and implementation of modern quality management systems;
- formation of a favorable investment climate;
- formation of regional programs to improve the quality of products of enterprises in the region;
- providing local budgets with financial resources for interest-free targeted lending to enterprises in the region for the development, implementation and certification of quality management systems;
- development of ethical norms of doing business, bringing them to the enterprises of the region;
- development of a system of incentives for enterprises with high quality products, progressive quality management system, conscientiously performing business activities;
- coverage of information on the latest quality management systems, the main provisions of state and regional policy in the field of quality, the experience of enterprises in the region on product quality management [39].

Among the strategic landmarks of the third level - the enterprise level - we propose to highlight:

- bringing the technical requirements of the enterprise in line with regional and national ones;
- certification and standardization of enterprise products;
- introduction of the model of organizational improvement;
- creation of a system of continuous monitoring and quality control; -increasing the competencies of employees of the enterprise;

- cultural and value motivation of staff to improve product quality;
- introduction of lean production; -transition to the 5th, 6th technological modes;
- formation of corporate culture of the enterprise;
- harmonization of value systems of the enterprise and its employees.

With the growing importance of regional development policy, a key element in ensuring the competitiveness of the region and enterprises is the creation and implementation of an integrated regional quality management system. The integrated logistics approach is based on the formation of a set of relationships and interaction of components of the product quality management system support system, namely: personnel, information, technological, regulatory, financial, methodological and organizational support based on the principles of logistics management, which will create effective regional quality management system, will encourage companies to implement progressive quality management systems that will increase the level of product quality, their competitiveness [39]. The proposed integrated regional quality management system is presented in Fig. 9. The integrated quality management system must be subordinated to the subsystem of public administration, guided by public policy. The subsystem of state quality management involves the formation and implementation of quality policy, creating an institutional environment that will promote the implementation of quality management systems at the regional level, incentives, incentives to improve product quality, improve the regulatory framework, train highly qualified specialists in quality management, which will ensure the work of regional centers of standardization, metrology and certification.

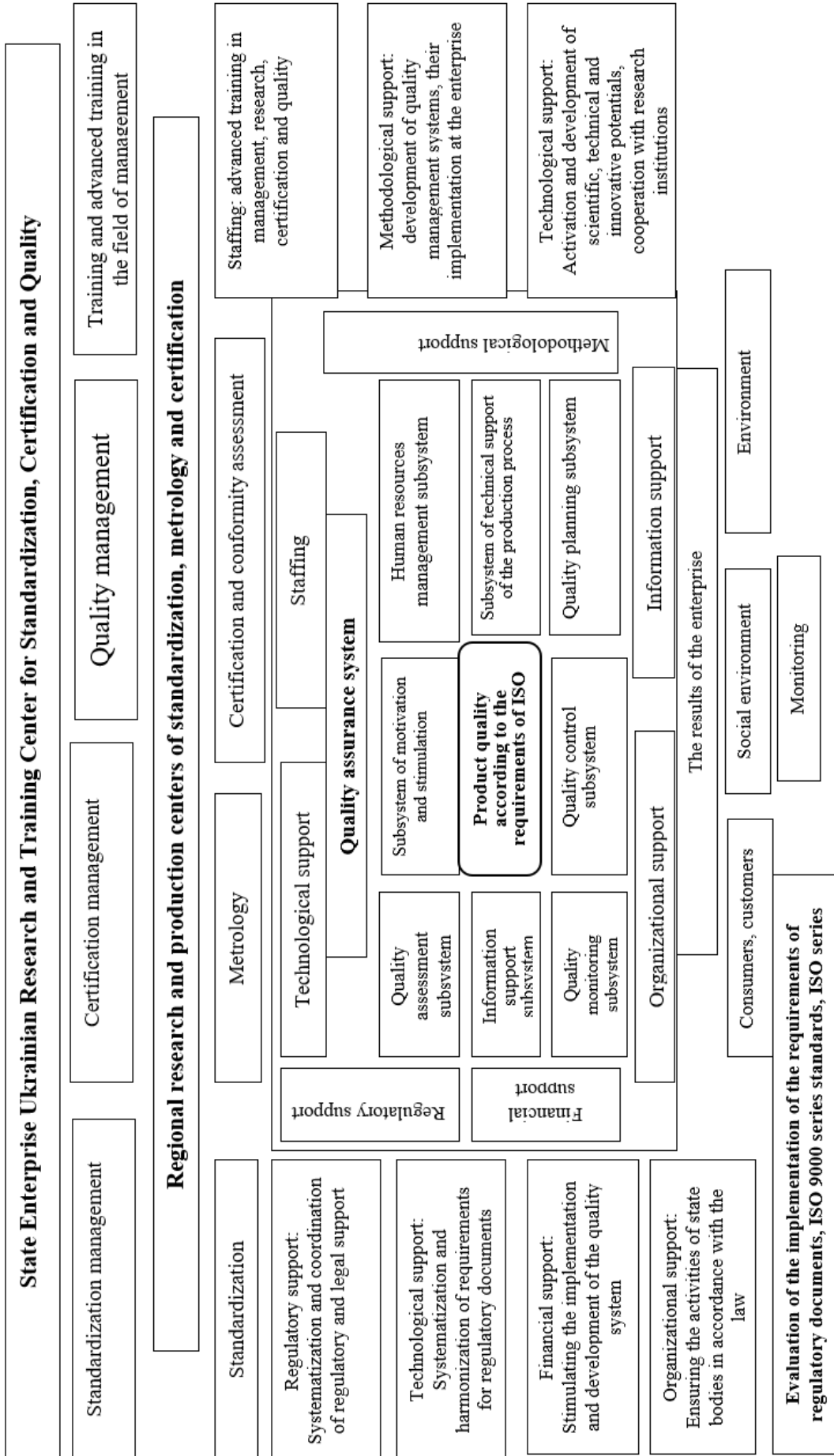


Fig. 9. Integrated regional quality management system at enterprises

The Regional Center for Standardization, Metrology and Certification acts in the regional subsystem of the quality management system. quality management. The center conducts work in the field of metrology, standardization, certification and conformity assessment, provides product testing services. The need for training of highly qualified specialists in the field of quality management should also be taken into account. To do this, it is necessary to form a subsystem of staffing, which will include the Institute for training and retraining of specialists in quality management. Higher education institutions that can produce quality assurance specialists should also be involved. The Institute of Quality Management, Standardization, Conformity Assessment and Metrology at the UkrNDNC is trained by specialists in the field of quality management.

The main direction of the existing system of training specialists in the field of quality is the training of auditors, civil servants, hold consultative seminars for business leaders, but for quality staffing this is not enough. Stimulation of a new direction of entrepreneurship - providing the company with services for the development, implementation of quality management system of a particular business. An individual approach to each enterprise will contribute to the creation of a quality management system, and the presence of organizations that provide such services at the regional level will promote the creation of individual, progressive management systems based on national methodology based on ISO 9000 series, ISO 14000 series. This subsystem is to control the quality of products of enterprises in the region, determining its compliance with national and international requirements.

The subsystem of technological support provides for the activation and development of scientific and technical potential of the region, based on the formation of close mutually beneficial links between industrial and scientific sectors of the region, which will promote the introduction of new technologies in the region.

The main task of the financial subsystem of the region is to create a favorable investment climate, develop an incentive system.

The information support subsystem involves the creation of an information portal on the requirements for quality management systems, existing quality management systems, organizations that promote the development and implementation

of management systems, company ratings according to the level of product quality, etc. At the enterprise level, product quality management should be performed in two directions:

-use of a logistical approach to quality management, which, unlike existing ones, is based on material and information flow management, which will reduce production costs, establish the optimal level of cooperation between all parts of the production process and its economic agents, speed up the process of obtaining information. customer satisfaction in product quality, control the quality of products at the stages of provision of material resources, technological process and supply [33];

Ensuring the responsibility of staff for product quality based on the development and implementation of their cultural and value motivation.

The key factor in ensuring the competitiveness of enterprises, their entry into European markets is the proper quality of their products. Identifying problems of implementation of effective quality management systems in enterprises confirms the need for a certain approach to addressing issues [26]. Adherence to strategic guidelines for improving the quality management system is proposed through the use of integration and logistics approach, which will establish a relationship between all participants in the process of quality formation based on the creation of an integrated regional quality management system.

In matters of ensuring higher product quality and increasing competitiveness, there is a high responsibility of management and motivation of enterprise personnel to increase the production of quality goods and services.

In practice, the work of enterprises on the basis of quality management, there are two main objectives of its development. First and foremost - optimizing the operation of the enterprise, ensuring its viability, in particular, the competitiveness of products and services produced, and increase production efficiency. The purpose of development is to demonstrate to the potential consumer that the company can stably produce products of a given level of quality, ie one that meets all its requirements. If to achieve the first stated goal it is enough to simply develop and implement quality management systems at the enterprise, then to achieve the second goal it is necessary

to certify quality management systems. Management is responsible for developing policies on service quality and customer satisfaction.

Responsibility for all aspects of quality policy in Ukrainian enterprises should be placed on the head of the enterprise or heads of structural units, depending on the management structure. Food quality and safety policy should take into account all types of products produced; image of the enterprise; tasks in the field of product quality; methods of performing tasks in the field of quality; the role of the company's staff responsible for the implementation of quality policy.

To perform tasks in the field of quality, the manager creates a service (or department) of the quality system, which allows at all stages of production to effectively manage product quality, evaluate and improve it. It is necessary to clearly establish the general and personal responsibility and authority of all employees on whose activities the quality of services depends. At the same time, the need for effective relations between the consumer and the supplier on all aspects of their interaction both within the organization and outside it should be provided.

However, the manager must be responsible for developing a quality system. He must be responsible directly or through his designee for the implementation of the quality system, its verification, continuous measurement of parameters and analysis for improvement. The scope of the quality system covers all functions, and continuous quality improvement requires the participation, dedication and effective interaction of all personnel of the organization.

Particular attention should be paid to the need or possibility of improving quality. The analysis should be performed by appropriate specialists or a competent, independent expert who informs the management.

Such an analysis should include clearly articulated and comprehensive assessments based on all sources of relevant information, including:

- on the conclusions of the analysis of the level of product quality, ie data on the overall efficiency and effectiveness of the production process in terms of compliance with product requirements and customer satisfaction;

- on the conclusions of internal quality inspections on the implementation and effectiveness of all elements of the quality system in terms of fulfilling the tasks of quality assurance of services;

- on changes caused by new technologies, quality concepts, market strategies, as well as social and environmental conditions.

The basic elements of the system approach are the consideration of all events, phenomena and processes in their relationship; setting priorities; work with causes, not their consequences; effectiveness.

A systematic approach to quality management in Ukrainian enterprises should be implemented through the implementation of the following main stages:

1. Identification of the problem related to non-compliance of products with the established requirements and technical conditions.
2. Analysis of the causes of nonconformities.
3. Development of measures to solve the problem.
4. Search for resources and estimate losses from non-compliance.
5. Control over the quality of work and production process.

In order to function effectively, an enterprise must identify and manage all interrelated activities. Resource-intensive activities that can be managed to convert inputs to outputs can be considered a process. Often the output of one process is directly the input of the next. The advantage of the process approach is that it provides continuous control over the connections of individual processes within the system of processes, as well as their connection and interaction. If this approach is applied within a quality management system, it emphasizes the importance of: a) understanding and complying with the requirements; b) the need to consider processes in terms of creating additional values; c) measuring the results of the process and its efficiency; d) continuous improvement of processes based on objective measurements.

In the context of quality management, management must provide the necessary and sufficient resources to improve quality and meet quality objectives. The most important resource of any organization is employees.

The leading role of management is explained by the fact that it is fully responsible for key issues of enterprise operation: resource allocation; formation of organizational structure; identification of development prospects; development and implementation of a product quality assurance and control system; development and implementation of standards, rules and procedures; control over the implementation of product quality standards; selection, training and advanced training; evaluation and promotion of performance; creating conditions for the application of a team approach to product quality management problems (Fig. 10).

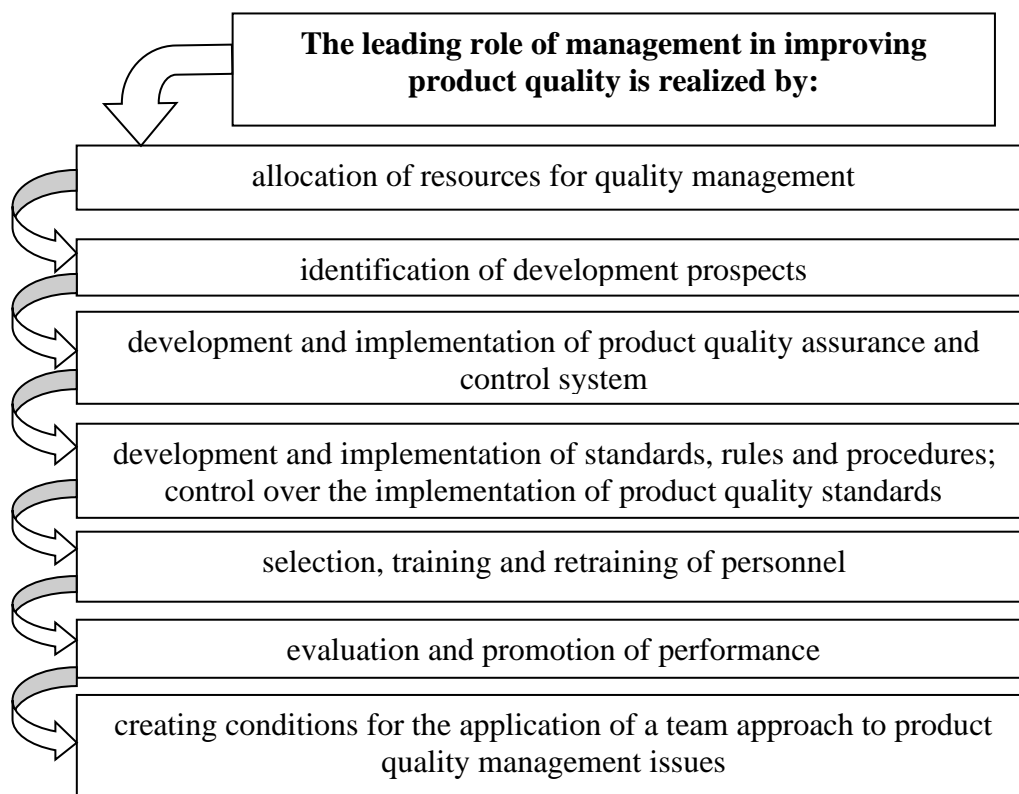


Fig. 10. Conditions for determining the leading role in the organizational support of the implementation of quality management systems

Attention should be paid to the importance of staff training in the field of quality. To ensure the successful development and implementation of quality management systems, training should be conducted for all levels of staff. Thus it is necessary to begin training with the top management.

The key function in achieving the required product quality is staff motivation. Knowledge and use of personnel management methods and, in particular, theories of motivation is of paramount importance in managing the quality of all enterprises.

Material incentives for staff to improve quality are important in the quality management system. Material incentives: in response to the previous salary increase, one can expect a more responsible attitude of the employee to the quality of their work, greater enthusiasm and, as a result, higher quality products.

Sales volumes increase not only due to improved product quality, but also due to reduced costs (then a corresponding reduction in prices) and increased production. All this will be a very real consequence of civilized relations of production, interrelated with the implementation of this method (Fig. 11) [39].

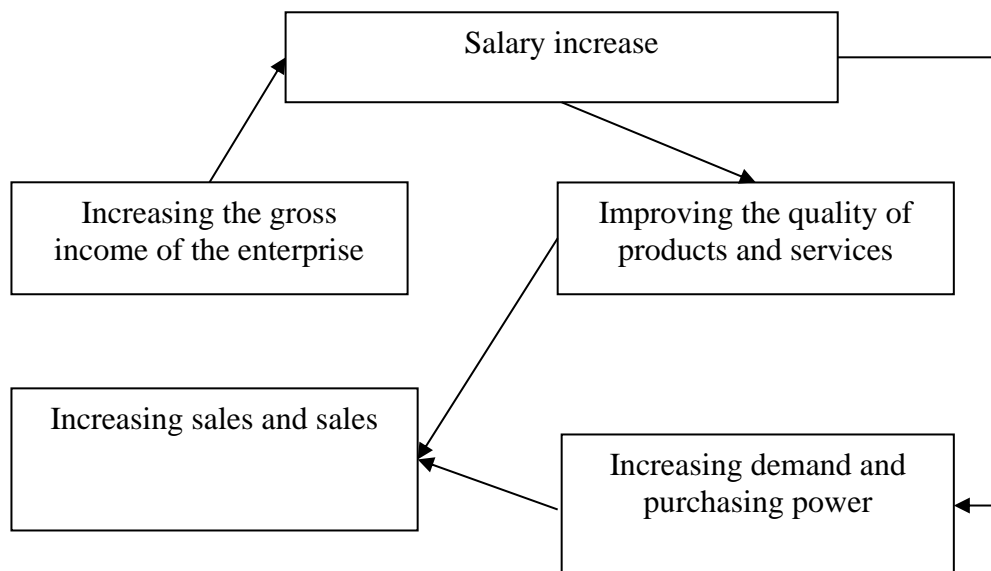


Fig. 11. The fundamental essence of the method of increasing wages in improving product quality

For the successful operation of enterprises it is necessary: managers to determine the goals and activities in the field of quality, to organize activities in quality and provide it with the necessary resources, including qualified personnel; maintain an appropriate level of staff motivation; make decisions aimed at achieving the required quality of work; to provide the production process with new technologies and materials. Both the authority and responsibility for the level of product quality and the

motivation of the staff to increase the efficiency and quality of work should be defined for all personnel of enterprises. Such procedures should be reflected in the collective agreement, employment contract, etc.

Thus, the quality management system is a personnel management system that needs to be supplemented by the implementation of a number of motivational measures, because it is necessary not only to have qualified specialists, but also to interest them in effectively realizing their potential.

Ukrainian companies should use the experience of world management to solve the problem of product quality through improving the system of marketing and organizational structure of the enterprise. To ensure the quality of products (goods, services) at enterprises it is necessary to implement a number of consistent and interdependent factors: analysis, identification and systematization of key factors and conditions that determine the competitiveness of products (goods, services) in a market economy); promising areas of development and improvement of economic mechanisms (pricing, cost, rate and mass of profit, economic efficiency, incentives, tax, credit conditions, etc.); regulatory and technical framework (standardization, certification, coding and cataloging of products, technical and economic information, etc.); substantiation of perspective directions of development and improvement of organizational mechanisms (service, advertising, etc.); improvement and dissemination of product quality management systems (based on international standards) by levels, areas, aspects (factors), stages of the "life cycle" of products, facilities, elements of product quality; substantiation of directions of formation of the system of protection of the rights of consumers on a legislative and public basis (guarantees, information, interaction with the organizations of protection of interests and the rights of consumers, etc.).

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3. Financial risk management as a component of the financial and economic activities of business entities

In today's realities, the problem of ensuring the financial security of the enterprise is urgent. This problem is especially acute in the conditions of the current economic and financial world crisis. Today, in the conditions of an unstable political situation, economic crisis, martial law in the country and a drop in the solvent demand of the population, domestic enterprises suffer from significant financial problems.

The financial activity of the enterprise is associated with many risks, the degree of influence of which on the results of its activity increases significantly with the transition to a market economy. The risks accompanying this activity are allocated to a separate group of financial risks, which play a dominant role in the general "risk portfolio" of the enterprise.

The increase in the degree of influence of financial risks on the results of the company's financial activity is associated with rapid changes in the economic situation in the country and on the financial market, the expansion of the sphere of financial relations, the emergence of new financial technologies and tools. Risks arise in the field of corporate relations with banks and other financial institutions and are associated with the probability of loss of funds or their non-receipt.

Since today the financial risks of enterprises are the most threatening and destructive, this necessitates their further research, study of the essence, types of financial risks and methods of their management. But the variability of the conditions of the economic environment requires further research into this problem. Despite constant scientific research, this issue needs further improvement, because in the conditions of the financial and economic crisis, including political instability, further research is needed to find optimal ways of analyzing and assessing financial risks and the most effective methods of minimizing them.

As a socio-economic category, risk is an integral component of industrial relations and is an organic part of the economic mechanism. In the general case, it is interpreted as a measure of the possibility of the occurrence of an adverse event or a certain combination of a number of such events. The manifestation of a risky situation

consists in the deviation of the actual values of critical indicators from the normal, stable, average or alternative level. Risk is an element of the results of any management decision due to the fact that uncertainty is an inevitable condition of business. Risk is a consequence of uncertainty. The emergence of uncertainty is due, first of all, to the fact that most processes related to entrepreneurial activity are initially non-deterministic (it is practically impossible to determine in advance the pace and directions of scientific and technical development, changes in the market situation, consumer preferences, the manifestation of these or other natural and climatic phenomena, etc.).

The peculiarity of financial risks is that they are the result of relationships between risk subjects, that is, they arise as a result of the human factor and do not have natural stabilizers of the risk level. Therefore, they have a dangerous property – they constantly change, cannot be generalized, are purely individual, etc. Therefore, the need for their classification, identification, measurement and management is of particular importance. Financial risk is the result of choosing an alternative financial solution by its owners or managers, aimed at achieving the desired target result of financial activity with the probability of economic loss (financial loss) due to the uncertainty of its implementation.

In a market economy, risk is a key element of entrepreneurship. Entrepreneurial activity is always influenced by internal and external factors. When managing risks, first of all, it is necessary to identify the existing risks (Table 1).

In this context, it is worth considering the cumulative risk, which is the sum of the business and financial risks of the enterprise and is determined by the formula:

$$\textit{Cumulative risk} = \textit{Business risk} + \textit{Financial risk}.$$

Table 1

Definition of financial risks in regulatory acts

<i>Financial sector</i>	
<i>Methodical recommendations on organization and functioning of risk management systems in banks of Ukraine, National Bank of Ukraine</i>	• Risk (from the bank's point of view) is a potential opportunity to lose income or reduce the market value of the bank's capital due to adverse effects of external or internal factors.
	• Risk (from the point of view of the National Bank) is the probability that events, expected or unexpected, may negatively affect the bank's capital and/or income.
	• Financial risks are risks that can be quantified.
<i>Non-financial sector</i>	
<i>International Federation of Accountants, 1999</i>	<ul style="list-style-type: none"> • Risk – uncertain future events that may affect the achievement of strategic, operational and financial goals of the organization. • Financial risk – refers to the financial operations of the business entity.
<i>Financial Risk Manager FRM Exam (Global Association of Risk Professionals (GARP))</i>	• Financial risk is a risk that involves financial losses for firms. Financial risk mainly arises from volatility and losses in the financial market caused by changes in stock prices, currencies, interest rates, etc.

Source: Formed on the basis of [55]

Financial risk arises in the process of the enterprise's relations with financial institutions (banks, financial, investment, insurance companies, stock exchanges, etc.). The causes of financial risk are inflationary factors, increase in bank discount rates, decrease in the value of securities and others [42]. A feature of financial risk is the probability of loss, which depends on the conduct of any operations in the financial, credit, and stock exchange sphere, the implementation of operations with stock securities, that is, the risk arising from the nature of these operations.

The goal of financial risk management is to reduce losses associated with a specific risk to a minimum. Damages can be measured in monetary terms, and measures to prevent them can also be evaluated. There are four methods of risk management: cancellation, prevention, insurance and absorption. When choosing a specific method of financial risk management, the financial manager should proceed from such principles:

- not to risk more than own capital can allow;
- not to risk more for the sake of less;
- predict the consequences of the risk [58].

Financial risk is a risk associated with the probability of losing financial resources (money). Financial risks are primarily related to changes in the financial market and changes in the economy. These can be changes in interest rates, exchange rates, changes in the industry or a specific borrower. Financial risks include:

- *credit* – risk is considered as the risk of non-repayment of the loan and non-payment of interest on it,

- *interest* – the risk arises in the event of a change in interest rates on the provided credit resources,

- *currency* – the risk is possible in the event of a change in exchange rates, as well as a political situation when rates do not change, and the possibilities of free circulation of currencies are limited. These risks are associated with the revaluation of balance sheet items of foreign branches in the national currency and in reverse transactions,

- *sectoral* – related to the specifics of certain industries, which is manifested in the change in the investment quality and exchange rate value of securities and the corresponding losses of investors,

- *liquidity and capital structure* – the risk associated with the possibility of losses when selling a security due to changes in the assessment of its quality,

- *operational* – the risk associated with an error or improper organization, an irrational choice of the method of carrying out a financial transaction. This type of risk includes possible errors of managers,

- *country risk* – a set of political, economic and transfer risks [42, c. 10], related to the actual and expected political and economic conditions in the country and the impact of these conditions on the ability of the government, certain corporations and certain individuals to meet their external debt obligations.

Usually, all types of risks are interdependent and affect the activity of an entrepreneur. At the same time, a change in one type of risk can cause a change in most others.

The risk management system has the following main stages: identification, risk assessment, risk neutralization. At the first stage, inherent risks are determined for each

type of economic activity, on the basis of which a list of possible unsystematic risks of the enterprise is formed.

At the second stage, a list of systematic risks of the enterprise's economic activity is determined.

At the third stage, a basic list of all financial risks of the enterprise, both systematic and unsystematic, is drawn up [41].

Financial risks are based on the objective uncertainty of the external environment, caused by political, economic, social and other factors of the macroeconomic environment in which the organization operates. Uncertainty of the environment involves a set of factors that provoke the emergence of a risky situation due to the fact that the enterprise does not have complete information about all subjects or objects with which it is forced to face during the implementation of its statutory activities.

On the other hand, financial risks are also subjective because they are realized through human activity. It is the entrepreneur who chooses from many alternative solutions, assessing the risk situation. Thus, the personal qualities and professionalism of the entrepreneur play not the least role in the assessment of financial risks and the subsequent outcome of the case [57].

The causes of financial risks are diverse and can arise spontaneously in the course of the company's activity, they are divided into external and internal (Figure 1).

The main external causes of the formation of financial risks include the following: a weak and unstable economy; economic crisis; inflation; ineffective state regulation of the bank discount rate; increasing the level of competition; lower prices on the world market; political factors, etc. [52]. All these reasons are external to the enterprise and therefore the enterprise cannot control them.

The internal reasons for the formation of financial risks include: an increase in costs at the enterprise, unsatisfactory financial policy of the enterprise, inefficient management of costs, income and financial results.

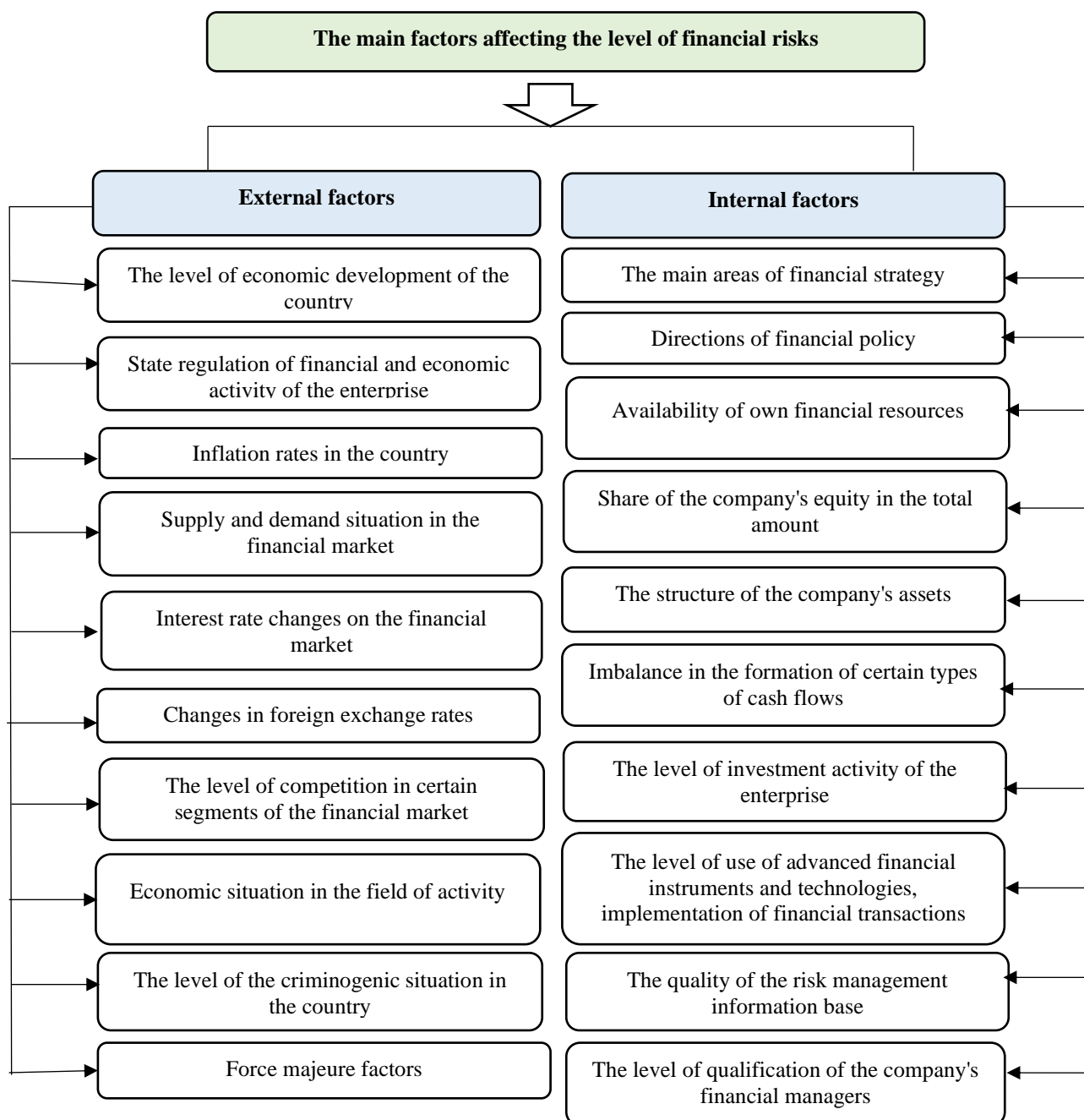


Figure 1. System of main factors affecting the level of financial risks of the enterprise

Source: formed based on research results

It should be noted that external financial risks may be caused by general economic and market factors. General economic factors include: general decline in production in the country, rising inflation, slowing down of payments, imperfection and instability of tax legislation, decrease in real incomes and purchasing power of the population, etc.

Among the market risk factors, the following can be distinguished: a decrease in the domestic market, a drop in market demand, an increase in the supply of substitute goods, instability of the financial and currency markets, insufficient liquidity of the

stock market [54]. Internal financial risks of the enterprise depend on the influence of production, commercial, investment and financial factors.

The main types of financial risks of the enterprise include: the risk of a decrease in financial stability, the risk of insolvency, investment, interest, currency, deposit, credit, tax, etc. According to the sources of occurrence, all types of financial risks are divided into two main groups: systematic (market risks) and unsystematic (specific risks) (Figure 2) [51].

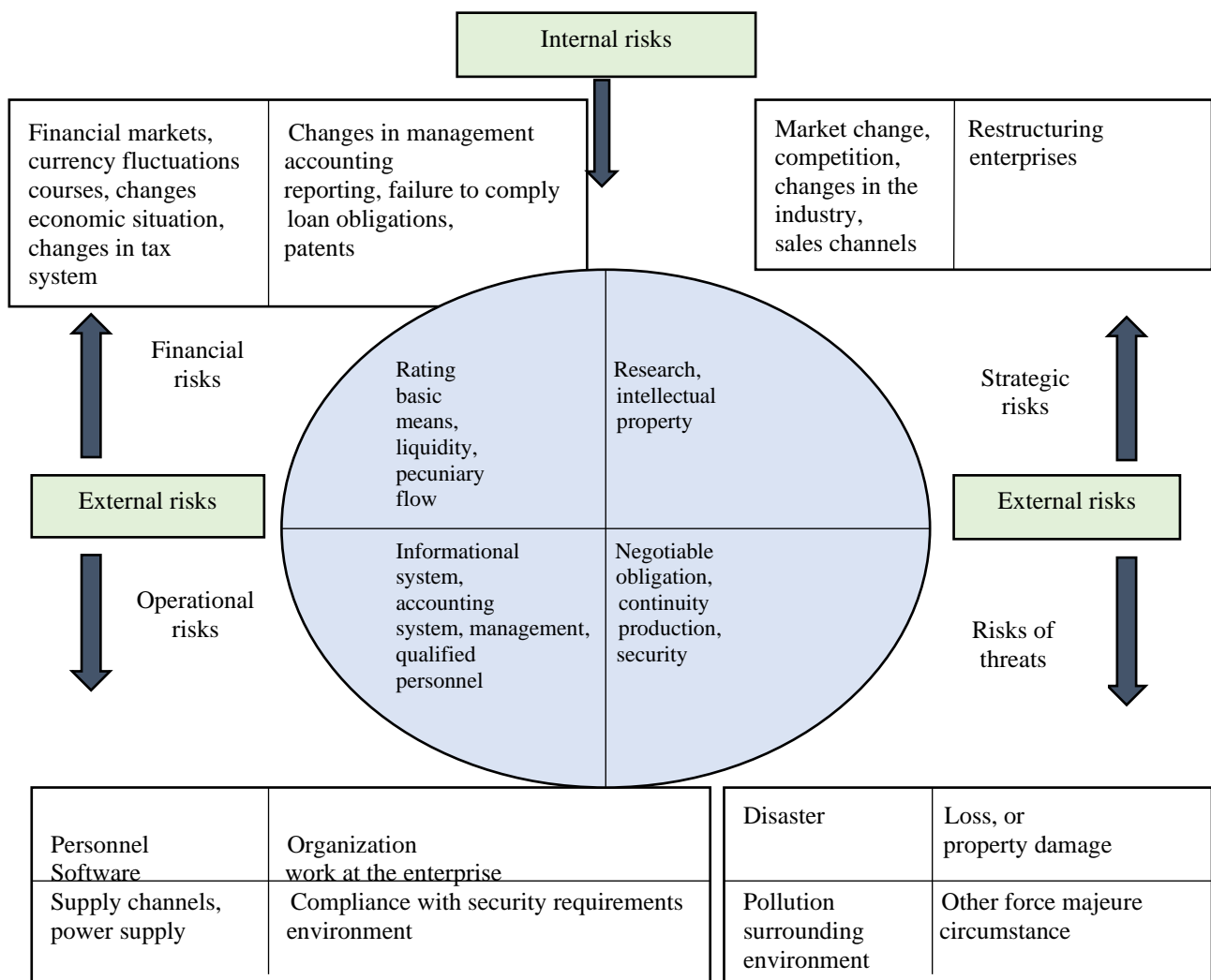


Figure 2. Types of enterprise risks

Source: formed based on research results

In the international practice of risk management, the system of risk classification based on the Generally Accepted Risk Principles (GARP), which was developed by the auditing group Coopers & Lybrand, is common, in which six types of risk are distinguished: credit, market, liquidity risk, operational risks, concentration risks, risks

of a business event, but this system does not cover all spheres of economic activity of a business entity [43].

Financial risk is assessed by analyzing certain indicators, in particular, financial leverage, break-even and the ratio of the use of borrowed funds. An equally important element of risk assessment is taking into account the probability of financial risk. In general, the definition of the level of financial risk can be represented by a formula:

$$PP = BP * PB,$$

where PP – level of relevant financial risk;

BP – the probability of the occurrence of this financial risk;

PB – the amount of possible financial losses during the implementation of this risk in value terms [43].

As a rule, all types of financial risks are interconnected, and a change in one type of risk can significantly affect the financial and economic activity of the enterprise and lead to unexpected consequences. In the table 2 shows the main features of the classification of financial risks.

Table 2

The main features of the classification of financial risks

№	Classification of risks	Characteristics of risks
1	<i>The risk of a decrease in the financial stability (or the risk of an imbalance in the financial development) of the enterprise.</i>	<ul style="list-style-type: none"> • This risk is generated by an imperfect capital structure (the use of a significant share of borrowed funds), which do not balance the inflows and outflows of the company's funds by volume.
2	<i>Risk of insolvency (or risk of unbalanced liquidity) of the enterprise.</i>	<ul style="list-style-type: none"> • This risk is caused by a decrease in the level of liquidity of current assets, which creates an imbalance of incoming and outgoing cash flows of the enterprise over time.
3	<i>Investment risk.</i>	<ul style="list-style-type: none"> • It characterizes the possibility of financial losses in the process of investment activity of the enterprise. Types of investment risk are divided according to the types of this activity – the risk of real investment and the risk of financial investment.
4	<i>Inflation risk.</i>	<ul style="list-style-type: none"> • This type of risk is characterized by the possibility of devaluation of the real value of capital (in the form of financial assets of the enterprise), as well as the expected income from financial operations in conditions of inflation.

Continuation of table 2

5	<i>Percentage risk.</i>	<ul style="list-style-type: none"> • It consists in an unforeseen change in the interest rate on the financial market (both deposit and credit). The reason for this type of financial risk is a change in the financial market under the influence of government regulation, an increase or decrease in the supply of free monetary resources and other factors.
6	<i>Currency risk</i>	<ul style="list-style-type: none"> • This type of risk is inherent in enterprises engaged in foreign economic activity. It manifests itself in the absence of forecasted income as a result of the direct impact of changes in foreign currency exchange rates used in the enterprise's foreign economic operations on the expected cash flows from these operations.
7	<i>Deposit risk</i>	<ul style="list-style-type: none"> • It reflects the possibility of non-return of deposits (non-redemption of deposit certificates). This happens quite rarely and is associated with an incorrect assessment and an unsuccessful choice of a commercial bank for the enterprise's deposit operations.
8	<i>Credit risk</i>	<ul style="list-style-type: none"> • Takes place in the financial activity of the enterprise, when it provides goods (commercial) or consumer credit to buyers. The form of its manifestation is the risk of non-payment or untimely payment of finished products sold by the enterprise on credit, as well as exceeding the debt collection estimate.
9	<i>Tax risk.</i>	<ul style="list-style-type: none"> • This type of financial risk has a number of manifestations: the probability of introducing new types of taxes and fees for certain aspects of economic activity; opportunities to increase the level of current taxes and fees; changing the terms and conditions of individual tax payments; the probability of cancellation of existing tax benefits in the field of economic activity of the enterprise.
10	<i>Structural risk.</i>	<ul style="list-style-type: none"> • This type of risk is generated by inefficient financing of the company's current costs, which causes a high share of fixed costs in their total amount. A high coefficient of operating leverage in the event of adverse changes in the commodity market and a reduction in gross cash flow from operating activities generates a much higher rate of decrease in the amount of net cash flow from this type of activity.
11	<i>Criminogenic risk.</i>	<ul style="list-style-type: none"> • In the field of financial activity of the enterprise, it manifests itself in the form of an announcement by its partners about fictitious bankruptcy; falsification of documents that ensure the embezzlement of money and other assets by third parties; embezzlement of certain types of assets by own personnel and other persons.
<i>According to the characterizing object, the following groups of financial risks are distinguished:</i>		
12	<i>The risk of a separate financial transaction.</i>	<ul style="list-style-type: none"> • It characterizes the entire range of types of financial risks inherent in a specific financial transaction (for example, the risk inherent in the acquisition of a certain share).
13	<i>The risk of various types of financial activity</i>	<ul style="list-style-type: none"> • (For example, the risk of investment or credit activities of the enterprise).
14	<i>The risk of financial activity of the enterprise as a whole.</i>	<ul style="list-style-type: none"> • The complex of various types of risks inherent in the financial activity of the enterprise is determined by the specifics of the organizational and legal form of its activity, the capital structure, the composition of assets, and the ratio of fixed and variable costs.

Continuation of table 2

<i>Financial risks are divided into the following groups according to the payback of the instruments under study:</i>		
15	<i>Individual financial risk.</i>	• It characterizes the aggregate risk inherent in individual financial instruments;
16	<i>Portfolio financial risk.</i>	• It characterizes the aggregate risk inherent in a complex of single-functional financial instruments combined into a portfolio (for example, a company's credit portfolio, its investment portfolio).
<i>According to the complexity of the study, the following groups of risks are distinguished:</i>		
17	<i>Simple financial risk.</i>	• Characteristic for the entire period of financial transactions and associated with the action of fixed factors. An example of such financial risk is interest rate risk, currency risk.
18	<i>Temporary financial risk.</i>	• It characterizes a risk that is permanent and that arises only at certain stages of a financial transaction. An example of this type of financial risk is the risk of insolvency of an efficiently operating enterprise.
<i>According to the level of financial losses, risks are divided into the following groups:</i>		
19	<i>Acceptable financial risk.</i>	• It characterizes the risk from which financial losses do not exceed the estimated amount of profit from the financial transaction;
20	<i>Critical financial risk.</i>	• It characterizes the risk from which financial losses do not exceed the estimated amount of gross income for a specific financial transaction;
21	<i>Catastrophic financial risk.</i>	• Describes a risk whose financial losses are determined by a partial or complete loss of equity.
<i>According to the possibility of prediction, financial risks are divided into the following two groups:</i>		
22	<i>Predicted financial risk.</i>	• Describes the types of risks associated with the cyclical development of the economy, changing stages of the financial market.
23	<i>Unpredictable financial risk.</i>	• Describes types of financial risks that cannot be predicted. Examples of such risks are the risk of force majeure, tax risk.
<i>According to the possibility of insurance, financial risks are divided into the following two groups:</i>		
24	<i>Financial risks that can be insured.</i>	• Financial risks that can be insured
25	<i>Financial risks that are not insured.</i>	• They include those types for which there are no offers of appropriate insurance products on the insurance market.

Source: cformed on the basis of [53]

The most common tool for neutralizing the consequences of risks is the use for these purposes of a reserve fund of financial resources, which is intended to cover possible losses. Reserves are created in accordance with the current legislation or founding documents of enterprises at the expense of retained earnings or owners' funds [60].

The complexity of the task of ensuring financial and economic security lies in the extent to which heads of enterprises, its divisions, departments, managers will

ensure the normal functioning of the enterprise by neutralizing (reducing, accepting) dangers and threats [44], various destabilizing factors.

Management subjects affect the objects of management influence with the help of certain management methods, which reveal ways to counteract real and potential threats [44], dangers and risks in specific conditions and during a certain period of time and reflect the immediate state of enterprise security.

The choice of the risk assessment method and the correctness of its implementation have a significant impact on the development of the financial state of the enterprise, because if the influence of factors that increase financial risk is incorrectly determined, the enterprise may suffer losses or go bankrupt. At the stage of evaluating the effectiveness of financial risk monitoring, the necessary financial and analytical indicators are calculated, the results are compared with previous periods and the causes of deviations are identified [46]. Appropriate measures are taken to eliminate negative consequences.

Financial risk management of the enterprise is a system of principles and methods of developing and implementing risky financial solutions that provide a comprehensive assessment of various types of financial risks and neutralize their possible negative financial consequences.

There are two complementary types of risk assessment – qualitative and quantitative. Qualitative analysis also includes a methodological approach to quantitative assessment of acceptable levels of risk. Quantitative assessment of risk, that is, numerical determination of the size of individual risks and the risk of the portfolio as a whole, is usually carried out on the basis of mathematical statistics methods [47, c. 10]. The difficulty of their application lies in the absence and inaccessibility of accumulated statistical information.

Qualitative risk assessment is carried out in several stages:

- factors affecting the growth and/or reduction of specific types of risk are identified. These factors are the basis for further risk analysis;
- a system of risk assessment indicators is determined, which must meet the requirements of adequacy, complexity, dynamism, objectivity, and also allow

replenishment and development;

- potential risk zones are determined: measures, operations, types of work, when performing which there may be uncertainty in obtaining a positive result;
- all possible risks are revealed, that is, identification of possible risks as a result of this action or inaction.

At the preliminary stage of the organization of risk management, the most important moment is its analysis. At the same time, risk factors are determined, which can be classified according to various criteria and characteristics, such as the degree of influence, the nature of the influence on the risk, the degree of control, and the source. In order to assess the probability of individual risks, it is advisable to use the following methods:

a) economic and statistical methods based on the mathematical theory of probability; allow you to get the clearest quantitative idea of the degree of probability of risk, but these methods can be used under the condition of sufficient statistical information;

b) calculation and analytical methods – allow you to get a relatively clear quantitative idea about the degree of risk probability based on the use of the company's internal information base (for example, the value of planned indicators of economic and financial activity); these methods can be used to assess economic risk, insolvency risk and risk of loss of financial stability;

c) analog methods – determine the degree of risk probability for some of the most massive operations of the enterprise; the use of these methods may be related to the assessment of the degree of probability of commercial, economic, price risk;

d) expert methods – are used only if the enterprise does not have the necessary information or statistical data for further calculations; these methods are based on a survey of qualified specialists (insurance, tax, financial) with subsequent mathematical processing of the results of this survey; expert methods can be used to determine the degree of probability of price, inflation, interest, tax, investment and other risks [60].

A special kind of financial risks is credit risk. There are various methods and ways of managing credit risks both at the level of each bank and at the level of the

entire banking system. To manage credit risks at all levels of the banking system, indicative methods are used, which include credit risk standards established by the Central Bank.

In Ukraine, the following standards are combined into the appropriate group: the standard for the maximum amount of credit risk per counterparty – H7; standard of large credit risks – H8; the norm of the maximum size of loans, guarantees and sureties provided to one insider – H9; the norm of the maximum aggregate amount of loans, guarantees and sureties provided to insiders is H10. These norms serve as a kind of indicators for banks [62].

When assessing risks, the basic values that are calculated are the amount of losses that the enterprise may suffer and the probability of these losses. Complex calculation algorithms are used to determine these values [51]. The results of the risk assessment are the basis for choosing appropriate measures for their neutralization. The main risk neutralization tools include: formation of appropriate reserves; risk diversification; hedging; risk insurance by insurance companies.

Financial risk management involves the development and implementation of economically justified recommendations and measures for the enterprise aimed at reducing the initial level of risk in financial transactions or monetary transactions to an acceptable final level. The assessment of the level of risk is carried out on the basis of the calculation of the probability of financial risk. This indicator is a measure of the frequency of the possible occurrence of an adverse event, which causes financial losses in the activity of the subject [51].

The process of financial risk management can be divided into six consecutive stages: determining the goal; ascertaining the risk; risk assessment; choosing a risk management method from 4: avoidance, acceptance, transfer, and prevention; implementation of management; summary of results (Figure 3).

Financial risks can be assessed in three main ways:

- with the help of fundamental indicators;
- through a comparative assessment of macroeconomic and financial multipliers;

– with the help of market indicators of the attractiveness of the sector according to free cash flows, dividend yield, technical indicators [49].

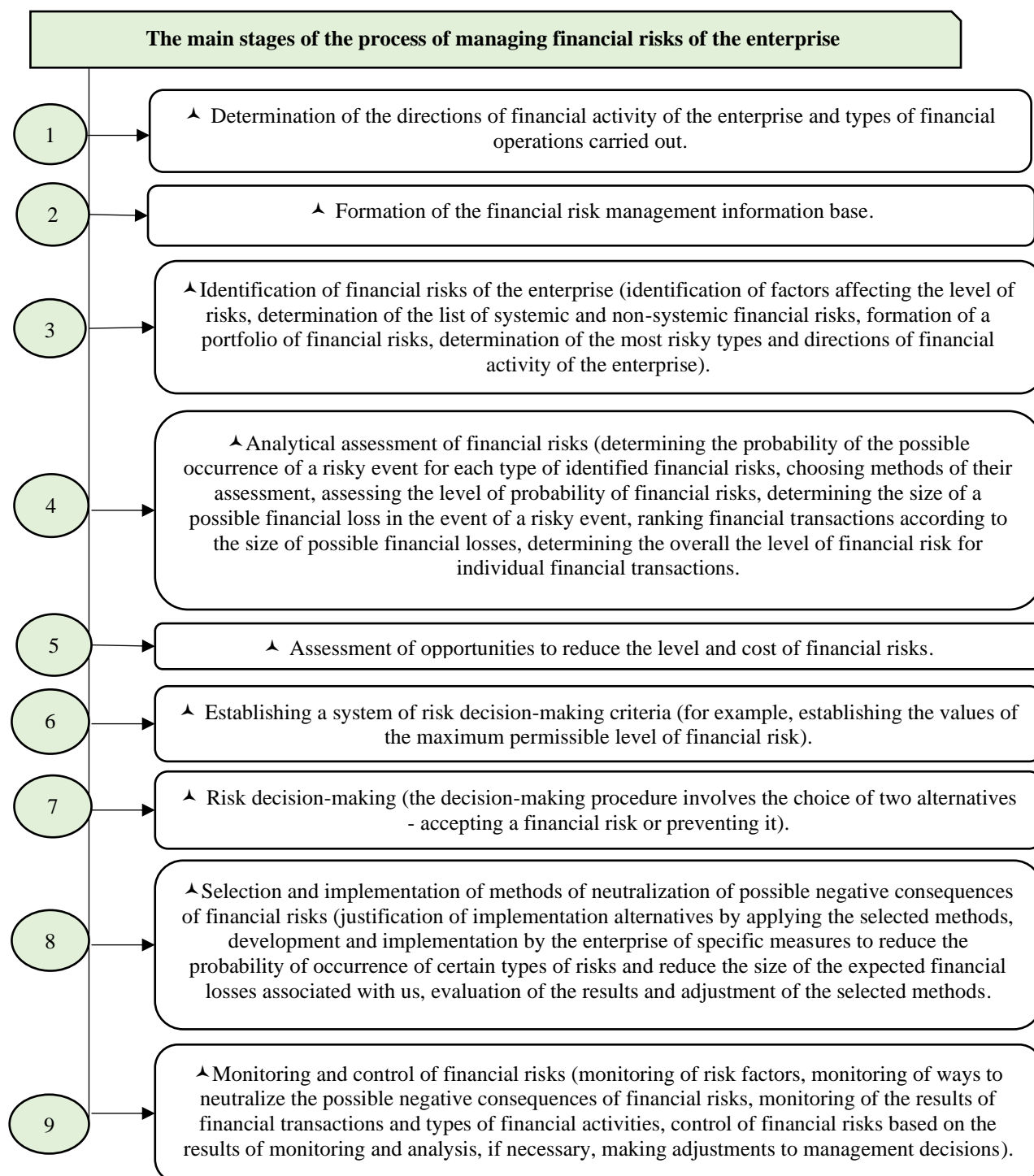


Figure 3. Stages of the financial risk management process

Source: formed based on research results

The main, basic stages of financial risk management are:

– planning and forecasting the level of financial risks of the enterprise, which occurs by using the method of expert assessments at the enterprise;

– implementation of the company's financial risk management strategy. The choice of strategy depends on determining the basic conditions of the enterprise. For example, whether the enterprise is ready to take a certain level of risk, whether it seeks to avoid risk and whether it does not seek to significantly maximize the level of profitability of its activities. Or the scheme of risk transfer using basic methods is more attractive to him;

– assessment of the effectiveness of financial risk management (performed using such indicators as the arithmetic mean; dispersion; mean square deviation; coefficient of variation) [47]. In the table 3 presents the main methods of financial risk management.

Table 3

Basic methods of financial risk management

№	Method name	Characteristics of the method
1	<i>Insurance</i>	<ul style="list-style-type: none"> • Undertakes responsibility for financial risk indemnification to another party for a fee. The economic essence of insurance consists in the creation of a reserve (insurance) fund, contributions to which for an individual insured are set at a level significantly lower than the amount of expected losses and, as a result, insurance compensation.
2	<i>Creating a reserve of funds*</i>	<ul style="list-style-type: none"> • Is one of the methods of risk management, which involves establishing a relationship between potential risks of impact on the value of assets and the amount of funds required to eliminate the consequences of the risk. • Own insurance or reserving is not aimed at reducing the probability of risk and is primarily aimed at compensating material losses from the risk. <p>(*to cover unforeseen costs)</p>
3	<i>Hedging</i>	<ul style="list-style-type: none"> • Designed to reduce possible financial losses of investments due to market risk, and sometimes credit risk. As with insurance, hedging requires the diversion of additional resources. Hedging of market risk is carried out by carrying out balanced operations with derivative financial instruments - forwards, futures, options and swaps. Credit risk hedging instruments such as credit default swaps have recently emerged. • Hedging involves the complete exclusion of the possibility of receiving any profit or loss on this position by opening an opposite or compensating position. This "double guarantee" of both profits and losses distinguishes hedging from classical insurance.
4	<i>Diversification</i>	<ul style="list-style-type: none"> • It is a way of reducing the aggregate appetite for risk by allocating funds between different financial assets, the price or profitability of which is weakly correlated. The essence of diversification is to reduce the maximum possible losses per event. At the same time, the number of types of risks that require control is increasing. • Diversification is one of the most popular mechanisms for reducing market and credit risks when forming a portfolio of financial assets and a portfolio of bank loans, respectively. It is important to remember that diversification is only effective in reducing unsystematic risk (i.e. risk associated with a particular instrument), while systemic risks common to all instruments considered (eg cyclical downturn risk) cannot be reduced by changing portfolio structure.

Continuation of table 3

5	<i>Management of assets and liabilities</i>	<ul style="list-style-type: none"> • It aims to carefully balance cash, investments and liabilities to minimize changes in net worth. Asset and liability management is most widely used in banking practice to control market, primarily currency and interest rate risks. • Asset and liability management is aimed at avoiding excessive risk by dynamically adjusting the main parameters of the portfolio. In other words, this method is aimed at regulating risk appetite in the activity itself, unlike hedging, which is based on risk neutralization.
6	<i>Limitation</i>	<ul style="list-style-type: none"> • This is a quantitative limit imposed on certain characteristics of operations. The limit is necessary in those cases when, during operations, for necessary reasons, the necessary characteristics of the riskiness of operations are not included in the calculation. The reasons for setting the limit may be the technical impossibility of assessing risks directly during operations or a conflict of interests between shareholders and employees of the divisions (insufficient interest of the bank's business divisions in complying with the chosen risk management strategy). • For example, the term (duration) limit of bonds in the portfolio. At the same time, bond department employees are interested in buying long-term bonds because it increases their ability to earn a profit, but long-term bonds may carry unacceptable risk. • The restriction is inappropriate if the decision to conduct operations is based on the necessary risk assessments. For example, for a bank with a small loan portfolio, there is no need to limit commercial lending operations, since risk can be assessed and to some extent limited directly at the time of loan application, loan approval by the credit committee and senior management.

Source: *cformed on the basis of [55]*

It should be noted that risk analysis usually uses the following assumptions:

- risk losses do not depend on each other;
- a loss in one type of activity does not necessarily increase the probability of a loss in another, with the exception of force majeure circumstances;
- the maximum possible loss should not exceed the participant's financial capabilities [49].

Avoiding the risk of failure or making radical decisions to eliminate the threat of their occurrence can significantly inhibit innovative activity and reduce innovative opportunities in further development and cause a loss of profit/income/capital during the implementation of strategic and tactical plans and programs [48].

The main components forming the financial risk management mechanism are shown in Fig. 4.

Limitation of financial risks is carried out by establishing appropriate financial standards, i.e. the upper limit of funds or resources, for certain areas of financial activity in order to fix possible financial losses at an acceptable level for the enterprise.

Hedging is the use of financial instruments that avoid or limit the risk of financial transactions as a result of adverse changes in exchange rates, commodity prices, and interest rates in the future by buying or selling futures contracts [49]. If the financial and economic activity of the enterprise is constantly affected by factors whose fluctuations are difficult to predict by the relevant legal framework, it is advisable to supplement a certain system of measures that should be applied under certain circumstances, for example, exceeding the permissible fluctuations of financial risk factors.

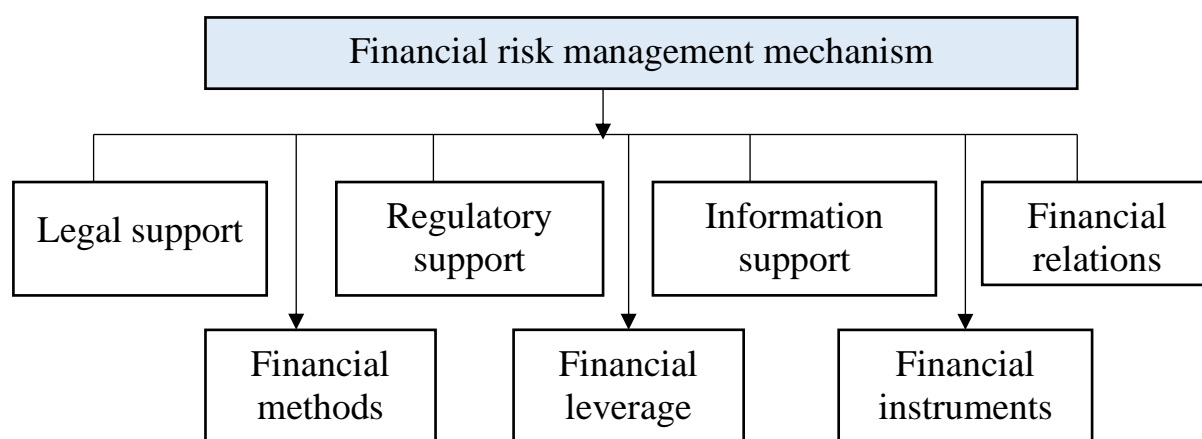


Figure 4. The main constituent elements forming the financial risk management mechanism

Source: formed based on research results

The speed of response of the monitoring system to the occurrence of unforeseen events is one of the most important properties. The content of this property consists in determining the current nature of the goals and objectives set in the system of enterprise plans and the available financial resources of the enterprise. At the same time, the monitoring system is expected to detect specific deviations in the state of influencing factors, the causes of such deviations, as well as prompt detection of specific consequences that may arise as a result of such deviations.

Implementation of operational control over the implementation of planned indicators is the main link in the regulatory system, as it expresses the state of financial resources and the rhythm of production in comparison with planned parameters. Therefore, the implementation of such control should occur synchronously with the

production process and should be a source of relevant information for the justification of management decisions throughout the vertical of financial risk management [45]. In Fig. 5 shows the stages of the enterprise's financial risk management process.

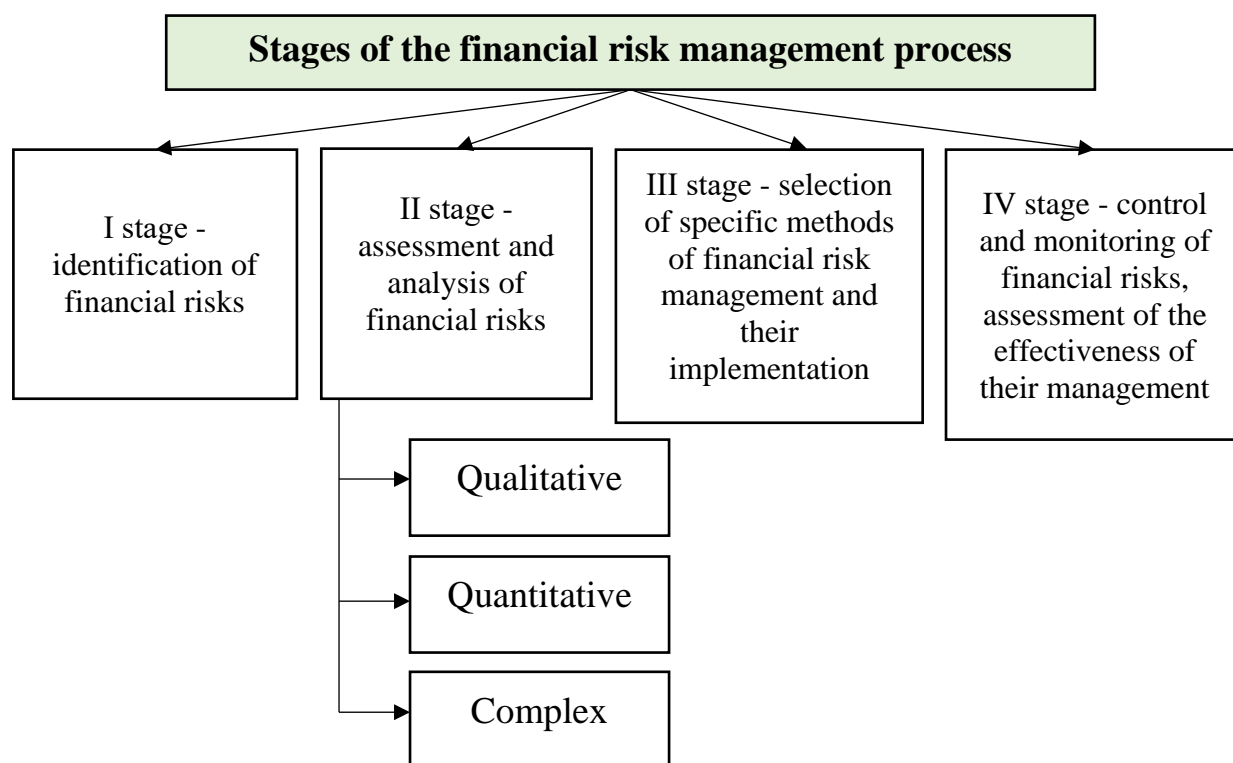


Figure 5. Stages of the financial risk management process

Source: formed based on research results

An important role in the management of financial risks at the enterprise is played by the risk neutralization mechanism. Its main advantage is that a high degree of alternative solutions depends on the implementation of financial activities and financial capabilities of the enterprise [49], and this, in turn, can be a prerequisite for external and internal insurance procedures.

The essence of financial risk insurance is to protect the company's property interests in the event of an insured event (insurance event) by special insurance companies (insurers) at the expense of funds generated by them from receiving insurance payments (insurance premiums) [49].

At the stage of risk neutralization (minimization), the most common in practice is the use of separate groups of methods (Table 4).

In the event that the level of financial risk cannot be accurately measured, the process of justifying the expediency of management decisions should be based on

general principles of decision-making under risk conditions. The financial security management system of any business entity highlights the management of financial risks at the stage of their prevention, neutralization and minimization of negative financial consequences [55, c. 16]. Each stage of financial risk management requires the use of specific methods and implementation of special measures.

Table 4

Groups of methods used at the risk neutralization (minimization) stage

№	Characteristics of methods
1	<ul style="list-style-type: none"> ▲ Risk localization methods: allocation of "bottlenecks" to structurally or financially independent divisions of the enterprise (internal venture); ▲ Consecutive disintegration of the enterprise;
2	<ul style="list-style-type: none"> ▲ Methods of minimizing risks or keeping risk within acceptable limits: <ul style="list-style-type: none"> – limiting financial risks; – establishing the minimum size of highly liquid assets of the enterprise, – establishing the maximum amount of loanable funds in economic circulation; ▲ Establishing the maximum size of a deposit placed in one bank; ▲ Limiting the concentration of risks; ▲ Obtaining certain guarantees from counterparties when providing commercial credits and loans; ▲ Sale of goods under the terms of financial leasing;
3	<ul style="list-style-type: none"> ▲ Methods of dispersing risks: integrative distribution of responsibility between production partners; ▲ Diversification of activities, markets and business areas; ▲ Expansion of the circle of consumer partners and partners of suppliers of raw materials, materials, etc; ▲ Distribution of risks by stages of work in time; ▲ Diversification of the investment, currency and deposit portfolio of the enterprise, diversification of the portfolio of securities; ▲ Hedging.

Source: formed on the basis of [56]

Prevention of financial risks requires timely identification of trends and prerequisites that contribute to their development, based on the analysis of which a system of preventive measures against financial risks is developed and implemented, aimed at reducing the probability of their occurrence and preventing threats to financial security. This goal is achieved by eliminating the prerequisites for future risk.

The basis of the prevention of financial dangers are methods that allow modeling and forming scenarios for the realization of a risky situation when implementing a specifically chosen strategy for the development of an enterprise. The most common among them are:

- 1) application of SWOT analysis;
- 2) modeling of business processes;
- 3) analysis of conflicting goals;
- 4) risk-benefit modeling based on the utility theory;
- 5) application of benchmarking based on the analysis of competitors and the best companies in the industry;
- 6) construction of financial balance matrices;
- 7) calculation of the financial stability reserve and determination of the break-even level;
- 8) forecasting the time of occurrence of risky situations and realization of specific risks;
- 9) monitoring of indicators of the financial state of the enterprise, detection of the threat of bankruptcy of the enterprise;
- 10) forecasting the bankruptcy of the enterprise in accordance with the officially approved methodology;
- 11) forecasting the foreign economic situation in the country, region of administration, etc.;
- 12) monitoring of the socio-economic and regulatory environment [56].

In the era of computerization of all financial operations, mathematical methods are used to manage the liquidity risk of financial institutions, which are associated with effective software and modern computer technology. The main direction of their application is the optimization of liquidity and profitability. These methods allow financial institutions to scientifically manage assets, optimize liquidity, profitability and profitability. In the table 5 shows the financial results before taxation of Ukrainian enterprises by type of economic activity for 2016-2020.

Linear programming connects the asset management problem with the liability management problem, taking into account the limitations on the profitability of financial transactions and liquidity [61]. Mathematical methods of liquidity management of financial institutions allow modeling any situation that may arise.

At enterprises, three areas of risk management are distinguished depending on the type of risk and company policy: neutral (risk avoidance), external (risk transfer) and internal (risk acceptance).

Table 5

Financial results before taxation of Ukrainian enterprises by types of economic
activity in 2016-2020 (million UAH)

№	Indicators	Years					Deviation 2020 (+/-) 2016
		2016	2017	2018	2019	2020	
1	That's all	-22201,5	274831,6	429129,3	664849,8	303219,3	325420,8
2	agriculture, forestry and fisheries	91109,5	69344,1	71478,5	94041,4	82230,6	-8878,9
3	industry	-7569,6	87461,7	154138,2	166753,2	-22289,6	-14720,0
4	construction	-9342,9	-3535,8	6433,9	15974,8	-2047,8	7295,1
5	wholesale and retail trade; repair of motor vehicles and motorcycles	7277,0	39296,3	86290,5	129113,3	45272,0	37995,0
6	transport, warehousing, postal and courier activities	12819,7	-16532,6	-22661,6	14414,8	17013,3	4193,6
7	temporary accommodation and catering	-1947,6	1976,8	2886,5	4648,0	-4440,9	-2493,3
8	information and telecommunications	4197,9	15195,3	18181,0	24838,8	16961,1	12763,2
9	financial and insurance activities	-91658,3	56159,7	84667,0	69326,6	196913,0	288571,3
10	real estate transactions	-42950,2	-15430,7	16,3	47317,5	-36027,1	6923,1
11	professional, scientific and technical activity	21079,8	45611,6	26147,7	84025,1	-9583,4	-30663,2
12	activities in the field of administrative and auxiliary services	-4347,7	-2967,3	482,5	11446,8	875,3	5223,0
13	education	102,8	121,5	178,6	377,7	143,8	41,0
14	health care and provision of social assistance	311,7	320,4	1249,3	1990,8	19616,0	19304,3
15	arts, sports, entertainment and recreation	-1512,8	-2198,1	-496,1	120,3	-1540,3	-27,5
16	provision of other types of services	229,2	8,7	137,0	460,7	123,3	-105,9

Source: cformed on the basis of [61]

In fig. 6 shows the financial results before taxation of large and medium-sized enterprises of Ukraine by type of economic activity for January-September 2021.

One of the main tasks at the enterprise is the formation of the enterprise's financial risk management program.

One of the possibilities of forming the above-mentioned program is the construction of an IDEF0 model.

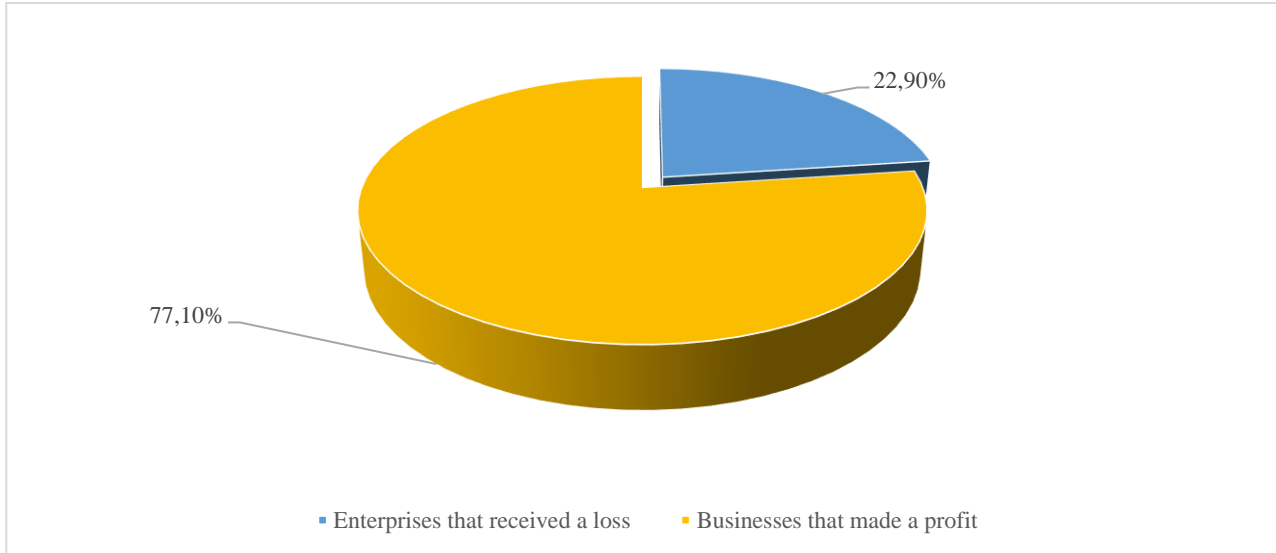


Figure 6. Financial results before taxation of large and medium-sized enterprises of Ukraine by types of economic activity for January-September 2021, %

Source: *formed on the basis of [61]*

The purpose of building the IDEF0-model is the formation of the financial risk management program of the enterprise; subject – financial risks; the subject is the process of managing the company's financial risks (Figure 7) [47].

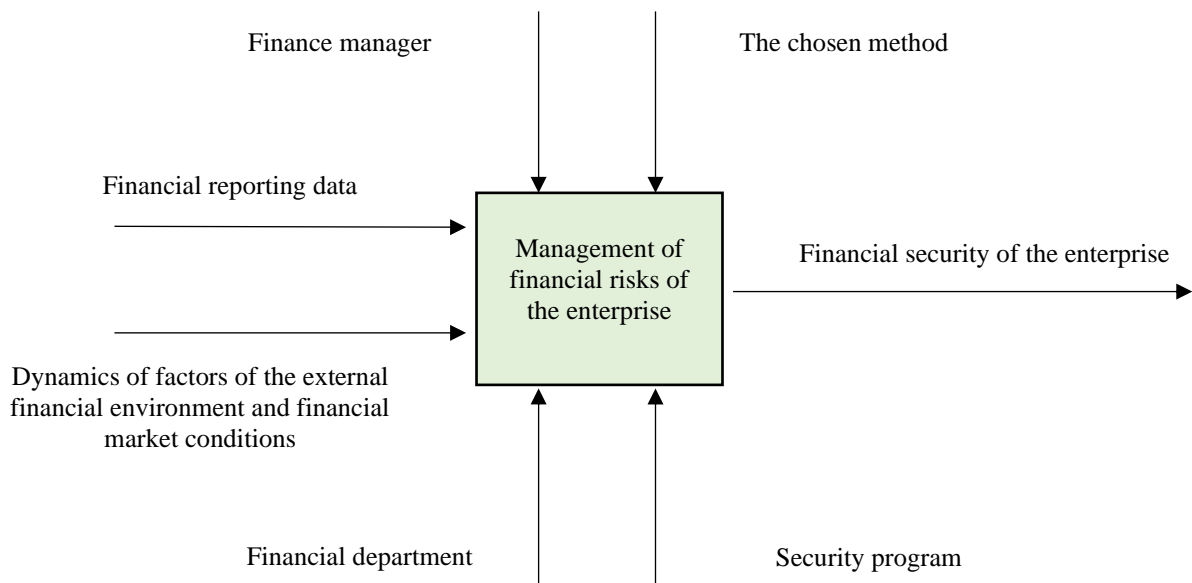


Figure 7. Model of financial risk management of the enterprise

Source: *formed based on research results*

The prevention of financial risks and the minimization of their negative impact on the operation and development of the enterprise requires the study of the conditions and nature of each factor that can cause financial losses, and therefore negatively affect the investment attractiveness and competitiveness of enterprises in the domestic and foreign markets [48].

The following risk management techniques are used to reduce risk:

- 1) risk prevention (risk avoidance);
- 2) loss prevention (loss prevention and control);
- 3) take risks (risk retention);
- 4) risk transfer.

1. Risk avoidance is a conscious decision not to be exposed to the relevant types of risks. For example, there are people who do not play in the stock market at all, but invest in real assets, the price of which may increase over time. To prevent credit risk, banks and leasing companies conduct a thorough financial and economic analysis of the borrower's property and financial condition.

2. Loss prevention and control consists of actions taken to reduce the probability of losses and minimize their consequences. Such actions can be carried out before the occurrence of losses, during the occurrence of the loss and after its occurrence.

3. Risk retention consists in covering losses at the expense of one's own resources and funds.

4. Risk transfer (risk transfer) is the transfer of risk to other persons. Like the movement of monetary resources through the financial system, risks move. In the financial system, there are financial intermediaries, such as insurance companies, which carry out their risk transfer activities and collect insurance premiums from their customers who wish to reduce their risk [62]. Insurance companies transfer these risks to investors who, for a fee, agree to pay insurance claims and bear the assumed risk.

A correctly constructed enterprise risk management system allows you to stabilize the most important strategic and tactical performance indicators (for example, business value, profitability), optimize the allocation of resources, capital in accordance with the assessment of risks, prevent losses (for example, by implementing

mechanisms for timely exit from the project and evaluating the project as real options) [51] in order to prepare the business for actions in an emergency situation and increase the reputation of the enterprise.

Any necessary decision requires the development of a detailed strategic risk management plan. There are various ways (methods) of reducing the level of risk. These include risk avoidance, risk localization, risk distribution and compensation [46]. In order to avoid financial risks, the enterprise must have information about the market situation, reliability of partners, contractors, suppliers, their reputation, financial and economic condition, etc.

Reduction of financial risks can also be achieved through the mechanism of diversification. Diversification is one of the ways to minimize financial risks, which consists in the distribution of risks by expanding investment objects, the range of goods and services, financial instruments, etc. Diversification of investments, products and production is taking place.

Regarding risk management mechanisms and tools in the agricultural sector, we note that they are divided into three levels:

1. Tools that an agricultural enterprise can use independently.
2. Tools for the use of which the agricultural producer must contact a bank, credit union, investment or insurance company, leasing company, etc.
3. Macroeconomic methods based on state regulatory policy in the agricultural market and state programs to support the agricultural sector (Figure 8) [59].

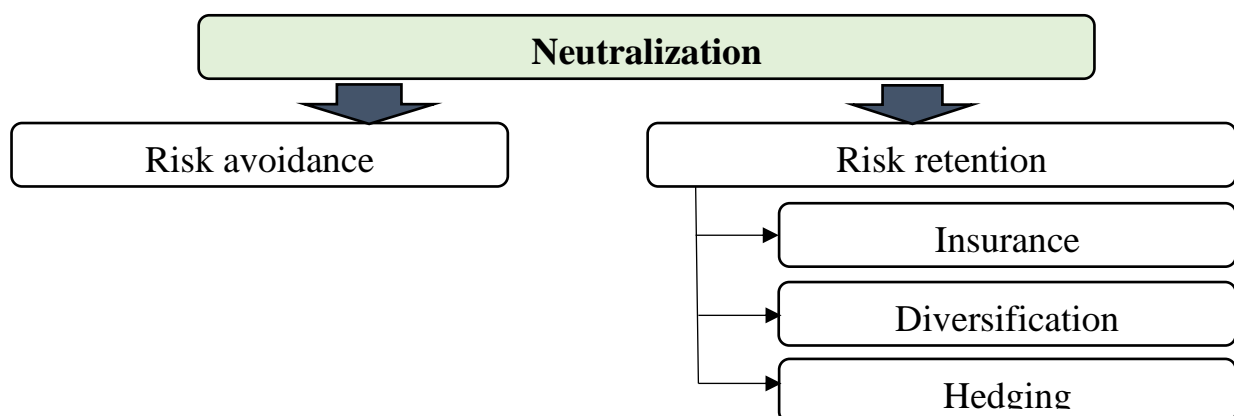


Figure 8. Forms and methods of enterprise risk management

Source: formed based on research results

Rapid changes in the economic situation in the country and financial market

conditions, the expansion of financial relations, the emergence of new financial technologies and tools accelerate the growth of the impact of financial risks on the financial results of the enterprise. Therefore, the application of the proposed block diagram will allow skillful management of all processes during risky situations and timely response to these changes [46]. The main task of entrepreneurs is to take timely measures and adequate decisions to support the financial condition of the enterprise.

In this context, it is worth considering a computational and analytical method that is based on theoretical ideas, but, unfortunately, the applied theory of risk is well developed only for the insurance and gambling business. The most common varieties of this method are: building a "decision tree" and the method of analogs. When using the "decision tree" method (if the sequence of actions is known), appropriate graphs of all possible solutions are built [62]. This method is also statistically probabilistic. The branches of the "decision tree" correlate subjective and objective assessments of the possible probabilities of events and their outcomes.

By moving the branches of such a tree, the probability of obtaining the greatest profit with minimal risk is determined. This method is also used to evaluate investment projects. In the quantitative analysis of risk, risk is understood as the probability (threat) of the enterprise losing a share of its resources, loss of income or occurrence of additional costs as a result of certain production and financial activities. Let's consider known approaches to calculating risk indicators, denoting the value of risk in absolute terms through W :

1) $W = P_i$, where P_i – the likelihood of adverse consequences;

2) $W = P_i x$, where x – the size of adverse consequences;

3) $W = M(X) = M_x = m_x$, where m_x – mathematical expectation of adverse consequences (loss of profit);

4) $W = D(X) = \sigma^2 X$,

where $\sigma^2 X$ – the dispersion of the values of a random variable around the mean value.

Assuming that X_1 i X_2 – the amount of profit, then at $m_1 > m_2$ i $\sigma_1 < \sigma_2$ a situation

characterized by magnitude will be more attractive X_1 .

The risk will be determined as a function of the ratio of the maximum possible losses and the size of own resources. This ratio is considered the risk factor:

$$W = Y : C,$$

where Y – maximum possible losses; C – the volume of own financial resources, taking into account precisely known inflows of funds [62].

Financial risk, like the result of any decision made in the presence of alternatives, always carries the risk of financial loss. The amount of financial losses depends on the uncertainty, unpredictability of the final result, especially on the innovative activity of the enterprise related to the technological renewal of fixed assets, the introduction of new technological processes, the creation of innovative products, the development of new markets, etc.

In these areas of activity there are relevant influencing factors that cause risks of financial losses, which leads to a decrease in the level of financial security of the enterprise.

Today, the insurance market has a large list of services provided by insurance companies to eliminate (minimize) financial risk. The main ones include:

- credit risk insurance (commodity, export, etc.);
- insurance of innovative risks;
- deposit risk insurance;
- liability insurance;
- risk insurance in case of failure to achieve the planned level of profitability, etc. [49].

Risk avoidance is the development of internal measures that completely exclude a certain type of financial risk. This method allows you to avoid potential losses associated with financial risks, but, on the other hand, does not allow you to profit from risky activities. In addition, it is simply impossible to avoid financial risk [51]. Therefore, as a rule, this method is used only to avoid very serious and high risks.

To build an effective financial risk management system, it is necessary to develop a concept of financial risk management, which includes the formation and

implementation of financial risk management strategies depending on the choice of management method and risk level, as well as the determination of informational and methodological support for these processes (Table 6).

Table 6

Proposals for the formation of a financial risk management system at enterprises

№	Characteristics of offers
1	<ul style="list-style-type: none"> • Introduce a risk management system at enterprises as an element of the enterprise management system as a whole;
2	<ul style="list-style-type: none"> • Implement risk management technologies in the work of financial managers of enterprises;
3	<ul style="list-style-type: none"> • Create an information database of financial security risks, which would allow to accumulate statistical information about changes in dynamics;
4	<ul style="list-style-type: none"> • Introduce the selection of the optimal level of financial security using the provisions of the concept of compromise between risk and profitability;
5	<ul style="list-style-type: none"> • Develop and implement a risk management strategy, which would include: assessment and management of financial and economic risks of the enterprise's production and economic activity; assessment of the possible consequences of implemented decisions in the future for the enterprise itself; calculation and establishment of the zone of permissible risk, when the volume of possible losses from the adoption of a certain management decision does not exceed the volume of the forecasted profit; carrying out a comparative analysis of possible benefits and losses from the implementation of certain management decisions; implementation of preventive measures aimed at avoiding risks;
6	<ul style="list-style-type: none"> • Develop and implement a risk management mechanism at enterprises;
7	<ul style="list-style-type: none"> • Introduce risk identification based on the analysis of hierarchical models of business processes and process operations. This will allow to identify, describe and classify the risks of business processes and technological processes in the field of financial management and cost management. Based on the analysis of the purpose of the business process, determine the main characteristics of the process, as a list of factors that indicate its success (or failure) and directly affect the main characteristics of the process;
8	<ul style="list-style-type: none"> • Introduce the recording of each of the identified risks with a mandatory indication of the name of the risk; risk probabilities; the causes of the risk and establishing the potential degree of its impact on the financial security of the enterprise during implementation; specific risk management mechanism; responsibility for risk management.

Source: cformed on the basis of [56]

The concept of financial risk management of the enterprise is aimed at minimizing the financial losses of enterprises from the negative impact of risks, establishing the organization of the financial activities of the enterprise, forming a sufficient amount of financial resources, which helps to quickly maneuver and mobile use them, as well as to concentrate funds on the most important directions of the enterprise's development; development of different duration of financial plans [60]; creation of reserves in case of unforeseen situations, ensuring a high level of financial security.

The consequences of the armed conflict that is taking place in Ukraine are felt in various spheres of personal life, the functioning of enterprises, society and the state as a whole. In order for the economic activity of Ukrainian enterprises to be effective during the Russian Federation's war with Ukraine, it is not enough to restore their work. Modernization and partial reorientation to other sales markets are needed. Therefore, it makes sense to implement energy-saving, ecological and innovative technologies during the reconstruction of destroyed regions, which will significantly increase the competitiveness of regional enterprises and increase their investment attractiveness.

One of the most important functions of management is to create the necessary conditions for the further functioning of the organization. For this reason, in the West, the main focus of risk managers is not profit maximization, but successful risk management, which ensures the greatest profit and minimum losses for the enterprise in the long term.

Modern technologies make it possible to create ERM systems at enterprises (Enterprise Risk Management – a comprehensive risk management system at the enterprise). The attractiveness of using ERM systems lies in improving the business situation, reducing risk management costs, and increasing competitiveness [57]. Corporate risk management is a process of identifying, evaluating and controlling the influence of internal and external factors that can negatively affect the value of a business entity.

The difference between ERM and point risk management is that risk management is carried out "from top to bottom" at the initiative of the board, board of directors and shareholders, that is, it creates a whole system that is part of the corporate governance structure. With this approach, it becomes possible to obtain comparable estimates for all types of financial risk and aggregate them. Such a structure contributes to the information security of all links of the corporate structure.

The sustainable development of entrepreneurship operating in a competitive environment is possible under the conditions of an appropriate level of financial security, which is determined by the effectiveness of countering the risk factors of the external and internal environment that negatively affect their financial results [48].

Therefore, the development of an effective mechanism for managing financial risks of enterprises is an urgent task, the solution of which will create appropriate conditions for their successful operation and sustainable development.

In modern realities, the most effective methods of reducing and neutralizing financial risks are their minimization, insurance (external and internal) and diversification.

In order to minimize the negative consequences of the current global economic crisis, companies need to make unconventional and bold decisions. Enterprises need to identify all possible risks in a timely manner and correctly assess their possible consequences in order to make effective management decisions in order to avoid financial losses and negative consequences.

The financial risk management process is a purposeful activity of a business entity to limit or minimize risks when conducting financial transactions. Financial risk management includes risk identification, risk assessment, selection of risk management strategies and tools, risk monitoring.

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4. Directions of improvement of ecological and economic development of the agricultural sector of the national economy in modern conditions of globalization

Agricultural sector has been and remains a key component of social development. The current state of the agricultural sector of Ukraine shows the imbalance of its development, when preference is given to the economic component with the secondary environmental and social determinants [63]. Of particular relevance is the theoretical justification and practical development and implementation of the determinants of sustainable development of agricultural enterprises of the national economy, which combines both internal contradictions and external challenges.

An important direction of progressive reproduction of the agricultural sector of the national economy is the practical implementation of the concept of sustainable development adopted in Ukraine as a model in the context of public policy and the program of its pragmatic implementation at the level of individual economic entities. The dynamics of agricultural processes within certain constants - financial and economic, organizational, technical and technological, commercial, etc. as the most optimal at the relevant market stage collectively reflects the principles of sustainable development in the sense of permanence, not static. Such events will be possible in the case of balancing the interests of society, the agricultural environment, an individual agricultural enterprise, man and the environment.

Management of the development of the agricultural sector of the national economy is considered at the national level as an integral task, which, on the one hand, includes the definition of economic, social and environmental parameters as key, which are manifested in more detailed positions, in particular, organizational and economic, technical and technological, environmental -economic, socio-economic, etc .; on the other hand - reflects the social needs of the substantive realization of the total consumer value of domestic agricultural production in a broad sense and increase its social significance.

Accordingly, the processes of importance of increasing the environmental safety of domestic agricultural production are combined, which, on the one hand, forms the technically necessary level of quality / safety of aggregate agricultural processes and

their final economic results in the form of sold products; on the other hand, it reflects the ecologically acceptable degree of load on the main natural spheres involved in agricultural production and reproduction of the environment in general, in particular from the standpoint of its socio-ecological "consumption".

The requirements of interconnected choice of all parameters of agrarian development, which characterize the state of the system "society - agrarian environment - natural sphere" and will overcome the existing agrarian risks as real or potential barriers to the rise of the agricultural sector of Ukraine, become a priority.

Realization of the reflected perspective directions of development of agrarian sector of economy of Ukraine demands effective methods, forms and means of management, development of algorithms of interactions. Based on the study, modern management mechanisms of the domestic agricultural sector are proposed for development, in particular in terms of solving the main strategic agricultural problems - organizational and economic, technical and technological, environmental and economic, socio-economic as separate author's methodological justifications (Table 1).

It should be noted that previous studies have considered: the role of waste in energy security [64], strategic management of innovative development of interconnected industries for biofuel production [65], analyzed the prerequisites and organizational and economic mechanism for forming and implementing waste management strategy agricultural enterprises [66], developed conceptual provisions of waste management strategy at the macro and macro levels [67] and formed a strategy for waste management of agricultural enterprises: rational management of crop waste, animal tissue waste, animal manure, agrochemical waste [68]. It is necessary to conduct logical research and find ways to improve the environmental and economic development of the agricultural sector of the national economy in today's globalization.

Today in Ukraine there is no control over the use of pesticides, and as a result people and the environment are poisoned, bees die en masse. It should be noted that this problem with pesticides has become a topic of discussion in the Stockholm Convention on Persistent Organic Pollutants, resulting in various initiatives to clean up

these stocks. In 2012, the JI and the EU launched a partnership, in line with the EU's neighborhood policy, to help countries reduce the risk of pollution from pesticide stocks.

Table 1.

**Characteristics of prospects for the development of the agricultural sector of the
Ukrainian economy in key vectors**

Key issues agricultural development	Vectors for solution main strategic agricultural objectives
Organizational and economic directions	
Uneven development of different forms of management due to the creation of formally identical economic entities for different sizes and social burdens, but not equal management conditions	Development of the logistics mechanism as a certain "buffer" to balance the conditions of agricultural management. Encouragement to create integration agrarian associations of logistical type, which include direct agricultural holdings and structures for storage, processing, transportation of agricultural raw materials / products, trade, etc.
Low marketability of agricultural production	Increasing the level of sales of marketable agricultural products as the main financial and economic result of the agricultural enterprise due to "internal" and "external" changes. Domestic improvements: reduction of costs in the process of agricultural production, economical use of resources, improving the quality of seeds, feed, finished agricultural products. Improving the conditions for effective sales of agricultural products through new production and economic ties with consumers, expanding sales networks based on cooperative interactions, increasing the number of products sold through agricultural commodity exchanges, etc.
Imperfect infrastructure of the agricultural market	Market formation of specialized institutions (by types of agricultural products sold), such as commodity exchanges, wholesale markets, etc., which correlates with the needs of agricultural producers and institutional consumers
Technical and technological directions	
Low rates of technical and technological renewal of agricultural production. Risks of increasing production costs due to increasing wear of equipment, the predominance of obsolete technologies, low rates of technical and technological renewal of agricultural production, etc.	Intensification of introduction of innovative technologies, in particular new selection programs in branch processes of agricultural production for the purpose of increase of level of economic efficiency. Update of material and technical base of agricultural enterprises at the expense of modern technical means with the raised ergonomic indicators that will allow to increase labor productivity; use of agricultural machinery with high indicators of energy saving, resource saving, etc.
Ecological and economic directions	
The growing cost of non-renewable natural resources in the cost structure of agricultural products	Increasing the use of renewable or conditionally renewable resources, in particular in the form of waste or by-products of agricultural production
Unstable competitive position of domestic agricultural products in foreign markets due to incomplete processes of adaptation to European requirements for quality and safety of raw materials and food products	Unstable competitive position of domestic agricultural products in foreign markets due to failure to complete the processes of adaptation to European requirements for quality and safety of raw materials and food products

Continuation of table 1

Lack of motivation of producers to comply with agri-environmental requirements of production	Significant expansion of forms, methods and means of environmental motivation within the system of state regulation of the agricultural sector of the national economy. Socially oriented encouragement of domestic agrarians to ecologically safe agricultural production and active nature protection activity
Socio-economic directions	
Limited capacity of the domestic market of agricultural products and food, due to low solvency of the population	Increasing the level of socio-economic development of the state, living standards of the population of Ukraine, purchasing power, food culture, which will contribute to the development of the domestic market of agricultural products, increase the requirements for its quality and safety
Weakening of the economic basis for the development of rural communities	Activation of development of rural communities in practice, maximum realization of the rights and guarantees of the consolidated Ukrainian peasantry declared by the legislation of Ukraine, increase of level of democratization of rural communities

Source: formed by the author on the basis of the processed literature

At the same time, there is the experience of European countries, where this problem began to be solved in the early 90s of the last century. It was at this time that the EU observed an increase in the concentration of nitrates in waters, many of which exceeded safe standards for human consumption and the environment. At present, almost 40% of the territory of the European Union has the status of vulnerable zones to nitrate pollution, where systemic measures are implemented to reduce and prevent this problem. This is all part of the EU's comprehensive water policy, which has had positive results: the pollution situation has stabilized and concentrations have begun to decline in 70% of EU surface water and 66% of groundwater. The tool that made this possible is the EU Nitrates Directive. This is one of the first documents that was designed to reduce water pollution and prevent it. As part of its European integration commitments, the Government of Ukraine must implement the requirements of this document and create conditions for its implementation "in the field." However, this should also happen through our common interest - through access to quality water, which is impossible without systematic action by both the state and entrepreneurs. Therefore, the Government of Ukraine should use the experience that has shown its effectiveness [69].

At the same time, the rise of the agrarian component of Ukraine's economy, the formation of effective mechanisms for the development of domestic agriculture in terms of complex indicators in time reflects the objectives of all agrarian reforms, the

effectiveness of which is not always effective. In modern conditions, the main emphasis of agricultural development should be combined with innovation processes. This opinion is shared by a large number of domestic agrarian economists, in particular, they propose certain areas of public administration reform based on the introduction of European standards in the agricultural sector of Ukraine while stimulating investment and innovation activities of agricultural enterprises. , the use of international experience in the formation of subsystems of the economic and environmental mechanism for regulating the development of domestic agricultural enterprises, etc. [70]. The agrarian system is a multicomponent, complex set of a significant number of subsystems, which, in turn, include elements of the organizational structure of rural areas, within which agricultural production is provided and aggregate agricultural product is created, rural social infrastructure is formed, market relations are developed, state concepts and programs are implemented. related to the entry of Ukraine's agricultural economy to a new level, the rise of the Ukrainian countryside, etc. Prospects for the development of complex structural parameters, integrated in the functioning of the agricultural system should be considered from the following methodological positions (Table 2).

Table 2.

Principles of development of economic and socio-ecological agrarian system

Characteristics of an integrated agricultural system and its subsystems		
Economic subsystem	Ecological subsystem	Social subsystem
Development as maintaining the structure of the system - a set of elements that provide system integrity, subordination, potential ability to transform		
<p>A complex system-forming unit, which includes individual structures and indicators of their manifestation, accumulates scientific and technical potential</p>	<p>Elementary, temporal or spatial constancy individual parameters ecological subsystem, main biotic and abiotic components, accompanying technical, technological and other elements</p>	<p>The unity of multicomponent social forms and their manifestations through political, socio-economic, environmental elements, cultural values, personal achievements and self-realization of members of the agrarian community, etc.</p>
<p>Indicators of implementation of ecological and economic principles - increasing the productivity of ecosystems and its economic (commercial) implementation; increasing labor productivity in agriculture; formation of the real market price for natural resources used in agriculture (tariffs, interest rates on the commodity value of the resources used); redistributive payments / benefits; payments or reimbursement of payments for agricultural agricultural activities, etc.</p>		

Continuation of table 2

x	Indicators of implementation of ecological and social principles - the degree of ecological safety of agricultural areas; quality of life of rural residents; employment of the rural population in ecologically oriented activities - directly agricultural and commercial in the relevant areas (green tourism, rural tourism, crafts, etc.)	
Development as a process of system functioning - changes, interactions, transformations, transformations with simultaneous equilibrium and dynamic equilibrium of subsystems		
Process reactions at the level of individual economic entities in response to the action of internal and external market factors - the maximum balance of agricultural production and demand for it through trade; access to international markets; realization of economic and social expediency, necessity, sufficiency of agricultural production	Effective transformation of the potential of a separate natural resource (land, natural reservoirs, clean air) into an element of economic activity of an agricultural enterprise; formation of new ones Integration (for environmental and economic / commercial parameters) of business entities; environmentally friendly oriented transformations of agrolandscapes, etc.	Changes in socio-economic tasks and prospects for the development of the national economy and society; diversification of market forms and methods of social realization and satisfaction of the agrarian community; raising the level of agricultural consumption culture; general consumer requirements for the quality and safety of agricultural products
Development as the effectiveness of the system - the reproduction of individual parameters, components of the system in the "mode" of self-development or management, the efficiency of integrated processes		
Maximum realization of economic potential of separate subjects of managing, regions, territories (natural-agricultural zoning) and reception of optimum social and economic effect from agricultural activity; elimination Some (current) contradictions between the agricultural system and the external market environment	Preservation of stability of ecosystems and other natural-technogenic groups with simultaneous updates on the basis of self-reproduction and effective administrative decisions (directed approaches to increase of the areas of ecologically stabilizing agricultural lands); integration of self-development processes (natural regenerative processes in natural ecosystems after changes) and controlled development of agroecological processes in line with ecologically oriented principles of nature management	Formation of a new level of socio-economic indicators of state development; introduction of socially oriented concepts of public administration in the field of agricultural economy, culture, education, humanitarian and intellectual development
Development and prospects for improving the system - balancing social, economic, environmental processes in a single implementation and integral unity		
Market self-organization of the agrarian economic system in combination with state coordinating regulation; introduction of insurance protection for the activities of agricultural producers; expansion of the principles of rational resource use of technical, technological, environmental, informational, intellectual, etc.	Effective agricultural nature management and environmental protection activities in unity with socio-ecological values, economic feasibility; balanced use of natural resources (non-renewable, renewable and conditionally renewable); reproduction of natural biodiversity, increasing the capacity of natural Ecosystems - from elementary to global	Achieving a qualitatively new state of the complex system as a whole, in particular in terms of social parameters as motivating in the development of rural areas; ensuring the appropriate level of comfort of human life in rural areas, well-being, favorable social climate, access to new indicators of social security of the Ukrainian countryside, etc.

Source: formed by the author on the basis of the processed literature

1. Dynamic structure that ensures integrity in the reproduction of the agricultural system in the process and management;
2. Multidirectional functioning while maintaining the processes of dynamic equilibrium of interconnected agricultural processes;
3. Reproduction with a certain frequency of parameters of efficiency (effectiveness) of the system;
4. Market self-improvement and purposeful management of system development.

Balanced development of the agricultural system, which will meet the projected communication and information principles within the agricultural sector of the national economy, will be acceptable in Ukraine only under a new management culture, which, in turn, should be based on the interaction of inputs and outputs - from macroeconomic processes effective state agricultural policy, reforming agricultural production on the basis of innovation and investment, increasing the level of competitiveness of agricultural enterprises as economic entities, supporting the entry of domestic agricultural producers into foreign markets, etc. to effective management at the micro level; in particular, it is a question of a new qualitative level of approaches to management and self-management of development of separate processes in agrarian farms [71].

Modern forms of improving the efficiency of the agricultural system in Ukraine in a broad sense on the basis of the proposed is an equivalent combination of economic, social and environmental components, ensuring the processes of agricultural production, entrepreneurship, rural development, etc. at a new level, in terms of maximum economic efficiency, social acceptability, environmental reproducibility.

The implementation of such an approach should be structural changes in individual agricultural systems, including natural, technical, economic, social and combined subsystems, transformation of their functional parameters based on updating approaches to the use of natural resources and their effective transformation into economic, business and social resources.

Progressive development of the agricultural sector of Ukraine's economy will be possible, along with the formation of other conditions, based on ensuring sustainable environmental positions in the field of agricultural production and agricultural relations. Ecological values in the world socio-economic space today are becoming dominant, especially in economically developed countries. Ukraine, as a sufficiently large European state, must develop taking into account such approaches [72]. To this end, effective mechanisms and management tools should be created at the level of the domestic agricultural sector, ensuring and stimulating environmental development. Regarding the latter, environmental motivations are important for the transition of the domestic agricultural management system in the direction of maximum greening.

Before outlining the feasibility and prospects of environmental motivation of agricultural development by subjects and objects of management, it is necessary to methodologically substantiate the essence of ecological reproduction of complex agricultural processes and components for their regulation. It is a question of consideration of various preconditions to greening of agrarian economy for the purpose of definition of the further target prospects (tab. 3).

Table 3.

Prospects for the greening of the domestic system of agricultural donation

Means of regulating agricultural processes	Direction of ecologically dependent agricultural processes
Public relations	Understanding by society, in particular the rural community, the need to transition the agricultural system of Ukraine to ecological principles in the theoretical aspect, the evolutionary development of ecologically oriented agricultural culture, prospects for rural development on socially and ecologically oriented principles
State regulation	Formation of new methodological approaches, effective mechanisms of greening of the agrarian system on the basis of ecologically significant agrarian policy, a course on balancing intensive and extensive (by separate cultures) agroecological development, improvement of ownership forms by increasing private share with obligatory conditions of ecological management, active use of innovation and investment funds in the field of agricultural production, environmentally friendly methods of agricultural management, etc.
Market self-government	Effective combination of market mechanisms of self-government and state regulation of agri-environmental processes, supply and demand for quality, environmentally friendly agricultural raw materials, crop and livestock products, aggregate agricultural processes and their end results as the most competitive in today's world market, etc.

Continuation of table 3

Agricultural business	The practical implementation of the state's socio-economic policy in the field of food production and consumption of the appropriate level of quality and safety depends on the quality of agricultural management, in particular its ecological component; formation of a commercially reasonable level of productivity of crop production, animal husbandry and other industries as a basis for increasing the profitability of agricultural activities in general, in particular environmentally friendly agricultural production as an independent sub-sector
Public initiatives, initiatives by individual cooperatives	Implementation of the results of the environmental movement in Ukraine in the practice of agriculture as the most acceptable for the implementation of the general environmental concept; intensification of the ecological movement of rural communities as a resource-dependent community; promoting the practical implementation of ISO 22000 standards "Food Safety Management Systems", ISO 9001: 2008 "Quality Management System"

Source: formed by the author on the basis of the processed literature

Emphasis should be placed on the need to form environmentally oriented relationships at the level of domestic society as a whole, awareness of the value of nature in all its manifestations and transfer of such social understandings to the agricultural sector as large in quantity and quality, support such processes in the form of state regulation. For example, we are talking about an effective agricultural environmental policy as a means of managing the agricultural sector [73] and the formation of sustainable, systemic, multidirectional, renewable in environmental content and forms of relations - organizational, managerial, financial and economic, business, moral and ethical etc. An important place in the processes of greening the agricultural sector belongs to the social movement, initiatives of rural residents and more. A necessary element in today's conditions of development of agrarian economy of Ukraine is the improvement of methodological techniques for determining the importance of environmental concepts, the transition from scientifically based target motivations to practical settings for their provision at the macro level (agricultural sector of the national economy and its main components - agricultural production, agricultural relations). and at the micro level - the conditions of management of individual economic entities. In our opinion, it is necessary to actualize the ecological goals of agrarian development, to find positive connections between ecological motivations of agrarian development and ecological processes (both independent and aggregate agro-ecological) and consequences of their detection, to embody them in practice of domestic agrarian management and progressive development of agrarian relations. (Table 4).

If we consider the evolution of approaches to the formation of environmental incentives in the system of world agriculture, it is advisable to analyze the characteristics of the interaction "agricultural environment-natural environment". Components of the agricultural economy, together with the implementation of the main socio-economic "mission" - providing the population with food, raw materials and the simultaneous development of agrar entrepreneurship, functionally correlate with the environmental parameters of the environment. The system of consumption of natural resources in agriculture has its own attributes and features different from other types of economic activity, which is associated with a significant dependence on changing natural and climatic conditions. As a result, agrarian nature management is characterized by the emergence of certain environmental risks - with a certain frequency and scale [74].

Table 4.

Target specifications of ecologically oriented development of the domestic
agricultural sector

Agricultural production	Agrarian relations
Environmental goals	
Creation of a total agricultural product of high quality and environmental safety based on compliance with regulatory and technical requirements for agricultural processes and end products - agricultural raw materials and agricultural products	Formation of ecologically oriented attitude to agricultural production on the basis of a new structure of ownership of fixed assets of agricultural production (mostly private); growing demand for environmentally friendly agricultural products; increase funding for agri-environmental projects, etc.
Agroecological consequences	
Reduction of ecological load on the main natural spheres involved in agricultural activity; formation of a dynamic balance between natural and agricultural processes; maximum increase in the number of territories that are part of agro-landscapes and at the same time develop on the basis of natural processes of self-development, etc.	Maximum realization of strategic ecologically oriented goals of the state agrarian policy and its tactical manifestations; strengthening the links between agricultural science and natural sciences - biology, chemistry, physics, geography and others in order to increase the effectiveness of agri-environmental projects; development of rural areas on the grounds of ecological purity; environmental risk insurance, etc.
Commercial results	
Making a profit from agricultural activities on the principles of ecological purity, ecological renewability and production of organic products	Coordination of interests of separate agrarian commodity producers and the state policy of Ukraine; raising the national producer of quality agricultural products to a new market level

Source: formed by the author on the basis of the processed literature

The practice of agricultural management in different countries in different periods, the solution of current agri-environmental problems by implementation

mechanisms, management of complex processes, methods of making optimal decisions and the simultaneous formation of environmental motivations differs. At the same time, general tendencies are observed, in particular, with the increase of the level of socio-economic condition of states in general, culture of social relations, consumer attitude to nature in the process of agrarian management turned into the predominance of ecological values. Thus, in economically developed countries, the following patterns can be traced: from the obligation to carry out certain environmental measures to the social and moral responsibility of economic entities, the dominance of environmental goals and finding appropriate opportunities to ensure them.

Thus, agro-ecological changes are necessary and characteristic attributes for world agriculture, but at the national and regional level they should be adapted to specific conditions and forms of domestic agricultural management. The realities of agrarian nature management in Ukraine and the development of agrarian relations today reflect the priorities of the ultimate commercial goal of management, environmental motivations are secondary and accompanying, especially for temporary tenants [75].

On the one hand, it is a question of development of a sufficient number of target state concepts and programs of ecological direction in Ukraine, on the other hand - insufficiently developed methods for their realization at the level of separate agrarian enterprises and other subjects of managing.

Confirmation of this is a significant number of environmental problems that accompany today the development of agriculture in Ukraine, which should primarily be explained by non-compliance with regulatory requirements for certain agri-environmental processes. Although such events have objective explanations: at the level of medium and small businesses, in particular due to organizational and financial reasons, it is difficult to organize proper professional support of the agricultural system, crop and livestock industries; insufficiently qualified specialists in agronomic, agrochemical, veterinary and other areas in agriculture of Ukraine; at a low level there is an ecological support of agricultural activity at the level of farms, individual households, etc.

It should be noted the imperfection of the culture of the agricultural system in Ukraine from an environmental standpoint at both the national and territorial levels, which, in turn, is manifested in the following aspects:

- ecological positions in agriculture - outdated equipment and ecologically imperfect tillage technologies (agrotechnical, chemical, reclamation-irrigation, etc.), large-scale soil degradation in the agricultural system of Ukraine in the form of soil erosion, dehumidification, compaction of arable lands and other negative exacerbated by global processes of climate change towards warming, etc .;

- ecological positions in crop production - large-scale imbalance in crop production regarding the cultivation of certain types of agricultural crops, ecologically unacceptable areas for certain species, which causes significant environmental pressures on soils and terrestrial ecosystems, it is about increasing agricultural production of economically profitable oilseeds and industrial crops some others;

- ecological positions in animal husbandry - the development of domestic animal husbandry takes place only with partial consideration of ecologically justified norms for livestock complexes, in some cases with significant violations of the latter, as an ecological consequence

- pollution by manure runoff of open reservoirs, groundwater, in some cases - eutrophication of reservoirs and other complex environmental effects in natural spheres [76].

The formation of a rational environmentally oriented agricultural sector of the national economy requires consideration of a large number of factors and indicators, many of which are unstable or those that directly affect the change of environmental motivations. We are talking about constant changes in the political, socio-economic space of Ukraine, accompanied by corresponding changes in the interest of domestic agricultural producers in environmentally friendly farming, because economic interests come to the fore. In addition, it is important to develop a system of national environmental incentives, not only direct in the form of individual preferences for a certain period of time (tax benefits, lending, etc.), but somewhat remote in time performance or accompanying specific environmental challenges.

For example, the following strategic postulate is necessary for action for the whole system of domestic economy on new principles, in particular for agriculture: sustainable socio-economic development of any country means the functioning of its economic complex, while meeting the growing material and spiritual needs of the population. , provides rational and ecologically safe management and highly efficient balanced use of natural resources, creates favorable conditions for human health, preservation and reproduction of the natural environment and natural resource potential of social production. This means the need to implement and enforce the principles of ecologically balanced nature management in the domestic agricultural system and develop effective mechanisms for their real provision both at the level of the agricultural sector of Ukraine as a whole and at the level of individual economic entities [77].

Prospects for ecologically oriented development of the domestic agrarian system, in our opinion, it is advisable to focus on the interdependence of environmental requirements and environmental decisions, balancing state regulation of agriculture in Ukraine and self-regulation at the level of individual agricultural groups. An important place should be given to the modernization of Ukraine's agricultural policy on new socio-economic objectives in the context of current environmental requirements and fundamental environmental principles, focused on high European standards.

Based on the study, we propose our own vision of solving the problem and the formation of effective principles for the growth of environmental motivations at the agricultural sector of the national economy, based on the methodology of various innovation management in terms of sustainable environmental motivations and simultaneous progressive development of domestic agriculture. Prospects for the introduction of innovative approaches to the processes of greening of domestic agriculture should be determined by the following postulates:

- 1) the need to update approaches to environmental motivations, based on the realities of existing practices of agricultural management in Ukraine;
- 2) expediency of practical realization of ecological motivations on the basis of introduction of new organizational, technical, technological decisions and effective

management of the corresponding processes;

3) the effectiveness of the manifestation of environmental motivations in commercially acceptable forms and socio-cultural manifestations.

The first position of the need for a new vision of greening of agricultural production in Ukraine reflects the current environmental problems - pollution (mechanical, physical, chemical, biological) of major natural areas, in some cases degradation of agricultural land, water resources, reduction of plant and animal species diversity, disproportionate change of natural landscapes in agricultural areas, as a consequence - the violation of natural processes of circulation of substances, energy, information. The primary reason for this, from the standpoint of agriculture, are the processes of intensification, the need to meet growing market needs for agricultural raw materials, food, to ensure the required quantitative level of food security, strategic stocks of agricultural products and more. Accordingly, new mechanisms are needed to make management decisions, improve methods of regulating the development of the agricultural sector by environmental parameters at both state and regional levels.

The second position on the economic feasibility of using innovative solutions, improving the processes of greening the agricultural sector is determined by both internal and external market factors. It is necessary to significantly improve the quality and safety of agricultural raw materials and food in Ukraine, which is important both from the standpoint of meeting the needs / wishes of domestic consumers and the overall requirements of the European market. products.

The third position on the effectiveness of improving the environmental components and making the right environmental decisions in the agricultural system of Ukraine will be reflected in aggregate, interdependent indicators - economic, social, environmental, accompanied by increasing overall efficiency of agricultural production with simultaneous environmental "accents", such as organic farming. diversification of agricultural entrepreneurship on the basis of green, rural tourism, development of rural areas, etc.

Environmental motivations for the agricultural management system according to the relevant environmental rules in European countries are regulated, on the one

hand, on the basis of promising environmental directives taking into account changing climate challenges, on the other hand - correlate with high economic incomes of farmers. Examples are the use of renewable energy sources in various forms - wind farms, solar panels, bioenergy plants, the use of tidal energy, etc., the cost of acquisition and operation of which are significant and compensated for a long period of time.

These positions of the common agricultural policy of the EU member states closely intertwine economic, social and environmental motivations for the progressive reproduction of the agricultural management system through various market mechanisms and centralized management, in particular at the macro level through the European Commission. Some examples of effective decision-making should be proven means to reproduce Ukraine's agricultural policy in line with European interactions, improve agricultural relations, progressive regulation of agricultural production and rural development (economic, social, environmental components as interdependent), increase the competitiveness of domestic agricultural products. , expanding its access to foreign markets and other market positions.

In our opinion, one of the aspects of practical provision of ecologically balanced agrarian management in Ukraine and simultaneous formation of ecological motivations is the expansion of the provision of information and advisory services. According to the Law of Ukraine "On Agricultural Advisory Activities" [78] defined measures and works to promote state agricultural policy, measures to promote scientific and technological progress, in particular in the world system of agriculture, generalization and dissemination of information on best practices in technological processes in agricultural production, introduction of new technologies for growing agricultural crops, animal care, product processing, etc. It is worth emphasizing the legislation of Ukraine in the field of agricultural waste management, which includes such laws as "On ensuring the sanitary and epidemiological well-being of the population" of February 24, 1994 № 4004-XII [79], "On the production and circulation of organic agricultural products and raw materials "of September 3, 2013 № 425-VII [80], " On food safety and quality "of December 23, 1997 № 771/97-BP (as amended by the Law of Ukraine of September 6, 2005 № 2809-IV) [81], "On withdrawal from

circulation, processing, utilization, destruction or further use of low-quality and dangerous products" of January 14, 2000 № 1393-XIV [82], etc. However, due to a number of reasons, the real situation does not allow for the proper implementation of information and consulting services for agricultural entities.

Therefore, it is urgent today to create permanent scientific and methodological centers for farms, where domestic farmers can get advice from theorists and practitioners: lawyers in the field of agrarian law, land managers, agronomists, agrochemists, plant and animal physiologists, breeders, agricultural technicians and more. on certain problematic issues related to various aspects of the agricultural system, in particular environmental orientation. The effectiveness of such centers will be possible only with real state support, in particular from the standpoint of financial regulation. There is a possibility of creation and functioning of such institutions on the basis of higher education institutions, academic research institutes, whose employees can be consultants, professionally substantiate the peculiarities of production activities of agricultural farms (at their request) on the basis of environmentally friendly procedures.

Potential opportunities to improve the situation in the agricultural sector of Ukraine should also be realized on the basis of specific environmental decisions at the level of individual agricultural groups, the effectiveness of which will correlate with the production capacity of the enterprises and their mobility. The main task, in our opinion, is targeted actions that will optimize production and entrepreneurial intensities, if necessary - to restructure agricultural enterprises, introduce new types of agricultural raw materials and finished products into agricultural production, ecologically orient agricultural cycles (taking into account climate change, in particular) , to grow organic products, focusing its sales on specific market segments, taking into account the preferences of modern consumers, etc.

The current system of state regulation of the agricultural sector of the national economy in Ukraine is developing taking into account its main institutional objectives, methodologically based on the implementation of socio-economic and environmental priorities of society as a whole [83].

In the agricultural sector, it is provided on the basis of relevant guidelines. The current targets for the development of the state regulation system and its importance should be reflected in economic, social and environmental criteria. The analysis of the main areas of management tasks in this area is shown in table 5.

An important basis for the production of agricultural products of high quality and environmental safety in Ukraine is the selection of aspects of its functional significance from the standpoint of producer, consumer, society as a whole. The process of formation of agricultural products by quality parameters and bringing the relevant properties to the consumer has a significant number of features that should be considered in a broad and local reflection: in the formation of strategic agricultural policy and project commercial calculations at the level of individual businesses [84].

Based on the author's analysis, we propose for conceptual consideration and practical consideration at the level of the agricultural sector of the national economy from the standpoint of ensuring the required level of quality and environmental safety, the following specifications of agricultural products:

- first, the process of production and creation of an agricultural product reflects to the greatest extent (in comparison with other types of economic activity) the action of natural, in particular biological factors, both external influences (climatic and weather conditions) and internal influences, in particular fodder lands, seed-selection base, livestock, etc.), differs in seasonality, involvement in agricultural cycles and the corresponding use of a significant amount of natural resources;

Table 5.

Motivational goals of the system of state regulation of the agricultural sector of
the Ukrainian economy

Task groups	Essential features
Economic problems	Contribute to ensuring: <ul style="list-style-type: none"> - food security of the country; - development of the main branches of the agri-food system (APS); - growth of agricultural production; - economic efficiency of the agricultural sector; - free development of agricultural enterprises as subjects of agrarian economy; - functioning of the domestic agri-food market with modern infrastructure; - growth of international technical cooperation in the agricultural sector; - Ukraine's strong market position in the world, in particular the European agri-food sector, etc.

Continuation of table 5

<p>Social tasks</p>	<p>Formation of new social standards due to: - social stability in society, in particular on the basis of a developed agricultural sector of the economy; - overcoming social problems in rural areas; - providing the rural population with jobs; - development of the service sector in the countryside at the expense of modern ones service enterprises: trade establishments, means of communication, public service establishments, etc.</p>
<p>Environmental tasks</p>	<p>Development of ecologically oriented agricultural sector on the basis of: - monitoring of environmental parameters of the agricultural management system; - high-tech agricultural production, resource- and energy-saving technologies; - improving the quality and safety of agricultural raw materials and food products; - production of ecologically safe agricultural products, in particular by parameters "organic products"; - integrated development of rural areas with simultaneous environmental priorities; - formation of a network of environmental farms and other institutions in the structure of the agri-food system</p>

Source: formed by the author on the basis of the processed literature

- secondly, today agricultural products are created in Ukraine in conditions of intensive environmental stress, unsatisfactory condition of a large part of the territory, including agricultural, for certain environmental parameters, primarily the level of air, water, soil - chemical, physical, biological, etc., violation agrotechnical and agrochemical cycles in the culture of agriculture, crop production, animal husbandry, etc .;

- thirdly, the use of ecologically oriented methods of utilization, reutilization of resources is insufficient, for example, the practical absence at the level of individual domestic farms of the use of modern methods of using agricultural waste as a secondary raw material, etc .;

- fourth, the regulatory, methodological, organizational and technical regulation of quality and safety of agricultural raw materials and finished products in the domestic agricultural market is imperfect, it is a significant lag behind the European level of the domestic system of technical regulation of agricultural products, its metrological support and qualimetric evaluation. ;

- fifth, a small number of examples of implementation of domestic quality management systems (ISO series) and safety (HACCP) in domestic agricultural

enterprises, which, in turn, reduces the competitiveness of domestic agricultural products in the world, including the European market.

In particular, the use of mineral fertilizers is regulated by agronomic and hygienic standards: the rate of fertilizers per unit area and the ratio of nutrients for individual crops, timing and methods of application, the maximum allowable level of nitrates and nitrites in crop products [69].

Economic research in the field of domestic agricultural production, in particular from the standpoint of conceptually improving the quality and environmental safety of agricultural products, reflects the need for original solutions and relevant author's proposals. Namely, it is important to develop the methodological basis of agrarian economic thought in terms of understanding the essence of certain established terms and their proper application in the practice of agricultural management.

Today, in the context of globalization and the formation of market relations, Ukraine needs to create an effective economic system capable of ensuring the economic development of agriculture and solving social problems in rural areas, as well as stimulating export-oriented agricultural sectors. Such processes have a positive effect on the qualitative characteristics of the institutional environment of state policy for the development of agricultural production. Analysis of the current state of the national economy and existing problems shows that stabilization and the beginning of economic growth in the agricultural sector are impossible without strengthening the role and effectiveness of state intervention, formulating a regional integrated system of state regulation that can create favorable financial and social conditions for the region. food in the required volumes and standard of living, and economic entities the appropriate level of profitability.

For the development of the agricultural sector it is necessary: to assess the state of agriculture and service industries, to formulate the main vectors of economic development for the future, to identify effective mechanisms of public policy to launch a motivational mechanism, to address economic and food security. Since the state policy significantly affects the efficient functioning of agricultural and processing

enterprises, without it it is impossible to ensure high profitability of agricultural production [85].

In modern conditions, agriculture in Ukraine has become one of the most important branches of material production, which due to its specific features and cyclical production in modern market conditions occupies a leading position and has an export-oriented orientation.

That is why the formation of a market economy requires, first of all, the implementation of radical transformations in the functioning of the system of state regulation of agricultural production, because one of the main conceptual provisions of Ukraine's agricultural policy is to guarantee the progressive development of agriculture. market. The priority direction of the state agricultural policy should be the focus on a balanced combination of state regulation of the economy of agricultural production with the economic freedom of enterprises, taking into account both domestic and foreign experience in order to integrate into the European economic space. To do this, it is necessary to implement a set of measures that would ensure the implementation of the strategy of agrarian transformation and the creation of efficient functioning of agricultural production.

Substantiation of the strategy and tactics of development of agricultural production and analysis of its current state requires a deep and comprehensive study of the theoretical foundations of development and its impact on the formation of Ukraine's economy [86]. After all, agriculture takes an active part in the creation of gross national product, national income, ensures food security of the state.

Public policy is a means that can bring the economy out of crisis and creates the necessary conditions for further stable development of the national economy. Given the close relationship and the dependence of its pace and nature on state influence, we need to identify a set of tasks that the state must solve in the near future:

- formation and implementation of the strategy for the development of the agricultural sector, its institutional modernization and structural and technological changes, the definition of priority sectors, place and role in the national economy;

- improvement of the regulatory framework for the regulation of relations in the agricultural sector;

- active participation of the agricultural sector in innovation-investment and structural-technological programs;

- efficient use of production potential (innovation, financial and investment, technical and technological) and all available resources of the agricultural sector of the regions.

It should be noted that the functioning and development of agriculture are extremely dependent on state support, which in turn is important both economically and socio-politically. Thus, it has two main forms - direct and indirect. The first of them is carried out through budget financing of special target investment, branch and other programs on a competitive basis. Under such conditions, agricultural enterprises are deprived of independent choice and are forced to make decisions on state terms. The second is indirect state support, in which the state only creates the preconditions for choosing those decisions that meet its interests, in particular:

- granting preferential taxation of investment and innovation activities;

- improvement of depreciation policy in the direction of widespread use of flexible methods of depreciation for the purpose of intensive renewal of fixed capital;

- introduction of the mechanism of state credit support of long-term investment projects in the agricultural sphere;

- ensuring in the agricultural sector of the economy the rate of return at the average level for the economy through the improvement of the system of distribution relations, price, tax, customs and other mechanisms;

- preferential customs policy.

State support of the agricultural sector is a component of the system of state regulation of agriculture, which is a set of legal, financial - economic, organizational and other measures of the state to stimulate the development of both agricultural production and rural areas in the right direction for society.

The main tasks of this program are to create organizational and economic conditions for integrated rural development; definition and support of priority

directions of development of agrarian sphere in modern conditions; guaranteeing the food security of the state; increasing the standard of living of citizens, providing conditions for competitive development of the agricultural sector, taking into account the requirements of the WTO, protection and conservation of natural resources, increasing the competitiveness of agricultural products.

Having analyzed the principles of the agrarian policy of the European Union, its perfection and great focus on the protection of its agricultural producers and consumers of agricultural products are clearly visible. Based on the principles of domestic agricultural policy, the desire to bring the agricultural sector of Ukraine to a significantly new level with a focus on the European model of management is seen [87].

Achieving strategic goals and priorities is possible through the implementation of the main areas: ensuring food security of the state; improvement of land relations; formation of long-term motivation of agricultural market participants; deregulation of economic activity, development of self-regulation of markets and adaptation of technical regulation to international standards and requirements; increasing the competitiveness of agricultural and food products; support for diversity for the effective development of agricultural sectors; rational use of natural resources.

Table 6.

Principles of the state agrarian policy of Ukraine and the common agrarian
policy of the European Union

Principles of the EU SAP		Principles of agrarian policy of Ukraine	
Financial solidarity	Redistribution of income between Member States through the general budget and ensuring the optimal level of revenue transfer for Member States and Member States candidates	Balance	Balanced development of the agricultural sector according to economic, social and environmental criteria
Preferences for EU farmers	Priority development of "domestic" production in order to increase the level of self-sufficiency of agricultural villages EU products	Priorities	Priorities for the development of export-oriented sectors of the agricultural sector

Continuation of table 6

Stability of legal regulation of EU agricultural policy	Clear, orderly and predictable legislation	Ensuring food security	Food production volumes should meet the needs of the population in the minimum consumption norms. Prevention of food security threats
Proportionality	Identifies the extent to which Member States need to cooperate	Strategic management of agricultural development	Management and coordination of the functioning of all branches of the agricultural sector and operational impact on market conditions
Non-discrimination	The common organization of agricultural markets prohibits any discrimination between producers and consumers within the EU	Differentiation	Substantiated distribution of approaches to creating conditions for state support of agricultural producers depending on the criteria established by law activities
Open market economy 3 free competition	No State shall impose on the products of other Member States any kind of internal taxation in excess of that which is directly or indirectly levied on similar products, domestic products	Motivation	Formation of a motivated producer of agricultural products
Cautions	The country has the right to take certain steps to restrict access to the market of products, the production and consumption of which could have serious consequences for human health and environment	Cooperation and cluster organization	Cooperation of agricultural producers and the formation of food clusters
Internal (common) market	Agricultural goods can move across the EU without any customs or tariff restrictions. The same prices and rules for all competition sanitary and veterinarians	Versatility and regionalization	Development of village-forming farms (family farms and agricultural enterprises of various organizational and legal forms). Taking into account regional features

Source: formed by the author on the basis of the processed literature

In our opinion, this will allow realizing the capabilities and desires of the state to bring the agricultural sector of the national economy to a significantly new level of functioning.

On the basis of the analyzed and in detail researched problems of formation of the state policy in the agrarian sphere, it is possible to draw certain conclusions.

In the context of globalization of the world economy, the state, solving problems of food and economic security, forming the regulatory framework, developing and implementing strategies for the functioning of the agricultural sector in the regions, implementing regional rural development programs, performs certain functions, including system-forming, system-reproducing and system-developing [88].

Today, under favorable natural and economic conditions, the agricultural sector will not be able to increase agricultural production without government assistance. After all, unprofitable, weak material and technical base, imperfect financial and credit and market relations make most of the agricultural and private enterprises inefficient. Therefore, the state agricultural policy should be aimed at supporting such farms and ensuring sustainable development of the agricultural sector of the national economy, based on national priorities and taking into account the need for Ukraine's integration into the European Union and the world economic space, taking into account foreign experience. Priority should be given to food security, transforming it into a highly efficient, competitive sector in foreign and domestic markets, integrated rural development and solving rural social problems.

The main vectors of state agricultural policy should be the improvement of public administration; state support of agricultural entities by concentrating state resources on priority areas of development, the formation of favorable pricing, financial and credit, insurance, tax and budgetary policies; promoting the development of competitive agricultural production on the basis of cooperation and integration; creating favorable conditions for the realization of export potential, the formation of market relations and land protection; introduction of modern mechanisms and methods of forming a transparent market of agricultural products, food, capital and labor; strengthening the social protection of the rural population.

We believe that the main task of Ukraine's agricultural policy at the present stage is to ensure socio-economic protection of domestic agricultural producers, formation of the domestic food market and realization of export potential of the industry, improvement of material and technical base and labor potential, improvement of pricing mechanisms, use of energy saving technologies, greening and rational land use.

It is necessary to minimize the impact of the price disparity between the cost of agricultural products and the cost of resources needed to produce these products; strengthen economic ties between agricultural producers and processors of agricultural raw materials; use budget funds efficiently; increase support for small and medium-sized producers; to improve social living conditions in rural areas, to carry out state regulation of food imports.

Thus, today agriculture of Ukraine is one of the most important branches of material production, which due to its specific features and cyclical production in modern market conditions occupies a leading position and has an export-oriented orientation. That is why the formation of a market economy requires, first of all, the implementation of radical transformations in the functioning of the system of state regulation of agricultural production, because one of the main conceptual provisions of Ukraine's agricultural policy is to guarantee the progressive development of agriculture. market. The priority direction of the state agricultural policy should be the focus on a balanced combination of state regulation of the economy of agricultural production with the economic freedom of enterprises, taking into account both domestic and foreign experience in order to integrate into the European economic space.

Agrarian policy in Ukraine should be built in accordance with new modern requirements, principles, quality standards of leading economic, environmental and social world trends and requirements. An important step in this direction is the development of a mechanism of environmental and economic management in agricultural production [89].

Thus, we can identify the main areas of organizational and economic management in agricultural production, namely:

- the state must form a number of measures that can change the format of relations between production and the environment in the direction of rational use, reproduction of agricultural systems;

- at the state and regional levels it is necessary to implement environmental policy measures, based on the process of implementation and development of

environmentally friendly production, rational use of the state economy, especially its financial resources, production and scientific and technical potential;

- it is necessary to determine social priorities in view of the specific situation in the regions, according to which it is planned to eliminate the negative phenomena of nature management and the transition to environmentally friendly production;

- it is important to combine state influence with market forms of management, stimulate qualitative changes through priority financing, lending, logistics, information support, implementation and development of environmentally friendly production; - conducting economic and environmental monitoring of the process of transition to environmentally friendly production in the analysis of internal strengths and weaknesses of agricultural producers;

- monitor and take into account changes in the composition of external factors and their impact on the competitiveness of products and enterprises of the agricultural sector of the economy, namely to detail their operation, clearly separate market opportunities and threats.

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5. Development of agriculture, forestry and fisheries of Ukraine in the conditions of the economic and economic needs of society

The process of improving the sectoral structure of agricultural enterprises involves the implementation of certain measures that precede the determination of the main directions and ways of developing and implementing a mechanism for ensuring the optimization of the production structure when using agricultural land.

It is impossible and impractical to determine the priority of one of the branches of agriculture. Since animal husbandry is based on plant products, the fodder base for which is the following products: hay, straw, green fodder, grain fodder and some other types of agricultural crops. In turn, animal husbandry wastes, namely manure, are used in crop production as organic fertilizers, which ensure the improvement of soil quality indicators and crop yields. At the same time, it should also be noted the undeniably important role of the plant industry in the social life of a person in general. This area provides the population with food products and raw materials for the processing industry, including food, pharmaceutical, light, woodworking, etc.

During the period 2000-2020, the area of agricultural land in Ukraine decreased. If in 2000 its volume was 41.8 million hectares, then in 2020 it will be 41.5 million hectares. Based on the data of the State Statistics Service of Ukraine, this trend was observed during the entire period of the study.

At the same time, the improvement of land productivity must be evaluated not only based on its total volume, but also on the use of mineral and organic fertilizers.

The dynamics of changes in the total volume of applied mineral fertilizers (nitrogen, phosphorus, potassium) in Ukraine during 2000-2020 (Fig. 1) shows about the growth of this indicator in 2020 compared to 2000 by 9.86 times.

It should be noted that compared to 1990 (4,414.2 thousand tons), the indicator of 2020 is 1.59 times lower, which indicates the absence of a policy to support the productivity of the land fund in the 1990s. This can be justified by the destruction of the chemical industry, in particular, enterprises that produced mineral fertilizers. The trend of stable growth of the total volume of applied nitrogen, phosphorus, potassium

mineral fertilizers in recent years allows us to assert the existence of opportunities to increase the productivity of the use of land resources in the future.

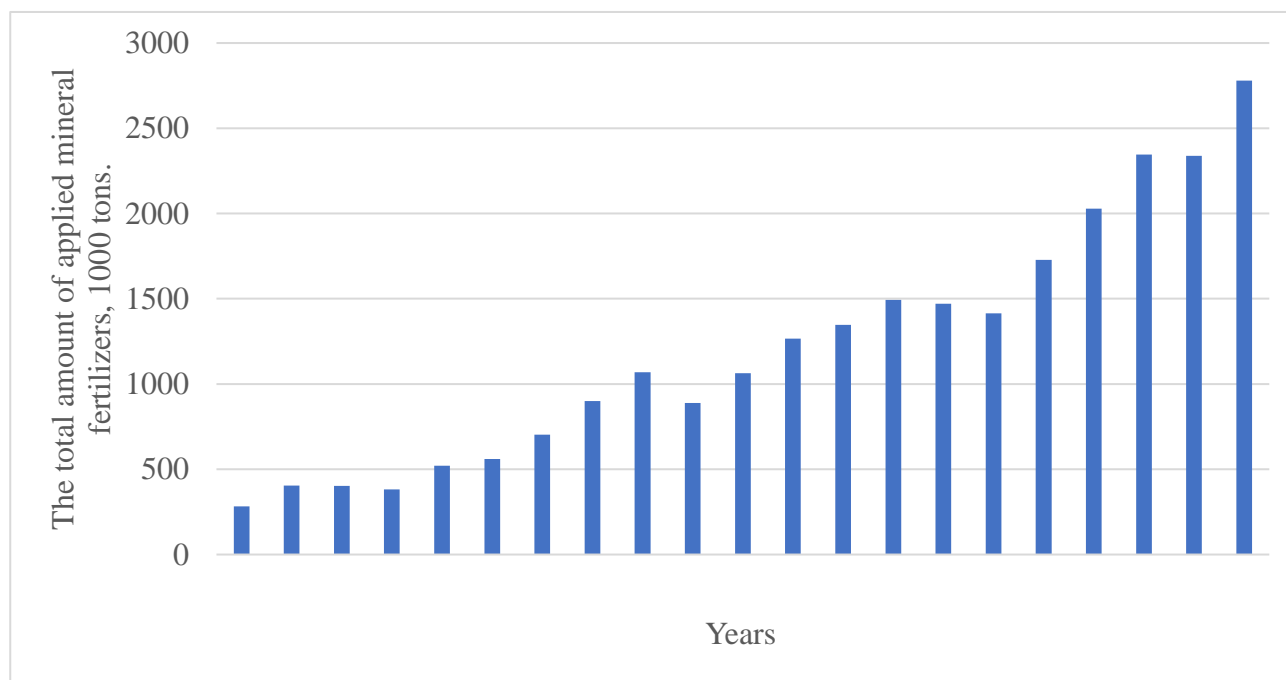


Figure 1. Dynamics of changes in the total volume of applied mineral fertilizers in Ukraine during 2000-2020, thousand tons.

(Compiled by the authors based on the data of the State Statistics Service of Ukraine)

It should be noted that compared to 1990 (4,414.2 thousand tons), the indicator of 2020 is 1.59 times lower, which indicates the absence of a policy to support the productivity of the land fund in the 1990s. This can be justified by the destruction of the chemical industry, in particular, enterprises that produced mineral fertilizers. The trend of stable growth of the total volume of applied nitrogen, phosphorus, potassium mineral fertilizers in recent years allows us to assert the existence of opportunities to increase the productivity of the use of land resources in the future.

Applying fertilizers is an important means of increasing the yield of crops and, accordingly, the efficiency of land use in agriculture. The effect of fertilization is achieved only with a balanced application of fertilizers, with an optimal combination of all components, maintaining the appropriate proportions between them. The level of fertilization of crops ultimately affects the revenue from the sale of plant products.

At the enterprise, a situation may arise when one of the components is preferred during fertilization. Yes, one of the elements most necessary for plants is nitrogen. It plays a significant role in improving soil properties and increasing their fertility.

Thanks to the introduction of nitrogen fertilizers, not only the yield of crops increases, but also the quality of agricultural products improves (the protein and gluten content in wheat increases, the sugar content in sugar beet increases, etc.) [90, p. 75]. Guided by such considerations, the enterprise can choose a ratio of fertilizers in which phosphorus and potassium fertilizers are provided. However, based on the fact that in the previous version, the applied amount of nitrogen fertilizers was not fully used, this ratio does not make sense, since the fertilizers are fully used only in the optimal ratio provided by the norm. The actual use of applied nitrogen fertilizers will be limited by the amount of applied phosphorus and potash fertilizers. This is explained by the effect of the law of the minimum, according to which the productivity of the field is directly dependent on the necessary component of nutrients that the soil contains in the smallest (minimum) amount [91, p. 9-10].

Phosphorus also plays an important role in the life of plants. The use of phosphoric fertilizers increases the yield of crops, improves the quality of products, and in addition, leads to the acceleration of plant maturation and increases their resistance to diseases [90, p. 75]. Phosphorus deficiency is characteristic of most soils.

Therefore, the use of phosphorus fertilizers is quite effective here. Potassium is also necessary for plant development. This element participates in the accumulation of proteins, stimulates the synthesis and accumulation of carbohydrates, and also increases the resistance of plants to lodging and damage by diseases. Potassium stimulates enzymatic processes in plants, increases their winter resistance and drought resistance [90, p. 75]. In some cases, potassium may be in short supply, so its application to the soil has a positive effect on fertility.

With the help of correlation-regression analysis, we will consider the dependences between different types of mineral fertilizers (nitrogen, phosphorus and potash), which are introduced to increase the fertility of agricultural lands. The peculiarity of this study is the construction of an inverse dependence, which will allow to assess the sufficiency (insufficiency) of potash and phosphorus fertilizers per unit area of agricultural land (Fig. 2).

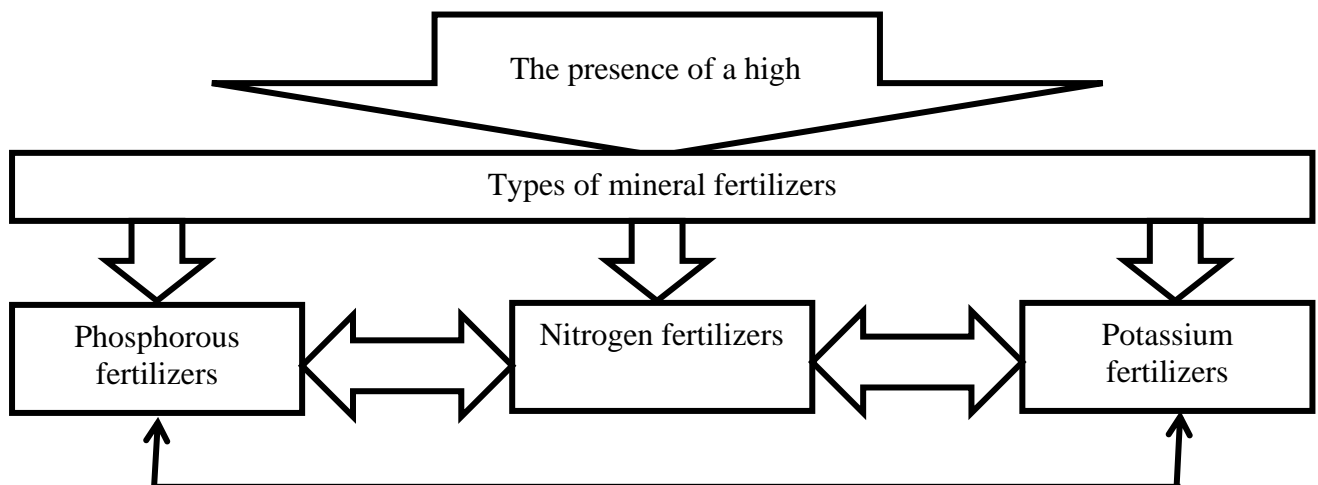


Figure 2. Scheme for assessing the sufficiency (insufficiency) of mineral fertilizers per unit area of agricultural land
(Built by the author)

The dependence of the application of nitrogen fertilizers per unit area of agricultural land on the amount of phosphorus fertilizers is characterized by growth trends.

Taking into account the high density of the connection, it is possible to say with one hundred percent certainty that the use of 1 kg of phosphorus fertilizers per 1 ha will lead to the use of 5.931 kg of nitrogen fertilizers.

The inverse dependence of this regression is the dependence of the application of phosphorus fertilizers per unit area of agricultural land on the volume of nitrogen fertilizers. In this case, there is a tendency to decrease the amount of phosphorus fertilizers per unit area of agricultural land in the case of nitrogen fertilizers.

If 1 kg of nitrogen fertilizers are applied per 1 ha of agricultural land, the lack of phosphorus fertilizers will amount to 0.2039 kg per 1 ha.

For a more detailed analysis of the sufficiency (insufficiency) of phosphorus and nitrogen fertilizers per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 1).

Table 1.

Assessment of the sufficiency (insufficiency) of nitrogen and phosphorus fertilizers per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=3,6479*x+2,2831$	1. Phosphorous fertilizers are not applied ($x=0$). The minimum amount of nitrogen fertilizers applied in this case will be 2.2831 kg per 1 ha ($3.6479*0+2.2831=2.2831$). 2. It is planned not to apply nitrogen fertilizers ($y=0$). The lack of phosphorus fertilizers will amount to 0.6259 kg per 1 ha ($x = -2.2831/3.6479 = -0.6259$).
$y=0,2664*x-0,4703$	1. Nitrogen fertilizers are not applied ($x=0$). The lack of phosphorus fertilizers will amount to 0.4703 kg per 1 ha ($0.2664*0-0.4703 = - 0.4703$). 2. It is planned not to apply phosphorus fertilizers ($y=0$). The minimum amount of nitrogen fertilizers applied in this case will be 1.7654 kg per 1 ha ($0.4703/0.2664=1.7654$).

There is a lack of phosphorus fertilizers in the range from 0.4703 kg per 1 ha to 0.6259 kg per 1 ha in the case of no application of nitrogen fertilizers. At the same time, the minimum need for applying nitrogen fertilizers per 1 ha in the absence of phosphorus fertilizers is in the range from 1.7654 kg to 2.2831 kg.

In this way, it is possible to overcome the lack of phosphorus fertilizers under the condition of sufficiency of nitrogen fertilizers in the case of applying the latter more than 1.7654 kg per 1 ha of agricultural land.

The relationship between the application of potassium fertilizers per unit area of agricultural land and the volume of nitrogen fertilizers, studied on the basis of statistical data for the last 20 years, is characterized by high density. The dependence of the amount of potash fertilizers applied per unit area of agricultural land on the application of nitrogen fertilizers has a decreasing trend, because in the case of applying 1 kg of potash fertilizers per 1 ha, the lack of potash fertilizers will amount to 0.2461 kg per 1 ha.

The inverse regression to this is the regression of the dependence of the volume of nitrogen fertilizers on the application of potash fertilizers per unit area of agricultural land. The regression equation shows the increasing trend of this regression. In the case

of applying 1 kg of potash fertilizers per 1 ha of agricultural land, the required amount of nitrogen fertilizers will be 6.904 kg.

According to the conducted studies, in the first case, there is a need to constantly increase the volume of nitrogen fertilizers to cover their guaranteed reduction in the amount of 0.4715 kg per 1 ha. In the second case, even with a zero amount of potash fertilizers per 1 ha of agricultural land, 4.3134 kg will be applied.

Considering the inverse of these equations in relation to each other, consider the level of sufficiency (insufficiency) of potash and nitrogen fertilizers per unit area of agricultural land (Table 2).

Table 2

Assessment of the sufficiency (insufficiency) of potash and phosphorus fertilizers per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=4,3134*x+2,5906$	1. Potassium fertilizers are not applied ($x=0$). The minimum amount of nitrogen fertilizers applied in this case will be 2.5906 kg per 1 ha ($4.3134*0+2.5906=2.5906$). 2. It is planned not to apply nitrogen fertilizers ($y=0$). The lack of potassium fertilizers will amount to 0.6006 kg per 1 ha ($x=-2.5906/4.3134= -0.6006$).
$y=0,2254*x-0,4715$	1. Nitrogen fertilizers are not applied ($x=0$). The lack of potassium fertilizers will amount to 0.4715 kg per 1 ha ($0.2254*0-0.4715= -0.4715$). 2. It is planned not to apply potash fertilizers ($y=0$). The minimum amount of nitrogen fertilizers applied in this case will be 2.0918 kg per 1 ha ($0.4715/0.2254=2.0918$).

There is a shortage of potash fertilizers in the range from 0.4715 kg per 1 ha to 0.6006 kg per 1 ha in the case of not applying phosphorus fertilizers. At the same time, the minimum need for applying nitrogen fertilizers per 1 ha in the absence of potash fertilizers is between 2.0918 kg and 2.5906 kg.

In this way, it is possible to overcome the lack of potash fertilizers under the condition of sufficiency of nitrogen fertilizers in the case of applying the latter more than 2.0918 kg per 1 ha of agricultural land.

The dependence of the application of potash fertilizers on the amount of phosphorus fertilizers per unit area of agricultural land is characterized by a high

density of connection, and the equation $y=0.8417*x-0.0516$ indicates a tendency to decrease the amount of potash fertilizers by 0.0516 kg per 1 ha.

In turn, the introduction of any amount of phosphorus fertilizers per unit of agricultural land leads to an increase in the amount of potash fertilizers by 0.8417 times. Thus, taking into account the trend over the last 20 years, it can be concluded that the application of 1 kg per 1 ha of phosphorus fertilizers leads to the need to apply 0.7901 kg per 1 ha of potash fertilizers.

The inverse equation of this regression is the equation $y=1.1762*x+0.1098$, and therefore it characterizes the tendency of growth in the amount of potash fertilizers applied per unit area of agricultural land by 0.1098 kg per 1 ha.

As a result, in the case of applying 1 kg of potash fertilizers per 1 ha of agricultural land, 1.286 kg of phosphorous fertilizers are applied.

Considering the inverse of these equations in relation to each other, consider the level of sufficiency (insufficiency) of potash and phosphorus fertilizers per unit area of agricultural land (Table 3).

Table 3

Assessment of the sufficiency (insufficiency) of potash and phosphorus fertilizers per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=1,1762*x+0,1098$	1. Potassium fertilizers are not applied ($x=0$). The minimum amount of phosphoric fertilizers applied in this case will be 0.1098 kg per 1 ha ($1.1762*0+0.1098=0.1098$). 2. It is planned not to apply phosphorus fertilizers ($y=0$). The lack of potassium fertilizers will amount to 0.0933 kg per 1 ha ($x=-0.1098/1.1762= -0.0933$).
$y=0,8417*x-0,0516$	1. Phosphorous fertilizers are not applied ($x=0$). The lack of potassium fertilizers will amount to 0.0516 kg per 1 ha ($0.8417*0-0.0516= -0.0516$). 2. It is planned not to apply potash fertilizers ($y=0$). The minimum amount of phosphoric fertilizers applied in this case will be 0.0613 kg per 1 ha ($0.0516/0.8417=0.0613$).

There is a shortage of potash fertilizers in the range from 0.0516 kg per 1 ha to 0.0933 kg per 1 ha in the case of no application of phosphorus fertilizers. At the same

time, the minimum need to apply phosphorus fertilizers per 1 ha in the absence of potash fertilizers is in the range from 0.0613 kg to 0.1098 kg.

In this way, it is possible to overcome the lack of potash fertilizers under the condition of sufficiency of phosphorus fertilizers in the case of applying the latter more than 0.0613 kg per 1 ha of agricultural land.

We will estimate the sufficiency (insufficiency) of mineral fertilizers by calculating the average indicators (Fig. 3).

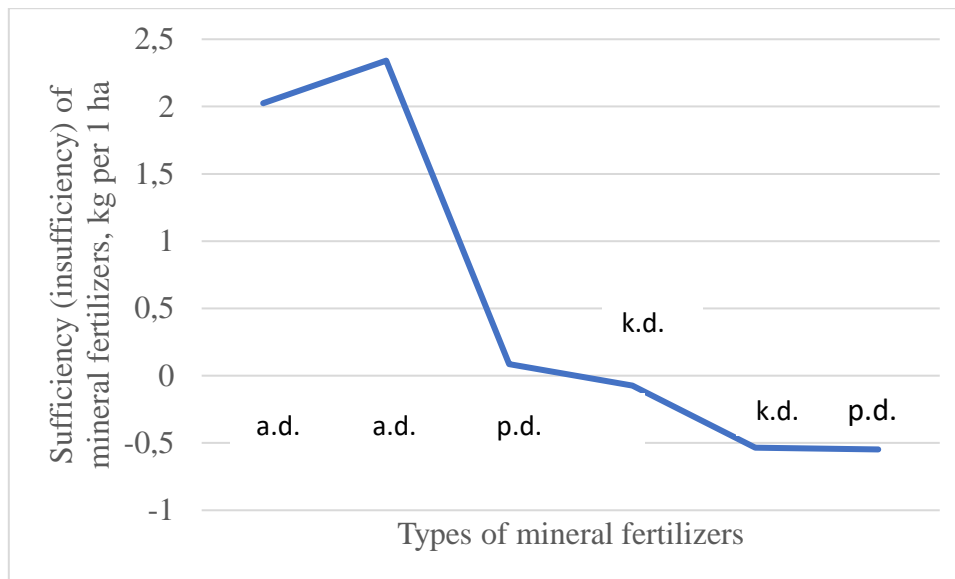


Figure 3. Average indicators of the dynamics of sufficiency (insufficiency) by types of mineral fertilizers (a.d. – nitrogen fertilizers, p.d. – phosphoric fertilizers, k.d. – potash fertilizers)

(Built by the author)

The conducted analysis allows us to conclude that in Ukraine there are all possibilities to achieve the minimum sufficiency of nitrogen fertilizers in relation to phosphorus fertilizers (average value 2.02425 kg per 1 ha) and potash fertilizers (2.3412 kg per 1 ha). In turn, the minimum sufficiency of phosphorus fertilizers in relation to potash is 0.08555 kg per 1 ha.

The shortage of potash fertilizers in Ukraine is the largest: in relation to phosphorus fertilizers - 0.07245 kg per 1 ha, nitrogen fertilizers - 0.53605 kg per 1 ha. The lack of phosphorus fertilizers in the context of the use of nitrogen fertilizers is 0.5481 kg per 1 ha.

Phosphorous fertilizers are the only type of mineral fertilizers, the use of which can provide both minimum sufficiency per unit area of agricultural land, and be insufficient in the calculation of two other types of fertilizers.

An example of the relationship between the volume of organic fertilizers and the application of nitrogen fertilizers per unit area of agricultural land is shown in fig. 4.

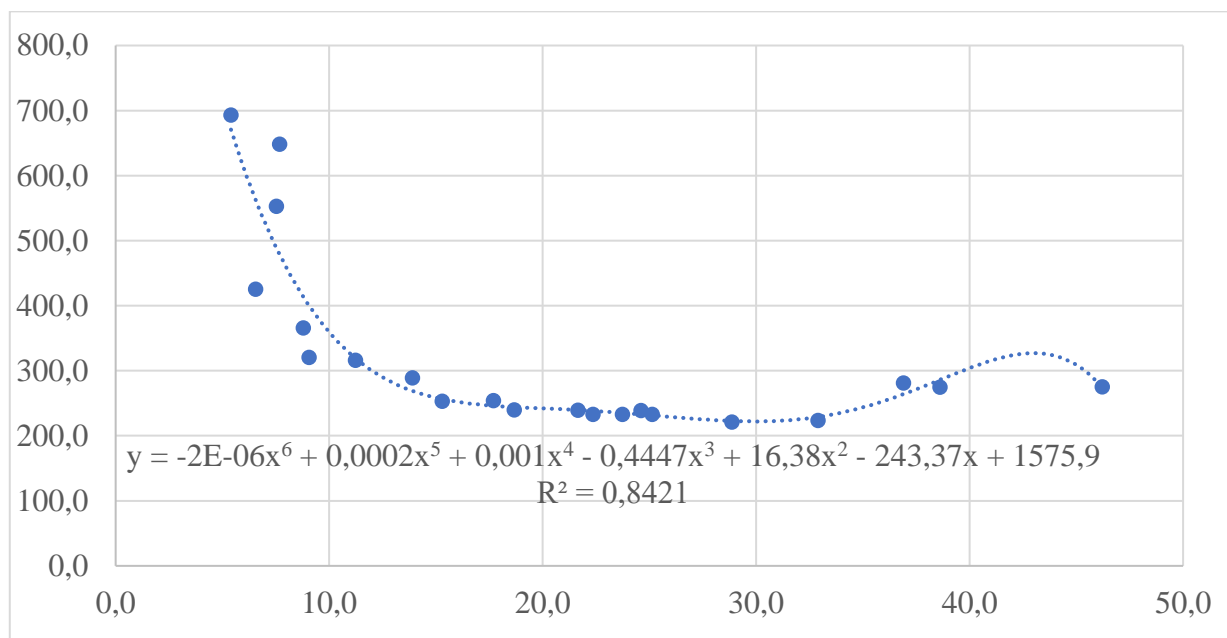


Figure 4. Dependence of the volume of organic fertilizers on the application of nitrogen fertilizers per unit area of agricultural land, kg per 1 ha

(Compiled by the author based on the data of the State Statistics Service of Ukraine)

The absence of a tight relationship when calculating a straight-line regression indicates a low dependence between the types of mineral fertilizers and organic fertilizers. Based on this, we propose to separately consider the importance and role of organic fertilizers in the development of land resources of the state.

You should pay attention to the form (regression equation) and features of the possible connection in the case of realizing the needs to comply with significant density.

In this case, the persistent instability of the development of the provision of organic fertilizers in the context of nitrogen fertilizers with a clearly expressed trend of decreasing their volume is characteristic.

By analogy with the calculations carried out, we will determine the amount of sufficiency (insufficiency) of mineral and organic fertilizers for crops: grain and leguminous crops (without corn), corn for grain, industrial crops, fodder crops.

The dependence of the volume of mineral fertilizers for corn crops per grain on the application of mineral fertilizers for grain and leguminous crops (without corn) is characterized by increasing trends of the regression line at a high connection density.

Thus, applying 1 kg of mineral fertilizers per 1 ha of grain and leguminous crops (without corn) provides a volume of 20.6406 kg of mineral fertilizers for corn crops per grain.

The inverse function to the given one has a decreasing character, characterized by the corresponding equation. Thus, the introduction of 1 kg of mineral fertilizers per 1 ha of corn crops for grain will lead to a shortage of mineral fertilizers for crops of grain and leguminous crops (without corn) in the amount of 10.8029 kg.

For a more detailed analysis of the sufficiency (insufficiency) of mineral fertilizers for sowing grain and leguminous crops (without corn) and corn per grain per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 4).

Table 4

Assessment of the sufficiency (insufficiency) of mineral fertilizers for sowing grain and leguminous crops (without corn) and corn for grain per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=1,1256*x+19,515$	1. Mineral fertilizers are not applied to grain and leguminous crops (without corn) ($x=0$). In this case, the minimum amount of mineral fertilizers applied to corn crops per grain will be 19.515 kg per 1 ha ($1.1256*0+19.515=19.515$). 2. It is planned not to apply mineral fertilizers under corn crops for grain ($y=0$). The lack of mineral fertilizers for sowing grain and leguminous crops (without corn) will amount to 17.3374 kg per 1 ha ($x=-19.515/1.1256=-17.3374$).
$y=0,8261*x-11,629$	1. Mineral fertilizers are not applied under corn crops for grain ($x=0$). The lack of mineral fertilizers for grain and leguminous crops (without corn) will amount to 11.629 kg per 1 ha ($0.8261*0-11.629=-11.629$). 2. It is planned not to apply mineral fertilizers under crops of grain and leguminous crops (without corn) ($y=0$). In this case, the minimum amount of mineral fertilizers applied to corn crops per grain will be 14.077 kg per 1 ha ($11.629/0.8261=14.077$).

There is a shortage of mineral fertilizers for grain and leguminous crops (without corn) ranging from 11.629 kg per 1 ha to 17.33744 kg per 1 ha in the case of not applying mineral fertilizers for corn for grain crops. At the same time, the minimum need to apply mineral fertilizers for corn crops per 1 ha in the absence of mineral fertilizers for grain and leguminous crops (without corn) ranges from 14,077 kg to 19,515 kg.

In this way, it is possible to overcome the lack of mineral fertilizers for sowing grain and leguminous crops (without corn) under the condition of sufficiency of mineral fertilizers for sowing corn for grain in the case of applying the latter more than 14.077 kg per 1 ha of agricultural land.

The dependence of the volume of mineral fertilizers for crops of industrial crops on the application of mineral fertilizers for crops of grain and leguminous crops (without corn) per unit area of agricultural land is characterized by growth trends with a significant density of communication.

If 1 kg of mineral fertilizers are applied for grain and leguminous crops (without corn) per unit area of agricultural land, then based on the equation of the regression line, the amount of mineral fertilizers for technical crops will be 14.979 kg per 1 ha.

The function $y=1.2867*x-15.175$ is the inverse of the function $y=0.739*x+14.24$, and therefore, taking into account the negative value of the free coefficient (15.175), it has a decreasing character. Application of 1 kg of mineral fertilizers for crops of technical crops per 1 ha will lead to a shortage of mineral fertilizers for crops of grain and leguminous crops (without corn) by 13.8883 kg.

For a more detailed analysis of the sufficiency (insufficiency) of mineral fertilizers for sowing grain and leguminous crops (without corn) and technical crops per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 5).

Table 5

Assessment of the sufficiency (insufficiency) of mineral fertilizers for sowing grain and leguminous crops (without corn) and industrial crops per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=0,739*x+14,24$	<p>1. Mineral fertilizers are not applied to grain and leguminous crops (without corn) ($x=0$). In this case, the minimum amount of mineral fertilizers applied to crops of technical crops will be 14.24 kg per 1 ha ($0.739*0+14.24=14.24$).</p> <p>2. It is planned not to apply mineral fertilizers under crops of technical crops ($y=0$). The lack of mineral fertilizers for sowing grain and leguminous crops (without corn) will amount to 19.2692 kg per 1 ha ($x=-14.24/0.739= -19.2692$).</p>
$y=1,2867*x-15,175$	<p>1. Mineral fertilizers are not applied to crops of industrial crops ($x=0$). The lack of mineral fertilizers for grain and leguminous crops (without corn) will amount to 15.175 kg per 1 ha ($1.2867*0-15.175= -15.175$).</p> <p>2. It is planned not to apply mineral fertilizers under crops of grain and leguminous crops (without corn) ($y=0$). In this case, the minimum amount of mineral fertilizers applied for sowing technical crops will be 11.7937 kg per 1 ha ($15.175/1.2867=11.7937$).</p>

There is a shortage of mineral fertilizers for crops of grain and leguminous crops (without corn) ranging from 15.175 kg per 1 ha to 19.2692 kg per 1 ha in the case of not applying mineral fertilizers for crops of technical crops. At the same time, the minimum need for the application of mineral fertilizers for the sowing of technical crops per 1 ha in the absence of the application of mineral fertilizers for the sowing of grain and leguminous crops (without corn) is in the range from 11.7937 kg to 14.24 kg.

In this way, it is possible to overcome the lack of mineral fertilizers for crops of grain and leguminous crops (without corn), under the condition of sufficient mineral fertilizers for crops of corn for grain, in the case of applying the latter more than 11.7937 kg per 1 ha of agricultural land.

The dependence of the volume of mineral fertilizers for fodder crops on the application of mineral fertilizers for grain and leguminous crops (without corn) per unit area of agricultural land is characterized by a downward trend with close connection. The equation $y=0.5003*x-5.2882$ characterizes the insufficiency of mineral fertilizers

in the amount of 5.2882 kg per 1 ha, which has been laid in the last twenty years in the system of applying agricultural land under the conditions of this dependence.

Based on the regression equation, if 1 kg of mineral fertilizers are applied to crops of grain and leguminous crops (without corn) per unit area of agricultural land, then the lack of mineral fertilizers for crops of fodder crops will amount to 5.2882 kg per 1 ha.

The inverse of the equation $y=0.5003*x-5.2882$ is the regression $y=1.9459*x+11.991$, which has a tendency to increase the volume of mineral fertilizers for grain and leguminous crops (without corn) due to the introduction of mineral fertilizers for fodder crops per unit area of agricultural land. The minimum amount of increase in the amount of mineral fertilizers applied to crops of grain and leguminous crops (without corn) is 11,991 kg per 1 ha.

In the case of application of 1 kg of mineral fertilizers for sowing fodder crops per 1 ha of agricultural land, the volume of mineral fertilizers for sowing grain and leguminous crops (without corn) will be 13.9369 kg.

For a more detailed analysis of the sufficiency (insufficiency) of mineral fertilizers for sowing grain and leguminous crops (without corn) and fodder crops per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 6).

Table 6

Assessment of the sufficiency (insufficiency) of mineral fertilizers for sowing grain and leguminous crops (without corn) and industrial crops per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=1,9459*x+11,991$	1. Mineral fertilizers are not applied under fodder crops ($x=0$). In this case, the minimum amount of mineral fertilizers applied to grain and leguminous crops (without corn) will be 11.991 kg per 1 ha ($1.9459*0+11.991=11.991$). 2. It is planned not to apply mineral fertilizers under crops of grain and leguminous crops (without corn) ($y=0$). The lack of mineral fertilizers for sowing fodder crops will amount to 6.1622 kg per 1 ha ($x= -11.991/1.9459= -6.1622$).

Continuation of table 6

$y=0,5003*x-5,2882$	<p>1. Mineral fertilizers are not applied to grain and leguminous crops (without corn) ($x=0$). The lack of mineral fertilizers for sowing fodder crops will amount to 5.2882 kg per 1 ha ($0.5003*0-5.2882= -5.2882$).</p> <p>2. It is planned not to apply mineral fertilizers under fodder crops ($y=0$). In this case, the minimum amount of mineral fertilizers applied to grain and leguminous crops (without corn) will be 10.57 kg per 1 ha ($5.2882/0.5003=10.57$).</p>
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There is a lack of mineral fertilizers for sowing fodder crops in the range from 5.2882 kg per 1 ha to 6.1622 kg per 1 ha in the case of not applying mineral fertilizers for sowing grain and leguminous crops (without corn). At the same time, the minimum need for applying mineral fertilizers for crops of grain and leguminous crops (without corn) per 1 ha in the absence of application of mineral fertilizers for crops of fodder crops is in the range from 10.57 kg to 11.991 kg.

In this way, it is possible to overcome the lack of mineral fertilizers for sowing fodder crops under the condition of sufficiency of mineral fertilizers for sowing grain and leguminous crops (without corn) in the case of applying the latter more than 10.57 kg per 1 ha of agricultural land.

The dependence of the amount of mineral fertilizers for technical crops on the application of mineral fertilizers for corn crops per grain per unit area of agricultural land is characterized by growth trends under conditions of high bond density, since for 0.6345 of the amount of mineral fertilizers applied for corn crops, 3.453 kg per grain is added on 1 ha.

If 1 kg of mineral fertilizers are applied to corn crops per grain, then the amount of applied mineral fertilizers to technical crop crops will be 4.0875 kg per 1 ha.

The dependence of the volume of mineral fertilizers for corn crops per grain on the application of mineral fertilizers for crops of technical crops per unit area of agricultural land is inverted to the function $y=0.6345*x+3.453$, characterized by downward trends, since by 1.5047 mineral fertilizers for crops of technical crops a decrease of 1.0552 kg per 1 ha is observed.

If 1 kg of mineral fertilizers are applied to crops of technical crops, the volume of mineral fertilizers for crops of corn per grain per unit area of agricultural crops will be 0.4495 kg.

For a more detailed analysis of the sufficiency (insufficiency) of mineral fertilizers for sowing corn per grain and industrial crops per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 7).

Table 7

Assessment of the sufficiency (insufficiency) of mineral fertilizers for sowing corn for grain and industrial crops per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=0,6345*x+3,453$	<p>1. Mineral fertilizers are not applied under corn crops for grain ($x=0$). In this case, the minimum amount of mineral fertilizers applied for sowing technical crops will be 3.453 kg per 1 ha ($0.6345*0+3.453=3.453$).</p> <p>2. It is planned not to apply mineral fertilizers under crops of technical crops ($y=0$). The lack of mineral fertilizers for corn crops per grain will amount to 5.442 kg per 1 ha ($x=-3.453/0.6345= -5.442$).</p>
$y=1,5047*x-1,0552$	<p>1. Mineral fertilizers are not applied to crops of industrial crops ($x=0$). The lack of mineral fertilizers for corn crops per grain will amount to 1.0552 kg per 1 ha ($1.5047*0-1.0552=-1.0552$).</p> <p>2. It is planned not to apply mineral fertilizers under corn crops for grain ($y=0$). In this case, the minimum amount of mineral fertilizers applied for sowing industrial crops will be 0.7013 kg per 1 ha ($1.0552/1.5047=0.7013$).</p>

There is a lack of mineral fertilizers for corn crops per grain ranging from 1.0552 kg per 1 ha to 5.442 kg per 1 ha in the case of not applying mineral fertilizers for technical crops. At the same time, the minimum need for the application of mineral fertilizers for crops of industrial crops per 1 ha in the absence of application of mineral fertilizers for crops of corn per grain is in the range from 0.7013 kg to 3.453 kg.

In this way, it is possible to overcome the lack of mineral fertilizers for sowing corn for grain under the condition of sufficiency of mineral fertilizers for sowing industrial crops in the case of applying the latter more than 0.7013 kg per 1 ha of agricultural land.

The dependence of the amount of mineral fertilizers for fodder crops on the application of mineral fertilizers for corn crops per grain per unit area of agricultural crops is characterized by a high density of connection and downward trends in the regression equation, since for any amount of mineral fertilizers applied for corn crops per grain, a decrease the volume of mineral fertilizers for fodder crops will be 10,994 kg per 1 ha.

In the case of application of 1 kg of corn per grain per unit area of agricultural land, the lack of mineral fertilizers for sowing fodder crops will amount to 10.5819 kg per 1 ha.

The dependence of the volume of mineral fertilizers for corn crops per grain on the application of mineral fertilizers for fodder crops per unit area of agricultural land is inverse to the previous one. It is characterized by growth trends, since in the case of applying any amount of mineral fertilizers for fodder crops per unit area of agricultural land, the amount of mineral fertilizers for corn crops per grain will increase by 33.185 kg per 1 ha.

If 1 kg of mineral fertilizers for fodder crops are applied per unit area of agricultural land, then the volume of mineral fertilizers for corn crops per grain will be 35.3683 kg per 1 ha.

For a more detailed analysis of the sufficiency (insufficiency) of mineral fertilizers for sowing corn for grain and fodder crops per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 8).

Table 8

Assessment of the sufficiency (insufficiency) of mineral fertilizers for sowing corn for grain and fodder crops per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=2,1833*x+33,185$	1. Mineral fertilizers are not applied under fodder crops ($x=0$). In this case, the minimum amount of mineral fertilizers applied to corn crops per grain will be 33.185 kg per 1 ha ($2.1833*0+33.185=33.185$). 2. It is planned not to apply mineral fertilizers under corn crops for grain ($y=0$). The lack of mineral fertilizers for sowing fodder crops will amount to 15.1995 kg per 1 ha ($x=-33.185/2.1833=-15.1995$).

Continuation of table 8

$y=0,4121*x-10,994$	<p>1. Mineral fertilizers are not applied under corn crops for grain ($x=0$). The lack of mineral fertilizers for sowing fodder crops will amount to 10.994 kg per 1 ha ($0.4121*0-10.994=-10.994$).</p> <p>2. It is planned not to apply mineral fertilizers under fodder crops ($y=0$). The minimum amount of mineral fertilizers introduced in this case for corn crops per grain will be 26.678 kg per 1 ha ($10.994/0.4121=26.678$).</p>
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There is a lack of mineral fertilizers for fodder crops in the range from 10.994 kg per 1 ha to 15.1995 kg per 1 ha in the case of not applying mineral fertilizers for corn for grain crops. At the same time, the minimum need for applying mineral fertilizers for corn crops per grain per 1 ha in the absence of mineral fertilizers for fodder crops is in the range from 26,678 kg to 33,185 kg.

In this way, it is possible to overcome the lack of mineral fertilizers for fodder crop crops under the condition of sufficiency of mineral fertilizers for corn crops for grain if the latter are applied in excess of 26,678 kg per 1 ha of agricultural land.

The dependence of the amount of mineral fertilizers for fodder crops on the application of mineral fertilizers for technical crops per unit area of agricultural land is characterized by a high density of connection and downward trends, since the application of mineral fertilizers for technical crops leads to a decrease in the amount of mineral fertilizers for fodder crops on 13.268 kg per hectare.

In particular, in the case of applying 1 kg of mineral fertilizers for technical crops, the lack of mineral fertilizers for fodder crops will amount to 12,618 kg per 1 ha of agricultural land.

Dependence of the volume of mineral fertilizers for crops of technical crops on the application of mineral fertilizers for crops of fodder crops per unit area of agricultural land is the inverse of the regression $y=0.65*x-13.268$. It has a clear upward trend, since when mineral fertilizers are applied to forage crops, the volume of mineral fertilizers to technical crops will increase by 22,725 kg per 1 ha.

When applying 1 kg of mineral fertilizers for sowing fodder crops per unit area of agricultural land, the volume of mineral fertilizers for sowing technical crops will be 24.1771 kg per 1 ha.

For a more detailed analysis of the sufficiency (insufficiency) of mineral fertilizers for sowing technical crops and fodder crops per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 9).

Table 9

Assessment of the sufficiency (insufficiency) of mineral fertilizers for sowing technical crops and fodder crops per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=1,4521*x+22,725$	<p>1. Mineral fertilizers are not applied under fodder crops ($x=0$). In this case, the minimum amount of mineral fertilizers applied for sowing industrial crops will be 22.725 kg per 1 ha ($1.4521*0+22.725=22.725$).</p> <p>2. It is planned not to apply mineral fertilizers under crops of technical crops ($y=0$). The lack of mineral fertilizers for sowing fodder crops will amount to 15.6497 kg per 1 ha ($x=-22.725/1.4521=-15.6497$).</p>
$y=0,65*x-13,268$	<p>1. Mineral fertilizers are not applied to crops of industrial crops ($x=0$). The lack of mineral fertilizers for sowing fodder crops will amount to 13.268 kg per 1 ha ($0.65*0-13.268=-13.268$).</p> <p>2. It is planned not to apply mineral fertilizers under fodder crops ($y=0$). In this case, the minimum amount of mineral fertilizers applied for sowing industrial crops will be 20.4123 kg per 1 ha ($13.268/0.65=20.4123$).</p>

There is a lack of mineral fertilizers for sowing fodder crops in the range from 13.268 kg per 1 ha to 15.6497 kg per 1 ha in the case of not applying mineral fertilizers for sowing technical crops. At the same time, the minimum need for the application of mineral fertilizers for crops of technical crops per 1 ha in the absence of application of mineral fertilizers for crops of fodder crops is in the range from 20.4123 kg to 22.725 kg.

In this way, it is possible to overcome the lack of mineral fertilizers for fodder crops under the condition of sufficiency of mineral fertilizers for technical crops in the case of applying the latter more than 20.4123 kg per 1 ha of agricultural land.

As a result of the analysis of the sufficiency (insufficiency) of mineral fertilizers for four types of crops, it was proved that the agricultural land is fully supplied with mineral fertilizers for technical crops (the sum of the average indicators of sufficiency is 36.7 kg per 1 ha). The sum of the average indicators of the sufficiency of mineral fertilizers for corn crops per grain is 63.5 kg per 1 ha, but the average value of the shortage in the context of technical crops is 3.2 kg per 1 ha.

The lack of mineral fertilizers for crops is most clearly manifested in two types (cereal and leguminous crops (without corn) and fodder crops) in the form of a shortage per unit area of agricultural land (kg per 1 ha). The sum of the average indicators for the lack of mineral fertilizers for sowing grain and leguminous crops (without corn) is 31.7 kg per 1 ha. In the case of the dependence of the amount of mineral fertilizers on this crop from fodder crops, the average indicator of the sufficiency of mineral fertilizers for crops of grain and leguminous crops (without corn) is 11.3 kg per 1 ha. The lack of mineral fertilizers for sowing fodder crops is the maximum compared to all other crops - the sum of average indicators is 33.3 kg per 1 ha.

The sufficiency (insufficiency) of mineral fertilizers by types of crops can be depicted by average indicators based on all analyzed cases of dependence (Fig. 5).

Using the scheme for assessing the sufficiency (insufficiency) of mineral fertilizers per unit area of agricultural land, we will conduct a similar study on organic fertilizers.

The dependence of the application of organic fertilizers under corn crops for grain on the amount of organic fertilizers under crops of grain and leguminous crops (without corn) per unit area of agricultural land is characterized by increasing trends in the amount of organic fertilizers applied under corn crops per grain in the case of the application of organic fertilizers under crops of cereals and legumes crops (without corn). At the same time, the low density of the relationship between the amount of organic fertilizers applied under crops of grain and leguminous crops (without corn) and under crops of corn for grain indicates the lack of interdependence in the field of increasing soil fertility.

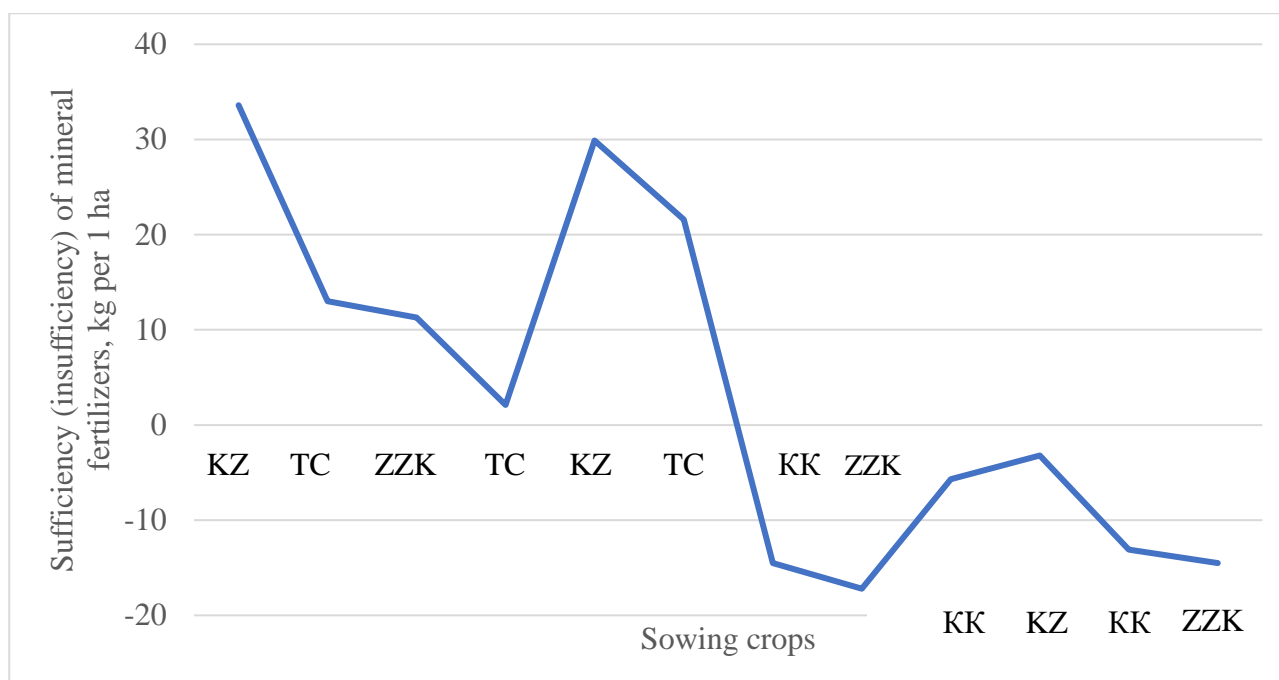


Figure 5. Average indicators of the dynamics of sufficiency (insufficiency) of mineral fertilizers by types of crops (KZ – corn for grain, TC – technical crops, ZZK – grain and leguminous crops (without corn), KK – fodder crops)
(Built by the author)

The dependence of the application of organic fertilizers for technical crops on the volume of organic fertilizers for grain and leguminous crops (without corn) per unit area of agricultural land is characterized by a high density of connection and downward regression trends, since the amount of organic fertilizers for technical crops will decrease by 1421.4 kg per 1 ha of agricultural land for any indicator of the volume of organic fertilizers for grain and leguminous crops (without corn).

Based on the given regression equation, applying 1 kg of organic fertilizers for crops of grain and leguminous crops (without corn) will lead to a shortage of organic fertilizers for crops of industrial crops in 1415.925 kg per 1 ha of agricultural land.

The dependence of organic fertilizers for sowing grain and leguminous crops (without corn) on the volume of organic fertilizers for sowing industrial crops per unit area of agricultural land is the inverse of the function $y=5.475*x-1421.4$. In this case, there are increasing trends in the development of regression, since for any amount of industrial crops, the application of organic fertilizers under the sowing of grain and leguminous crops (without corn) will increase by 285.9 kg per 1 ha of agricultural land.

The application of 1 kg of organic fertilizers for sowing technical crops provides an increase in the volume of organic fertilizers for sowing grain and leguminous crops (without corn) by 286,056 kg per 1 ha of agricultural land.

For a more detailed analysis of the sufficiency (insufficiency) of organic fertilizers for sowing grain and leguminous crops (without corn) and technical crops per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 10).

Table 10

Assessment of the sufficiency (insufficiency) of organic fertilizers for sowing grain and leguminous crops (without corn) and industrial crops per unit area of agricultural land

Regression equation	Evaluation of possible options
$y=0,156*x+285,9$	1. Organic fertilizers are not applied to crops of technical crops ($x=0$). In this case, the minimum amount of organic fertilizers applied to grain and leguminous crops (without corn) will be 285.9 kg per 1 ha ($0.156*0+285.9=285.9$). 2. It is planned not to apply organic fertilizers to grain and leguminous crops (without corn) ($y=0$). The lack of organic fertilizers for crops of industrial crops will amount to 1832.69 kg per 1 ha ($x= -285.9/0.156= -1832.69$).
$y=5,475*x-1421,4$	1. Organic fertilizers are not applied to grain and leguminous crops (without corn) ($x=0$). The lack of organic fertilizers for crops of industrial crops will amount to 1421.4 kg per 1 ha ($5.475*0-1421.4= -1421.4$). 2. It is planned not to apply organic fertilizers under crops of industrial crops ($y=0$). In this case, the minimum amount of organic fertilizers applied to grain and leguminous crops (without corn) will be 259.62 kg per 1 ha ($1421.4/5.475=259.62$).

There is a lack of organic fertilizers for crops of industrial crops ranging from 1421.4 kg per 1 ha to 1832.69 kg per 1 ha in the case of not applying organic fertilizers for crops of grain and leguminous crops (without corn). At the same time, the minimum need to apply organic fertilizers for crops of grain and leguminous crops (without corn) per 1 ha in the absence of organic fertilizers for crops of technical crops is in the range of 259.62 kg to 285.9 kg.

In this way, it is possible to overcome the lack of organic fertilizers for sowing technical crops under the condition of sufficiency of organic fertilizers for sowing grain

and leguminous crops (without corn) in the case of applying the latter more than 259.62 kg per 1 ha of agricultural land.

The dependence of the amount of organic fertilizers for forage crops on the application of organic fertilizers for grain and leguminous crops (without corn) per unit area of agricultural land is characterized by a fairly high density of connection (correlation coefficient - 0.77). The regression has an increasing character, because with any amount of organic fertilizers applied to crops of grain and leguminous crops (without corn), the amount of organic fertilizers to crops of fodder crops will increase by 3870.3 kg per 1 ha of agricultural land.

In case of application of 1 kg of organic fertilizers for crops of grain and leguminous crops (without corn), the amount of application of organic fertilizers for crops of fodder crops will be 3866.136 kg per 1 ha.

The dependence of the volume of organic fertilizers for crops of grain and leguminous crops (without corn) on the application of organic fertilizers for crops of fodder crops is the inverse of the regression $y = -4.164 * x + 3870.3$. It is also characterized by the presence of growing trends.

Application of 1 kg of organic fertilizers for fodder crops allows to obtain the volume of organic fertilizers for grain and leguminous crops (without corn) in the amount of 728.98 per 1 ha of agricultural land.

It should be noted that both regressions differ significantly from other dependencies in the form of the equation.

Their feature is the presence of a negative value of the angular coefficient, that is, the positive value of the effective indicator is limited to the amount of 3870.3 kg of organic fertilizers per 1 ha of agricultural land for the first equation and 729.12 kg of organic fertilizers per 1 ha of agricultural land for the second equation.

For a more detailed analysis of the sufficiency (insufficiency) of organic fertilizers for sowing grain and leguminous crops (without corn) and fodder crops per unit area of agricultural land, we suggest considering both regression equations in the context of trends over the last twenty years (Table 11).

Table 11

Assessment of the sufficiency (insufficiency) of organic fertilizers for sowing grain and leguminous crops (without corn) and fodder crops per unit area of agricultural land

Regression equation	Evaluation of possible options
$y = -4,164 \cdot x + 3870,3$	<p>1. Organic fertilizers are not applied to grain and leguminous crops (without corn) ($x=0$). In this case, the minimum amount of organic fertilizers applied to fodder crops will be 3870.3 kg per 1 ha ($-4.164 \cdot 0 + 3870.3 = 3870.3$).</p> <p>2. It is planned not to apply organic fertilizers under fodder crops ($y=0$). In this case, the maximum amount of organic fertilizers applied to grain and leguminous crops (without corn) will be 929.47 kg per 1 ha ($x = 3870.3 / 4.164 = 929.47$).</p>
$y = -0,1418 \cdot x + 729,12$	<p>1. Organic fertilizers are not applied to fodder crops ($x=0$). In this case, the minimum amount of organic fertilizers applied to grain and leguminous crops (without corn) will be 729.12 kg per 1 ha ($-0.1418 \cdot 0 + 729.12 = 729.12$).</p> <p>2. It is planned not to apply organic fertilizers to grain and leguminous crops (without corn) ($y=0$). The maximum amount of organic fertilizers introduced in this case for sowing fodder crops will be 5141.89 kg per 1 ha ($729.12 / 0.1418 = 5141.89$).</p>

The optimal need for applying organic fertilizers for fodder crops is in the range from 3870.3 kg per 1 ha to 5141.89 kg per 1 ha in the case of not applying organic fertilizers for grain and leguminous crops (without corn). At the same time, the optimal need for the application of organic fertilizers for crops of grain and leguminous crops (without corn) per 1 ha in the absence of application of organic fertilizers for crops of fodder crops is in the range from 729.47 kg to 929.47 kg.

As the calculations show, the dependence between the application of organic fertilizers for fodder crops and the application of organic fertilizers for grain and leguminous crops (without corn) is characterized by the absence of a shortage (insufficiency) of organic fertilizers both for fodder crops and for grain and leguminous crops (without corn) per unit area of agricultural land. It should be noted that in case of exceeding the level of the maximum need for organic fertilizers, there will be a shortage (insufficiency) of both fodder crops and grain and leguminous crops (without corn).

The dependence of the amount of organic fertilizers applied to crops of industrial crops on the amount of organic fertilizers applied to crops of corn per grain per unit of agricultural land is characterized by a very weak relationship.

The correlation coefficient of 0.27 indicates that the application of organic fertilizers for crops of industrial crops does not depend on the application of organic fertilizers for crops of corn per grain per unit of agricultural land. Similarly, there is no inverse regression - the dependence of the amount of organic fertilizers applied to corn crops per grain from the amount of organic fertilizers applied to agricultural crops per unit area of agricultural land.

The dependence of the amount of organic fertilizers applied to fodder crops from the amount of organic fertilizers applied to corn per grain per unit of agricultural land is characterized by a very weak relationship.

The correlation coefficient of 0.03 indicates that the application of organic fertilizers for crops of forage crops does not depend on the application of organic fertilizers for crops of corn per grain per unit of agricultural land. Similarly, there is no inverse regression - the dependence of the amount of organic fertilizers applied to corn crops per grain from the amount of organic fertilizers applied to fodder crops per unit area of agricultural land.

The dependence of the amount of organic fertilizers applied to fodder crops from the amount of organic fertilizers applied to industrial crops per unit of agricultural land is characterized by an average density relationship.

The correlation coefficient of 0.63 shows that the application of organic fertilizers for fodder crops does not depend on the application of organic fertilizers for industrial crops per unit of agricultural land. The average relationship is not enough to identify the level of sufficiency (insufficiency) of organic fertilizers for crops. Similarly, there is no inverse regression - the dependence of the amount of organic fertilizers applied to technical crops on the amount of organic fertilizers applied to fodder crops per unit area of agricultural land.

Based on the results obtained regarding the sufficiency (insufficiency) of applying organic fertilizers to agricultural crops, it is possible to conclude that there is a high density of connection only for two cases:

- the relationship between the application of organic fertilizers for crops of grain and leguminous crops (without corn) and the volume of organic fertilizers for crops of technical crops;

- the relationship between the application of organic fertilizers for grain and leguminous crops (without corn) and the amount of organic fertilizers for fodder crops.

In contrast to the relationship between mineral fertilizers applied to crops of different agricultural crops, the relationship with organic fertilizers is mainly characterized by weak density. Thus, it is possible to conclude that there are no effective and well-founded measures for uniform supply of agricultural land with organic fertilizers in Ukraine.

As the obtained calculations show, there is a sufficient amount of organic fertilizers, however, in contrast to the use of mineral fertilizers, the lack of interdependencies between crops shows the lack of effective development of land resources due to the application of organic fertilizers to corn crops for grain. Moreover, the presence of an effective effect on the application of organic fertilizers is observed only for crops of grain and leguminous crops (without corn) (2 cases of interdependencies). For technical and fodder crops - one case each, which characterizes their attachment to the amount of organic fertilizer application exclusively for grain and leguminous crops (without corn).

The dynamics of waste generation in agriculture, forestry and fisheries (Fig. 6) shows the existence of stable growth trends during 2000-2020. The maximum volume of waste generation was reached in 2011 – 12,201.2 thousand tons. In the following years, it is observed reduction in the volume of waste generation in agriculture, forestry and fisheries, in particular in the last of the studied years, it amounts to 5315.4 thousand tons.

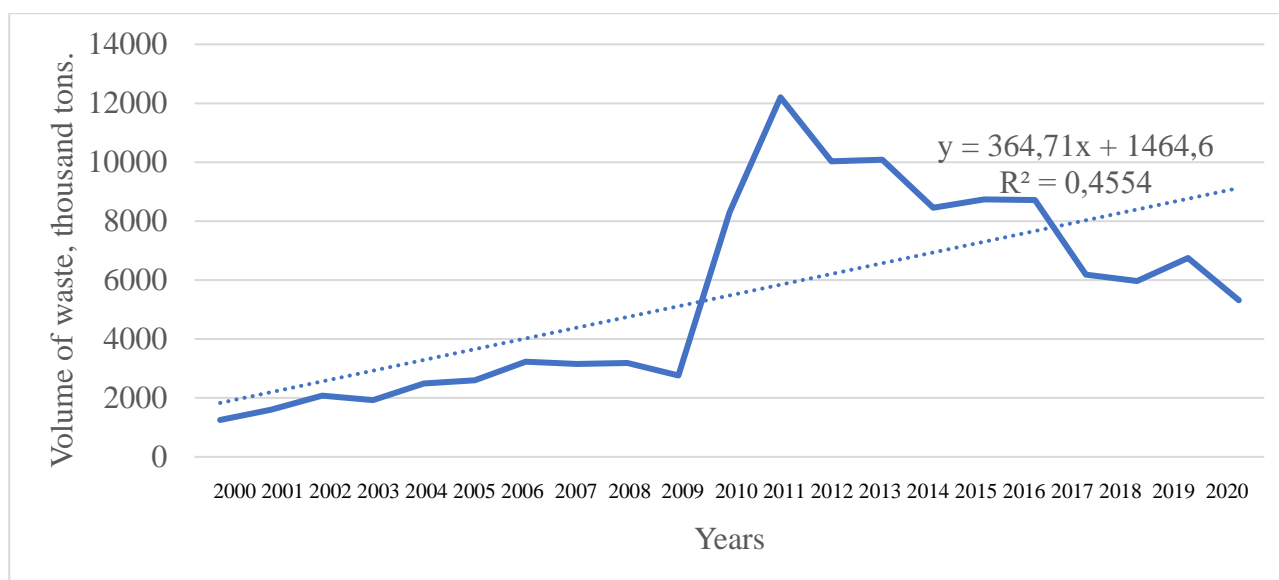


Figure 6. Dynamics of waste generation in agriculture, forestry and fisheries (Compiled by the author based on the data of the State Statistics Service of Ukraine)

The density of connection (correlation coefficient – 0.67) characterizes the average influence of time (within twenty years) on the accumulation of waste. Nevertheless, the value of this coefficient is sufficient to assert with high probability a gradual decrease in the amount of waste.

Based on these dynamics, it is possible to conclude that there are three periods in the generation of waste in agriculture, forestry and fishing:

- gradual increase of waste (2000-2009);
- a rapid increase in the amount of waste (2010-2011), in particular compared to 2009, the amount of waste in 2010 increased by 3 times;
- gradual reduction of waste (2012-2020).

On the basis of the regression equation ($y=364.71*x+1464.6$), it can be stated that in the case of implementation of measures to eliminate this amount of waste in agriculture, forestry and fisheries, it is necessary to spend an additional four years.

The dynamics of waste generation in the supply of electricity, gas, steam and air conditioning for 2000-2001 (Fig. 7) is characterized by an insufficiently tight connection between the time period and the volume of waste. However, the correlation coefficient (0.57) is greater than 0.5, and therefore it is possible to assert the existence of a certain influence on the volume of waste from the activity of supplying electricity, gas, steam and air conditioning.

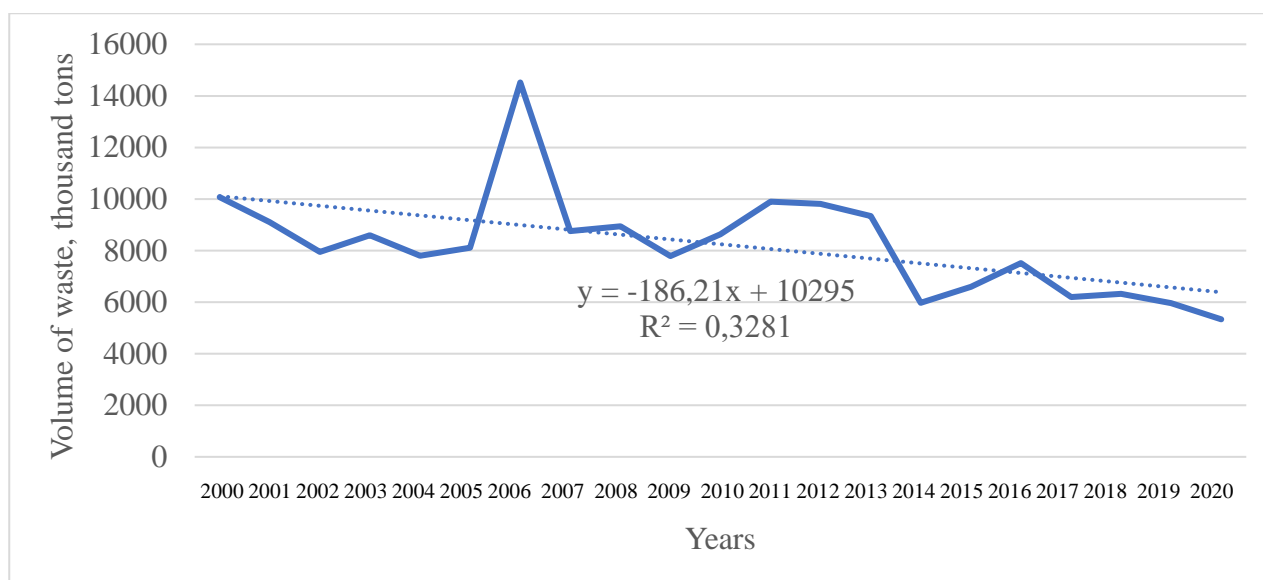


Figure 7. Dynamics of waste generation in activities related to the supply of electricity, gas, steam, and air conditioning
(Compiled by the author based on the data of the State Statistics Service of Ukraine)

The regression equation of the type $y = -186.21 \cdot x + 10295$ indicates the possibility of complete elimination of this amount of waste no earlier than in 55 years.

Changes in the volume of waste generation in the activities of supplying electricity, gas, steam and air conditioning are characterized by a significant increase in 2006 compared to 2004 by 1.8 times. However, in the following year there was a return to the indicators of 2006 (8753.5 thousand tons).

In the period 2008-2020, there is a periodic increase in the amount of waste, in particular in 2011-2013 to the level of 10,000 tons. However, the general trend is a decrease in the amount of waste from activities related to the supply of electricity, gas, steam, and air conditioning. In the last of the studied years, it is 5333.7 thousand tons - the lowest indicator in the last 20 years.

The dynamics of construction waste generation is characterized by a weak correlation between the volume of waste and the time period between 2000 and 2020 (correlation coefficient equal to 0.44) (Fig. 8). Such a low value of this indicator indicates the absence of a stable model, which allows us to draw conclusions about the possibility of eliminating waste under these conditions. Based on the above, on the basis of the equation $y = 14.85 \cdot x + 117.87$, it is possible to draw conclusions about the need to spend approximately 8 years for the elimination of construction waste.

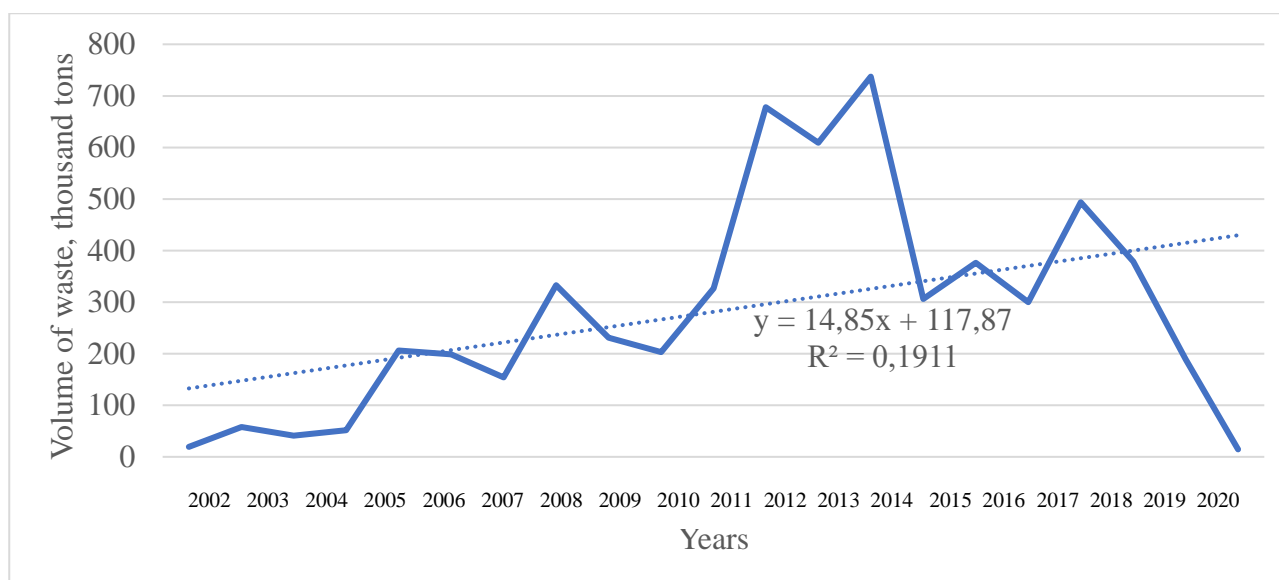


Figure 8. Dynamics of construction waste generation
(Compiled by the author based on the data of the State Statistics Service of Ukraine)

During the years 2000-2020, there is an increase in the volume of construction waste. If there is a gradual increase in the amount of waste from 2000 to 2010, then in 2011 the amount of waste amounted to 677.9 thousand tons (compared to 2010, the increase was 2 times). In 2013, the growth of the volume of construction waste reached its maximum - 737.3 thousand tons. However, already in 2014 there was a drop in the volume of waste compared to 2013 by 2.4 times.

In the future, growth trends were observed until 2017, and from 2018 there is a rapid decrease in the volume of construction waste, in particular, in the last of the studied years, this indicator amounted to only 14.5 thousand tons, which is the absolute minimum for the years 2000-2020.

The dynamics of waste generation in the mining industry and the development of quarries is characterized by a high correlation density (correlation coefficient equal to 0.78) (Fig. 9) between the amount of waste and the time period of 18 years (2002-2020). The regression equation $y=12556*x+142063$ shows that 11 additional years are required for the elimination of waste with the existence of this trend.

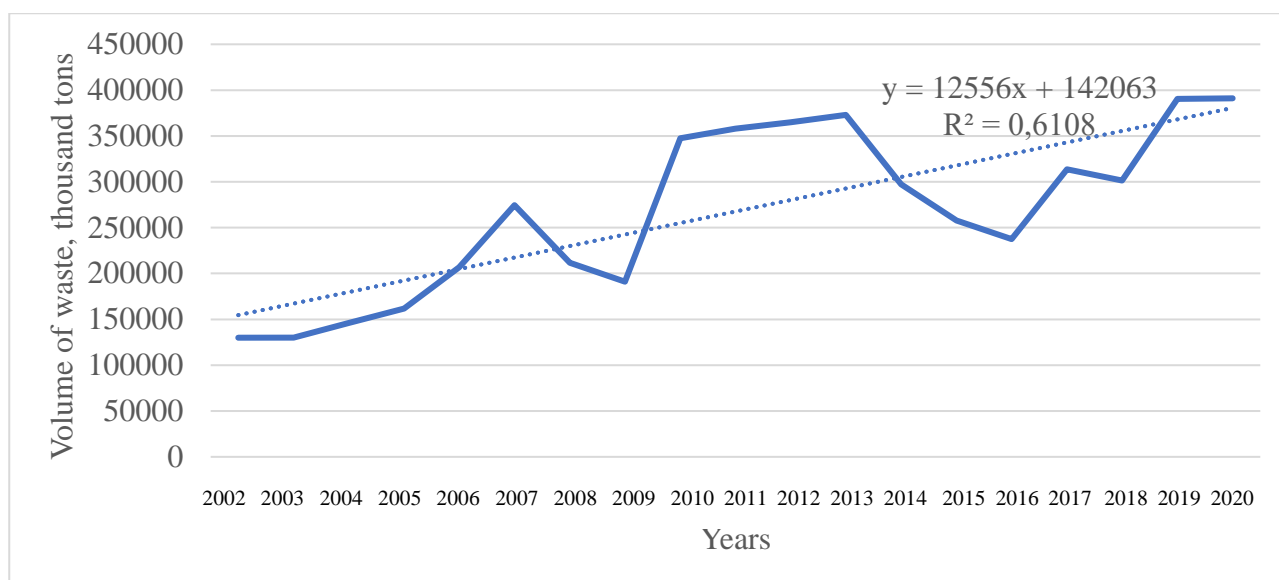


Figure 9. Dynamics of waste generation by mining industry and quarry development

(Compiled by the author based on the data of the State Statistics Service of Ukraine)

In 2010, there was a significant increase in the amount of waste compared to 2009 (the period 2002-2009 is characterized by a slight increase in the amount of waste) to 347,442.3 thousand tons (1.8 times). The period of 2010-2013 is the largest amount of waste from the extractive industry and quarry development since 2002.

From 2014 to 2016, there is a trend of a significant decrease in the volume of waste, but from the following year, a gradual increase led to the maximization of these indicators in 2019 and 2020 to the highest values for the entire period of the study.

The dynamics of waste generation in the processing industry is characterized by a sufficiently high density of connection (correlation coefficient equal to 0.7) (Fig. 10) between their volume and the time period of 2002-2020. The regression equation $y = -1287 \cdot x + 57864$ shows that under these conditions, waste disposal is possible in 45 years.

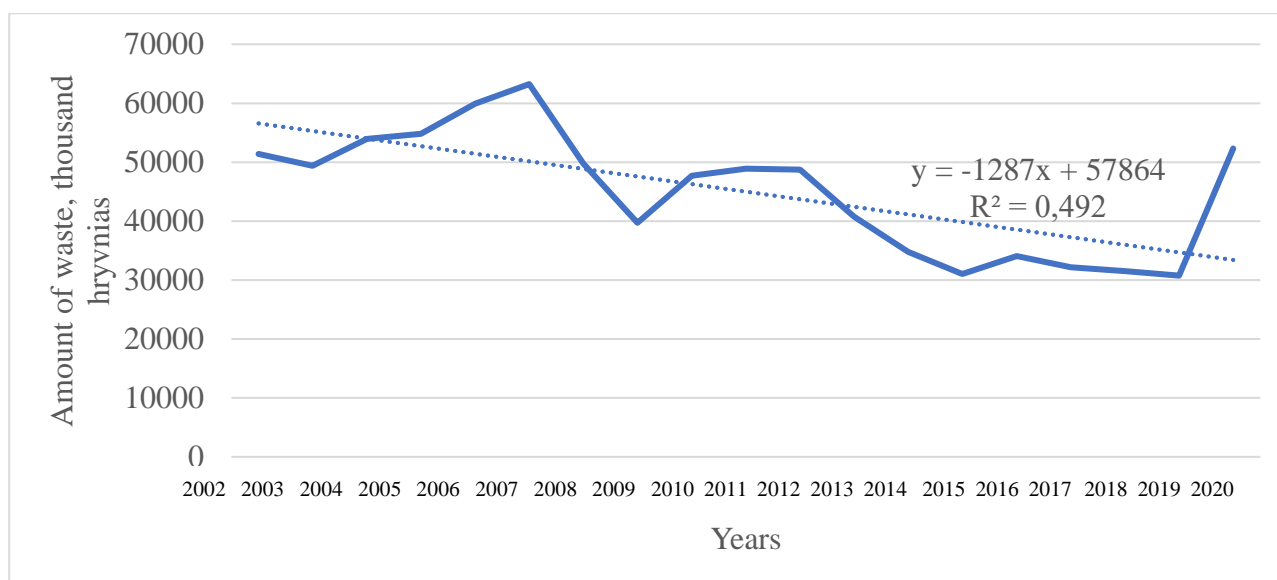


Figure 10. Dynamics of waste generation by processing industry
(Compiled by the author based on the data of the State Statistics Service of Ukraine)

There is a steady trend of a general decrease in the amount of waste in the processing industry for 2002-2020, with periods of partial growth. In this context, two periods can be distinguished:

- 2003-2009, where the maximum amount of waste amounted to 63,247.3 thousand tons in 2007;
- 2009-2015, where the maximum volume of waste amounted to 48,920.4 in 2011.

From 2019, a new cycle of growth in the volume of waste in the processing industry begins, as in 2020 it reached a value of 52,311 thousand tons, which is 1.7 times more than the previous year.

The dynamics of waste generation by other types of economic activity is characterized by a fairly low correlation coefficient (0.38) (Fig. 11), which indicates a weak connection between the amount of waste and the period of its generation in 2000-2020. The regression equation $y = -168.35 * x + 5535.5$ indicates the possibility of eliminating these wastes in 33 years under these conditions.

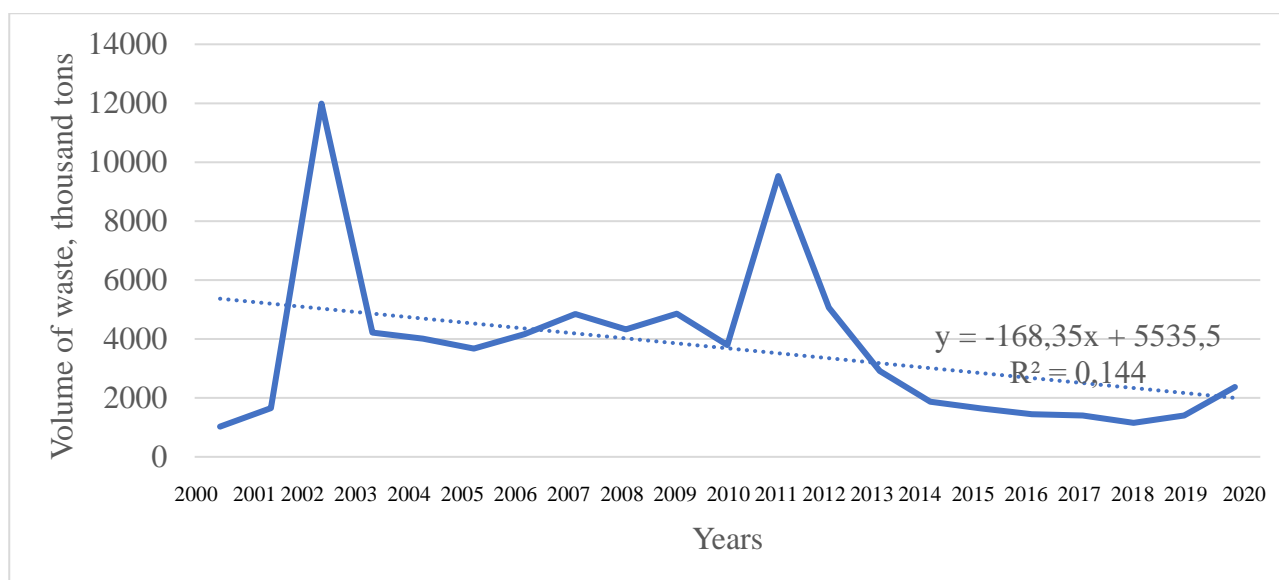


Figure 11. Dynamics of waste generation by other types of economic activity (Compiled by the author based on the data of the State Statistics Service of Ukraine)

The maximum volume of waste from other types of economic activity was observed for the entire period under study in 2002 (11,987.8 thousand tons), which is 7.2 times more than in 2001. The period of 2003-2010 is characterized by moderate growth trends, and in 2011 a new maximum is reached - 9524.4 thousand tons, which is 2.5 times more than in 2010. Starting from 2012, trends in the reduction of the amount of waste in other types of economic activity determined the nature of the entire dynamics during the period under study.

Based on the study of waste generation, the following conclusions can be drawn:

- The dependence of the amount of waste on the time period during which it was accumulated is observed. In particular, the correlation coefficient is one of the highest in agriculture, forestry, and fishing compared to other types of economic activity: the connection is denser only in the processing industry and mining industry and the development of quarries. In no case was a strong connection found, however, the presence of an average allows us to state that for these three types of economic activity, the time factor of waste generation is quite influential.

- Of all the models of dependence in these branches of economic activity, two variations are observed: $y=a_0-a_1*x$ and $y=a_0+a_1*x$, which indicates the possibility of determining the number of years for waste elimination (the first equation) and the number of years that additionally required for waste elimination (second equation). In

addition, in the case of the first model, the dynamics of waste generation has a pronounced decreasing character, in the case of the second model, it is increasing.

– The dynamics of all analyzed types of economic activity indicate the maximization of waste generation in certain years, in particular, in agriculture, forestry and fishing in 2011; for electricity, gas, steam and air conditioning in 2006; for construction in 2013; on the extractive industry and career development in 2020; on processing industry in 2007; on other types of economic activity in 2002.

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6. Retrospective analysis of theories of institutionalism in the functioning of agrarian entrepreneurship

Institutionalism as an independent direction of economic thought arose in the 20th century. Representatives of classical institutionalism were Thorstein Veblen, John Commons, Wesley Mitchell, who were fundamentally different from each other and did not have a common vision of the main factors influencing economic processes.

Thorstein Veblen investigated the dependence of economic processes on psychology, biology, anthropology and initiated the socio-psychological direction of institutionalism. He believed that institutions are the result of processes that took place in the past; they are adapted to the circumstances of the past and are therefore a factor of social and psychological inertia, a special way of society's existence. Institutions define a permanent and predominant way of thinking that has become habitual for a group or has become a habit for a people. Thorstein Veblen recognized the principle of technological determinism, but believed that sociological and psychological factors contribute to the development of institutions more than economic ones [92].

John Commons initiated the socio-legal direction of institutionalism and inspired the trust of many people of different social status. In his books, he highlights the understanding of institutions as customs that have their roots in collective psychology and history, but have received legal status.

John Commons followed the tradition of the historical school in applying legal concepts to economics, and more specifically, he explored the development of such institutions as the family, the state, corporations, and he also wrote about trade unions. As for transaction theory, it was the backbone of John Commons's system. By agreement, exchange, he understood primarily the mechanism of transfer of control functions justified by law, i.e. «legal control» from one individual to another. He believed that multiple conflicts can be eliminated only through the legal cooperation of various social strata [93].

The American economist Wesley Mitchell was a student of Thorstein Veblen, who continued the idea of his teacher by leading the conjunctural-statistical current of

institutionalism.

A feature of Wesley Mitchell's research was the use of a huge amount of statistical material that reflected the state of the country's national economy. He considered social psychology, traditions and customs to be the main factors affecting economic phenomena and human behavior. Wesley Mitchell supported Thorstein Veblen's critique of the rational hedonist model and developed the idea of studying real human behavior in the economy through statistical analysis [92].

Neo-institutionalism was formed in the 1950s and 1960s within the framework of neoclassical theory, but gained recognition much later in the 1980s and 1990s. Neo-institutionalism is a socio-institutional trend represented by numerous theories of various institutional orientations. This was expressed in the awarding of the Nobel Prize in Economics to the most outstanding representatives, including: Ronald Coase, John Galbraith, Douglas North.

The theory of transaction costs, which was highlighted in his works by Ronald Coase, turned out to be such a statement of the problem at the time, which was significantly ahead of its time and was somewhat unusual and imperceptible even for the institutionalists themselves. Its essence was that in addition to production costs that reflect the process of society's interaction with nature (costs for material processing, raw materials, planning and coordination of work in production), Ronald Coase also singled out transaction costs as costs for establishing market relations between people. Among them, he attributed the costs of securing property rights, their transfer from one person to another, data protection and others, that is Ronald Coase separately allocated the costs of market functioning.

Another new contribution to the neo-institutional theory was the development of property rights by Ronald Coase, by which he understood the entire set of legal norms that regulate access to rare resources. For the efficient functioning of the economy, it was necessary to determine the property rights of each market agent and reliably protect them for the efficient use of rare resources. As a result of the interaction of two theories, Ronald Coase derived a theorem: if property rights are specified (clearly defined) and transaction costs are zero, then the structure of production will remain

unchanged and efficient regardless of changes in the distribution of resources. The theorem indicated a relationship between the distribution of ownership powers and the level of transaction costs [94].

The works of John Galbraith have gained great popularity in the scientific world, because they highlight the simplicity and comprehensibility of the material presented. He believed that the economic basis of modern society is corporations, the dominant position of which belongs to the technostructure. Representatives of the technostructure are engineers and managers who have complete information and influence the behavior of individuals in the interests of large corporations [92].

Unlike John Galbraith, in his works Douglas North noted that organizations – firms do not quite fit the definition of institutions. He offered his point of view and argued that institutions are the rules of the game, and organizations are the players [95].

It is equally important that in the second half of the 20th century classical institutionalism was transformed into a new institutionalism. The new institutionalism, in turn, develops in the following directions:

- institutional and sociological;
- transformational;
- industrial and technocratic;
- evolutionary.

The institutional-sociological trend is presented in the research of French economists Francois Perroux and Jean Fourastier, who tried to develop such an economic system that would harmonize individual and public interests through planning and state regulation of the economy.

Transformational institutionalism reflected the processes of transformation of capitalism, the emergence of a new form of capitalist enterprises in which the separation of capital-property from capital-function, and property – from managerial labor took place.

The industrial-technocratic direction, within which the scientific school arose and is developing, is represented by outstanding scientists John Galbraith, Daniel Bell, Alvin Toffler. For example, in his works, Daniel Bell called the new society post-

industrial, and this term spread in economic literature. The term «post-industrial society» defines it as a society that comes after the industrial one. The essential characteristics of the new society are the formation of an appropriate technological method of production, which is characterized by information and intellectual technologies, and information and knowledge become a decisive, qualitatively new factor of production.

Representatives of evolutionary institutionalism actively study the megatrends of human evolution, the main regularities, models and stages of social development, shift the emphasis from the analysis of social groups to the analysis of social institutions. Research in this area of institutional theory is mainly focused on the concepts of scientific and technological progress, innovation, industrial development, business cycles and economic growth [92].

Summarizing the material presented above Figure 1 shows the structure of institutional theories and concepts.

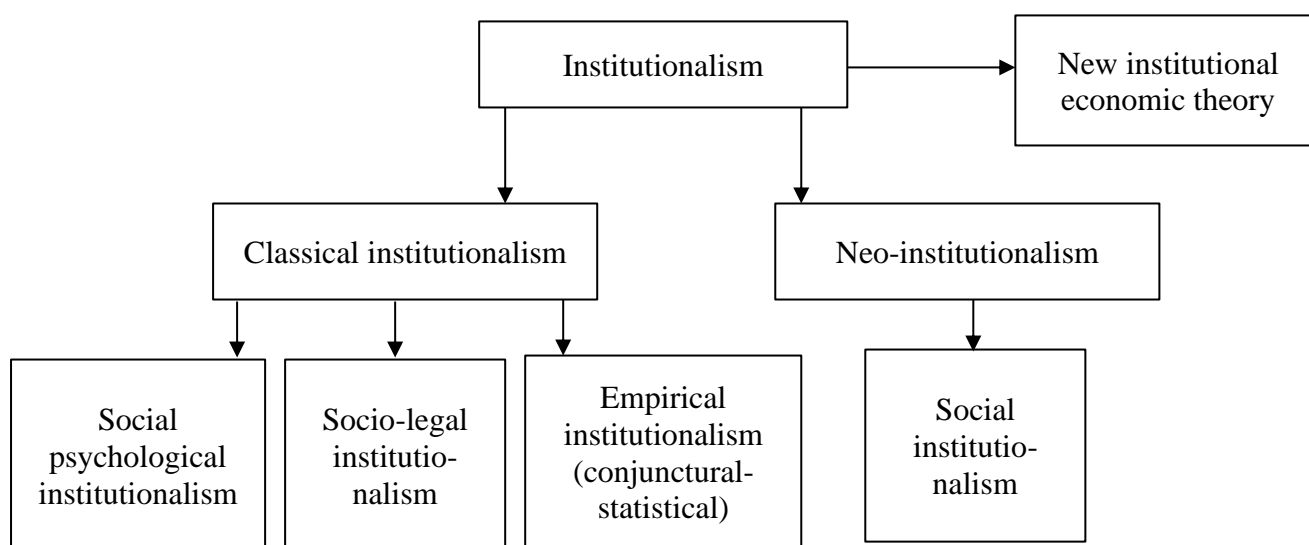


Figure 1. Structure of institutional theories and concepts

Source: author's own development

The emergence of institutionalism is due to the following factors:

1. Transformational shifts in the market system under the influence of monopolization and corporatization of the economy and manifestations of market instability – signs of cyclicity, the problem of employment.

Today, it is impossible to imagine a modern and progressive society without markets and their competition. The term «market» refers to an organizational structure

in which a certain order necessarily exists. The rivalry that arises between producers of goods for the best and economically beneficial conditions of production and sale of products improves their competitiveness on the market and provides the population with jobs.

To ensure smooth operation of the market functioning mechanism, competition performs certain functions (Fig. 2):

1) with the help of the regulation function, the factors of production under the influence of the price are directed to those industries where the greatest need for them is felt;

2) the incentive function forces enterprises to strive for higher productivity. Such a function should be considered from two positions – chance and risk. The chance for the enterprise is to reduce production costs, as well as increase profits when producing high-quality, new products; risk for the enterprise – losses that the enterprise will incur if it does not respond to the behavior of consumers;

3) the pricing function affects the level of individual costs for the production of any product, reducing them to socially necessary, which, in turn, determine the balanced market price of the product;

4) the distribution function allows you to distribute income among business entities in accordance with their effective contribution, which corresponds to the main principle of competition – rewards based on results;

5) the control function acts as a certain force that opposes the emergence of permanent economic power of individual market subjects, that is, it limits and controls the economic power of each enterprise;

6) the innovative function of competition at enterprises is realized by the constant improvement of the technological base of production, the introduction of the latest technologies and progressive forms of organization of the production process, thereby reducing production costs, which can be used more effectively in the future. Enterprises that will not be able to implement such innovation policy measures will be pushed out of the market [96].

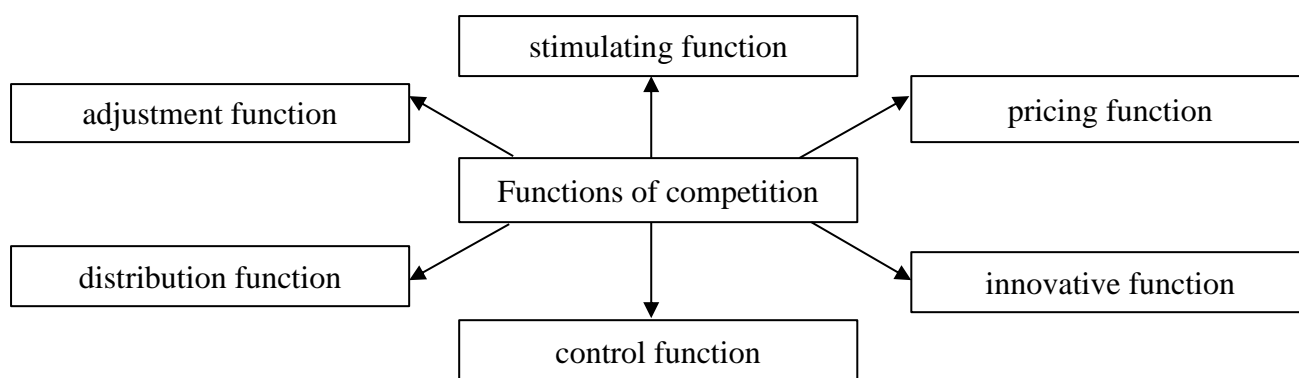


Figure 1. Functions of competition as an economic category

Source [96]

It should be noted that in today's crisis conditions, competition is turning into a very big disaster for many enterprises. Unlimited competition leads to the bankruptcy of a large number of enterprises, the growth of their unprofitability, and the slowdown of production. Unrestricted competition creates unemployment in the country, stagnation of the development of productive forces and reduction of production capacities of enterprises [97].

Therefore, any enterprise should always take into account all the risks during competition, which can significantly affect the enterprise in the future.

By studying the market, you can distinguish between perfect and imperfect competition. With perfect competition in the market, there is a large number of buyers and sellers who do not depend on each other and are unable to influence the price in the future. Otherwise, the opposite of perfect competition is imperfect competition. An example of imperfect competition is monopolistic and oligopolistic competition. Monopolistic competition involves the dominance in one or more industries of a certain corporation, firm or legal entity, which in this case is called a monopolist and is the only supplier of a specific type of product or service on the market. Monopolists occupy leading positions in the market and do not allow the development of small and medium-sized enterprises, which have a considerable number of barriers to entry or exit from the market. Small and medium-sized enterprises must constantly change or improve their operations in order to stay on the market and be competitive. The percentage of monopolized markets in Ukraine is quite large, and therefore high monopoly prices are constantly formed on the market for some types of goods that the country's population

cannot always afford.

First of all, the state must control all actions of monopolists and give all enterprises the opportunity to develop. The government should actively pursue antimonopoly policy, issue laws that will affect monopolistic organizations.

In addition, antimonopoly policy and antimonopoly legislation do not aim to prohibit or liquidate monopolistic entities. The main task of the antimonopoly policy is to put the activity of monopolies under state control, to exclude the possibility of abuse of the monopoly position [98].

2. The presence of social contradictions and the strengthening of the influence of mass social organizations and movements (labor, trade union).

Trade union organizations are created independently without prior permission based on the free choice of their members. The purpose of trade union organizations is to protect the labor, socio-economic rights and interests of trade union members before the owner, who are independent of state authorities and local self-government bodies, political parties, employers, and other civil organizations. Trade union organizations operate in accordance with legislation and their statutes. After all, when getting a job, an employee always expects that he will receive a salary on time, that the working conditions will meet the established standards, in particular, the standards for the duration of working hours and rest. However, any employee is not immune from the arbitrariness of individual employers, heads of enterprises, organizations.

If the owner's labor rights are violated, it will be difficult for the employee to stand up to him on his own. In most cases, such employees are fired immediately or their wages are not paid on time.

By uniting, workers become a powerful force. Moreover, the more workers unite to protect their violated rights, the stronger they are, the more effectively they can protect their rights and ensure that the employer fulfills the legal demands of the labor team.

3. The inability of the neoclassical doctrine to support the opinion of the self-sufficiency of the competitive market, its completely automatic and effective regulation and non-interference of the state.

4. The need for social control over the market mechanism and democratic reform of social relations [99].

The term «institutionalism» is based on the concept of «institute». Institutions include: the state, private property, trade unions, religion, customs, organizations, and others.

Shpykuliak O.H. considers that under institutions it is appropriate to understand certain formations that structure the economic interaction of market agents [100].

Stryzhak O.O. notes in her work that the concept of an institution is quite broad and includes customs, a way of thinking, systems of formal and informal norms and rules, restrictive frameworks of human interaction, procedures and mechanisms for ensuring the implementation of rules, control mechanisms, stable relations that structure social life [101].

Inshakov O.V. focuses attention on the fact that «etymologically the word «institute» means establishment, institution and organization, with the help of which institutions are realized, that is, these specific social functions are performed themselves or they are taught, and they are transferred to new agents» [102].

So, studying institutions, scientists try to more clearly define this term, to understand and explain the social processes taking place in different countries, delving into history, to see the prospects of social development.

The essence of any process, phenomenon or concept is best revealed through its functions. Institutes perform certain functions, including:

1) regulate the behavior of people so that they do not cause damage to each other, or that this damage is compensated by something;

2) minimize the effort that people spend on finding each other and agreeing with each other. The Institute is designed to facilitate both the search for the right people, goods, and values, as well as the ability of people to negotiate with each other;

3) organize the information transfer process;

4) implement restrictions in the process of making economic decisions, which are related to limiting access to resources and providing various options for their use;

5) an institution that limits the number of possible courses of action affects the

distribution of resources by economic agents;

6) institutes coordinate the behavior of economic agents [103]. But today, the institutional structure of the Ukrainian economy at the moment still lacks clear and reliably protected «rules of the game» that would regulate the behavior of market agents.

Institutions, which should be understood as a set of certain social customs in which the dominant way of thinking for a social group or the entire nation, have become the subject of the study of institutionalism.

For the first time, the term «institution» was used by U. Hamilton in 1918 in the pages of «The American Economic Review» magazine. He gives the following interpretation of this concept: «...an institution is a language symbol for a better description of a group of social customs. They mean a predominant and permanent way of thinking that has become a habit for a group or a custom for a people. Institutions establish boundaries and forms of human activity. The world of customs and habits to which we adapt our lives is an interweaving and continuous fabric of institutions». U. Hamilton considers that institutions play the role of fixers of established traditions and procedures and reflect the general agreement and coherence in society. The scientist includes trade unions, the state, the world of traditions, habits and rituals [104].

Hrytsenko V.V. emphasizes the existence of a categorical difference between the concepts of «institute» and «institution»: «institutions are the basis of the activity of certain individuals and their groups in society. A certain type of institution establishes and enforces rules that ensure the proper functioning of institutions. Thus, the institution is the main form of social organization of certain groups of individuals, which plays the main role in determining their place in the system of relationships regarding the formation of social existence and constitutes a hierarchical system of relationships of the functional structure of society» [105].

Institutions create an institutional environment that affects the behavior of an individual, but at the same time sets limits for the implementation of his activities, using economic, political, legal, psychological and social factors.

At the same time, the institutional environment depends on:

1) harmonization of «government-business-society» relations, for this it is necessary to implement the development of the institution of public-private partnership, develop institutions of civil society, religious centers, improve vectors of interaction and encourage social responsibility of business, etc.;

2) coexistence of formal and informal institutions at each stage of reforms;

3) the absence of inconsistency or conflict between them, the presence of which, as a rule, leads to the instability of the institutional system, is a threat to the stability of the country in the socio-political sphere and may result in an economic crisis;

4) guarantees of compliance with the rights of all participants in economic relations during operations and upon completion of transactions [106].

Institutional support plays an important role in the functioning of agrarian entrepreneurship. According to Article 42 of the Economic Code of Ukraine, «entrepreneurship is an independent, initiative, systematic, at one's own risk, economic activity carried out by business entities (entrepreneurs) with the aim of achieving economic and social results and making a profit» [107].

It can be argued that entrepreneurship, as an economic category, is a certain type of business where the main business entity is the entrepreneur. In his activity, the entrepreneur rationally combines production factors, organizes and manages production on an innovative basis and at his own risk with the aim of obtaining business income in the future.

The essence of entrepreneurship is most fully revealed through its functions:

1. Innovative - promotes the process of producing new ideas, carrying out research and development, creating new products and providing new services.

When creating new products, an enterprise can involve other enterprises in cooperation with the development of a new product or do it independently. At the same time, it is appropriate to develop all marketing strategies, analyze the possibilities of product production and sales, test the product in market conditions, and then deploy the production complex, which will continue to function effectively. A new product can satisfy existing or anticipated public needs, which increases the level of competitiveness of the enterprise on the market of goods and services.

2. Economic - ensures the most effective use of labor, material, financial, intellectual and informational resources.

Labor resources should be understood as a set of persons who work at a certain enterprise and invest their labor, physical and mental abilities, knowledge and skills in the economic and financial activities of the enterprise.

Material resources are a component of production resources that participate in the process of economic activity during one production cycle. Their feature is that they completely change their form and transfer their value to the company's expenses.

The financial resources of the enterprise are some funds that are at the disposal of the business entity and are intended for them to fulfill certain financial obligations.

Intellectual resources form and expand the potential capabilities of the enterprise itself due to their uniqueness and ensure its sustainable competitive advantages in the market.

Information resources of the enterprise serve as instruments of coercion or stimulation of production and commercial activity, management decision-making. Informational resources, in contrast to material, labor and financial resources, are characterized by a certain feature:

- inexhaustibility – they do not disappear over time, but increase;
- multiple use of the same information;
- the value of information increases in its combination with production factors;
- easy to collect and transfer;
- used for various management purposes.

3. Organizational – introduces new forms and methods of production organization, new forms of wages, rationally combines forms of unit division of labor.

According to the Law of Ukraine «On Remuneration of Labor», salary is a reward, calculated, as a rule, in monetary terms, which the employer pays to the employee for the work performed by him under the employment contract.

In turn, salary are divided into: basic, additional, other incentive and compensatory payments.

The basic salary is a reward for the work performed in accordance with the

established labor standards (standards of time, production, service, job duties). It is established in the form of tariff rates and piece rates for workers and official salaries for employees.

Additional salary is a reward for work above the established norms, for labor successes and ingenuity, and for special working conditions. It includes surcharges, allowances, guarantee and compensation payments provided for by current legislation.

Other incentive and compensatory payments – payments in the form of rewards based on the results of work for the year, bonuses according to special systems and regulations, payments within the framework of grants, compensatory and other monetary and material payments that are not provided for by acts of current legislation or that are carried out in excess of the norms established by the specified acts [108]. The correct organization of remuneration contributes to the fuller encouragement of employees. However, this cannot be achieved without adequate funding.

4. The social function consists in the production of goods and services necessary for society, in accordance with the main purpose, the requirements of the main economic law;

5. Personal – affects the self-realization of the entrepreneur's own goal, getting satisfaction from his work.

Business entities (entrepreneurs) can be:

– citizens of Ukraine, other states, stateless persons, not limited by law in legal capacity;

– legal entities of all forms of ownership established by the Law of Ukraine «On Property»;

– an association of legal entities operating in Ukraine under the terms of a product distribution agreement.

The following categories of citizens are not allowed to engage in entrepreneurial activity: military personnel, officials of the prosecutor's office, court, state security, internal affairs, state notary, as well as state power and management bodies, which are called to exercise control over the activities of enterprises [109].

To ensure the freedom of business development, the rights and obligations of

business entities are legally defined. The rights of an entrepreneur include:

- create any type of entrepreneurship;
- buy property and acquire property rights;
- independently organize business activities, choose suppliers, set prices and tariffs;
- free disposal of profits;
- conclude employment contracts with citizens on the use of their labor;
- independently establish the forms, system and amounts of labor remuneration;
- receive any unlimited personal income;
- participate in foreign economic relations, carry out currency transactions;
- use the state system of social security and social insurance.

The responsibilities of an entrepreneur include: complying with current legislation; keep financial records; make mandatory payments; enter into employment contracts with citizens who are hired; to ensure proper and safe working conditions, wages not lower than those determined by law, and their timely receipt by employees, as well as other social guarantees; to observe the rights of consumers in order to realize their legitimate interests, ensuring the reliable quality of manufactured goods (services); obtain a license to operate in areas that are subject to licensing in accordance with current legislation [110].

Entrepreneurship in the agricultural sphere is characterized by a number of features related to the nature of agricultural production, which is based on the ability of plant and animal organisms to reproduce naturally, which depends on the climate and soil. From this follows the fundamental difference between agriculture and other branches of production – in it, the economic process of reproduction is always closely intertwined with the natural one. That is, the consequences of management in this field depend not only on the employee, his technical equipment, but also on natural conditions. The peculiarities of entrepreneurship in the agricultural sector include:

- 1) the economic process of reproduction is always closely intertwined with the natural;
- 2) the extraordinary role of land as a production factor;

3) seasonal nature of production;

4) all enterprises – subjects of agrarian entrepreneurship – are closely related to agricultural producers;

5) a small share of innovative products, the predominance of traditional goods and services;

6) the special importance of informal regulators (trust, reputation of partners) in view of the predominance of the traditional way of thinking and behavior of residents of rural areas [111].

The agricultural enterprise plays an important role in the development of rural areas:

– business brings additional income for the people themselves, which contributes to the improvement of the standard of living of the rural population and the growth of its well-being;

– entrepreneurship solves the problems of food supply for the population of rural areas;

– entrepreneurship is directly an important source of budget formation of local village councils;

– agribusiness contributes to the formation of agricultural product processing chains, procurement of raw materials, as well as the provision of various types of services.

It is no less important that the agricultural enterprise provides the rural population with jobs, but the current situation with employment and employment opportunities in rural areas in Ukraine is considered catastrophic, it is very difficult for villagers to find work at their place of residence.

Table 1 presents the number of employed population aged 15 to 70 by gender, type of location and employment status from 2020 to 2021.

Table 1

Employed population aged 15-70 by gender, type of location and employment
status from 2020 to 2021

	Years		Deviation 2021 (+/-) 2020
	2020	2021	
Number of employed population aged 15-70, total, thousands of people	15995,6	15610,0	-385,6
<i>including by employment status, as a percentage of the total</i>			0
Employed	83,4	83,7	0,3
Employers	1,4	1,4	0
Self-employed	15,0	14,7	-0,3
family members working for free	0,2	0,2	0
Women	7650,0	7406,6	-243,4
<i>including by employment status, as a percentage of the total</i>			0
employed	85,9	85,9	0
Employers	0,9	0,9	0
Self-employed	12,9	12,9	0
family members working for free	0,3	0,3	0
Men	8345,6	8203,4	-142,2
<i>including by employment status, as a percentage of the total</i>			0
employed	81,1	81,7	0,6
Employers	1,9	1,8	-0,1
Self-employed	16,8	16,3	-0,5
family members working for free	0,2	0,2	0
Urban area	11027,3	10774,5	-252,8
<i>including by employment status, as a percentage of the total</i>			0
employed	89,9	89,9	0
Employers	1,6	1,5	-0,1
Self-employed	8,4	8,5	0,1
family members working for free	0,1	0,1	0
Countryside	4968,3	4835,5	-132,8
<i>including by employment status, as a percentage of the total</i>			0
employed	69,0	69,8	0,8
Employers	1,0	1,0	0
Self-employed	29,4	28,7	-0,7
family members working for free	0,6	0,5	-0,1

Source: compiled by the author based on the data of the State Statistics Service of Ukraine [112]

Having analyzed the dynamics of the employed population aged 15 to 70 by gender, type of location and employment status from 2020 to 2021, it can be seen that the number of employed population is decreasing over the analyzed period. The number of working women decreased by 243,4 thousand people, men by 142,2 thousand people. There is also a decrease in the number of employed people in urban areas by 252.8 thousand people and in rural areas by 132.8 thousand people. The decrease in the number of employed people in rural areas is due to the fact that a large number of villagers move to large cities in search of work and employment. Business owners are happy to hire young people who have come from rural areas. They believe

that rural youth are hardworking, sincere and to some extent naive.

Today in Ukraine, agrarian entrepreneurship can function with the help of certain institutional conditions (a combination of formal and informal institutions, as well as coercive mechanisms), which are presented in Figure 3.

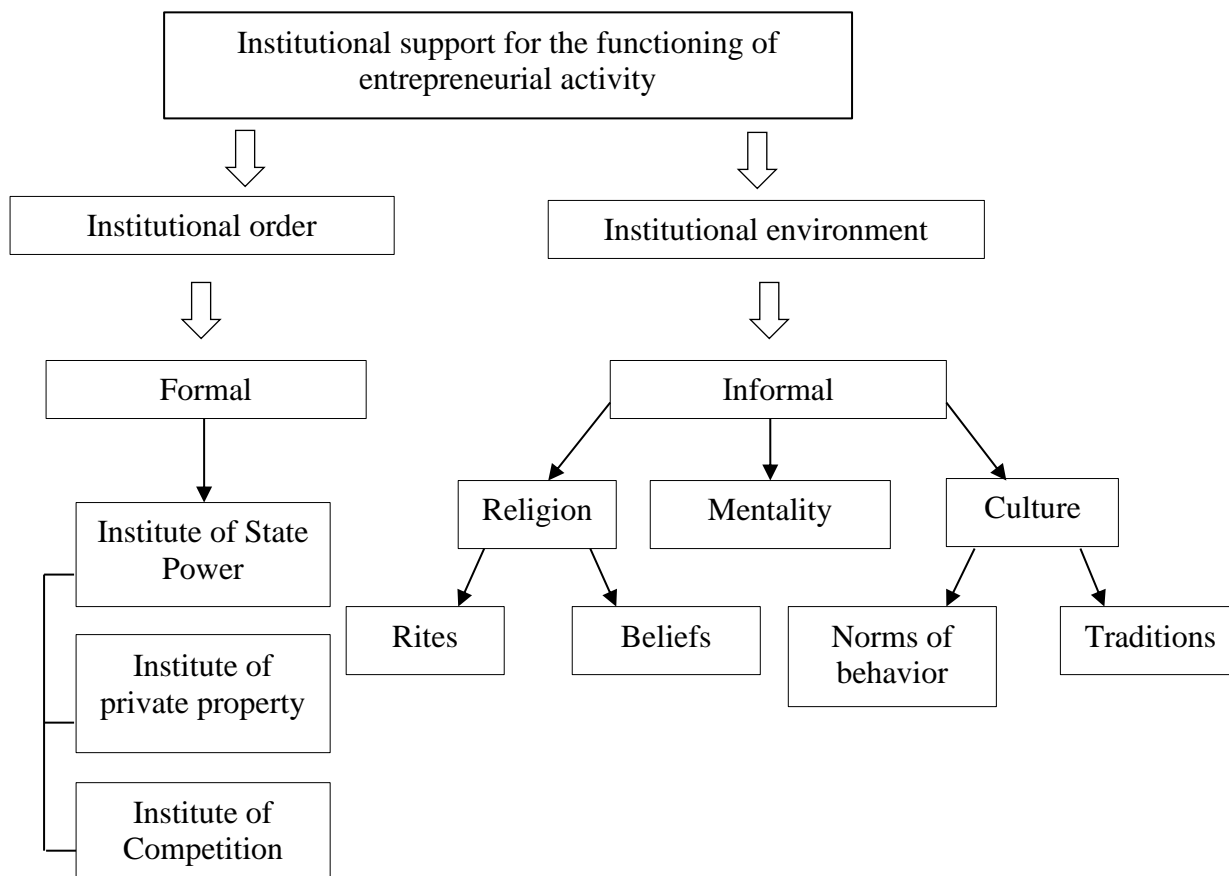


Figure 3. Institutional support for the functioning of entrepreneurial activity

Source: formed on the basis of [111, 113].

Formal institutions that provide the possibility of entrepreneurial activity in the field of agribusiness are normative legal acts (laws, orders, decrees, other administrative documents) that regulate property relations, production relations, distribution and redistribution relations. Basic economic institutions should also include the institution of state power, the institution of private property, and the institution of competition. The effectiveness of these institutes is ensured by the relevant regulatory and legal support [111].

Creating favorable conditions for the development and functioning of entrepreneurship, an important role is played not only by formal institutions, but also by informal ones, which significantly influence entrepreneurial activity. Non-formal

institutions should include: culture (traditions, norms of behavior), religion (beliefs, rites), mentality.

The culture that is formed internally at the enterprise is an important component of the entire life cycle of the enterprise. Culture not only provides high prestige to the enterprise, but also contributes to increasing production efficiency.

Elements of entrepreneurial culture are formed under the influence of the experience of this enterprise, which is built up over the years and constantly improved. Changes that can occur in the culture of entrepreneurship occur according to new ideas about values.

The culture of an entrepreneur depends on appearance, language literacy, sociability, friendly attitude towards every employee of the enterprise, good mood, satisfaction of employees with working conditions, positive image in the business environment.

It is known that foreign investors are reluctant to invest in Ukraine, because domestic entrepreneurs do not always keep their words, but also the signed contracts, and violate the ethical principles of doing business.

The formation and observance of ethics in business activities should be based on mutual consideration of interests. Reliability and duration of relations between partners are ensured not only by compliance with formal institutions (laws and norms), but also by such values as honesty, decency, and good faith. Compliance with morality in economic behavior is ensured by institutional conditions (relevant institutions and rules of the game). The moral values of any nation originate in religion. It is religion that forms the internal attitude of the subjects of entrepreneurial activity to wealth and poverty, individualism and collectivism, gives preference to rational or irrational thinking, determines the attitude to property and entrepreneurial activity in general.

Mentality, as a characteristic of the psychological life of people, is a system of established norms and stereotypes of thinking, psychophysical regulators of behavior, which is determined by the dominant needs and hierarchy of values of a certain ethnic community (people) and significantly affects the creation or change of institutions in society. Through the mentality, the people transmit from generation to generation the

inherited knowledge, moral norms, traditions, customs that affect the economic behavior of individual business entities, the peculiarities of conducting business activities [113].

Therefore, the functioning of entrepreneurship depends significantly on the influence of formal and informal institutions. The use of informal institutions allows entrepreneurs to significantly reduce the costs of searching for information and concluding contracts. But, if we are talking about more advanced markets where there is a lot of competition, then there is a need for formal regulators, enshrined in the relevant laws.

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7. Foreign experience of the development of successful companies

In the management of the best companies in the world, regardless of the model in which they exist, regardless of nationality, the following features are determined: client-oriented approach, business diversification, activation of the human factor, use of modern integrated information marketing technologies, development of partnership relations, including through new organizational forms of management, namely: global associations, strategic alliances, consortia providing access to cheap resources and important sales markets, the dominance of adaptive management structures, important activities for the creation and maintenance of microculture.

Ensuring the sustainable socio-economic development of regions and increasing their competitiveness are impossible without overcoming the problems of interregional differences, eliminating crisis phenomena and backwardness in the development of certain territories of the country. When managing the economic development of a separate region, it is advisable to highlight all the above relatively independent goals and monitor their achievement. In particular, along with monitoring the state of regional production and the dynamics of the population's monetary income, it is necessary to monitor other important parameters of economic transformation.

Availability and level of quality of education, kindergartens, other educational institutions and their accessibility, as well as the level of education and qualifications of citizens are the most important parameters of the level of well-being of any region. Food supply, quality control, compliance with consumer rights in the retail market are also parameters for assessing the level of regional growth. At the post-industrial stage of transformation of a city or region, the main factor determining its well-being is the level of availability of regional infrastructure. How developed the roads, communications, residential sector, service and entertainment industry are, available office space, how low the crime rate is and the city is provided with qualified personnel - all this determines the development potential of the post-industrial region. How the entire infrastructure of the region is able to accept a new type of business and new

people, how quickly and effectively the entire regional infrastructure can adapt to new conditions - all this determines the potential of post-industrial growth [114, p. 1-10].

Let's consider the positive experience of Germany, transformational changes, innovative solutions, problems that arose after the unification of the country. Germany is a special country that is trying to overcome the negative consequences of its tragic past. Two world wars left their mark in architecture, cultural and historical monuments. A large part of cities, towns and villages was destroyed. After the Second World War, Germany was divided into 4 zones of occupation. These sectors were under the control of the governments of the USSR, USA, Great Britain and France.

The economic, political and social cooperation of 6 European countries, namely: Germany, Italy, France, Belgium, the Netherlands and Luxembourg, initiated the creation of the "European Coal and Steel Community" in 1951, and in 1957 – the "European Economic Community" and "of the European Atomic Energy Community". The European Union is a new political institution created by nation-states after the Second World War.

Its main goal is to avoid war, strengthen state power, and overcome the poverty and devastation caused by two world wars. Right now, the European Union is achieving economic and political integration, and this process is one of the most ambitious projects ever implemented by any supranational political institution in the world.

A commitment to liberal democratic methods as a means of enabling cooperation is a major feature that unites Europeans and has become one of the defining characteristics of the European Union. Eastern and Western Europe are united by the common experience of prosperity and progress embodied in the European Union.

The end of the "Cold War", marked by the collapse of the Soviet Union (1989-1991), caused significant changes in both Western and Eastern Europe. In the West, he caused the transformation of socialist and communist parties and initiated the search for new political ideologies capable of existing in a world where global capitalism functions and there is no longer communism. In addition, he added new strength to the idea of greater political integration of the European Union and enabled Germany to

become the leading power of the European Union.

In addition, the fall of the Berlin Wall marked the beginning of the process of expansion of the European Union, which included the countries of Central and Eastern Europe. The territory of modern Brandenburg was included in the Soviet zone of occupation, in which the Democratic Provision on Citizens of 1946 was issued, which extended along with Brandenburg to Pomerania, Saxony, Thuringia and Saxony-Anhalt. The Land of Brandenburg, for example, was divided into three districts: Cottbus, Frankfurt am Oder and Potsdam.

With the reunification of Germany and the end of the communist German Democratic Republic (GDR), the five former GDR regions in East Germany had to change their economic and political system from a planned economy to a private sector-oriented market economy. The changes that took place required the emergence of new economic structures, new ways of thinking and training requirements from all stakeholders of the former system, as well as the creation of modern institutions and promising economic support structures. In addition to attracting investors to the general process of privatization, emphasis was placed on ensuring and strengthening the stability of industry poles traditional for the GDR in various parts of Brandenburg (Bestandssicherung).

Namely: tourism and the film industry around Potsdam and Hafelland, as well as promoting the development of industry in medium-sized cities. In the region, more attention was paid to the use of local research organizations and their integration in promoting the development of new areas of business and startups. It was also a time when cluster policy and the strengthening of endogenous potentials became more acceptable within the European Union as a whole, and not only in Germany [115].

Clusters in Germany are considered the most successful and effective form of investment and innovation development of the country's regions. At the same time, clustering processes are characterized by significant centralization. If at the initial stages, cluster formations were created here spontaneously and chaotically, then at the current stage, clusters in Germany are formed with the active support of the state, which is implemented through the mechanism of providing scientific institutions with modern

equipment and supporting them with financial resources.

In various regions of Germany, we have the opportunity to trace the local specificity of cluster formations. Analyzing the above, we can draw a conclusion: there are national peculiarities of cluster policy in the countries of the world, which are determined by the traditions and culture of the process of policy formation in them in general, as well as the chosen concept of clustering. In addition, cluster policies of states differ in the degree of intervention of authorities in the process of creating clusters and directions of participation of power structures in the implementation of cluster processes [116].

Germany is a country in which you open new pages for yourself every time - its history, the character and traditions of its inhabitants, the incredible contrast between rural nature and the active life of big cities.

Nuremberg with its bridges and arches, the unique castles of Hohenschwangau and Neuschwanstein, the magnificent Black Forest, touristic Bavaria with its rich historical past and natural attractions, multifaceted Berlin, the tranquility of the Baltic coast, the purest lakes and unique mineral springs, mountain resorts, medieval cities - all it attracts tourists to Germany, a country of order and picturesque nature.

Ancient German lands are rich in powerful fortresses and medieval castles, majestic monasteries and churches, exquisite palaces and high towers, beautiful gardens and parks. Cities have their own unique face, a rich excursion program awaits you, tasting traditional German cuisine, visiting unique museums and pleasant walks through narrow cobbled streets. Germany is a patchwork quilt, as if woven from different eras, historical events and cultures. The capital of the country is the best proof of that.

Go to Dresden with its magnificent baroque buildings, ancient squares and streets, fountains and bright green lawns, art galleries and museums. In Dresden, we can travel for hours, just observing the change of architectural images and streets, the place of knightly tournaments, the halls of the royal palace, palace ensembles and parks.

The history of the Dresden Gallery began in the 16th century, when the Elector of Saxony Friedrich III the Wise, who was an admirer of the art of Lucas Cranach and Albrecht Dürer, gathered his own collection of paintings. During the reign of the Saxon Elector Augustus I, the Art Cabinet (Kunstkamera) was created in his residence – Wittenberg Castle.

The collection of paintings in the Kunstkamer mainly consisted of paintings on religious subjects and dynastic portraits. The next elector, Augustus II the Strong, on the advice of the court architect and the first director of the Le Plas museum, separated the works of painting into a separate independent picture gallery, which was placed in the "Equestrian Yard" on Judenhof Square in Dresden.

From that event that happened in 1722, the official life of one of the most glorious museums in the world begins. During the reign of Augustus III the Saxon, the collection of works of art acquires a systematic character and is carried out by court art connoisseurs with unprecedented activity. In 1745, Raphael's immortal canvas "Sistine Madonna" arrived at the gallery.

The album "The Dresden Gallery" presents masterpieces of painting from three European countries: Italy, Spain and France. Italian painting in the album is presented by outstanding masters of the Early and High Renaissance: Francesco del Cossa "Annunciation", Antonello da Messina "Saint Sebastian", Cima da Conegliano "Introduction of Mary to the Temple", Bernardino Pinturicchio "Portrait of a Boy", Raphael Santi "Sistine Madonna", Giorgione "Sleeping Venus", Titian "Caesar's Denarius", Antonio Correggio "Holy Night (Christmas)" and others. Among the Spanish masters, reproduced canvases are El Greco "Healing of the Blind", Josepe Ribera "Diogen with a Candle", Francisco Zurbaran "Saint Bonaventure", Diego Velázquez "Portrait of Juan Mateos", Esteban Murillo "Madonna and Child".

A wide chronological range – from Nicolas Poussin to Edgar Degas – presents the works of French artists: Claude Laurens "Landscape with the Flight into Egypt", Nicolas Poussin "The Kingdom of Flora", Antoine Watteau "Feast of Love", Auguste Renoir "Portrait of an Officer", Claude Monet "The Banks of the Seine in Lavacourt", Edgar Degas "Two Dancers" and others.

Germany is a special world that forever remains in the hearts of those who come to rest. Germany has everything a tourist needs – magical landscapes, cozy cities, castles and historical legends. Germany offers its guests numerous and quite diverse tourist attractions both in urban conditions and in nature. Just a few of them: familiarization tours, attending events, shopping tours, recreation in the "Luxury Smart" segment, and active recreation combined with culinary regional cuisine [117].

From our own experience, we note that in the development of tourism in the German Democratic Republic, and later in the united Germany, drastic changes took place, which caused a qualitative renewal of the tourism sector. The number of hotel and restaurant complexes, entertainment facilities, water parks, hotels and hostels has also dramatically increased.

But the atmosphere of small cities and towns, their cozy shops, parks and squares, trips on the fabulous Christmas and New Year tram, the first spring flowers near the houses, Easter cupcakes and Christmas markets with traditional wooden stalls and holiday souvenirs, a wide range of street food, from year per year, mesmerizing tourists and local residents.

In addition, here we have the opportunity to buy not only original wooden toys and amazing Christmas tree decorations, but also to feel the emotions of joy and happiness that remain with you for life. Therefore, it is necessary to define the essence of the concept – "joy". This is an emotion, a mood, the ability to feel positive emotions from what you plan, what you expect, what you dream. Joy arises at the moment when we positively perceive a certain situation, have the desire to preserve positive emotions and enjoy every minute, and this state is called "happiness".

Can everyone be happy and joyful? A person is happy when he gets what he wants. For example, the purchase of a car or the birth of a child, or a trip to a country that you have been planning to visit for a long time. In order to be happy, you need to have a desire. That is, when you have the desire, you have the mood and purposefulness, apart from the fact that the trip itself will be, you already rejoice every day in anticipation.

This is happiness. It is important that your desires correspond to your values and

that you do not violate them. It is about how you will achieve them. And this is already planning. The more and better you work on your plan, the easier and more interesting it will be for you to implement it.

Happiness is the creation of dreams and the ability to follow them, enjoying every minute – to be happy. Because happiness is overcoming known barriers on the way to known goals. And joy is a feeling that you feel every day, every minute. And joy is a way out of the comfort zone, it's development, it's life! When you are happy, you create new moments, interesting memories. Because our memory records emotional memories [118].

Every person in his life has probably repeatedly asked the question – what is happiness? This concept is more than subjective, everyone has their own answer. It is quite difficult to give an unequivocal definition of "hygge". In the Danish language, the word "hygge" was borrowed from Norwegian, which meant "well-being" or "well-being". Now it is better to equate it with the concept of "coziness", but if "hygge" is considered more deeply, then it means "atmosphere or feeling of happiness".

By the way, there is even an "Happiness Research Institute" in Copenhagen. Its founder, scientist and chief ideologist Mike Viking, in his best-selling book "The Little Book of Hygge. The secret of Danish happiness" emphasizes that the concept of "hygge" is not translated, but felt. How to experience all the beauty of "hygge"? One of the main conditions is to enjoy the moment, to live here and now and to rejoice in the simple (one might even say – modest) "Hygge" pleasures of life. Although the home is the center of hygge, it can of course be achieved outside of it. Country houses, boats, landscapes are great places for "hygge".

You can enjoy coziness and comfort anytime and anywhere. It doesn't matter if you are on a river in Sweden, among vineyards in France, or just in your garden or in a park near the house where you live – the surrounding nature revives and creates an atmosphere of ease, comfort and happiness. Among the natural landscapes, there are no luxuries and extravagances, but good company and pleasant conversation are important. Slow, simple and unpretentious things quickly adjust us to the atmosphere of "hygge" [119].

In Germany, for example, there is everything for recreation. And the sea – as many as two – in the north of the country. And the Alps – in the southeast. There are large metropolises and cozy German towns with half-timbered houses.

Here you can find impressive national parks, nature reserves and natural wonders. Own "Disneylands" for recreation with children. You can travel around the country by car, train, bicycle or even on foot - all routes in detail can be found on the Internet. And the roads to any tourist attractions are excellent. It is extremely easy to find a tourist route for any taste. German cities have a page on the Internet, where there is a mandatory "tourism" section. This section contains a wide variety of offers with a detailed description of routes, hours of operation, ticket prices, and tour operators' telephone numbers [117].

The experience of Germany in the development of domestic tourism is shown in (Figure1).

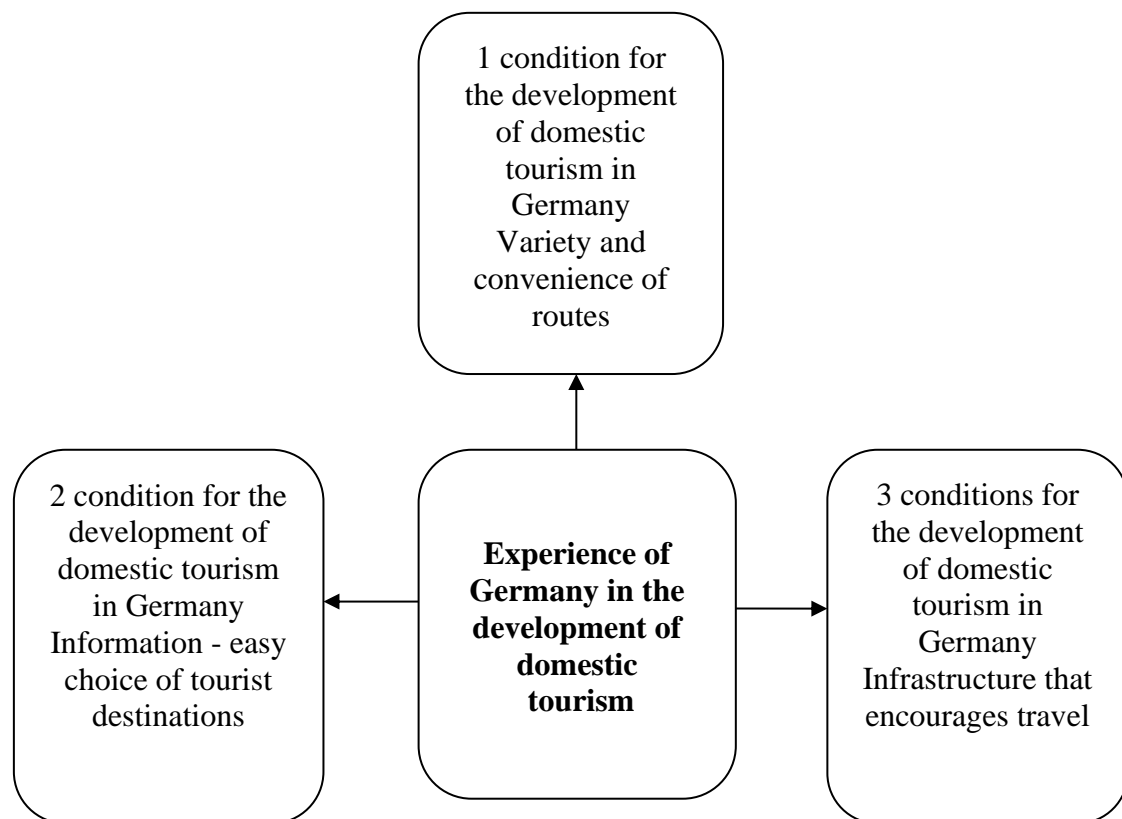


Figure 1. The experience of Germany in the development of domestic tourism

**Source: created by the author based on [120].*

The five new federal states play an important role in tourism. For many regions in eastern Germany after reunification, tourism became a chance to once again increase the efficiency of management in an economic sense. Landscapes such as the Spreewald, the traditional cultural cities of Dresden or Weimar or Baltic resorts such as Binz on the island of Rügen attract tourists from Germany and abroad. It does not matter how many have already been visited – there are still a significant number of places that we have the opportunity to discover, experience, celebrate and wonder in the country of tourism – Germany [117].

The set of reasons that contribute to the development of domestic tourism in Germany are shown in (Figure 2).

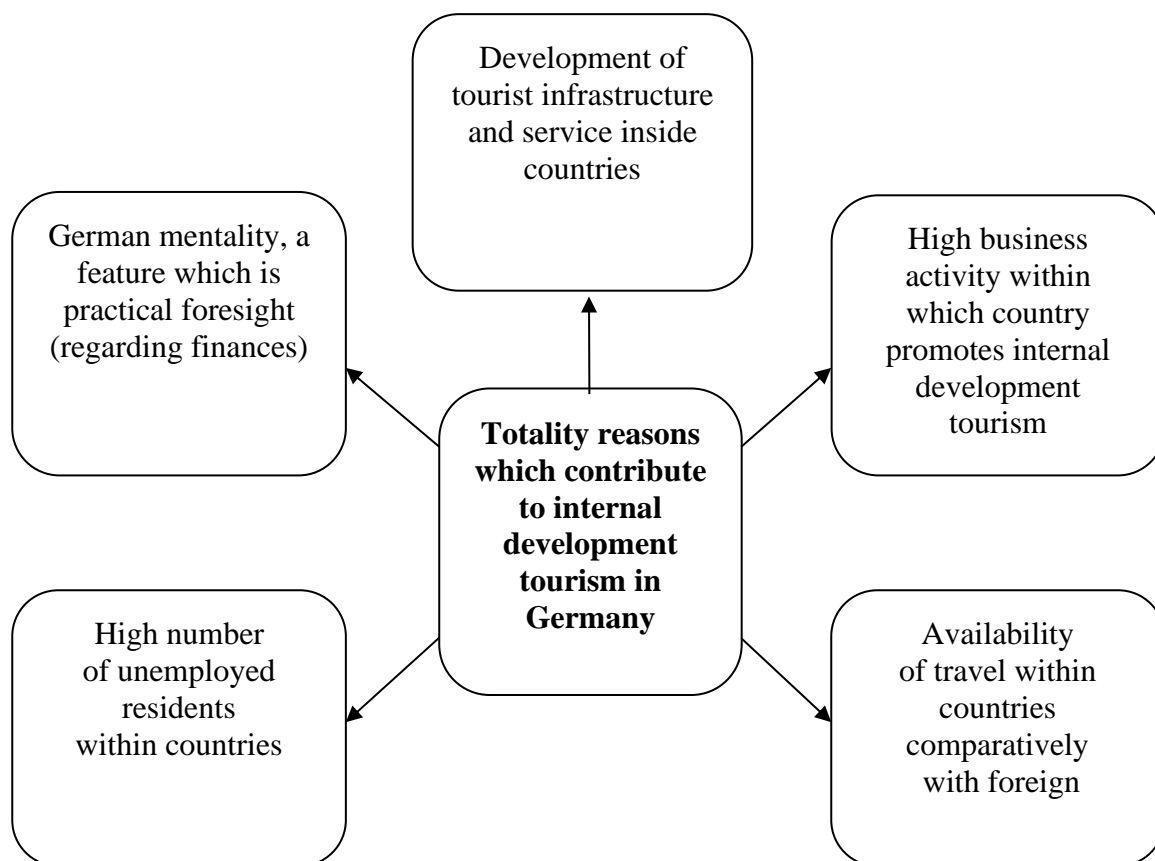


Figure 2. A set of reasons that contribute to the development of domestic tourism in Germany.

**Source: created by the author based on [120].*

The experience of Germany shows that the state, which is interested in the development of the tourism industry, should finance the promotion of this industry both

within the country and abroad, while the funding should be directed not only to advertising activities, but also to in-depth marketing research, increasing information transparency and additional education of workers in the tourism industry, which must meet global standards.

Among the places that will interest those who have not visited Germany before, and those who have, will be interested again – the capital Berlin with its 800-year history, wonderful museums and concert halls, as well as, of course, the Reichstag, the Berlin Wall, the zoo.

Berlin is an urban metropolis where historical monuments are combined with modern architecture. Here, the pedantry typical of Germany is strangely combined with an atmosphere of lightness and ease, which is why the German capital is called the city of freedom. During the Cold War, Germany was divided into two parts – East and West. The Berlin Wall was built to mark the borders along the entire capital.

And in the fall of 2019, the Germans celebrated the 30th anniversary of its fall, when Germany again became a unified state. In some areas of the city, parts of the wall were preserved and turned into a kind of installation. The Brandenburg Gate is a business card of the city, a symbol of united Germany. If you came to Berlin on New Year's Eve, be sure to visit Paris Square, where the gates are located. Mass festivities, concerts and entertainment for tourists are organized here. Local residents advise to go to Museum Island without fail.

There are 5 museums here, a whole day will not be enough to see all of them. Antique exhibits are offered for inspection in the Old Museum, and valuable items of ancient Egyptian art in the New Museum. The National Gallery will appeal to fans of impressionism. In the Bode Museum, you can get acquainted with paintings and sculptures of the early Middle Ages. The Pergamon Museum is very popular among tourists, its exhibits are dedicated to the Islamic art and culture of Eastern Asia.

Gendarmenmarkt square is the best in Berlin. Here are located the German and French cathedrals, as well as the Concert Hall. These masterpieces of architecture were built as early as the 18th century, and then reconstructed after the Second World War. The buildings are impressive with their majesty.

If you have already explored the city and are planning what to see in the vicinity of Berlin, you should visit Potsdam. This is a city located half an hour's drive from the capital. Be sure to visit the Souci Palace, the Dutch Quarter, the Glintzi Bridge and just take a walk through the colorful streets. Potsdam differs from the German metropolis in architecture and general atmosphere [120].

City tourism is the largest segment of the German tourism industry. The number of trips by German and foreign tourists is increasing in the cities. The reasons for traveling are the desire to participate in cultural events or sporting events. The cities, which for many years have held leading positions in German tourism statistics, thanks to their diverse range of services and a significant number of activities, attract more and more visitors who want to make an excursion, have an interesting weekend or a short vacation. There is a noticeable trend towards short vacations, which contributes to the popularity of urban tourism [121].

Cottbus is a city in the eastern part of Germany, located on the Spree River and three railway lines 100 km from Berlin, and is considered the cultural and political center of the Sorbian population of Lower Lusatia. Cottbus is a fairly small city, so it has a special rhythm of life. The atmosphere here is different from the atmosphere of big German cities, the locals even communicate in a special Lusatian-Silesian dialect. Among the attractions for tourists, the "Branitz" castle with its adjacent park, which is located in the south of the city, will be interesting. The residence was built on the special order of Prince Hermann von Pückler-Muskau, who was one of the few key figures of the country in the 19th century. Writer, traveler and landowner, as well as a landscape designer at the Prussian court.

The building was built in the Baroque style, and the project for it was prepared by an architect from Dresden, Gottfried Semper, who designed the Dresden Opera House. At the current stage of history, the castle is a museum in which exhibits are devoted to the life of the prince. Traveling through the streets of the city, we have the opportunity to contemplate a historical building called "Casper Gewerbehof". This building was built more than a hundred years ago, originally one of the large industrial companies was located in it. The building is interesting because it has not changed at

all over the years of its existence.

It is known from my own experience that residents of the city and tourists in Cottbus are also in for a pleasant surprise, they will be able to visit a cinema with the intriguing name "Mirror World". This is the first permanent cinema in the city, the opening of which took place back in 1907, at first it was located in an old apartment building. In 1911, the government of Cottbus decided to build a separate building for the cinema, it is still located in an amazing baroque building. Recently, the cinema hall was supplemented with new modern equipment and designed for 500 people [121].

So, it should be noted that quite significant changes have taken place in the development of international and domestic tourism in Germany, they were connected with the country's cooperation with various international and regional organizations. Tourists with children in Cottbus will be interested in visiting the Senftenberg planetarium, which is located in the immediate vicinity of the city. It was opened in 1966, but tours in it still remain incredibly interesting and informative. A powerful projector is installed here, which can display up to 6,000 celestial bodies.

Cottbus is a great place for family vacations. There are sights and museums that would be interesting for every member of the family ("Branica" palace and park, "Cottbus Theater", "Pharmaceutical Museum"), as well as facilities for active pastime (various entertainment centers). We know from our own experience that it is possible to travel in the city both carefree, walking in the Grafsky Park and the zoo, which is located nearby, and engaging in active leisure activities (visiting entertainment complexes, cycling). At Tierpark Cottbus Zoo, we have a great opportunity to look at various animals that live in all corners of the world – tigers, porcupines, deer, penguins, camels, tapirs, pelicans, bears.

As in any other zoo in Germany, special attention is paid to animal care. In addition, the fence in the park is minimal, due to which the feeling is created, as if the spectators are visiting a safari [121]. Let's consider the necessary conditions for creating a project model of a cluster in the city of Cottbus (Brandenburg). The creation of the tourism and recreation cluster "Cottbus" will ensure the production, technology and information interaction of state authorities, travel agencies, public catering

establishments, hotel and restaurant complexes, museum institutions, information and marketing centers, mass media, educational institutions and research institutions with the aim of creating a joint tourist product.

Let's consider the structural elements of the tourist and recreation cluster – hotel and restaurant complexes. One of them is located in the heart of Cottbus, the “Altstadthotel Am Theater“ and is an ideal place to get to know Cottbus.

The project model of the "Cottbus" cluster is shown in (Figure 3).

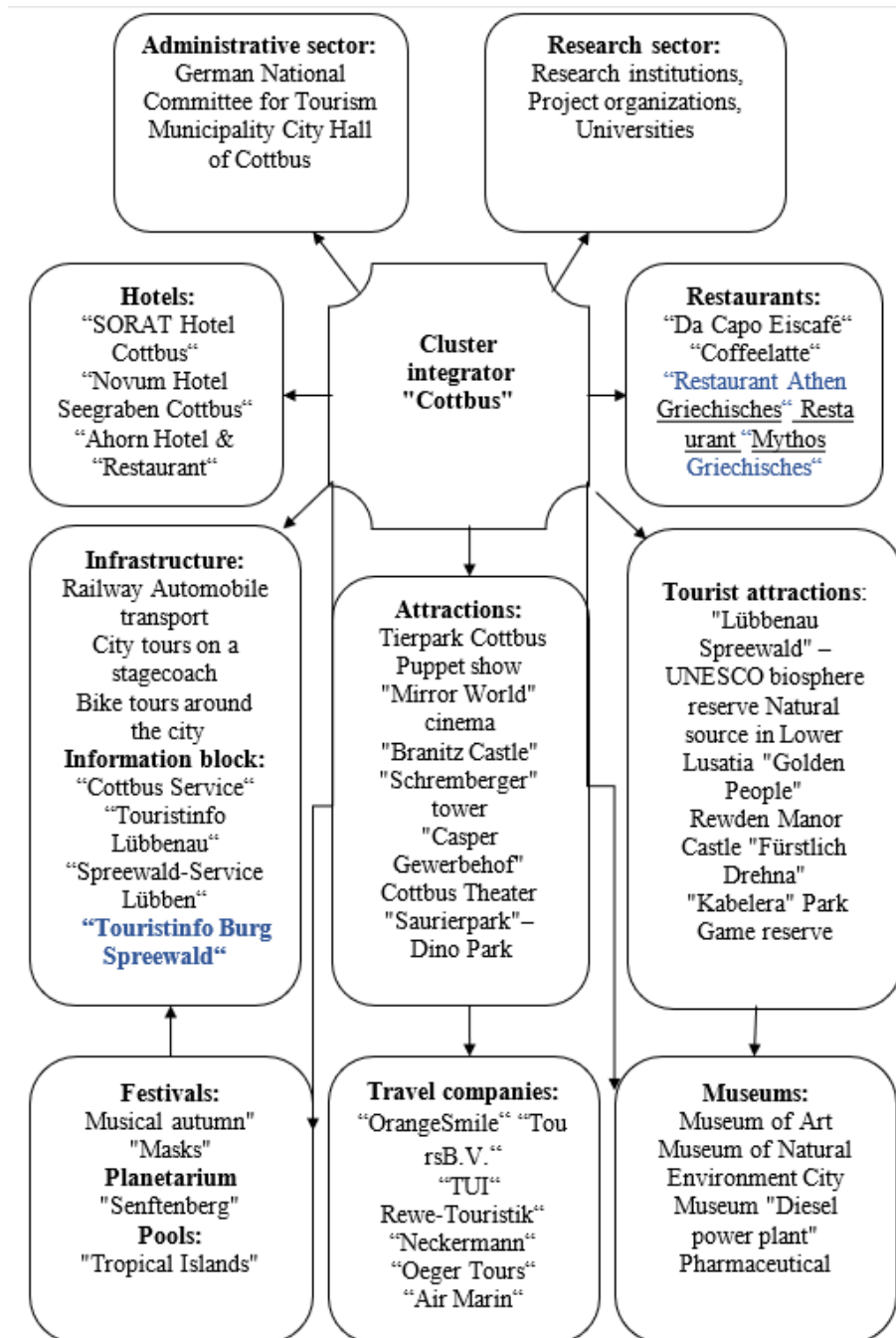


Figure 3. Project model of the "Cottbus" cluster.

*Source: created by the author based on [122].

It is from here that guests can enjoy easy access to all that this wonderful city has to offer. Due to its close proximity to such attractions as Cottbus Theater, Schremberger Street, Cottbus Exhibition, visitors will be grateful for its location.

For the comfort and convenience of guests, the hotel offers room service, hotel/airport transfer, conference rooms, family room, newspapers. Accommodation in the hotel has a high level of comfort. There is heating, the possibility of ordering a wake-up call, a desk, a mini-bar, and a balcony in every room. In addition, the hotel owners will provide you with full information on what you should see during your stay in the city. Regardless of the purpose of your visit, the "Altstadthotel Am Theater" is an excellent choice for your stay in Cottbus [122].

A characteristic feature of the city and region of Brandenburg is the diversity of various industries, and especially: energy technologies (including environmental protection), metalworking, mechanical engineering, mining, communication technology, media, information and communication industries, food industry, as well as services.

Cottbus is one of the few cities in Germany that still has space for business development, there is sufficient potential for both industrial and commercial space. After the opening of the "Technological and Industrial Park" (TIP), Cottbus became the owner of the largest continuous industrial zone in Brandenburg. The city of Cottbus, as a center for conducting business activities, has an excellent scientific and educational potential for conducting scientific research [123].

A cluster approach is widely used in tourism for the formation and development of competitive tourist destinations. In the regional development strategy, the cluster approach is a form of territorial and sectoral organization of production, which contributes to the implementation of innovative entrepreneurial projects of economic development, conditions the synergistic effect of interaction with scientific and project institutes with the interested participation of regional and municipal management bodies.

In addition, the cluster approach in the field of tourism activates entrepreneurship through the concentration of business activity, therefore it contributes

to the creation of jobs, incomes, improvement of the quality of tourist services, and the life of the population in the territory of its implementation. Successful activity is carried out thanks to the growth of competitiveness, the ability to integrate intellectual, natural and recreational, labor, and financial material resources in ensuring the quality of production and services provided. Joining into cluster networks strengthens the role of small and medium-sized enterprises, allows to use their innovative potential, improves opportunities to enter the world market [124].

The creation of the "Cottbus" cluster will ensure the production-technological and information interaction of state authorities, tourist agencies, public catering establishments, hotel and restaurant complexes, museum institutions, information and marketing centers, mass media, educational institutions and research institutions with the aim of creating joint tourist product.

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The creation of the "Cottbus" cluster will ensure the production-technological and information interaction of state authorities, tourist agencies, public catering establishments, hotel and restaurant complexes, museum institutions, information and marketing centers, mass media, educational institutions and research institutions with the aim of creating joint tourist product. Therefore, the tourism cluster unites the administrative and research sectors, hotels, restaurants, travel agencies, museums, festivals, exhibitions, fairs, zoos, planetariums, castles and other structures to increase the competitiveness of the region.

The experience of Germany shows that the state, which is interested in the development of the tourism industry, should finance the development of this industry both within the country and abroad, while the funding should be directed not only to advertising activities, but also to in-depth marketing research, increasing information transparency and additional education of workers in the tourism industry, which must meet global standards.

Five separate stages of activation of consciousness to perform the task are shown in (Figure 4).

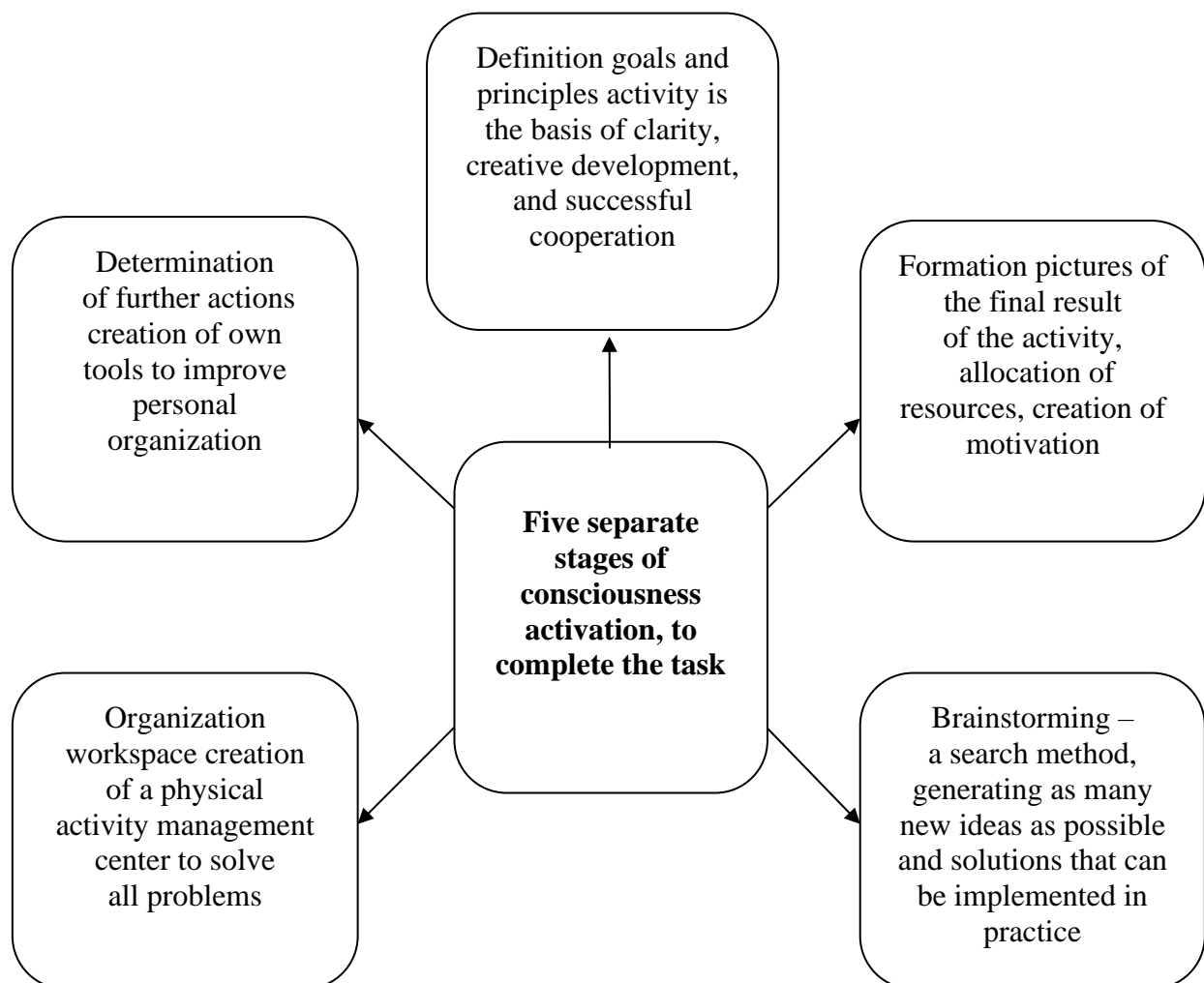


Figure 4. Five separate stages of consciousness activation to complete the task

**Source: created by the author based on [125, p.13].*

More attention began to be paid to the use of local research organizations and their integration in promoting the development of new areas of business and startups. It was also a time when cluster policy and the strengthening of endogenous capacities

became more acceptable within the European Union as a whole, not just in Brandenburg. The combination of the strategy of cluster competence, which is implemented by the land of Brandenburg and the RPZ, has led to a regional and spatial specification of the cluster approach. This made it possible to practically implement the cluster approach at the local level, as well as to focus the emphasis, taking into account the specific situation, on the existing local competitive potentials [123, p. 17].

In the situation that exists at the current stage, it is necessary to analyze various types of risks that have arisen and to create effective techniques and tools for the development and improvement of activities.

David Allen suggests that in order to increase the efficiency of the activity and the performance of the work, it should be divided into five separate stages: outline all the problems that need to be paid attention to; find out their essence and decide what steps to take; organize the results we will receive; consider what alternative options exist; create an action program [125, p.13].

In the study "7 Habits of Highly Effective People", Stephen Covey analyzes paradigms and principles, private and public victories, principles of balanced self-renewal. Let's consider the seven habits of highly effective people, namely: be proactive, start with a goal in mind, win-win thinking is most important, first understand, then seek understanding, create synergy, "sharpen the saw".

Therefore, it is necessary to define the main aspects of the concept of "proactivity". Its meaning is that we, as human beings, are responsible for our own lives. Our behavior is a consequence of our decisions, not environmental conditions. In our hands is the initiative and responsibility to achieve the result.

Extremely proactive people accept responsibility. They do not place the blame for their behavior on the circumstances, the environment, or its influence. Their behavior is the product of a conscious choice based on values, not a consequence of living conditions based on feelings. The ability to subordinate one's impulses to values is a key feature of a proactive personality. Proactive people are led along the path of life by carefully thought-out, selected and learned values. Businesses, social groups, organizations of all kinds (including families) can be proactive.

Proactive individuals have the ability to combine their creativity and ingenuity to create a proactive culture within the organization. The organization does not have to be at the mercy of the environment – it is able to take the initiative to realize the common values and goals of the individuals who belong to it.

Stephen Covey analyzes six paradigms of interaction known to us, but the thoughts in the "win/win" format deserve special attention. "Win/win" is a special attitude of the heart and mind, aimed at the constant search for mutual benefit in all human interactions. "Win/win" means that all agreements and solutions are mutually beneficial and satisfy both parties.

By making a "win/win" decision, both parties are satisfied and do not violate the adopted plan of action. Win/win thinking is a habit of interpersonal leadership. It involves the use in our relations with others of all unique human properties: self-awareness, imagination, conscience and independent will. It includes mutual learning, mutual influence and mutual benefit.

The essence of such negotiations is to separate the person from the problem, focus on interests rather than positions, develop mutually beneficial options and insist on objective criteria – external benchmarks or principles agreed upon by both parties [126, p. 39-40].

The distribution of adaptation strategies into species corresponds, first of all, to the selected classification features of adaptability (passive/active).

Yes, it can be divided into types: passive survival strategies, which use available opportunities and are a typical course of action for an enterprise in a stable and predictable environment; strategies for the active survival of the enterprise, aimed at active search and effective use of opportunities. Strategies of active influence on the external environment correspond to and include actions on active search and creation of new opportunities for innovative development of the enterprise. Such strategies are implemented at the expense of innovations, strategic competences and knowledge.

Strategies of active influence on the external environment (horizontal integration, vertical integration, concentric and conglomerate diversification). The strategy of horizontal integration is carried out when there is an acquisition or merger

with an enterprise or a main competitor operating in another market segment. The strategy of vertical integration indicates that the company is expanding in the areas of activity related to the promotion of goods to the market [127, p. 251-256].

The study of the foreign experience of the combination of the strategy of cluster competence, which is implemented by the Brandenburg state in Germany and RZ (regional poles of growth), led to the regional and spatial concretization of the cluster approach. This made it possible to practically implement the cluster approach at the local level, as well as to focus the emphasis, taking into account the specific situation, on the existing local competitive potentials.

The theoretical justification of the growth poles approach is that economic development does not occur in all places at the same time, but instead in territories where competitive industries and services have already appeared, and where they provide a "spillover effect" due to the strengthening of direct and reverse business relations connections with adjacent territories. In addition to strengthening agglomeration effects from the concentration of economic and labor potential in a specific region or location, the model of regional growth poles (RPZ) is also aimed at creating synergy with adjacent rural areas and areas of so-called secondary growth. Poles of growth in this regard are considered as a starting point from which a new integration formation originates [123, p. 17].

In parallel with the above-mentioned approaches, a new system of multi-level governance was created in the federal state of Brandenburg, and the creation of planning documents for the development of the region was initiated. The shift towards a cluster-oriented approach should be interpreted as a clear transition from the policy of combining rather general top-down planning, according to the principle of "all sisters by earring" and the approach aimed at large projects in the field of investment development, to top-down approaches ("bottom-up") of endogenous development – geographical and cluster orientation. The combination of the strategy of cluster competence, which is implemented by the land of Brandenburg and the RPZ, led to the regional and spatial specification of the cluster approach [123, p. 17].

More than 7,000 enterprises work in Cottbus and its suburbs. In addition to medium-sized innovative enterprises, there are also large concerns and holdings in the city. Combining science, research and business to create highly qualified jobs in Cottbus and the region is an important goal for all parties involved [117].

The share of industries in the service sector of the city of Cottbus is shown in (Table 1).

Table 1

The share of individual industries in the service sector of the city
of Cottbus (Germany)

№	Industry	Determined % of the industry in the total amount	Industry rating
1.	Trade, transport, hotel and restaurant business, tourism	25 %	1
2.	Public administration, defense, social insurance	14 %	2
3.	Health care, disease prevention	12 %	3
4.	Real estate, scientific and technical services	7 %	4
5.	Education, child development studies	6 %	5

**Source: created by the author based on [117].*

It should be noted that the services of trade, transport, hotel and restaurant business, and tourism in the total volume of industries in the service sector make up 25%, which significantly exceeds the share of other industries [117].

Before organizational change can succeed, it must first take place on an intangible spiritual level within the individual people of that organization. To make your idea popular, use a unique approach: do something out of the ordinary. To make your ideas bright, interesting and effective, use all the tools available to you, including your imagination. Share your stories and people will want to share theirs, and together you will create a new and much bigger story. Jim Collins and Morten Hansen have analyzed and formulated the main principles of conducting business in adverse conditions for a long time. Leaders of decathlete companies are clearly aware of the variability of situations at any stage of activity, so they consider it necessary to be ready for possible changes (Table 2).

Table 2

David Brishers' COMPOUT Recipe for Tourist Travel

№	Necessary activities	Implementation of necessary measures
1.	Create a folder for yourself for a certain stage of the trip	Create backup plans in case of unforeseen circumstances, as well as backup plans for backup plans.
2.	When changing the place of deployment, check the "Checklist" (all stages of work with technical equipment)	Conditionally go through the entire route again and make sure that nothing is left behind.
3.	Learn how to load film into a film camera with hands without gloves	Adjust your camera to ensure the quality of every frame you capture.
4.	Learn to disassemble and assemble the camera in advance	Get ready to instantly set up your camera on a tripod, load film, aim the lens at your chosen target, and shoot instantly with ease.
5.	Test the equipment in real conditions	Test your gear in real-world conditions on training hikes before heading out on a real expedition.
6.	Constantly optimize two components - weight and functionality	Carry minimal weight without compromising the functional component and your own safety.
7.	Carefully choose the team for the upcoming trip	When you choose companions for your upcoming trip, choose people with whom you will feel safe in a difficult situation
8.	Take care of backup items	Always take with you spare work clothes and food, additional supplies of oxygen, "alpine cats", gloves.
9.	Appreciate all team members without exception	Never force weak expedition members to climb a mountain peak with others. Remember the slogan: "The strength of a team is determined by its weakest member."
10.	Divide your team according to ability	Split your team into two separate groups: climbers and cinematographers, as this division works well high up in the mountains.

Source: created by the author based on [128].

Leaders of decathlon companies demonstrate three main qualities that, combined, distinguish them from less successful managers - fanatical discipline, empirical creativity, and productive paranoia. Fanatical discipline leads enterprises that are part of the group of decathlon companies to the chosen goal. Empirical creativity is based on previous experience and gives new strength. Productive (productive) paranoia keeps them alive. After all, the ambition of the fifth level inspires and stimulates new shifts.

Decathletes are extremely persistent, never compromise their standards and are so disciplined that they never overestimate their strengths. You need an ambitious goal that you want to achieve and the self-control that will help you slow down when necessary on the way to that goal. Leaders of decathlon companies are always very consistent in their actions, adhere to their values, goals, performance standards and methods of operation. Let's consider the ten commandments-items of Putnam's list – a recipe for making a drink, the name of which is KoMPoT (in the original SMaC – Specific, Methodical, Consistent).

The abbreviation KoMPoT stands for "concreteness, methodicality and consistency". A solid KoMPoT recipe serves as the operational code for turning strategic concepts into realistic and viable ones, a set of methods and techniques longer than ordinary tactical moves. The transparency and clarity of the KoMPoT recipe helps entrepreneurs navigate the business space and maintain the proper operational level of work, especially in extreme conditions [128, p. 38, 300].

The modern concept of project-oriented management consists in the idea of creating organizations in which not only development, changes, but also the implementation of the main business activity can be represented by various projects, which together ensure the achievement of strategic goals of organizations. Such organizations become more competitive and able to optimally use their internal resources.

Let's analyze the main elements that reflect changes in certain divisions of the enterprise (Table 3).

Table 3

The main elements that reflect changes in certain divisions
of the enterprise

№	Type of changes	The main elements that reflect changes in certain divisions of the enterprise
1.	Changes in the main structure	Reflect the nature and level of business activity, legal structure, ownership, sources of financing, international operations and their impact, diversification, mergers, joint ventures
2.	Changes in tasks and activities	The range of products and the set of services provided, new markets, customers and suppliers are reflected

Continuation of table 3

3.	Changes in the technology used	Equipment, tools, materials and energy, technological processes, office equipment
4.	Changes in management structures and processes	Reflect the internal organization, work processes, informal relations, motives and processes, leadership style
5.	Changes in organizational culture	Reflect values, traditions, informal relations, motives and processes, leadership style
6.	Changes in people	Reflect management and service personnel, their competence, motivation, behavior and efficiency in work
7.	Changes in the efficiency of the organization	Reflect: financial, economic, social and other indicators of assessment of the organization's relationship with the environment, the performance of its tasks and the use of new opportunities
8.	Changes in the prestige of the organization	Reflect the prestige of the organization in business circles and society

**Source: created by the author based on data [129, p. 71-75].*

Changes in modern conditions are associated with crisis situations: non-fulfillment of planned and normative indicators; decrease in the company's profit; reduction of the potential capabilities of the enterprise; decrease in the ability to be competitive; decrease in liquidity. In such conditions, the main task of the enterprise is adaptation to changes in the external environment, which causes the above-mentioned types of changes. There should be such a formation of organizational support for the behavior of the enterprise, which would produce the appropriate type of reaction to the conditions caused by the strategic and current external environment.

The management of the enterprise needs to choose such an organizational management structure, the parameters of which will ensure the development of a certain type of reaction that will meet the conditions for the implementation of the chosen strategy [129, p. 71-75].

From our own experience, we note that Germany is a country where you always want to discover new pages of its history, the character and traditions of its inhabitants, the incredible contrast between rural nature and the active life of big cities. German lands offer fortresses and medieval castles, majestic monasteries and wonderful churches, exquisite palaces and high towers, incredible gardens and parks.

The cities here have their own unique face, a rich excursion program awaits you everywhere, tasting traditional German cuisine, visiting unique museums and pleasant walks through narrow cobbled streets.

Therefore, Germany is the fourth largest country in the European Union after France, Spain and Sweden. Experts see sustainable growth and the development of innovation in the revival of cities and predict a significant increase in the number of residents in large cities by 2030, which will have important consequences for the housing market, intra-urban mobility and modern infrastructure. Cities have a great attraction for tourists as well – Berlin itself has a special magnetism, where the number of visitors increases every year [121].

At the current stage, drastic changes have taken place in the world economy. Transformation of the world's leading economies, loss of competitiveness of the most profitable industries. Negative trends, a drop in the production of goods and the inability to provide timely and high-quality services related to the COVID-19 pandemic. Central and local authorities form tactical and strategic decisions that contribute to minimizing the risks that have arisen.

Consider the activities of a 4-star hotel located in the historic central quarter of the city of Cottbus.

The comfortable and spacious rooms of the "Lindner Congress Hotel Cottbus" are equipped with all modern safety equipment (Figure 5).

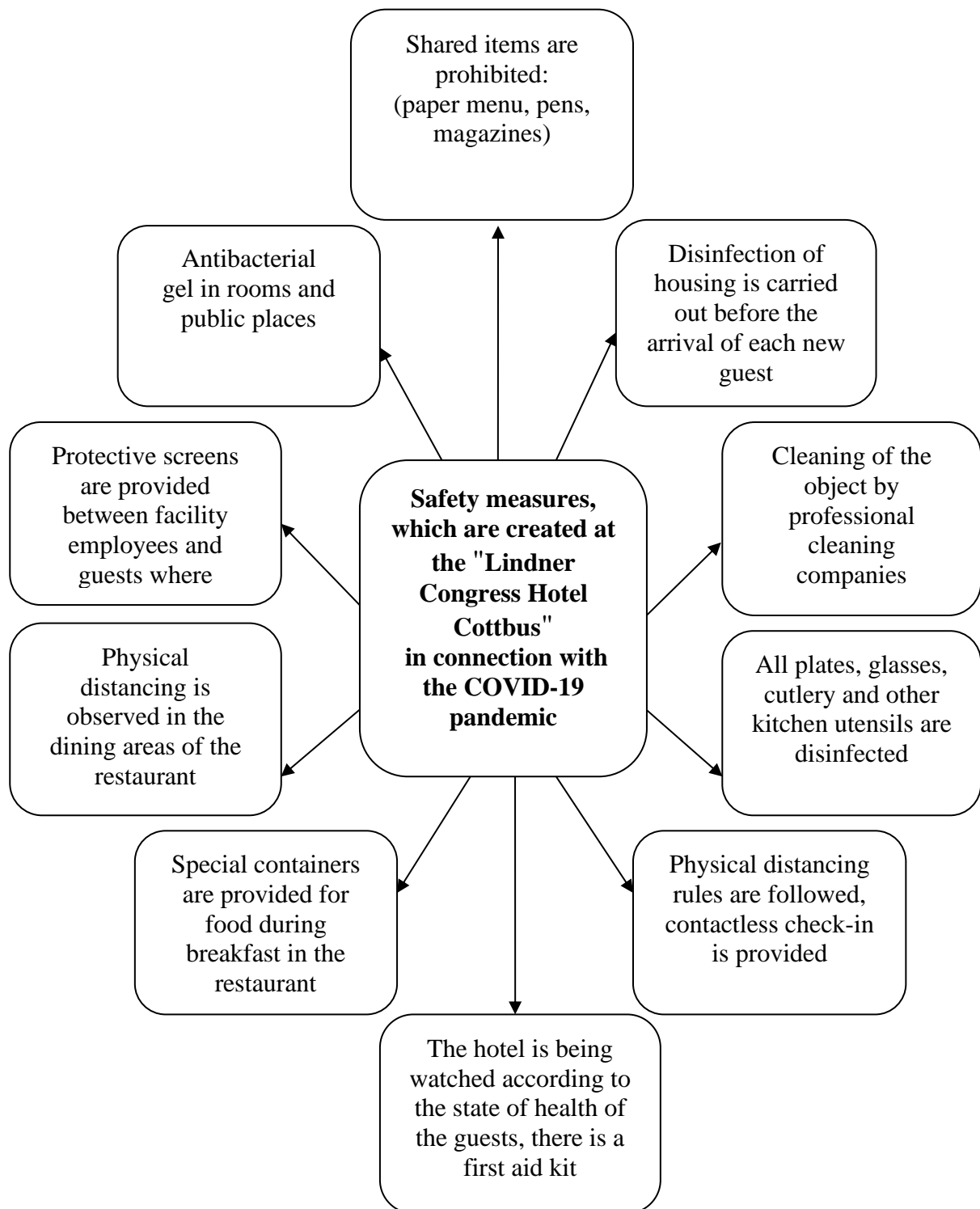


Figure 5. Security measures in place at the Lindner Congress Hotel Cottbus in connection with the COVID-19 pandemic.

**Source: created by the author based on [122].*

The COVID-19 pandemic has affected all areas of our lives, especially leisure and recreation. Due to quarantine restrictions, many countries consider it necessary to

limit the flow of tourists. However, tourism workers note, there are positive points, because due to low demand, prices for some well-known destinations have been significantly transformed. From our own experience, we note that Germany is a country where you always want to discover new pages of its history, the character and traditions of its inhabitants, the incredible contrast between rural nature and the active life of big cities.

German lands offer fortresses and medieval castles, majestic monasteries and wonderful churches, exquisite palaces and high towers, incredible gardens and parks. The cities here have their own unique face, a rich excursion program awaits you everywhere, tasting traditional German cuisine, visiting unique museums and pleasant walks through narrow cobbled streets.

But it should be noted that the years 2019-2022 radically changed the duration, directions of tourist trips and preferences of tourists. World tourism experienced the greatest problems due to the closure of borders between countries, in connection with the recommendations of the governments of countries, international organizations, regarding the avoidance of mass events, limiting the intensity of movement between countries and the related decrease in demand for air travel and the impossibility of carrying out tourist activities due to the complex fight against the COVID-19 pandemic and the introduction of quarantine.

Tourism increasingly plays the role of an indicator of political relations between regions, a stabilizer of partnership relations at the national level. Therefore, taking into account the great importance of tourism, the state has identified it as one of the priority directions of the development of the national economy and culture, the sphere of realization of the rights and needs of people and society, and one of the defining components of the socio-economic policy of the state and regions.

Today, in Ukraine there are a number of problems that do not contribute to the development of the tourism industry, lead to a significant destruction of economic and social relations in the tourism sector. This is, first of all, the absence of a management system in the tourism sphere due to the undefined special central body of the executive

power on tourism issues, as well as the absence of a clear state policy aimed at the development of green tourism.

The imperfection of the system of control over the activities of the entities of the tourism sphere, the slow rate of growth of investments in the development of the material base of the tourist infrastructure, non-compliance with international standards of the quality of service provision indicate the insufficiency of state support and the absence of mechanisms for an integrated approach to the management of the national tourist product on the domestic and international market tourist services.

The radical development of information technology has a significant impact on the tourism industry, as it increases the efficiency of operations and provides opportunities for business expansion in geographical, marketing and operational aspects. Information technology is vital for information processing as well as for monitoring environmental issues. In recent years, the development of information and reservation systems tied to a specific region or destination (tourist information systems) has become widespread.

In the world, the process of mastering new concepts of hotel business and modernization of old ones is constantly taking place. Globalization and concentration of the hotel business is manifested in the creation of large corporations and hotel chains. With the help of internal hotel management systems, the main components of which include booking modules, concierge service, guest payments, room management, customer security, electronic lock system, and most importantly, the engineering service, which is created at the hotel design stage, automation and dispatching of heat - and energy supply, storage, water supply, interactive television.

The cluster approach in the field of tourism activates entrepreneurship through the concentration of business activity, contributes to the creation of jobs, incomes, improvement of the quality of tourist services, and the life of the population in the territory of its implementation. The mentioned moments are achieved thanks to the growth of competitiveness, the possibility of integration of intellectual, natural and recreational, labor, and financial material resources in ensuring the quality of production and services provided.

Our houses, villages and cities are located on the territory of the country. In addition, the territory has traditionally been the main source of food for the people and even today the products and natural resources of the country are of great importance and constitute a crucial component of the nation's wealth. And transformed into a landscape, the territory acquires a completely different meaning for those who belong to it, those who are able to distinguish specific places where memorable battles and events took place, and to identify specific monuments and shrines that constitute the distinct character of the nation.

People eventually came to believe that the landscape embodied the traditions, histories, and culture of the nation they shared with their predecessors. The landscape is also a source of beauty, elevation and exploitation. It has turned into a symbol of the nation, embodying traditions, ideas, hopes and feelings, some of which awaken a sense of belonging to the nation. According to the Better Life Index of the Organization for Economic Cooperation and Development (OECD), Danes have more free time than residents of the rest of the member countries (OECD), and according to the European Social Survey, 33 percent of Danes say they feel mostly calm and peaceful, then as in Germany, only 23 percent of the population, 15 percent in France, and 14 percent in Great Britain can say so.

Rapid population growth in recent decades has led to an increase in the demand for food, which leads to an increase in the negative impact on the environment. Taking into account the mentioned factors, the construction and practical implementation of the state policy of environmentalization of agricultural production appropriate to the existing conditions is one of the priority tasks of today. Thus, in order to protect, preserve and improve the quality of water, air, soil and biodiversity, significant efforts of the countries of the European Union (hereinafter the EU) are aimed at integrating environmental aspects into the Common Agricultural Policy (CAP).

It is implemented (SAP) through the definition of a number of strategic guidelines, on which the National Strategic Plans of the member states of the European Union are based in the future. Therefore, with the help of a cluster form of enterprise organization, it is possible to improve the management mechanism, specialization,

cooperation, rationally use territorial division and resources. Also, the cluster mechanism improves the standard of living of the population, increases the competitiveness of businesses located in a certain territory, supports an effective business climate and ensures the transition to the comprehensive use of the potential of the entire state.

The definition of "strategy as a result" is related to the identification of the goal and strategy and is conditioned by the need to establish specific guidelines for the implementation of strategic activities. In this context, the following approaches are distinguished. Most often, the strategy is equated with the position on the markets, with measures that make it possible to strengthen the competitive position and increase the share in "their markets", to fight for the conquest of new markets, etc.

According to a broader definition, strategy is the position in the environment that the company occupies, specified in certain indicators, it is a kind of view of the internal and external environment and an attempt to find ways of effective adaptation to external factors not controlled by the company by making necessary changes in elements and their combinations of the internal environment.

The strategy is considered as a model to which the organization (enterprise) strives to approach. Most often, they take a well-known company as a sample, analyze its positive aspects of its activity and try to take advantage of its experience. On the other hand, strategy as a management goal can be defined as an ideal model of an enterprise in which the "vision" of its managers and owners is realized, and which is built using SWOT analysis or other approaches used to analyze the interaction of the external and internal environments of the organization. In modern literature, two main concepts of strategy can also be distinguished - philosophical and organizational and managerial. The philosophical concept emphasizes the overall importance of strategy for the enterprise.

Within this concept, strategy can be seen as a philosophy that should guide the organization that has it. From this point of view, strategy is: a position, a way of life, which does not allow stopping at what has been achieved, but focuses on constant development; an integral part of management that allows you to understand the future;

thinking process, "intellectual exercises" that require special training, skills and procedures; the reproducible value (value system) of the organization, which makes it possible to achieve the best results by activating the activities of all personnel.

Strategy can be defined as a pattern of logical, consistent behavior, which is developed at the enterprise consciously or spontaneously. Strategy is the most important element of self-determination of an enterprise or organization. In this context, it is closely related to the characteristics and features of organizational culture, has, as a rule, all its advantages and disadvantages, makes it possible to more thoroughly formulate social strategies in general and elements of social directions in other types of strategies. The organizational and management concept of strategy is related to competitive actions, measures and methods of implementing strategic activities at the enterprise [127].

The study of the processes of implementation of strategic changes consists in determining the nature of the changes taking place at enterprises through the analysis of factors and trends in their management. Research technology includes awareness of the problem, the sequence of stages and procedures of collection, processing, organization of data, definition of criteria, indicators and methods of analysis, presentation of results.

The toolkit of strategic change management is a means of managing changes of the enterprise, which ensure, respectively, the intentions and goals of the enterprise regarding the development of strategic decisions, their implementation through changes and their control. Change strategies correspond to directions of strategic development.

The general strategies of the organization (typical, basic, reference) are the main management "game plan" aimed at establishing the functioning and development of it in the long term, by implementing the product, commodity, resource and functional strategies necessary to achieve strategic goals [127].

The general strategies of the organization are depicted on (Figure 6).

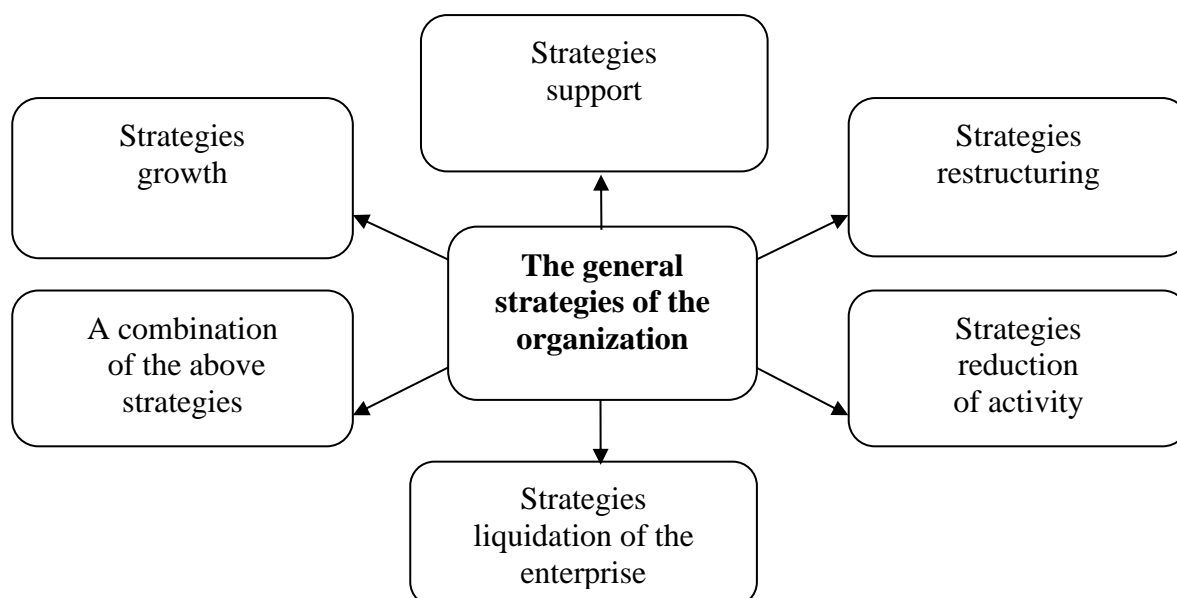


Figure 6. The general strategies of the organization

**Source: created by the author based on [129].*

An enterprise created to achieve certain success, from the very beginning of its activity, chooses development and growth as target orientations. However, real life adjusts these basic guidelines, as conditions are often created in which maintaining high growth rates is not the best solution.

Objective and subjective reasons encourage the enterprise to increase or decrease the growth rate of sales, other quantitative and qualitative indicators, and therefore, the amount of profits and the possibility of reinvesting them in production for further development. In such cases, different overall strategies are involved, not just a growth strategy.

In the research of Shershnyova Z.E. it is noted that the general strategies of the organization, in turn, provide for expansion, diversification, and globalization of activities. The planning of a firm's strategy is not the result of only difficult situations in the market and in management. Planning the market strategy also depends on the level of internationalization of the enterprise. After choosing a strategy comes the stage of transforming it into action and positive results.

The requirements for managers at the stages of strategy development and implementation are significantly different. If the successful creation of a strategy

depends on a business vision, a competent analysis of the external and internal environment of the organization, entrepreneurial art, then the implementation of the strategy requires solving various management tasks and is determined by leadership, motivation, and the availability of relevant skills.

According to the two directions of implementation of strategic changes through integration, two types of strategy are defined: horizontal and vertical. The strategy of horizontal integration is carried out when there is an acquisition or merger with an enterprise or a main competitor operating in another market segment. The strategy of vertical integration indicates that the company is expanding in the areas of activity related to the promotion of the product to the market. Strategies for changes in external growth organization are depicted on (Figure 7).

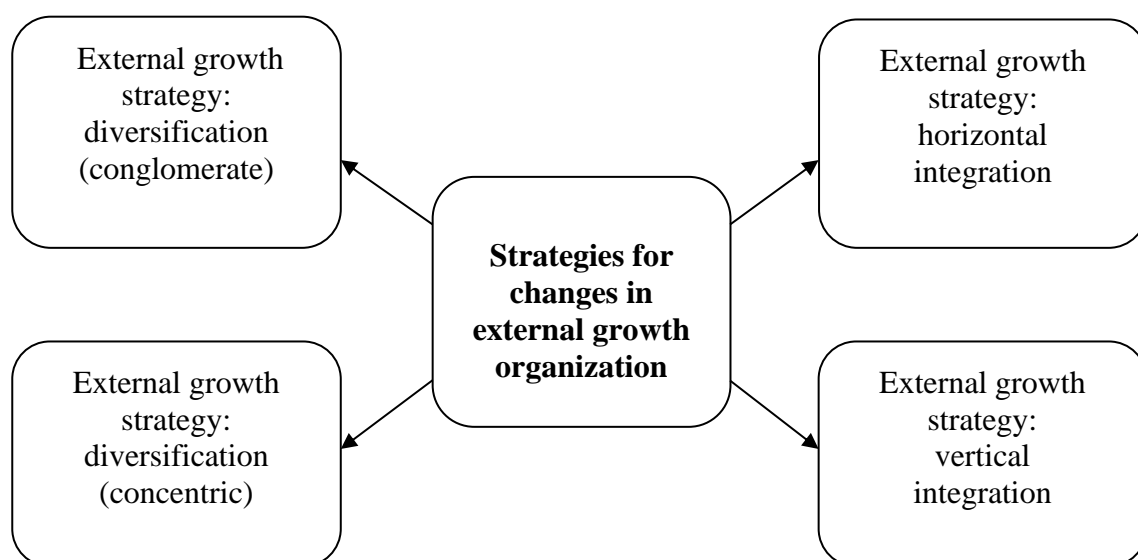


Figure 7. Strategies for changes in external growth organization

**Source: created by the author based on [127].*

In reality, all of the above modern strategies for increasing the competitiveness of enterprises are related to financial, innovative and other areas of ensuring the competitiveness of enterprises, since finance, innovation, management and much more are integral factors in the creation and implementation of any competitive strategies [127].

But these directions of ensuring the competitiveness of enterprises are implemented in independent strategies, for example, stimulating the sale of products, investing, predicting and adapting, maintaining the achieved level of activity, etc. As a result of the complexity and mobility of the business environment, the number of changes that must be carried out by enterprises increases.

The requirements for the quality of changes are also increasing - they should be carried out faster, more efficiently, with fewer failures, and have a wider scope and depth. External growth strategies (horizontal integration, vertical integration, concentric and conglomerate diversification) are implemented through organizational changes, which are reproduced in various forms of mergers, acquisitions and agreements. Therefore, the issue of planning and implementation of changes acquires strategic importance for any modern enterprise.

This issue is particularly relevant for the Ukrainian reality, when in dynamic business conditions, enterprises are forced to choose new ways to ensure stability and the possibility of expanding economic activity. The biggest difficulties that have to be solved in order to achieve these goals relate to industrial enterprises, which are characterized, as a rule, by greater areas of specialization, deeper and wider relationships with the environment and increased dependence on it.

Despite the fact that these problems are external and business entities are unable to get rid of them, there is a very real possibility of reducing their impact. Diversification of economic activity is one of the tools that allows to improve the activity of the enterprise. The transition to the production of more economical, but no less demanded goods, the introduction of new types of activities, the implementation of which has certain preferential conditions, access to new markets characterized by a higher level of income per capita all this is a potential source of ensuring stable and efficient functioning.

Taking into account the peculiarities of industrial enterprises (availability of certain techniques, technologies, access to resources, established personnel), it becomes obvious that the closest and least risky for them at the first stage of

development is the diversification of the entire production activity of the enterprise [127, p. 445-451].

To increase the competitiveness of enterprises in the tourism sector, it is necessary to study the essence of business processes, the practical experience of the economic activity of integrated structures that create favorable conditions for the production and sale of products, the provision of services and the economic development of the region and the country as a whole.

Consumers of tourist services analyze a certain segment of the market and choose the right continent, region, country, city for rest, recovery, scientific research, which provide an emotional component to increase individual, group or corporate productivity in the future. The toolkit of strategic change management is a means of managing changes of the enterprise, which ensure, respectively, the intentions and goals of the enterprise regarding the development of strategic decisions, their implementation through changes and their control. Change strategies correspond to directions of strategic development.

Therefore, the issue of planning and implementation of changes acquires strategic importance for any modern enterprise. This problem is especially relevant for the Ukrainian reality, when in the dynamic conditions of business, enterprises are forced to choose new ways to ensure stability and the possibility of expanding economic activity. The biggest difficulties that have to be solved in order to achieve these goals concern precisely industrial enterprises, which are characterized, as a rule, by a greater degree of specialization, deeper and wider relationships with the environment and increased dependence on it.

Diversification of economic activity is one of the tools that allows to improve the activity of the enterprise. The transition to the production of more economical, but no less demanded goods, the introduction of new types of activities, the implementation of which has certain preferential conditions, access to new markets characterized by a higher level of income per capita all this is a potential source of ensuring stable and efficient functioning.

REFERENCES

1. Key tasks of the post-war reconstruction of Ukraine <https://iie.org.ua/publikatsiyi-u-zmi/kljuchovi-zavdannja-povoiennoho-vidnovlennja-ukraini/>
2. Kupynets L.E., Kharichkov S.K. Problems of production of environmentally friendly products in the agricultural sector: national and international aspects [monograph] Odesa, 2007. P.126-134
3. Speech of WTO Director General Renato Ruggero at the opening of the WTO symposium in Geneva on March 17, 1998. International politics. 1998. № 5
4. Ministry of Environmental Protection and Natural Resources. URL: <http://minagro.gov.ua/page/?5795>
5. Kupynets L.E., Kharychkov S.K. Environmental safety tools in international trade. Economy of Ukraine. 2006. No. 4. P. 66-73.
6. Kupinets L.E. The potential of greening of the agro-food sector of the economy of Ukraine. 2014. Economic innovations. №. 57, P. 165-178
7. Communication COM. 571 final "Roadmap to a Resource Efficient Europe". Brussels URL: http://ec.europa.eu/resource_efficiency.
8. Kovalchuk S.Ya. Economic component of ecological growth. 2019. Agroworld № 7. P.17-25
9. About the Basic principles (strategy) of the state environmental policy of Ukraine for the period up to 2030. Law of Ukraine №. 2697-VIII, dated February 28, 2019 URL: <https://zakon.rada.gov.ua/laws/show/2697-19#Textcnhfntusz>
10. Kupynets L.E., Kharychkov S.K. Environmental factor in regulatory regulation of international trade. Economy of Ukraine, 2005. №. 2. P. 71-78.
11. The European Green Course: Opportunities and Threats for Ukraine". Analytical document. Resource and Analytical Center "Society and Environment" (2020)" 74 p.
12. Music P.M., Dushka V.I., Solomonko D.O. Ukraine's food potential and ways to increase it on an innovative basis // Collection. of science Ave. VDAU. Vinnytsia, 2008. Issue 36. P. 162-169.
13. Onishchenko O., Yurchyshyn V. Regional aspects of sustainable development of agro-industrial complexes. Ukraine economy. 2005. №. 9. P. 92-93.
14. Gladiy M.V. Use of the production and resource potential of the agrarian sector of the economy of Ukraine (issues of theory, methodology and practice) [monograph]. 1998. Lviv, pp. 156-175
15. Gazuda L.M. Resource potential of agrarian enterprises in the conditions of transformation of property relations. Uzhhorod, 2004. 245 p

16. Gerasimchuk, Z.V., Gerasimchuk, N.S. Economic security of the region: diagnosis and mechanism of provision [monograph]. 2006. Lutsk: "Nadstyrya", pp. 134-145
17. "Green growth and environmental management in Eastern Europe, the Caucasus and Central Asia" URL: <https://www.oecd.org/env/outreach/48876138.pdf>
18. Bezrodna, S.M. (2017). Quality management. Chernivtsi [in Ukrainian].
19. Vakulenko, A. B. (2013). Quality management. Kyiv [in Ukrainian].
20. Veksler, E. M., Vasylevych, L.F., Ryfa, V.M. (2008). Quality management. Kyiv: «VD «Profesional» [in Ukrainian].
21. Kaletnik, H.M., Kozlovskiy, S.V., Kirieieva, E.A., Pidvalna, O.H. (2015). Management of regional food security in conditions of economic instability. Vinnytsia [in Ukrainian].
22. Feihenbaum, A. (1986). Product quality control. [in Russian].
23. Biletskyi, E.V., Yanushkevych, D.A., Shaikhlislamov, Z.R. (2015). Product and service quality management. Kharkiv [in Ukrainian].
24. Honcharuk, I.V. (2020). Orhanizatsiino-ekonomichne zabezpechennia enerhetychnoi nezalezhnosti ahropromyslovoho kompleksu [Organizational and economic support of energy independence of the agro-industrial complex] Ekonomika, finansy, menedzhment: aktualni pytannia nauky i praktyky – Economics, finance, management: current issues of science and practice, 2, 23-38 [in Ukrainian].
25. Shtefan, O.I. Dosvid vprovadzhennia system upravlinnia yakistiu v Polshchi [Experience in implementing quality management systems in Poland]. Retrieved from http://www.kbuapa.kharkov.ua/e-book/n_1_2008/doc/3/07.pdf [in Ukrainian].
26. Khaietska, O. (2021). Economic security of Ukraine in modern conditions. Economic and legal principles of economic growth in the post-crisis period: collective monograph. Austria [in English].
27. Quality management systems. Basic provisions and glossary of terms. (2008). Kyiv [in Ukrainian].
28. Bielko, I.A. (2016). Upravlinnia yakistiu produktsii v systemi stratehichnoho upravlinnia pidpriemstvom [Product quality management in the system of strategic enterprise management]. Visnyk Odeskoho natsionalnoho universytetu. Serii: Ekonomika – Bulletin of Odessa National University. Series: Economics, 2, 69-73 [in Ukrainian].
29. Sarancha, H.A. (2013). Metrolohiiia, standartyzatsiia, vidpovidnist, akredytatsiia ta upravlinnia yakistiu [Metrology, standardization, conformity, accreditation and quality management]. Kyiv: TsNL [in Ukrainian].
30. Quality management systems. Requirements. (2016). DSTU ISO 9000-2016. Kyiv: Derzhstandart Ukraine [in Ukrainian].

31. Smernytskyi, D.V. (2016). Zabezpechennia upravlinnia yakistiu vidpovidno do standartiv serii ISO pry rozrobsi ta vyhotovlenni naukovo-tekhnicnoi produktsii: pravove rehuliuвання [Ensuring quality management in accordance with the standards of the ISO series in the development and manufacture of scientific and technical products: legal regulation]. Kryminalistychnyi visnyk – Forensic Bulletin, 1, 22-30.
32. Quality management systems. Requirements. (2007). DSTU ISO 9000-2007. Kyiv: Derzhstandart Ukraine [in Ukrainian].
33. Boichyk, I.M. (2016). Ekonomika pidpriemstva [Business Economics]. Kyiv [in Ukraine].
34. Sait URS Sertyfikatsii [Site of URS Certification]. <http://www.urs-ukraine.com.ua/o-nas-urs-certyfikacija>. Retrieved from <http://www.urs-ukraine.com.ua/o-nas-urs-certyfikacija> [in Ukraine].
35. Global G.A.P. The Worldwide Standard for Good Agricultural Practices. Retrieved from http://www.globalgap.org/uk_en [in Ukraine].
36. Sertyfikatsiia yak perepustka na yevrorynok [Certification as a pass to the European market] <https://agrotimes.ua/article/sertifikaciya-yak-perepustka-na-evrorinok> Retrieved from <https://agrotimes.ua/article/sertifikaciya-yak-perepustka-na-evrorinok>.
37. Shebanina, O.V., Fedosieieva, H.S. (2018). Sertyfikatsiia ahrovyrobnykiv yak chynnyk formuvannia yikh konkurentnykh perevah na svitovomu rynku [Certification of agricultural producers as a factor in shaping their competitive advantages in the world market]. Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu. Ekonomichni nauky – Bulletin of the Chernivtsi Trade and Economic Institute. Economic sciences, 3, 133-139 [in Ukraine].
38. Simchenko, N.O., Mokhonko, H.A. (2012). Vprovadzhennia system upravlinnia yakistiu na pidpriemstvakh Ukrainy: problemy ta perspektyvy [Implementation of quality management systems at Ukrainian enterprises: problems and prospects]. Ekonomika. Upravlinnia. Innovatsii. Serii: Ekonomichni nauky – Economy. Management. Innovation. Series: Economic Sciences, 1. Retrieved from http://nbuv.gov.ua/UJRN/eui_2012_1_55 [in Ukraine].
39. Dykan, O.V. (2015). Stratehichni oriientyry shchodo udoskonalennia systemy upravlinnia yakistiu na vitchyznianskykh promyslovykh pidpriemstvakh [Strategic guidelines for improving the quality management system at domestic industrial enterprises]. Visnyk ekonomiky transportu i promyslovosti – Bulletin of Transport Economics and Industry, 52. 163-171 [in Ukraine].
40. Khaietska, O.P. (2019). Napriamky udoskonalennia mekhanizmu upravlinnia yakistiu produktsii [Directions for improving the product quality management mechanism]. Ekonomika, oblik, finansy ta pravo v umovakh hlobalizatsii: tendentsii ta perspektyvy – Economics, accounting, finance and law in the context of globalization: trends and prospects: Proceedings of the International Scientific and Practical Conference (Vols. 2), (pp. 25-27). Poltava [in Ukrainian].

41. Pozhar, Ye.P. (2020). Analiz finansovykh ryzykiv ta metody yikh neutralizatsii na pidpryiemstvi [Analysis of financial risks and methods of their neutralization at the enterprise]. *Infrastruktura rynku – Market infrastructure*, 43, 387-391. [in Ukrainian].
42. Hrechko, A.V., & Herbeda, M.V. (2012). Vplyv finansovykh ryzykiv na rezultaty diialnosti pidpryiemstva [The impact of financial risks on the results of the enterprise]. *Efektivna ekonomika – Efficient economy*, 3. Retrieved from <http://www.economy.nayka.com.ua/?op=1&z=1006> [in Ukrainian].
43. Kulish, H.P., & Rodnichenko, I.V. (2018). Vplyv finansovykh ryzykiv na rezultaty diialnosti pidpryiemstva [The impact of financial risks on the results of the enterprise]. *Prychornomorski ekonomichni studii – Black Sea Economic Studies*, 25, 98-103. [in Ukrainian].
44. Orlyk, O.V. (2016). Finansovi ryzyky v systemi zabezpechennia finansovo-ekonomichnoi bezpeky pidpryiemstva [Financial risks in the system of financial and economic security of the enterprise]. *Innovatsiina ekonomika – Innovative economy*, 5-6 [63], 218-223. [in Ukrainian].
45. Dobryn, S.V. (2015). Upravlinnia finansovymy ryzykamy pidpryiemstva [Enterprise financial risk management]. *Efektivna ekonomika – Efficient economy*, 5. Retrieved from <http://www.economy.nayka.com.ua/?op=1&z=4073> [in Ukrainian].
46. Bezditko, O.Ie. (2020). Upravlinnia finansovymy ryzykamy pidpryiemstva [Enterprise financial risk management]. *Tavriiskyi naukovyi visnyk. Serii: Ekonomika – Taurian Scientific Bulletin. Series: Economics*, 3, 43-49. [in Ukrainian].
47. Bielousova, S.V. (2017). Formuvannia prohramy upravlinnia finansovymy ryzykamy pidpryiemstva [Formation of the program of management of financial risks of the enterprise]. *Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu. Serii: Mizhnarodni ekonomichni vidnosyny ta svitove hospodarstvo – Scientific Bulletin of Uzhhorod National University. Series: International Economic Relations and the World Economy*, 12, 1, 33-37. [in Ukrainian].
48. Bielousova, S.V. (2019). Mekhanizm upravlinnia finansovymy ryzykamy promyslovykh pidpryiemstv [Mechanism of financial risk management of industrial enterprises]. *Problemy i perspektyvy ekonomiky ta upravlinnia – Problems and prospects of economics and management*, 3 (19), 277-293. [in Ukrainian].
49. Kuzminets, T.H., & Perehniak, Yu.A. (2017). Upravlinnia finansovymy ryzykamy pidpryiemstva v umovakh rynkovoï ekonomiky [Management of financial risks of the enterprise in a market economy]. *Molodyi vchenyi – Young scientist*, 12 (52), 677-680. [in Ukrainian].
50. Podolianchuk, O., & Tomashuk, I. (2020). Formation of financial results of activities of agricultural enterprises of Vinnitsa region. *The scientific heritage*, 47, 7, 63-73. [in Ukrainian].

51. Kostetskyi, V.V., & Butov, A.M. (2016). Napriamy pobudovy systemy upravlinnia finansovymy ryzykamy na pidpriemstvi [Directions of building a financial risk management system at the enterprise]. *Ukrainskyi zhurnal prykladnoi ekonomiky – Ukrainian Journal of Applied Economics*, 1, 3, 60-66. [in Ukrainian].
52. Tomashuk, I.V., & Tomashuk, I.O. (2021). Enterprise development strategy: innovation and internal flexibility. *Solloquium-journal*, 3 (90), 4, 51-66. [in English].
53. Upravlinnia finansovymy ryzykamy [Financial risk management]. Retrieved from https://pidru4niki.com/74707/ekonomika/upravlinnya_finansovimi_rizikami [in Ukrainian].
54. Honcharuk, I.V., & Tomashuk, I.V. (2022). Resursnyi potentsial silskykh terytorii: stan ta napriamy zmitsnennia [Resource potential of rural areas: state and directions of strengthening]: monohrafiia – monograph. Vinnytsia: TOV «Tvory», 334. [in Ukrainian].
55. Laktionova, O.A. (2020). Upravlinnia finansovymy ryzykamy [Financial risk management], 256. Retrieved from https://r.donnu.edu.ua/bitstream/123456789/1460/1/Navch%20posibnyk%20UFR%2027_10_2020.pdf [in Ukrainian].
56. Zahorelska, T.Iu. (2009). Upravlinnia finansovymy ryzykamy na rivni pidpriemstva [Financial risk management at the enterprise level]. *Visnyk Khmelnytskoho natsionalnoho universytetu – Bulletin of Khmelnytsky National University*, 3, 1, 168-173. [in Ukrainian].
57. Ananieva, Yu.V. (2020). Upravlinnia finansovymy ryzykamy – faktor stiikoho rozvytku pidpriemstva realnoho sektoru ekonomiky [Financial risk management is a factor in the sustainable development of the real sector of the economy]. *Naukovi zapysky Natsionalnoho universytetu «Ostrozka akademiia», seriia «Ekonomika» – Scientific notes of the National University «Ostroh Academy», series «Economics»*, 16(44), 127-135. [in Ukrainian].
58. Bozhanova, O.V. (2015). Upravlinnia finansovymy ryzykamy promyslovoho pidpriemstva: teoretychnyi aspekt [Financial risk management of an industrial enterprise: theoretical aspect]. *Naukovyi visnyk Khersonskoho derzhavnoho universytetu. Seriiia Ekonomichni nauky – Scientific Bulletin of Kherson State University. Economic Sciences Series*, 10, 1, 80-83. [in Ukrainian].
59. Zakharova, N.Iu. Mekhanizm upravlinnia finansovymy ryzykamy ahrarnykh pidpriemstv [Mechanism of financial risk management of agricultural enterprises]. Retrieved from <https://core.ac.uk/download/pdf/159845189.pdf> [in Ukrainian].
60. Nastenka, M.M., Pokynchereda, V.V., & Hudzenko, N.M. (2017). Kontseptsiiia stratehichnoho upravlinnia finansovymy ryzykam pidpriemstv [The concept of strategic management of financial risks of enterprises]. *Visnyk Khmelnytskoho natsionalnoho universytetu – Bulletin of Khmelnytsky National University*, 3, 1, 18-22. [in Ukrainian].

61. Ofitsiinyi sait Derzhavnoi sluzhby statystyky Ukrainy [Official site of the State Statistics Service of Ukraine]. Retrieved from <http://www.ukrstat.gov.ua> [in Ukrainian].
62. Shkliaruk, S.H. (2019). Upravlinnia finansovymy ryzykamy [Financial risk management], 494. Retrieved from https://maup.com.ua/assets/files/lib/book/upr_fin_ryzik.pdf [in Ukrainian].
63. Lopatinsky, Y.M., Todoryuk, S.I. (2015), Determinanty staloho rozvytku ahrarnykh pidpriemstv [Determinants of sustainable development of agricultural enterprises], Chernivtsi National un-t., Chernivtsi, Ukraine.
64. Pryshliak, N.V., Tokarchuk, D.M. and Palamarenko, Y.V. (2019), Zabezpechennia enerhetychnoi ta ekolohichnoi bezpeky derzhavy za rakhunok biopalyva z bioenerhetychnykh kultur i vidkhodiv [Ensuring energy and environmental security of the state through biofuels from bioenergy crops and waste], TOV “Console”, Vinnytsia, Ukraine.
65. Pryshliak, N.V., Palamarenko, Y.V. and Bereziyk, S.V. (2020), Stratehichne upravlinnia innovatsiinym rozvytkom vzaiemopoviazanykh haluzei z vyrobnytstva biopalyva [Strategic management of innovative development of interconnected industries from biofuel production], TOV “Druk”, Vinnytsia, Ukraine.
66. Pryshliak, N., Tokarchuk, D. and Palamarenko, Y. (2021), “Prerequisites and organizational and economic mechanism of formation and implementation of the strategy of waste management of agricultural enterprises”, *Ekonomika ta derzhava*. vol. 3, P. 104–117. DOI: 10.32702/2306-6806.2021.3.104
67. Tokarchuk, D. and Palamarenko, Y. (2021), “Conceptual provisions of the strategy of waste management of agricultural enterprises at the macro and micro-level”, *Efficient economy*. vol. 11, available at: <http://www.economy.nayka.com.ua/?op=1&z=9585> (Accessed 17 December 2021). DOI: 10.32702/2307-2105-2021.11.111
68. Tokarchuk, D., Pryshliak, N. and Palamarenko, Y. (2021), “Strategy of waste management of agrarian enterprises: rational management of plant waste, waste of animal tissue, animal manure, archochemical waste”, *Efektivna ekonomika*, [Online], vol. 12, available at: <http://www.economy.nayka.com.ua/?op=1&z=9758> (Accessed 27 Jun 2022). DOI: 10.32702/2307-2105-2021.12.104
69. The official site of Agribusiness today (2017), “Measures to reduce soil contamination with mineral fertilizers”, available at: <http://agro-business.com.ua/agro/mekhanizatsiia-apk/item/1288-zakhody-dlia-zmenschennia-zabrudnennia-gruntiv-mineralnymy-dobryvamy.html> (Accessed 27 Jun 2022).
70. Volkova, I.M. Varchenko, O.M. Dankevych, V.Y. (2013), Koniunktura ta perspektyvy svitovykh ahrarnykh rynkiv [Business Conditions and Prospects of world agricultural markets], Tsentr uchbovoi literatury, Kyiv, Ukraine.

71. Palamarenko, Y. (2020), "Conceptual provisions of state regulation of innovation processes", *Derzhavne upravlinnya: udoskonalennya ta rozvytok*, [Online], vol. 4, available at: <http://www.dy.nayka.com.ua/?op=1&z=1625> (Accessed 27 Jun 2022). DOI: 10.32702/2307-2156-2020.4.56
72. Lopatinsky, Y.M., Kifyak, V.I. (2014), *Rozvytok ahrarynoho sektora natsionalnoi ekonomiky na instytutysiinykh zasadakh* [Development of the agricultural sector of the national economy on an institutional basis]. Chernivtsi National University, Chernivtsi, Ukraine.
73. Law of Ukraine "On Basic Principles of State Agrarian Policy and State Policy of Rural Development". URL: https://ips.ligazakon.net/document/view/jh72i00a?an=6&ed=2018_10_04 (Accessed 27 Jun 2022).
74. Potapenko, V., Potapenko, O. (2011), "Organic agriculture as a factor of economic security", *Economics of agro-industrial complex*. vol. 5. P. 58-65.
75. Pohryshchuk, B., Pohryshchuk, G. (2011), "Ecological and economic paradigm of modern development of agricultural production", *Agrosvit*. vol. 9, P. 8-11.
76. Omelchenko, A., Obykhod, G., Nechitaylo, T. (2016), "Greening of economic development as a factor of modernization of production", *Economist*. vol. 6, P. 24-27.
77. Milovanov, E. (2019), "The role of the organic social movement in the development of the organic sector of the agricultural sector of Ukraine", *Modern Economics*. vol. 14, P. 161-173.
78. Law of Ukraine "On Agricultural Advisory Activities". URL: <https://zakon.rada.gov.ua/laws/show/1807-15#Text> (Accessed 27 Jun 2022).
79. Law of Ukraine "On Ensuring Sanitary and Epidemic Welfare of the Population" of February 24, 1994 № 4004-XII», available at: <https://zakon.rada.gov.ua/laws/show/4004-12#Text> (Accessed 27 Jun 2022).
80. Law of Ukraine "On Production and Circulation of Organic Agricultural Products and Raw Materials" of September 3, 2013 № 425-VII, available at: <https://zakon.rada.gov.ua/laws/show/425-18#Text> (Accessed 27 Jun 2022).
81. Law of Ukraine "On Food Safety and Quality" of 23 December 1997 № 771/97-BP, available at: http://search.ligazakon.ua/l_doc2.nsf/link1/ed_2011_02_03/Z970771.html (Accessed 27 Jun 2022).
82. Law of Ukraine "On Withdrawal from Circulation, Processing, Disposal, Destruction or Further Use of Low-Quality and Dangerous Products" of January 14, 2000 № 1393-XIV, available at: <https://zakon.rada.gov.ua/laws/show/1393-14#Text> (Accessed 14 November 2021).

83. Svystun, L., Popova, Y. and Shtepenko, K. (2020), "State regulation of the agricultural sector in the context of ensuring sustainable development", *Efektyvna ekonomika*, [Online], vol. 11, available at: <http://www.economy.nayka.com.ua/?op=1&z=8371> (Accessed 27 Jun 2022). DOI: 10.32702/2307-2105-2020.11.93
84. Kostetsky, Y.I. (2017), *Stratehiia formuvannia i rozvytku ahrarnoho sektoru Ukrainy: teoriia i praktyka* [Strategy of formation and development of the agricultural sector of Ukraine: theory and practice], Ternopil, Ukraine.
85. Burliai, A.P., (2019), *Orhanizatsiino-ekonomichni zasady ekolohizatsii ahrarnoi sfery ekonomiky Ukrainy* [Organizational and economic principles of greening the agricultural sector of Ukraine's economy], Publisher "Sochinsky MM". Uman, Ukraine.
86. Yevchuk, L. (2011), "Strategic management as a support mechanism", *Agricultural Economics*. vol. 9. P. 104-107.
87. Zinchuk, T.O. (2019), *Ahrarna polityka Yevropeiskoho Soiuzu: vyklyky ta perspektyvy* [Agrarian policy of the European Union: challenges and prospects], Center for Educational Literature. Kyiv, Ukraine.
88. Kirilov, Y. (2016), "The impact of globalization on the development of national economies". *Efektyvna ekonomika*, [Online], vol. 12, available at: <http://www.economy.nayka.com.ua/?op=1&z=5297> (Accessed 27 Jun 2022).
89. Bagorka, M. (2016), "Innovative directions of development of strategy of ecological marketing in agricultural production", *Black Sea Economic Studies*. vol. 11. P. 65-69.
90. Назаренко І.І., Польчина С.М., Нікорич В.А. *Грунтознавство: підручник*. Чернівці: Книги – XXI, 2004. 400 с.
91. Гордієнко В.П. та ін. *Землеробство: навчальний посібник*. К.: Вища школа, 1991. 286 с.
92. Ivashina, S., & Ivashina, O. (2018). *Institutional economics*. Dnipro: University of Customs and Finance [in Ukrainian].
93. *Osnovopolozhnyky i vytoky instytutsionalizmu* [Founders and origins of institutionalism]. stud.com.ua. Retrieved from: https://stud.com.ua/51818/ekonomika/osnovopolozhniki_vitoki_institutsionalizmu [in Ukrainian].
94. *Neoinstytutsionalizm ta yoho holovni techii* [Neo-institutionalism and its main currents]. economics.studio. Retrieved from: <https://economics.studio/ekonomicheskaya-teoriya/neoinstitutsionalizm-yogo-golovni-93396.html> [in Ukrainian].

95. Vivsnyanyk, O. (2020). Vplyv neoinstytualizmu na vyznachenni mistisia orhanizatsii v instytutsiinomu mekhanizmi derzhavnoho upravlinnia [The influence of neoinstitutionalism on determination of the place of organizations in the institutional mechanism of public governance]. Derzhavne upravlinnia: udoskonalennia ta rozvytok – Public administration: improvement and development, 4. Retrieved from: http://www.dy.nayka.com.ua/pdf/4_2020/155.pdf. DOI: 10.32702/2307-2156-2020.4.153 [in Ukrainian].
96. Chikov, I. (2019). Konkurentsii: teoretychni pidkhody do rozuminnia sutnosti poniattia [Competition: theoretical approaches to understanding the essence of the concept]. Ahrosvit – Agrosvit, 10, 74–80. DOI: 10.32702/2306-6792.2019.10.74 [in Ukrainian].
97. Nechiporenko, V. Konkurentsii i konkurentospromozhnist na aharnomu rynku Ukrainy [Competition and competitiveness on the agricultural market of Ukraine]. repo.snau.edu.ua. Retrieved from: <http://repo.snau.edu.ua/bitstream/123456789/6758/1/1.PDF> [in Ukrainian].
98. Prokopiv A. Vplyv monopolii na rozvytok rynkovykh vidnosyn v Ukraini [The influence of monopolies on the development of market relations in Ukraine]. Zakarpatski pravovi chytannia – Transcarpatian legal readings, 1, 308-314 [in Ukrainian].
99. Rykova, N. (2020). Teoretychni osnovy instytutsionalnykh mekhanizmiv derzhavnoho rehuliuвання korporatyvnoho sektoru [Theoretical basis of institutional mechanisms of state regulation of the corporate sector]. molodyvcheny.in.ua. Retrieved from: <http://molodyvcheny.in.ua/files/conf/other/47may2020/27.pdf> [in Ukrainian].
100. Shpykuliak, O. (2010). Ekonomichni instytutsii ta instytuty u rozvytku teorii rynku [Economic institutions and institutions in the development of market theory]. Ekonomika APK – Economy of agro-industrial complex, 1, 159-165 [in Ukrainian].
101. Stryzhak, O. (2016). Poniattia instytutu: osnovni pidkhody do vyznachennia suti ta zmistu [Concept of institute: basic approaches to definition of essence and content]. Ekonomika ta derzhava – Economy and the state, 8, 38-43 [in Ukrainian].
102. Inshakov, O. (2010). Evoliutsiina perspektyva ekonomichnoho instytutsionalizmu [Evolutionary perspective of economic institutionalism]. Pytannia ekonomiky – Economic issues, 9, 63-77 [in Ukrainian].
103. Kolesnichenko, I. (2015). Institutional economics. Kharkiv: KHNEU named after S. Kuznetsa [in Ukrainian].
104. Obushna, N. (2016). Osoblyvosti katehorialnoho aparatu instytutsionalnoi teorii u ploschchyni derzhavnoho upravlinnia [Features of the categorical apparatus of the institutional theory in the area of state administration]. Derzhavne upravlinnia – Governanc, 2, 40-48. Retrieved from: [file:///C:/Users/Svitlana/Downloads/289-Article%20Text-902-1-10-20201024%20\(2\).pdf](file:///C:/Users/Svitlana/Downloads/289-Article%20Text-902-1-10-20201024%20(2).pdf) [in Ukrainian].

105. Hrytsenko, V. Sutnist i katehorialna vidminnist poniat «instytut» ta «instytutsiia» [The essence and categorical difference of the concepts «institute» and «institution»]. nbuv.gov.ua. Retrieved from: http://www.nbuv.gov.ua/old_jrn/Soc_Gum/Vdnuet/econ/2009_4/6.pdf [in Ukrainian].
106. Kharchenko, Yu. (2019). Katehorialnyi aspekt rozvytku instytutsionalizmu [Categorical aspects of institutionalism development]. Problemy i perspektyvy ekonomiky ta upravlinnia – Problems and prospects of economics and management, 4, 80-87. DOI: 10.25140/2411-5215-2019-4(20)-80-87 [in Ukrainian].
107. Hospodarskyi kodeks Ukrainy № 436-IV [Economic Code of Ukraine № 436-IV]. (2003, January 16). zakon.rada.gov.ua. Retrieved from: <https://zakon.rada.gov.ua/laws/show/436-15> [in Ukrainian].
108. Pro oplatu pratsi: Zakon Ukrainy [Law of Ukraine «On remuneration»]. (1995, March 24). zakon.rada.gov.ua. Retrieved from: <https://zakon.rada.gov.ua/laws/show/108/95-вп#Text> [in Ukrainian].
109. Pro pidpriemnytstvo: Zakon Ukrainy [Law of Ukraine «On Entrepreneurship»]. (1991, February 7). zakon.rada.gov.ua. Retrieved from: <https://zakon.rada.gov.ua/laws/show/698-12> [in Ukrainian].
110. Karpyuk, G. (2021). Basics of entrepreneurship. Retrieved from: <https://mon.gov.ua/storage/app/media/pto/2021/04/19/Osnovy%20pidpryyemnytstva.pdf> [in Ukrainian].
111. Prutska, T. (2015). Instytutsiine zabezpechennia rozvytku pidpriemnytstvav aharnii sferi [Institutional support of entrepreneurship development in the agricultural sphere]. Ekonomika APK – Economy of agro-industrial complex, 2, 93-100. Retrieved from: <http://socrates.vsau.org/repository/getfile.php/9142.pdf> [in Ukrainian].
112. Derzhavna sluzhba statystyky Ukrainy. Ofitsiynyi sait derzhavnoi sluzhby statystyky Ukrainy [State Statistics Service of Ukraine. Official site of the State Statistics Service of Ukraine]. www.ukrstat.gov.ua. Retrieved from: <http://www.ukrstat.gov.ua/> [in Ukrainian].
113. Prutska, T. (2014). Neformalni instytuty yak chynnyk rozvytku pidpriemnytstva [Informal institutions as a factor of development enterprises]. Ekonomika. Menedzhment. Biznes – Economics. Management. Business, 2, 84-93. Retrieved from: <http://repository.vsau.org/getfile.php/9153.pdf> [in Ukrainian].
114. Hrytsak, Ya. (2014). 26-y PROTSENT, abo yak podolaty istoriiu. [26th INTEREST, or how to overcome history]. Kyiv: Fond Poroshenka. [in Ukrainian].
115. Tanasiichuk, O. Turystychna Nimechchyna chekaie ukraintsiv. [Tourist Germany awaits Ukrainians]. Ukrinform. Multymediina platforma inomovlennia Ukrainy. Ukrinform. Multimedia platform of foreign language of Ukraine. Retrieved from <https://www.ukrinform.ua/rubric-tourism/2247361-turisticna-nimeccina-cekae-na-ukrainciv.html> [in Ukrainian].

116. Tabenska, O.I. (2020). Osnovni perevahy klasternoi modeli orhanizatsii turystychnoho biznesu v rehioni. [The main advantages of the cluster model of tourism business organization in the region]. *Ekonomika, finansy, pravo.* – Economy, finance, law, 3. 18-22 Retrieved from https://file:///C:/Users/User/AppData/Local/Temp/efp_03-0_2020.pdf [inUkrainian].
117. Zahlen-Daten-Fakten. Deutscher tourismus verband. [German Tourism Association] Retrieved from <https://www.deutscher-tourismusverband.de/service/touristische-informationsn-orm-tin.html> [in German].
118. Chomu aktyvni podorozhi taki uspishni? [Why active travel is so successful]. Retrieved from <http://isic.org.ua/2017/08/> [inUkrainian].
119. Vikinh, M. (2017). Malenka knyha khiuhe. [Little hygge book] Kharkiv: Klub simeinoho dozvillia [inUkrainian].
120. Iarlykova, O. Yak rozvynuty vnutrishnii turyzm: 3 pravyla z dosvidu Nimechchyny. [How to develop domestic tourism: 3 rules from the experience of Germany] Retrieved from <https://rubryka.com/article/domestic-tourism/> [inUkrainian].
121. Tabenska, O.I. (2020). Rozvytok sfery turyzmu u Nimechchyni. [Development of tourism in Germany]. *Ekonomika, finansy, pravo.* – Economy, finance, law, 2. 28-32 [inUkrainian].
122. Hoteli ta restorany Kotbusa [Hotels and restaurants in Cottbus] Retrieved from <https://www.agoda.com/uk-ua/altstadthotel-am-theater/hotel/cottbus-de.html?cid=-218> [in German].
123. Rehionalni poliusy zrostannia (2019). Rozuminnia instrumentu, analiz peredumov yoho uspikhu i vyjavlennia pryntsyypiv dlia mozhlyvosti perenesennia v ukrainskyi kontekst [Regional poles of growth. Understanding the tool, analyzing the prerequisites for its success and identifying principles for the possibility of transfer to the Ukrainian context] Retrieved from http://ck-oda.gov.ua/docs/2019/30052019_2.pdf [inUkrainian].
124. Sylvanskaia, H.N., Popovych, A.V. (2013). Klasternyi podkhod k pozytsyonyrovanyiu v turyzme [Cluster approach to positioning in tourism] *Metody ta zasoby upravlinnia rozvytkom transportnykh system* Methods and means of managing the development of transport systems, 1. 159-180 [inUkrainian].
125. Efektyvno vchusia, zastosovuiu tekhniky i instrumenty. Kohnityvnyi intelekt (2019) [Study effectively, apply techniques and tools. Cognitive intelligence]. Dnipro: Monolit [inUkrainian].
126. Kovi, S.R. (2019) 7 zvychok nadzvychaino efektyvnykh liudei [7 Habits of Highly Effective People]. Kharkiv: Klub Simeinoho Dozvillia [inUkrainian].
127. Shershnova, Z.Ie. (2004) Stratehichne upravlinnia [Strategic management]. Kyiv: Kyivskiy natsionalnyi ekonomichnyi universytet [inUkrainian].

128. Kollinz, Dzh. (2014) Velychni za vlasnym vyborom [Majestic by choice]. Kyiv: Nash Format [inUkrainian].
129. Haidei, O.O. (2012) Upravlinnia zminamy na pidpriemstvi [Management of changes in the enterprise]. Visnyk Berdianskkoho universytetu menedzhmentu i biznesu – Bulletin of the Berdyansk University of Management and Business, 3, 71-75 [inUkrainian].