

**SUSTAINABLE ECONOMIC DEVELOPMENT :
BASIS, DETERMINANTS, TENDENCIES, MARKS**

**Collective monograph
edited by Zhanna Derii**

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**Sustainable economic development : basis, determinants, tendencies, marks:
collective monograph**

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Part 1. Sustainable development: change in the philosophy of thinking and principles of economic activity

ANALYSIS OF ENVIRONMENTAL POLICY OF UKRAINE IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

*Derii Zh.
Lysenko I.
Lysenko N.*

The intensive use of natural resources and the development of society leads to man-made environmental changes that have ecological and socio-demographic consequences in the world.

Analysis of problems in the environmental sphere and determination of the role of the state in implementation ecological politics is a topical issue.

There is a need to develop a modern strategy of Ukraine's foreign environmental policy that would ensure national interests and contribute to the goals of balanced development.

Problems of formation and research of ecological policy in Ukraine is dedicated to and works by L. Amjadin, O. Vasyuta [1], O. Veklych, T. Galushkina, V. Dyomkin, N. Zinovchuk, V. Kruk, N. Maevskaya, V. Marinenko, S. Marova, E. Senyushkin, I. Sinyakevich, B. Danylyshyna [2], M. Khilka [3], O. Lazor [4], Z. Deriy [13; 16; 17] and other [14; 15; 18-25].

Works related to the study of the relationship of political, economic and environmental issues in the formation of environmental policy, its legal framework is considered in his works O. Yurechko [5], N. Malysh [6], I. Romanchenko, A. Sbitnev, S. Butenko.

The analysis of international environmental policy is the subject of research in the scientific works of A. Hetman, V. Kostytsky [7], S. Kravchenko [8] and other Ukrainian scientists.

The implementation of environmental policy in Ukraine is aimed at redefining relations in the "man – society – environment" system. This is due to the scale of the environmental problem, its globalization and significant financial costs for solving environmental problems. Environmental policy is a separate direction of state and public administration.

At the national level, environmental policy is one of the important directions of the country's internal and external policies related to the reproduction of natural resources and ensuring the stability of the environmental protection system, as well as the dynamism of its development.

Among the main ones tasks environmental policy is stabilization and improvement of the ecological state of the country through the implementation of state environmental policy to ensure the transition to sustainable development of the economy and the introduction of an environmentally balanced system of nature use.

The state environmental policy is aimed at achieving such strategic goals:

- the formation of environmental values and principles of sustainable consumption and production in society;
- on ensuring the integration of environmental policy in the decision-making process on social and economic development of Ukraine;
- humiliation of environmental risks to ecosystems and health of the population to socially acceptable levels;
- on ensuring the sustainable development of the natural resource potential of Ukraine;
- in the improvement and development of the state system of environmental management.

The root causes of ecological problems of Ukraine:

- subordination of environmental priorities to economic expediency, ignoring environmental consequences when making decisions to the Cabinet of Ministers of Ukraine;
- depreciation of fixed assets of industrial and transport infrastructure and objects of housing and communal services;
- low level of understanding in society of priorities of preservation of the environment and benefits of sustainable development, imperfection of the system of ecological education;
- imperfect structure of the economy with the prevailing share of resource and energy-intensive industries;
- not effective system of public administration in the field of environmental protection, monitoring its state, regulating the use of natural resources and ensuring environmental safety;
- unsatisfactory compliance with environmental legislation and environmental rights and obligations of citizens.

Economic mechanisms are used to solve ecological problems in Ukraine, but implementation of environmental measures within the territorial unit does not produce an effective result. Significant environmental issues are often of a regional scale and the territorial community can not solve them on their own. Regional representations of the executive branch consider the issues of environmental significance in the context of the economic component, so most ecological problem issues remain unresolved.

Determination of the main directions of the state environmental policy is the competence of the Verkhovna Rada of Ukraine. The central place in the implementation of the overall leadership of the state in the field of ecology and natural resources belongs to the President of Ukraine. The Cabinet of Ministers of Ukraine coordinates and directs the work of ministries and other bodies of central executive power, in particular the Ministry of Environment and Natural Resources of Ukraine.

Introduction and strengthening new ones financial and economic levers realization state ecological politics necessary condition for stable ecological developmentstate [11]. They include:

- creation of the national ecological the fund;
- state support in creating ecological banks;

- introduction efficient control and selling quotas for pollution the environment;
- streamlining and concentration of environmental funds for their efficient use funds;
- introduction of environmental leasing, environmental insurance, ecological excise tax, tax privileges, subsidies.

According to the draft law in the country "On the Basic Principles (Strategies) of the State Environmental Policy of Ukraine for the Period up to 2030", the state environmental policy is to stabilize and improve the state of the environment of Ukraine by integrating environmental policy into the socio-economic development of Ukraine to create environmentally safe natural environment for the environment. Life and health of the population, from conservation of natural ecosystems, provision and protection of constitutional environmental rights of citizens.

The main tools for implementing state environmental policy are:

- cross-sectoral partnership and stakeholder involvement;
- ecological accounting;
- state regulation in the field of environmental protection;
- informing and communicating;
- environmental management systems, environmental audit, environmental certification and product labeling;
- technical regulation and accounting in the field of environmental protection, environmental management and environmental safety;
- assessment of the impact of the planned environmental activity;
- legislation of Ukraine in the field of environmental protection, which is adapted to the legislation of the European Union;
- economic and financial mechanisms;
- education and scientific support for the formation and implementation of state environmental policy;
- integrated monitoring of the state of the environment and control in the field of environmental protection, rational use, reproduction and protection of natural resources;
- international cooperation in the field of environmental protection and environmental safety.

Improvement of the state environmental policy should contain concrete goals, tasks and directions of development. The development of strategic plans, the formation and implementation of environmental development projects, the implementation of a model of project-oriented management are the most optimal approaches to reformatting the domestic environmental policy.

The growth of environmental problems that have come to be as well as the nature of the environmental crisis, require a sound environmental policy, that is, the need to direct human activity in accordance with the possibilities of nature with the participation of the state in order to preserve the ecological balance.

The Draft Law of Ukraine on the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the period up to 2030 envisages the achievement of the objectives of the state ecological policy in three stages [9]:

– by 2020, it is planned to achieve a deceleration of the deterioration of the ecological situation by reforming the system of state environmental management, which will include implementation of European environmental norms and standards, improvement of environmental accounting and control systems, and the introduction of incentive mechanisms for enterprises to achieve energy efficiency;

– by 2025, stabilization of the ecological situation by consolidating changes in the system of public administration that took place during the first stage, as well as raising the ecological consciousness of society, informatization of the sphere of environmental protection and nature management of all levels is envisaged;

– by 2030, the state of the environment is expected to be improved by balancing the socioeconomic needs and tasks in the field of preservation of the natural environment, ensuring the development of an environmentally effective partnership between the state, the economy and the public (Fig. 1):



Fig. 1. Environmental policy of Ukraine till 2030

The implementation of environmental policy requires the effective functioning of the environmental protection legislation aimed at achieving national priorities.

The main requirements for such legislation are its compliance with the Constitution of Ukraine, approximation to the relevant directives of the European Union, ensuring the implementation of multilateral environmental agreements, social acceptability, economic efficiency. Legislation should facilitate the flexible application of the relevant economic instruments to stimulate the introduction of innovative environmental technologies, solving environmental problems at the local level.

Ukraine's socio-economic development allows us to move on to an effective model of sustainable development. The system of political, legislative, executive, judicial measures conducted within the framework of environmental policy should contribute to the priority resolution of environmental problems.

An important direction for improving the environmental policy of Ukraine is a course on adaptation of the requirements of environmental legislation in accordance with EU law.

The European Community has a broad competence in the field of environmental issues, and environmental integration has become mandatory for all members and candidates for EU membership.

Principles of EU ecological policy [10]:

- the principle of subsidiarity (joint activities in those areas where countries can not handle themselves or such a solution will be more effective than at the state level);
- principle of preventive (preventive) action;
- principle of caution;
- the principle of reimbursement of environmental damage by eliminating damage at the initial stage of its occurrence;
- the principle of ecological orientation, when any activity is carried out taking into account the needs of the environment;
- principle of integration of environmental policy in the development and implementation of all other policies.

The experience of implementing the EU ecological policy is useful to Ukraine for reasons of expediency and efficiency of using modern technologies in the field of nature management.

An example of the effective use of economic levers in the implementation of the environmental policy can be Poland, the use of which is useful and appropriate as a result of the successful implementation of environmental policy instruments and the similarity of natural and social conditions.

The main elements of the economic management mechanism of nature management, which operates in Poland, are:

- fee for special use of natural resources;
- payment for pollution of the environment and other kinds of harmful effects on the environment;
- a system of financing and lending of environmental protection measures (state and local budgets, environmental funds, banks, enterprises funds, foreign and income and investment);
- introduction of environmental taxes;
- support the formation and development of the eco-industry.

Poland adheres to the main priority of environmental policy, generally accepted for all EU countries – to prevent environmental pollution through environmental predictability.

Along with the adoption of legislation to ensure a high level of environmental protection, the EU has implemented environmental protection instruments (Tabl. 1). This is embodied in the application of "best available technology" (Best Available Technology – BAT – the application of those methods of production, which at the

current level of scientific and technical knowledge provide the opportunity to guarantee the highest possible environmental safety).

Table 1

Environmental protection tools

The name of the instrument for environmental protection	Description
LIFE	A financial instrument for environmental protection aimed at promoting the development, implementation and updating of Community environmental policy and legislation
Environmental Protection Agreements	Improvement of environmental aspects of enterprises and introduction of sustainable production methods by encouraging voluntary measures and agreements on environmental protection
Environmental taxes and taxes	Promoting the use by Member States of fiscal instruments to improve the environmental performance of the environment and ensure the use of environmental taxes and duties in accordance with Community law
Support Program for Non-Governmental Organizations in the Field of Environmental Protection	The effectiveness of NGOs in different member states varies – the largest public activity in the UK, Germany, the Netherlands and Denmark, and the smallest in Ireland and Greece
Integrated production policy	The Commission presents a strategy for strengthening and changing the direction of environmental policy related to production, in order to facilitate the development of a market for environmentally safe products and stimulate public discussion of relevant issues.
European Agency for the Environment	Provision of responsible persons for political decisions, as well as public, reliable and reliable information on the state of the environment
Eco-labelling of products	Eco-labelling aims to promote products with a reduced negative environmental impact
Community Environment Management and Community Audit Scheme (EMAS)	The aim is to ensure continuous improvement of the efficiency of the environmental activities of European organizations, as well as to provide the public and interested parties with relevant information
Environmental Impact Assessment (EIA) of certain public and private projects	It is intended to reveal the nature, intensity and degree of danger of the impact of any type of planned economic activity on the state of the environment and health population
Assessment of environmental impacts of plans and programs implementation	It is conducted to promote the inclusion of environmental aspects at the stages of development and adoption of plans and programs
Environmental inspections	Minimum criteria: ensuring greater consistency and greater unanimity in the application and implementation of Community environmental legislation by providing minimum criteria for organizing, conducting, post-monitoring and publishing the results of environmental inspections in all Member States
European Pollutant Release and Transfer Registry (PRTR)	Improving public access to environmental information, thereby helping to prevent and reduce pollution in the future

Using the positive experience of European countries in implementing economic instruments provides an opportunity to more effectively deal with environmental policy issues.

Establishing common standards for environmental protection activities of the Member States is the basis of the EU's environmental policy. The ecological laws of the EU countries are based on the country's internal priorities and are limited to a given level of environmental protection.

International environmental cooperation of Ukraine is carried out in the framework of the concluded relevant international agreements – interstate, intergovernmental and interagency, regulated by the norms of international law. Given that in the modern world, in the context of the global ecological crisis, the integration of economic, technological and information structures that are increasingly becoming transnational is extremely active, international environmental cooperation is becoming extremely important.

The concept of sustainable development, which is the driving force behind the harmonization of human relations and the environment, is based on the environmental policy of developed countries. The problem of sustainable development – the most culturally in the modern world, it is devoted to hundreds of government and intergovernmental programs, it has been on the agenda of the most influential international organizations for many years.

A conscious restriction on the consumption of natural resources is a prerequisite for the further development not only of a separate state, but of mankind as a whole. The concept of improving the domestic environmental policy in the context of the planned reforms should be based on the methodological principles of a harmonious combination of strategic management taking into account the experience of European countries, EU members.

To ensure the proper ecological status the question of application of mechanisms of project-oriented management remains relevant. In Ukraine, the regulation of natural resources is carried out through the mechanism of administrative and legal forms of management through the system of normative and technical documents. The most important of these are environmental norms, rules and standards that are developed on the basis of environmental legislation, taking into account environmental, sanitary, hygienic, technical and economic requirements.

Taking into account the EU's achievements in the field of building an effective environmental policy and in resolving the environmental situation in Ukraine, the most urgent and urgent measures to improve the system of environmental policy instruments of Ukraine should be implemented:

- carrying out of independent scientific complex ecological examinations for the purpose of drawing up of ecological forecast and recommendations of local scale;
- activation of ecological education in schools, high schools and ecological education of the population with the help of television, the press, cinema, environmental societies;
- increasing the cost of nature protection and accelerating the pace of construction of environmental objects, devices and equipment;
- prohibition of any deviations from projects on environmental damage, strict

compliance with recommendations Environmental Impact Assessment (EIA);

- creation of economic incentives for environmental measures;
- activation of the activity of the relevant bodies of state and executive power on legislative, informational and technical support of the integration of the ecological component in industry policies;
- creation of conditions for the political priority of solving environmental problems, economic responsibility of business and industry for the environmental damage caused;
- ensuring timely and full implementation of the measures envisaged in the Law of Ukraine "On the Basic Principles (Strategy) of State Environmental Policy for the period up to 2030";
- when developing draft concepts, programs, legislative acts on the formation and improvement of environmental policy to use the positive experience of the EU countries, the situation of international strategies and approaches in this area;
- further optimization of tax legislation in order to ensure economic development and stimulate environmentally safe behaviour;
- activation of the activities of non-governmental organizations for the implementation of environmental education and education.

A significant increase in the level of environmental education, education and education of Ukrainian citizens will create conditions for the introduction of sustainable consumption patterns in the daily lives of citizens, increase their role in preventing pollution and controlling the state of the environment, sustainable use of natural resources and restoration of Ukraine's natural and resource potential.

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EDUCATION AS A DETERMINANT FOR SOCIAL ENTREPRENEURSHIP DEVELOPMENT IN THE EUROPIAN REGION

Revko A.

Within the context of sustainable development of the regions, the formation of social infrastructure becomes a dominant element of human development, creating and reproducing a healthy, creative, active generation. Social infrastructure of the region covers a range of services and facilities that meet local and strategic needs of society and contribute towards a good quality of life of the population.

The process of social entrepreneurship development plays an important role in local development and often creates jobs for the disabled or the socially or culturally disadvantaged. A high level of the social entrepreneurship would characterize a healthy and educated population of the region. Therefore, social entrepreneurship improves the living conditions and invests in social infrastructure of the region. Education support of social entrepreneurship in different educational institutions is an area of enormous potential, but one that has received little attention until now.

The main goal of the research is to study the role of education component of social infrastructure in development of social entrepreneurship in Denmark, Poland and Ukraine, and to work out the chief directions for development education for social entrepreneurship in Ukraine's regions. The measure to achieve the intended goal is the analysis by the case study and comparative methods of the education component of social infrastructure, which exert the greatest impact on the social entrepreneurship development in European region. In addition, the study conducted in the research has been enriched with numerous figures made on the basis of graphic methods.

The social infrastructure should be understood as the sphere of human activity, which conducts to the implementation of institutional requirements focusing on human needs in the spheres such as: education, health care, culture, by a team of devices and institutions, including buildings outside staffing and equipment in

procedures, and manifests itself in the activities of the government, self-government and civil society focused on providing public goods. Social infrastructure forms a number of competences that are needed in the modern world, connected with entrepreneurship, the development of creativity and innovation, which are the basis of the modern economy.

According to J. Kroszel, the social infrastructure includes institutions which provide services in the field of education, culture, health care, social security, physical culture and tourism [1]. R. Brol supports Kroszel's and notes that social infrastructure provides services more often, and sometimes only through association the union of people, the so-called institutions, and the material support specific areas (schools, buildings, hospitals, cultural institutions, etc.) is not a prerequisite to meet the social needs of individuals [2].

The development of social infrastructure is based on the following principles, which have been divided into general scientific and specific. The general scientific group includes the principles of historicism, systemic, prioritize, balanced and proportionality. A group of specific principles refers to the development of the socio-humanitarian space of social infrastructure and includes principles of synergy, sustainability, participation, subsidiarity, innovation and adaptability (Fig. 1).

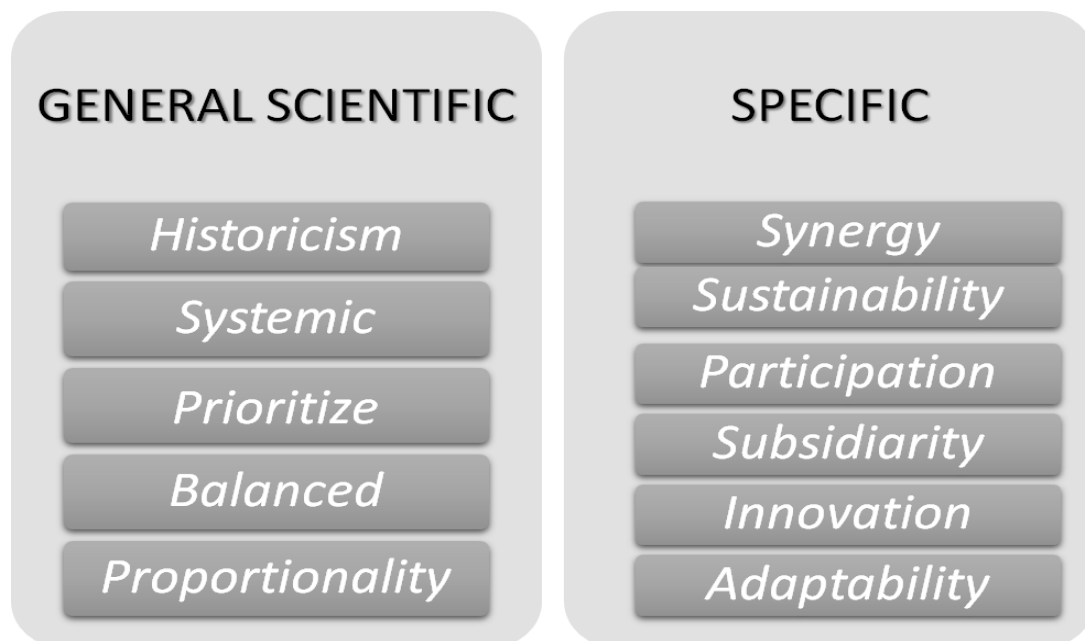


Fig. 1. The principles of social infrastructure development of the region

Source: own study

It should be recognized that social infrastructure includes public goods in three basic areas, namely: education (kindergartens, schools, educational institutions, psychological and pedagogical counselling offices, universities), culture (including cinemas, libraries, theatres, museums, sport's clubs) and health care (including hospitals, outpatient clinics, diagnostic laboratories and pharmacies) (Fig. 2).

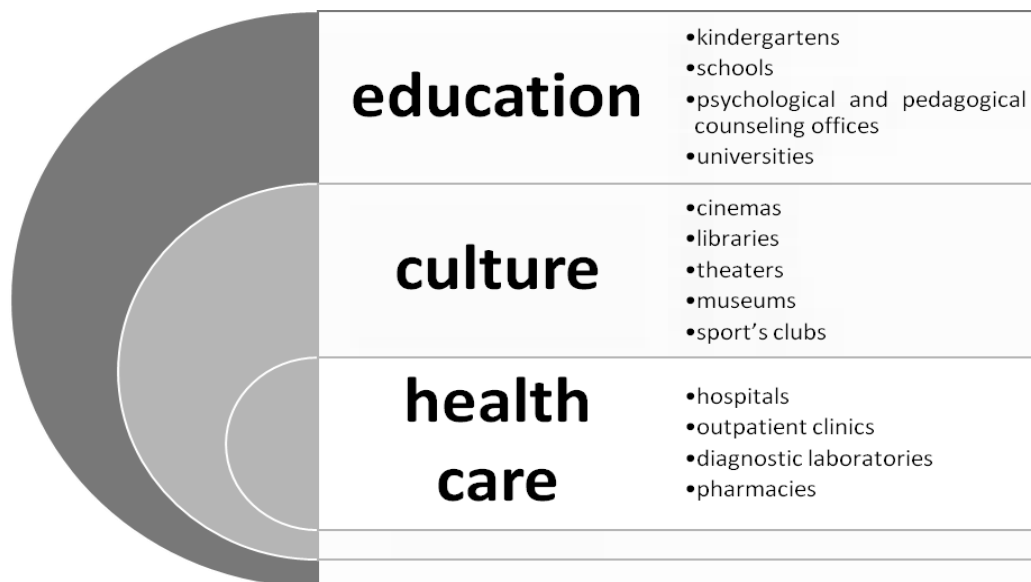


Fig. 2. Elements of the social infrastructure of the region

Source: own study

Hence, the social infrastructure can be defined as the structures and spaces that help communities and neighborhoods to function effectively. These can include:

- universal spaces and services such as education, health, active open space, recreation and sport, safety and emergency services, arts and cultural facilities, community centers and meeting places;
- lifecycle targeted spaces and services such as those for the elderly, youth and children;
- targeted spaces and services for groups with special needs such as families, people with a disability and indigenous and culturally diverse people [3, p. 4].

One of the region's competitive strengths is education, that plays a crucial role in creating sustainable communities through development social infrastructure and provide a strong theoretical background for working with social entrepreneurship. The main mission of social entrepreneurship is to bring benefits for the community. Achieving profit is equally important for social enterprises as increasing public benefit.

In Alex Nicholls view, social entrepreneurship is best understood as a multi-dimensional and dynamic construct moving across various intersection points between the public, private and social sectors [4].

Social entrepreneurship is innovative activities of the person who does systemic changes in social or ecological spheres, gets profit from this activity and has considerable impact on the regional economic growth. For example, social entrepreneurs create new work places, pay taxes and improve the standard of living on the definite territory [5, p. 87].

Social entrepreneurship fosters the development of two of the eight competences recognized by the European Commission as crucial in the process of functioning in a knowledge-based economy. There are social and civic competences: ability to participate effectively and constructively in one's social and working life

and engage in active and democratic participation, especially in increasingly diverse societies [6]. It should be stressed that social entrepreneurship teaches empathy and sensitivity to other people. These are attitudes that should be taught not only at school, but throughout life. In this case, social entrepreneurship and education are two extraordinary opportunities that need to be encouraged and interconnected for human development required for building the societies of the future.

In recent years, in Europe the educational support of social entrepreneurship is developing dynamically. Education needs social entrepreneurship just as much as social entrepreneurship needs education. Nowadays, the programs or subjects of social entrepreneurship and the social economy is taught at the universities and interest in this topic in academic circles is growing in proportion to the number of positive examples of social enterprises at different European countries. The education of social entrepreneurs must be adapted to this demanding reality and there should be an endeavor to equip them as best as possible with the knowledge necessary for this difficult work [7, p. 35].

The Master Program on Social Entrepreneurship and Management at Roskilde University in Copenhagen have contributed to the development of the field of social entrepreneurship and social enterprises in Denmark last 10 years. The program targets both International and Danish students and all teaching and curricula is in English. The Master Program Social Entrepreneurship and Management (SEM) is inter-disciplinary and draws upon areas such as sociology, organization leadership and governance as well as research in social innovation, social enterprise, corporate social responsibility and social accounting. Students have opportunity to learn a wide-range of theories, concepts and practices within the following fields:

- social entrepreneurship, social enterprise and social responsibility;
- innovation, capabilities and resource development;
- managing and organizing social enterprises.

The strengths and weaknesses of educational programs for social entrepreneurship development at higher education institutions in Denmark are represented in table 1.

Students gain skills for initiating, analyzing and managing social innovation processes. By exploring leadership and management processes in complex, multi-dimensional organizations, the program aims to prepare academically-oriented practitioners for the reality of running, shaping and transforming the next generation of social enterprises and innovation-led organizations.

Moreover, in 2006 The Centre for Social Entrepreneurship (CSE) was founded at Roskilde University in Copenhagen, Denmark with a Government grant worth almost €1.5 million. The purpose of the Centre is to become a “greenhouse” for learning and building competences in social entrepreneurship, with a view to improving the living conditions of socially marginalized people. CSE is carries out research, teaching, counselling, development work, evaluation and documentation in a number of areas related to social innovation and social entrepreneurship. The CSE activity plan is based on two streams of programming, each of which constitutes a basis for benchmarking. The first stream is research, and the second is education. Both streams are tied to the overall objectives of stimulating the civil society,

including NGOs and other organizations and agents engaged in voluntary social work. CSE has currently 7 PhD projects on social entrepreneurship. In general, education relating to social entrepreneurship and social enterprises is getting more attention in Denmark.

Table 1

The educational programs for social entrepreneurship development at higher education institutions in Denmark

Name of the program	Strengths	Weaknesses
1. Master Program on Social Entrepreneurship and Management has been offered since 2008 at Roskilde University in Copenhagen, Denmark	The education is very community-oriented and provides a strong theoretical background for working with social entrepreneurship	The education is basically theoretical and though cases and best practice examples are part of the education very few practical skills to be able to work as social entrepreneur are acquired. The business side of social entrepreneurship is absent from the program
2. The Centre for Social Entrepreneurship (CSE), was founded in 2006 at Roskilde University	Strong research section both national and international. CSE has currently 7 PhD projects on social entrepreneurship	Interesting and important research is not very well dissipated to the general public
3. Centre for Corporate Social Responsibility, Copenhagen Business School (cbsCSR), Minor in Social Entrepreneurship	The course targets people who would not normally become social entrepreneurs, but try to interest students from majors on Copenhagen Business School, e.g. finance and economics who at the end of their studies could be interested in this field. The course has a strong focus on the business side of social entrepreneurship	The course doesn't focus much on how social entrepreneurship can be used to better understand and analyses challenges and difficulties in society and in the welfare system

Source: Author' elaboration using [8, p. 6-7, 20-21]

An important additional educational support for development social entrepreneurship in Denmark is the program Minor in Social Entrepreneurship, which was established at the Centre for Corporate Social Responsibility, Copenhagen Business School (cbsCSR). The minor contains classes providing the theories and tools required to start, finance, and grow charities and non-governmental organizations (NGOs). The Minor is intended to give students a better understanding of the particularities and special features of non-profit organizations and social entrepreneurial efforts. On the Minor students from many different disciplines work together (business, political sciences, public health, sociology).

The minor includes three courses:

1. "Social Entrepreneurship: Creating Social Change Using the Power of Entrepreneurship".
2. "Instant Innovation Camp: Co-creating sustainable tools and business

models”. The camps invite social enterprises to tell about their problems. In this way, students can learn more from them.

3. “Business Plan Writing for Social Enterprises”. The courses can be taken individually, but interested students will be offered the opportunity to sign up for all three courses in one go.

One of the largest university in Denmark, VIA University College, has been offering modules in social entrepreneurship, social economy and social innovation within these programs: Bachelor in Public Administration, Bachelor in Social Education and Bachelor of Social Work.

At the same time, the Company Program is a learning-by-doing program in which pupils from upper secondary education learn to develop, try out, and realize good ideas within everything from social innovation to technical products. Company Program is relevant for all upper secondary educations, because the pupils achieve valuable competences that they can use in future as entrepreneurs or as attractive employees in any organization.

Thus, there are many possibilities to have an education in social entrepreneurship and social enterprises in Denmark, but still there is a need for a longer practical education. In fact, the VIA University College have tried to establish a Bachelor program in Social Entrepreneurship that could fulfil part of this need. But as of yet the program has not been approved by the Ministry of Education [8, p. 21-23, 25-26].

Currently in Poland there are several universities offering postgraduate studies in the social economy and social entrepreneurship. In addition, several universities provide Bachelor’s studies (full-time and part-time) as well as single obligatory and optional subjects, such as workshops, profiled master's seminars.

A great example of a formal education for social entrepreneurship in Poland is Warsaw University, the Institute of Social Politics. As one of the best Polish educational institutions, they have been running a special course called Manager of Social Innovations for several years. The key factor here is the innovation. How to implement innovative solutions in social economy, transfer them to other social fields, and make a real impact in this field are the main issues. Social Economy, New Technologies and Management of Innovative Projects are among subjects. After completing the 1-year studies students are expected to have the knowledge about the nature of the social entrepreneurship and its operating principles and skills to set up and implement appropriate strategy with innovative tools, as well as identify the nature of micro and macro business and social conditions, an understanding of the role of socio-economic problems and sustainable economic development.

The one more of the example of education for social entrepreneurship development in Poland is postgraduate studies in the field of Social Economy at School of Social Sciences in Lublin. The aim of the postgraduate social economy is to provide up-to-date knowledge in the field of social economy. Students acquire knowledge and develop skills in management, leadership, the business of the PS (social enterprise), fundraising (including EU funding under the Human Capital), standard designs, innovative testing with a transnational component, obtaining practical guidelines for the preparation of the application, the exchange of

experiences with the practices of the social economy (lecturers), and the development of an innovative project [8, p. 65-66].

At the same time, the Institute of Sociology of Adam Mickiewicz University in Poznan provides subject “Social Economy” for Masters students in the field of Social Work. Throughout the subject, Masters students study topics such as: idea and objectives of the social economy; history of social economy in Poland; social economy in public policies at the national and regional level; centres of support for social economy, amongst others which examine social economy entities: social cooperatives, therapy centres, centres and clubs of social integration, non-governmental organizations conducting economic activity and other entities. Moreover, students have opportunity to learn about tools for supporting and promotion social economy.

Furthermore, Adam Mickiewicz University in Poznan implements the project “Laboratory of Social Initiatives (LIS)”. The main objective of the project is to facilitate 160 students at the Faculty of Political Sciences and Journalism of Adam Mickiewicz University in Poznan entering the labour market by developing and equipping them with competences expected by employers. The project, in particular, consists in raising the level of professional and communication skills, analytical skills, IT and entrepreneurship skills. LIS project consists of three blocks: Social Innovation, Entrepreneurship, Professional Competences and includes study visits at potential employers. Entrepreneurship block includes courses, among others, Social Entrepreneurship and Own Company Step by Step. Within this courses students have opportunity to learn more about grassroots entrepreneurship, socially involved and socially useful, how to effectively search for the right business models, how to raise financial and social capital. In addition, course of Social Entrepreneurship includes study visits to successful social enterprises in Poland.

The gap between public higher education and peoples’ needs is filled by a strong and broad group of non-formal education institutions which are offering training course on different topics connected with social economy; mostly through OWES – supporting centres for social economy providing complex services for people/institutions interested in social economy. All of the training is available for free for the beneficiaries and available in Polish [8, p. 66].

Nowadays, formal and informal education program in the area of social and solidarity economics is creating for pupils of IV-VIII classes of the primary school in Poland. Educational activities dedicated to pupils are run by Social Economy Support Centers in cooperation with the Regional Social Policy Centre. Within the various projects implemented by Regional Social Policy Centre and partners in the area of social economy in the Wielkopolskie voivodship in the years 2011-2015 various educational initiatives were undertaken, among others an educational program for upper secondary schools was created.

An example of good practice is extremely Social Economy Support Center in Gdansk Good Work (Dobra Robota), which implements the project Solidarity Economics. In this framework, the group of participating schools work on social programs that positively influences the local community. The culmination of the work is to defend the idea in front of a professional jury.

Thereby, education relating to social entrepreneurship and social enterprises is getting more attention in Denmark and Poland. Various educational programs are available, both at the level of university, university colleges and primary, secondary school.

At the same time, social entrepreneurship is not currently a sufficiently developed activity in Ukraine. One of the reasons for this situation is the lack of knowledge of the social and public and business sectors about the nature of the social enterprise, its distinction from other forms of entrepreneurship, its role in the development of society and the local community.

Only in 2016, the course "Social Entrepreneurship" first was held at the Bachelor Programs at the Lviv Business School at the Ukrainian Catholic University and at the School of Social Work at the National University of Kyiv-Mohyla Academy.

Furthermore, "Social entrepreneurship" is a part of the Master's degree program "Social work" at the Chernihiv National University of Technology (Ukraine). The course started in September 2016 and in total it contains 30 hours of lessons. In total the course results in 4 ECTS points. The aim of the course is to learn the nature of social entrepreneurship and formation of professional competences regarding the basic stages of social enterprise planning. Throughout the subject, Masters students study topics such as: methodological basis of social enterprise; ability to entrepreneurship in future social professionals; general characteristics of the stages of social enterprise planning; the role of cooperation and the exchange of experience between stakeholders; marketing of a social enterprise; financial component of a social enterprise; organizational requirements for a social enterprise; features of social reporting and auditing. Another example of education program for social entrepreneurship at the Chernihiv National University of Technology in cooperation with the International Foundation for Social Adaptation is teaching course "Social Entrepreneurship" within "Ukraine – Norway" project "Retraining and social adaptation of military personnel and their family members in Ukraine". The participants of the project are able to:

- get acquainted with the experience of social entrepreneurship in Ukraine, Denmark, Poland and other countries of the world;
- learn about the main features of social entrepreneurship and distinctions social entrepreneurship from standard businesses;
- work out own ideas of social entrepreneurship, using Business Model Canvas by Alexander Osterwalder;
- familiarize with opportunities of financial support of social enterprise in Ukraine.

As a result, the Social Entrepreneurship programs are a progressive educational initiative of European countries, aimed to promote entrepreneurship and the innovation of the social and health sector, environmental protection, urban development, rural development and community development.

Conclusions. The examples of educational support for social entrepreneurship in practice allow us to draw some important conclusions. Firstly, education relating to social entrepreneurship and social enterprises is getting more attention in Denmark

and Poland. Various educational programs are available, both at the level of university, university colleges (for professions such as social workers, teachers at primary and secondary school level) and primary and secondary school. There is also a growing number of actors providing support and non-traditional education for social entrepreneurs and social enterprises. Secondly, the inclusion of social entrepreneurship in Ukraine's education systems is at an early stage. Unfortunately, in Ukraine educational programs of social entrepreneurship at schools are not available.

The main direction of development of the education for social entrepreneurship in the regions of Ukraine should be embedding social entrepreneurship across the curriculum at school for development real world skills, entrepreneurial potential in young people. The education programs should follow the project based learning method. Programs should certainly cover such topics as: project management, sources of support and funding, work with target groups (work integration forms of social enterprises), crisis management etc. [7, p. 35].

The results from the current study demonstrated that education institutions, at every level of education, should teach both the theory of social entrepreneurship and practice. Moreover, the modules in social entrepreneurship could be introduced within courses for different professions, in that way inspiring graduates to use social entrepreneurship as a tool in their professional career. In this case, educational institutions should engage social entrepreneurs to education process. Many of the best examples of social entrepreneurship education have been instigated by social entrepreneurs. They bring the innovation, vision and expertise of the social enterprise sector into schools.

In closing, education for social entrepreneurship needs the support of government. As long as governments retain control of education however, they are a key partner in helping to shape an education system that is fit for the 21st century [9, p. 33].

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Part 2. Macro-, meso- and micro-level solutions of the problem of sustainable development provision

EFFICIENCY OF PROFESSIONAL EDUCATION IN AGRICULTURE SECTOR OF UKRAINE: ACTION RESEARCH APPROACH

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The Association agreement with the EU [1] provides vast opportunities in future for agricultural sector of Ukraine, but to use these opportunities its essential to have the necessary knowledge, skills etc. for adopting products to EU market needs. Agricultural potential is not fully enabled by rural population of the country. It is still a relatively low productivity and low growing sector. The current performance of the agricultural sector and non-advanced alternative income sources result in a high poverty rate of rural population [2].

One of the main problems in Ukrainian agrarian sector relates to lack of professional and high-qualified labour. Despite the country's rural sector development is one of highest priorities there is a lack of skills and high-quality professional education system.

The aim of this study is to assess the existing situation and needs of regional professional education in agriculture and rural sector, and whether it understands necessary for future knowledge and skills, as well as types of professional trainings for improvement of vocational education programs on regional level.

The methodology was based on the action research approach. It foresees close collaboration with the target groups (Regional Education centers, SME sector, Public Sector, NGO Sector, students and alumni of vocational training institutions in Agriculture and Rural Sector) in order to explore their vision on the existing situation of regional professional education in Agriculture and Rural sector and identify the needs and problems they face within this regard.

The national system of vocational education in agrarian sector is represented by a system of more than 300 institutions of different types, which provide training on 19 professions [3]. All institutions operate within a single state policy in the field of vocational education. On the one hand, it ensures equality of rights to vocational education, accessibility and opportunity to choose educational trajectories to obtain professions of different qualifications, social orientation of such education and openness of the vocational education and training (VET) system to innovations. On the other hand, the list of educational subjects, topics within them and the number of hours for study is typical within the country, limiting the possibilities for vocational education establishments to determine the directions of their activities.

Since 2015, the course of reforms to gradually strengthen the autonomy of vocational schools has been launched. Among others, it involves introduction of state standards for vocational education on the basis of a modular-competent approach. This approach allows to maintain close relationships with employers at all stages of the learning process and improve the content and volume of professional knowledge,

proficiency, skills in response to changes in the relevant production industry and staff customers' proposals.

Despite the availability of vocational education, the number of students of vocational schools decreases annually. Only 14% of graduates receive vocational education, the rest focus on getting higher education. As a result, the ratio of the number of students of higher educational institutions and vocational schools is 6 to 1. More than 90% of senior pupils from rural schools do not intend to study and work in the agrarian sector [4].

The reasons for unpopularity of vocational education are:

- labour market state (the number of vacancies of skilled agricultural workers is the smallest among all professional groups (1% of all vacancies in 2017), and status in employment is the highest (44 persons per vacancy in 2017 [5]);
- artificially undervalued labour costs, the lack of decent salary, and the lack of opportunities for professional growth and career development;
- improper working conditions (outdated equipment at the enterprises, the lack of social package) and the lack of basic social infrastructure;
- low rate of job creation due to unfavourable investment climate, seasonal nature of many enterprises;
- lack of prestige of agrarian professions among young people.

The situation in the Ukrainian labour market of blue-collar occupation can be called paradoxical. On the one hand, the level of non-employment of vocational schools' graduates is rather high and has an increasing tendency (10,4% in 2016/2017 against 6,6% in 2009/2010). On the other hand, the demand for blue-collar jobs has been dissatisfied for a long period. As of September 1, 2018, vacancies for blue-collar jobs of the agrarian sector accounted for more than 4% of all vacancies of the State Employment Service [6]. And such professions as a farmer and a mechanic for repair of agricultural machinery and equipment are among the top 10 most demanded in Ukraine.

There has been a situation in the Ukrainian economy where the demand for agrarian labour professions is not satisfied at the expense of labour supply, which is being trained by national vocational education institutions. Modern system for training workers for agrarian sector is irrelevant and incapable of ensuring training of skilled workers in accordance with the socio-economic needs of the society.

Taking into account the trends of agricultural production reform in Ukraine, one can distinguish the following directions of content-methodological modernization of agrarian VET:

- providing knowledge on world trade rules, EU agricultural policy, development of skills in the field of productivity development and technical development, environmental safety, sustainable development;
- implementation of methods of forming a personality capable of choosing an individual educational trajectory, life-long learning, career development, entrepreneurship and self-employment;
- gradual reorientation from hard skills to soft [7].

In order to enhance the analytical details for assessing the quality of professional education it is necessary to make reference to the results of expert survey

[8]. The key findings of the survey are the following:

The activity of VET institutions forms an adequate labour supply in agricultural sector, but the quality of training programs needs to be improved taking into account the needs of employers. Students and graduates appreciated the quality of training programs (the sum of the highest ratings was more than 60%), while almost 40% of employers represented average marks, and about one third of them gave high and low marks.

Students and graduates of vocational schools highly appreciate vocational education institutions according to the criteria of educational and methodological support, creation of conditions for professional skills development, and effectiveness of teaching methods. Positive characteristics of agrarian vocational schools were also the lack of barriers to entry, acceptable level of training costs, and professionalism of teaching staff. Students gave high marks to professional knowledge of teachers, their communicative skills and practical experience.

Despite the professionalism of training, employers and graduates point to problems in recruiting and employment in agrarian sector. Almost half of the survey participants (47,6%) from the list of employers called the search for skilled workers a difficult task. Despite more optimistic attitudes of students and graduates (46% of the interviewed are sure they do not have job search problems), 22% of respondents indicated significant difficulties in job search in agricultural sector.

Graduates of agricultural vocational schools have a sufficient level of theoretical training, but little practical skills; they are not sufficiently initiative and motivated. According to employers' estimations, the two most acute specific problems with graduates are lack of practical skills (62,2% of respondents) and lack of initiative (53,8%). In addition, problems of lack of managerial skills (32,4%), knowledge of foreign languages (28,0%) and special professional skills (23,1%) are quite acute.

Since practical skills are determined as the greatest benefit of vocational training, students and graduates are particularly concerned about issues of irrelevant training programs, lack of practical training, outdated material resources. Almost a third of the respondents (26,7%) included practical skills in specialties in the list of the most useful things they learned in a vocational education institution. At the same time, according to the respondents, the most acute problems related to effectiveness of vocational and technical education institutions are: outdated educational base and lack of necessary educational materials (28,0%); lack of practical classes (16,7%); unprofessional and non-motivated teachers (14,7%); non-correspondence of training program to the needs of the modern labour market and agribusiness (12,7%).

According to graduates, preconditions for success are further vocational training, study of foreign languages, specific technologies in the field of agribusiness, basic concepts of finance and management. 48,7% of the polled students are convinced of absolute importance of continuing vocational training, while 38,6% of respondents call continuing education to be of some importance. Only each eighth participant in the survey (12,7%) does not see the need for further acquiring professional knowledge.

Having logistical support and current requirements for training programs

vocational schools do not have the capacity to prepare labour personnel with the expected level of practical experience in the field of modern agricultural technologies, equipment and machinery. According to the surveyed representatives of business, public sector, management of educational institutions, the three most demanded professional skills in agriculture, which are provided partially or don't provided at all, are: practical knowledge of the latest technologies (21,3%); practical skills (19,1%); management and doing business skills (15,1%). All survey participants pointed to the need for updating training programs.

Agrarian business representatives are not actively involved in the process of training specialists; they do not have systematic cooperation with vocational schools, which negatively affects the level of attraction of students to apprenticeship and its quality. Assessing the level of cooperation between business sector and vocational schools and educational centers in attracting interns, two-thirds of respondents (67,6%) noted that such cooperation is limited to periodic admitting trainees by business companies. Another 15,5% of respondents said that business does not cooperate with practitioners. Only one in six respondents (16,9%) calls such cooperation a close one. The result of this situation is the fact that almost a third of the polled students and graduates of agrarian vocational schools did not have apprenticeship or take trainings. Less than half of those who had apprenticeship called it useful (47,3%). Every ninth respondent (10,9%) stated that apprenticeship was merely formal and did not provide practical experience.

Business has not enough motives for cooperation with educational institutions in preparation, recruitment and staff development, which adversely affects market saturation by skilled personnel. The most significant reasons why business companies are not interested in attracting trainees from vocational schools include:

- lack of employment period and experience (21,8%);
- low level of theoretical knowledge and low qualification of trainees (17,3%);
- lack of desire and / or motivation for business companies to perform tutorial functions (14,2%);
- low motivation of trainees to work (12,9%);
- reluctance of business to finance trainees (12,0%).

This leads to sporadic nature of interaction between business and educational institutions in recruiting (70,4% of the polled stated that fact) and occasional nature of cooperation between business and educators in skill improvement issues (only 15,1% of respondents consider such cooperation to be regular). Every tenth respondent (10,6%) is convinced that there is no interaction between business and educational institutions for further training.

State programs for development and support of education in agrarian sector are assessed as less effective than international donor programs. According to the respondents, the areas which they consider to be the most important and effective for improving educational programs in agriculture both from government and from international donor organizations are:

- provision of the analysed educational institutions with modern equipment (15,1%);
- increase of practical training of students (14,7%);

– expansion of financing of educational institutions (14,7%).

The level of awareness about availability of international cooperation and low degree of student involvement in such projects do not allow assessing adequately their effectiveness in Ukraine. Almost half of respondents of the first group (47,6%) do not know about existence of international cooperation projects on exchanging students, teachers, implemented by the Ukrainian educational centers in agricultural sector. Only one of eleven students and graduates participated in international exchange programs.

Preserving the current situation in the field of professional agricultural education, given the expected growth of agrarian business in the country and opportunities for graduates to work abroad, threatens a shortage of skilled labour in the near future. More than 2/3 of respondents (68,0%) are convinced that demand for labour in agriculture will grow, another 18,7% forecast stable demand. At the same time, during 2010-2017 the number of pupils in vocational schools decreased by 37,9%. Another unfavourable, from an employer's point of view, tendency to increase the disproportion between the number of people who acquire blue-collar occupation and receive higher education remains unchanged: the number of students who studied in vocational schools, decreased by 1,5 out of 96 people in 2010 to 64 – in 2017 per 10,000 of population.

Vocational education is a core element of national economy, aimed at providing skilled workers according to the needs of the countries' agricultural sector. Due to the relatively short terms of training, the focus on formation of skills necessary for practical activities, this level of education is especially valued by employers. However, the potential of vocational training in agrarian sector is not fully used nowadays. Its functions of informing and developing professional competencies, ensuring competitiveness of labour force and its mobility in labour market, and career growth fail. This is confirmed by a paradoxical situation, when a significant percentage of graduates of vocational schools cannot find a job, given the sufficient number of vacancies for agricultural blue-collar occupations.

Problems of agrarian vocational education represent a polyhedron, formed on the crossroads of interests of students, senior and teaching staff of educational institutions, employers and other stakeholders. The results of the survey showed that the quality of practical training of vocational schools' graduates is a cornerstone. Neither students nor employers are satisfied with its level for today. Irrelevant training programs, outdated material resources, lack of necessary training materials, and insufficient motivation of teachers complicate the situation. The poor image of the VET system is an obvious and urgent stimulus for open cooperation and communication on collaborative work on partnership principles involving many stakeholders.

Solving these problems comes upon two interconnected barriers. On the one hand, permanent underfunding of educational institutions is not expected to be overcome in the near future. As foreign experience shows, the successful transfer of expenditure financing for labour personnel training in vocational schools from state budget to local authorities is possible, provided there is a multilevel financing, including well-established channels for attracting funds from engaged enterprises. On

the other hand, business entities are little interested in active and systematic participation in training future staff because practitioners lack employment period and experience. It has led to a vicious circle.

Current programs for development and support of education in agricultural sector, both at national and international levels, cannot drastically improve the situation. Through lack of awareness and low degree of involvement in international projects, agricultural vocational schools lose the opportunity to improve training programs, improve material and technical resources, improve teachers' skills, and facilitate trainees' exchange.

In order to reload national system of agrarian vocational education and to avoid personnel shortage it is worth drawing stakeholders' attention to the next points:

- the traditional budget- and input-orientated financing model needs transformation towards modern market-orientated and learner-based financing system. This means focusing on a learner-based model as the main category of desired disbursement mechanism requiring a high degree of flexibility, sensitivity and specialization while, as far as possible, making use of existing infrastructure and resources under the above-mentioned constraints. Revised policies and regulations should be integrated into existing VET system development processes, structures and projects, but more thought should be given to development of an information system for learners to enable them to make the right decision on how to use the new learner-based financing mechanisms. The appropriate role of government in VET market is to let private training markets work under the umbrella of public-private partnerships. This might be relevant for VET programs where the private sector shows interest and where they do not engage the public sector. For agriculture – at first stage public financing should be prevalent, but since this sector is growing (and labour demand accordingly) gradually private sector's involvement also should be stimulated. In order to achieve this, it is expedient to use taxation and fiscal instruments (tax breaks, tax deductions, tax exemptions, deferral of taxes, state personnel training fees), as well as funding instruments (educational vouchers, education lending schemes, student loans, individual training accounts). It will encourage employers to invest more actively in the future workforce, be engaged in management of vocational education system and influence the direction of expending for staff training, and also increase access to high quality education for people with different incomes;

- the state list of professions requires consolidating of agricultural professions and appropriate changes to the state list of professions. This will increase the level of satisfaction of employers' requirements in skills and competencies of working with new technology, facilitate access to employment of agricultural workers, improve efficiency and competitiveness of enterprises and economy as a whole;

- when developing state requirements for vocational education content, the level of professional qualification of graduates of agricultural vocational schools, the main compulsory means of training it is necessary to take into account the need of including knowledge on world trade rules, the EU agricultural policy, skills in the field of productivity development and technical development, environmental safety and sustainable development in general professional competencies. It will ensure the ability of the agrarian VET system to respond flexibly and adequately to dynamic

changes in the world economic space, and take into account new requirements for agricultural management;

– to revise and modernize the current concept of an information system of labour market based on selection and use of diversified data sources (statistical and administrative information, enterprise research, graduate studies). It will allow developing reliable information system of labour market of national importance. As a result, it will improve the predictive function of multilevel system of managing vocational education. For business and public entities who take decisions as to funding, it will define priority VET sectors for financing and investment in education with relevant changing according to sectoral employment and market needs;

– a plan for promotion of vocational education in agrarian sector within the framework of communication strategy on vocational education should be developed. It is necessary to provide the possibility of partial financing of creation and broadcasting of advertising plots aimed at increasing the prestige of agricultural agrarian professions by employers. Broader implementation of vocational guidance system at all levels and further vocational training must also be ensured. It will open the way for motivation, substantiation and strong arguments for formation of a modern vision of agrarian vocational education;

– it necessary for employers to create a framework action plan for improving the quality of vocational education services through a large-scale application of public-private partnership practices. Those include: sponsoring of individual educational institutions by enterprises, investments in training centres through state programs, organization of apprenticeship for practical experience and provision of production training. The knowledge and theory component is clearly the domain of the VET centres, but agribusiness companies could play a crucial role in terms of practical skills and work experience component. With respect to efficiency increases in the delivery of VET programs, the workplace-based apprenticeships deserve special attention. This kind of cooperative training will be an excellent starting point for going into a closer relationship between VET centres and private sector in order to enhance the employability of VET graduates. A longer apprenticeship period will reduce the average training time spent in VET centres. Consequently, recurrent cost per student borne by government will decrease and facilities can be made available for new learners, reducing the need for new investments in VET centres. For sure, such donor-supported initiatives should be based on a strong legislative framework and supported by financial incentives that will reduce barriers to private-sector cooperation and encourage it, in particular, to make financial contributions to vocational education system that will be useful to apply at the level of separate educational institutions. This will enable the development of new types of relations in the field of research and innovation and will gradually form the basis for creation of agrarian clusters;

– the cooperation between VET institutions and international and national funds for financial support for participation of students and VET teachers in international programs should be advanced. It is necessary to intensify the information campaign on possibilities for participation of students and teachers in international cooperation projects for exchange of students and teachers; to provide

appropriate information and consultation support. This will allow students of agricultural vocational schools to acquire modern practical skills in agriculture, take industrial practice at advanced agricultural enterprises. It will allow teachers to use benchmarking of international educational experience for improving national systems of professional training of specialists in agrarian sector, develop and modify study programs, learning materials etc.;

- methods of formation of a personality capable of choosing an individual educational trajectory, life-long learning, career development, entrepreneurship and self-employment should be to implement in VET institutions. Inclusion of such training in the content of educational and production processes of vocational schools will allow to develop skills of adaptation in a dynamic professional environment, decision-making on professional future, readiness to compete and be an active subject in the labour market, self-assessment of competencies, skills and abilities regarding performing professional activities;

- flexible methods for recruiting students in order to attract rural youth, women in particular, to study in agricultural education institutions should be designed. Especially it is important to do active work with rural population – to provide information about available education programs as well as offer specialized short-term practical trainings. Provision of more publicly available, relevant information about VET will allow both potential students and employers make more informed and rational decisions;

- the conditions for improvement of career perspectives and professional recognition, recruitment and skills development at all levels need to be established in VET institutions. To maintain professional qualifications, teachers should attend relevant seminars and courses regularly, participate in meetings and conferences of national or international levels. It will facilitate the establishment of channels for advisory and technical support, information exchange, and improvement of administrative work. The prospective model of specialists' professional training in agrarian sector anticipates involvement of farmers, agronomists, representatives of agrarian products certification agencies, managers, marketers and other experts;

- closer links between VET institutions, enterprises and employment services need to be established. It will allow to meet the real needs of a region or a country through adaptation of training programs and teaching methods. business associations that focus on a specific sector, or groups of professionals who benefit from interaction with VET establishments, could be obvious partners because they have clearly defined knowledge and expertise on a given industry;

- methods of extensional agrarian education, adapted to the needs of different target groups (seminars, trainings, consultations) should be designed. Such methods should extend to continuing education and retraining, modular courses, distance learning and informal education. Providing expanded educational services to farmers and professionals involved in agriculture should be emphasized particularly. This will allow vocational institutions to independently plan and offer their educational services in adult education based on studying demand and supply of a regional labour market.

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INSTITUTIONAL APPROACH TO EVALUATE THE EFFECTIVENESS OF CORPORATE GOVERNANCE MODEL FORMATION WHILE CHOOSING LEGAL FORMS OF ENTITY INTEGRATION

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Within the conditions of the global economy, the importance of local factors of production placement and development efficiency is increasing, despite the maturity of information and communication technologies and the relative availability of markets. This is primarily due to the institutionalization of the company's business activities, which includes a wide range of legal norms and management mechanisms; determines the effectiveness of contractual relations and enforcement mechanisms; contributes to the companies activity integration and their information system development, transparency and availability of specific production factors, stock market resources, transaction costs reduction as well as receiving the benefits leading to the growth of companies productivity and competitiveness.

The analysis of global economic corporations practice shows that the most efficient way of development of the corporate-type enterprises is to use the

advantages of program-oriented and goal-oriented approach integration, which has in recent decades become a popular competitive strategies development tool in rapidly developing countries. As the more diverse the economic and management tools of public and corporate governance are, the more effective the corporate economy development process is [1-4].

Increased competition in the global economy intensifies the question of not only improving the quality of products and ensuring high institutional conditions of business organization, but also its increases the need to find the most adapted to the national context of corporate governance models as a market economy institution and a public economic activity form, which, thanks to the achievement of common goals, create an additional effects due to increased specialization, integration of resources, intellectual, information and councils and retirement homes building companies can improve their competitiveness (no clue what is going on even in Ukrainian) Insufficient level of institutionalization of corporate relations inhibits the development of the domestic economy and requires the determination of the effectiveness of integration evaluation criteria for corporate entities.

The object of the research is the development regulation processes of corporate entities integration relations, which determine the efficiency of business activities within an integrated structure. The subject of research is theoretical and applicative principles of the development of the methodological approaches for evaluating the effectiveness of corporate entities integration.

The research is devoted to the analysis of the key performance criteria of integration relations formation for corporate entities as well as the corporate governance models while choosing the form of enterprise integration. The goal implementation led to the solution of the problems of the analysis of the institutional mechanisms of corporate structures integration relations, the definition of the economic basis of corporate type enterprises integration, the system of criteria and methodologies for evaluating the effectiveness of corporate entities integration.

The following methods were used in the topic research to achieve the goal: methods of system analysis of the regulatory and legal framework of Ukraine; cause-effect approach was used to study trends, phenomena and processes in their relationship and interaction regarding development regulation of corporate entities integration relations, the analysis of the institutional framework of their interaction with public authorities and local governments; rationalization of the factors and criteria of integration efficiency; econometric as well as structural and functional techniques were used for analysis and structuring the impact factors concerning the development of corporate type business structures; program-oriented and goal-oriented method as well as expert evaluation of factors influencing the choice of corporate entities relations development strategy and the development of methodologies for evaluating their effectiveness.

Analysis of the functional features of the corporate sector of Ukrainian economy allows to determine the nature of structural changes in the country's economy, the influence of public administration on the formation of the ownership structure, namely: strong protection of the rights of owners leads to property dispersion, weak one leads to corporate property concentration and complex control

systems creation [4-6]. The insider ownership structure in Ukraine is the evidence of the unresolved issues of institutional support of the corporation's development in Ukraine as of one of the public forms of entrepreneurial activity.

It seems reasonable to begin the analysis of the business units corporate relations development with the determination of features, inherent in corporate form in the western economies, but illegibly determined in the legislative framework of Ukraine, where the concept and the content of corporate relations are not fixed in the legislative environment, however, are widely used in the Commercial Code of Ukraine, Draft Tax Code of Ukraine, Law on Joint Stock Companies and other legally enforceable enactments, which induces certain misunderstandings when it comes to the analysis of such business entities activity. Since there are a wide variety of views on the development of the terminological concepts of corporate law, it will be logical to determine the features, which allow acknowledging the unit as “corporation” in the international practice while this unit is secured in legislation as the following terms: “company”, “economic association”, “union”, “association”. On the basis of the research purpose and analysis of the corporate legislation in Ukraine [5, p. 261-265] the following business units are acknowledged as the corporate entities:

- entrepreneurial companies, which were created exceptionally in the form of the joint-stock company (private joint-stock company/closed joint-stock company); public joint stock company (open joint-stock company); limited liability companies, partnerships with additional liability;

- each of the participants in the enterprise is the owner of corporate rights;

- the enterprise was created on the basis of the pooling of interests, not the association of the persons, i.e. the enterprise appears as the property owner, instead of his members;

- property rights for ownership capital, invested in the enterprise, are always separated from control (in contrast to the cooperative society, full partnership, limited partnership);

- entrepreneurial administration is run by institutional bodies, specially charged to govern on behalf of the legal person – the publicly elected hired workers fulfilling the functions of corporate management;

- participants in the enterprise are united under the overall interest, which reflects the outsider and insider interests of the corporate right owners, and also those, who are not shareholders (hired workers, managers, etc);

- the presence of the social partnership institute, namely the presence of the developed standards and rules on the social protection of the members of the working association.

Clarification of the characteristics of corporate entities and their relationships reflects the most important distinctive features of corporations and their desire to pool resources in order to obtain key competitive advantages in the domestic and foreign markets.

To implement innovation development, any enterprise must be provided with informational and innovative resources, which can be obtained through the integration of corporate assets of the members of the association. However, the complexity of formation of such structures consists in the purposefulness of positive

externalities that are expected from integration and in incentive factors determining the corporations' owners' decision to consolidate assets, optimize the place and functions of each company as an integral part of the structure of economic relations of the integrated association [7, p. 207-210].

Despite the fact that the mechanisms of enterprise integration represented by a large number of scientific studies are well-grounded and useful [5, p. 263; 8-10], the effectiveness of these mechanisms should be evaluated using a system of indicators able to allow choosing the optimal institutional way of corporate association integration and development.

First, in the author's opinion, the institutional advantages gained by the members of the association are poorly developed, as they tend to focus on saving transaction costs. Also, the external effects (intangible, institutional, organizational, innovative, corporate etc.) stay not sufficiently developed as well, which does not allow finding out which of them is the cause and which are consequential, actual or potential. These effects have different economic origins and create unique, innovative benefits that shape the global competitiveness of national corporations as a result.

The second major obstacle is the one-sided views on the processes of integration, co-operation and concentration of corporate assets. Scientific sources indicate only positive effects, leaving negative issues not discussed. If the integration effects are significant, then why there are so few powerful enterprises of a corporate type, especially transnational? And why do more and more corporate owners change the form of ownership from a public type to a private one, or even quit their entrepreneurial activity, that could not be expected in the case of settled institutional conditions of the business environment with positive externalities?

Thirdly, the issue of criteria for choosing the structure of the association and the partners of the corporate association is important. It is obvious that in addition to external influences, microeconomic and institutional mechanisms of their achievement (such as, for example, the taxation scheme) are also essential.

Let's try to answer all these questions consistently, assessing the expediency of integration and the economic logic of corporate entities relations development.

The intensification of the processes of national economic entities integration into the world economy at the legislative level led to the adoption of the Law of Ukraine On Holding Companies (dated 15.06.2006, №3528-IV). In the worldwide practice corporations perform the role of financial flows consolidators. Companies are formed as a result of the integration processes of the pooling of capitals (merges, acquisitions) and are used to concentrate resources enabling to consolidate the efforts of owners to improve investment, optimize financial flows and taxation, reinforce protection against unfair competition and use the opportunities of implementing expensive innovative projects and programs. Unfortunately, neither the specified law nor the Law of Ukraine On Joint Stock Companies (dated 17.09.2008 №514-VI) do not provide any preferences for companies to stimulate their development, since the creation of any integrated structure is a very expensive process that has to pay off.

Developed on the basis of international standards, National Principles of Corporate Governance are of recommendatory nature and provide opportunities to approach the standards of openness and transparency of corporate structures, investor

rights protection, and corporate governance improvement.

Thus, in Ukraine, the process of corporate legislation improvement goes on, intending to solve the problems of institutionalization of mechanisms for coordinating the economic interests of different groups of participants in corporate relations, including the state. It may be worthwhile to take advantage of the USA experience, where large corporate entities provide services to the public on terms that cannot be obtained from private ones. For example, corporations with a large share of state property combine two fundamental features: the state reserves the right to make strategic decisions by implementing public policy in a particular industry, and the responsibility for the results of the activity is borne by the management of the corporation. By providing corporations with individual government powers, American corporate law ensures the safety of activities and the preservation of national property control in strategically important sectors of the economy [3, p. 25-27].

The role of the state in modern Ukrainian realities, characterized by the inability of state mechanisms of regulation of entrepreneurship development to overcome institutional, investment, financial collapses, becomes crucial, especially given the depth of socioeconomic crises and their consequences. The imperfection and fragmentation of the existing legislation leads to unsatisfactory performance of the adopted laws, market infrastructure development slowdown, and economic stagnation. Market institutions able to accumulate all the scientific achievements as well as the progress of mankind and bring them back for the public welfare are poorly developed in Ukraine. The effectiveness of the implemented reforms proved to be inadequate to the socioeconomic consequences, incommensurable with the high price paid in the form of deep destruction of the territorial, industrial, technical, human potential, inadequate costs compared with other countries undergoing similar socioeconomic transformations [11].

The state's task in developing the institutional environment for the corporations functioning regards not only creation of a favorable institutional climate, but also national interests lobbying in favor of national corporations concerning their integration into the global economic space [11]. The state also has to inhibit and block the "shadow" economy, the entry of the structures undesirable for national environment. For this purpose certain institutions are used: input requirements mechanisms, channels of direct public exclusion or direct passing etc.

In the process of improving the institutional mechanisms for regulating the integration relations of corporate entities, the state acts as a legislator and as a guarantor of law compliance. The priority of the activities of state and local government bodies should be restructuring and increasing the competitiveness of regional economic complexes, individual large companies, deepening their sectoral specialization, introducing ecodesign in production, development of industrial, transport and market infrastructure.

The legal basis of the corporate sector of the economy should solve one more important task: creating mechanisms for ensuring the updating and expansion of the reproductive process of production of goods and services, which would make business more profitable and socially fair. By modifying the institutional mechanisms

for regulating the integration relations of corporate entities, it would be appropriate to take into account the historical experience of American and European legal systems that share the ownership rights to public (private relations) and private (protection of private interests), regulate relations between private interests related to profits. The development of such a mechanism which ensures the efficiency of using private resources in a united economic mechanism based on the institutional approach, is advisable to be carried out by three interconnected components: institutional, corporate, interpersonal, which integrate and protect the interests of not only shareholders but of all participants in corporate relations [12].

The system of property rights is a dominant component of the institutional environment of corporations, forming a model of corporate governance and ensuring the activity effectiveness. Property rights realization is carried out according to the norms and rules legalized by the state (formal rules – laws, decrees, regulations, statutes, standards, etc.), corporate relations, relations between business entities and their environment (informal norms – principles of corporate governance, corporate culture rules, traditions, customs, patterns, stereotypes, patterns of behavior, etc.). Sometimes formal and informal limitations can be positioned antagonistically, which will simultaneously affect the effectiveness of corporate business entities relations. Such situation forces corporations to choose a combination of formal and informal norms of conduct that may not always be successful and well-balanced. In turn, the institutional environment is characterized by increasing passivity, with even more inactive informal norms. Thus, the institutional mechanisms for regulating the integration relations of corporate entities represent a set of rules and regulations that limit the choice of possible models of corporate governance, the effectiveness of which affects the level of transaction and transformation costs, forming new conditions for the implementation of mutually beneficial decisions [7, p. 208-212].

Exchange, placement, use or redistribution of corporation resources in the external environment is provided by the market, and within the framework of economic relations the corporate entities integration relations are considered as property rights management mechanisms. This feature makes the market different from the institution, which is a set of rules for the exchange conditions formation, and from an organization where such a transfer is not represented in the classical form.

Analysis of institutional mechanisms for regulating the integration relations of corporate entities involves taking into account some indicators which, of course, depend on both the historical development trajectory and the institutions developed in the process of formation of market relations: economic, technological, environmental, tax, as well as institutions, belonging to the organizational culture, business communication, partnership relations, socialization, informatization of the society, etc. Although most institutional mechanisms are related to the state's economic policy and even are its creation, it is still very important to take into account the processes of institutions formation and development, the orderliness of which is a characteristic feature of the institutional system. Institutional structure is a set of organizational, legal, organizational, economic, as well as cultural and informational relations, which interact within the framework of certain organizational forms of economic entities.

As part of the property rights redistribution a set of obligations to shareholders

is considered in the form of an organizational agreement, in which a certain corporation represents the interests of its investors and adheres to their implementation.

In the modern economy, the most important subject of property rights relations is the state. Through the use of various management mechanisms, state authorities and local self-government perform the functions regarding relations regulation between all market players by: financial, fiscal systems, stock market, granting of privileges, subsidies, subventions, grants, shareholding management in various joint stock companies etc. Ownership management and control over the effectiveness of their use are aimed at regulating the activities of corporations in fulfilling the obligations assumed by the owner of corporate assets. To improve the efficiency of management and the formation of competitive advantages for national corporations, the state should optimize its share of capital stock towards increasing the predictability and strategy of their development [5; 8; 9, p. 298-299].

The state as the most important regulator of economic relations forms the basic rules that determine the appropriate organizational structures and mechanisms for controlling their economic activity. It is the economic policy of the state that influences changes in these rules. Therefore, the institutional arrangement should be considered from the point of view of the state economic policy, which should be optimized in the part of regulating the issues of economic activity of integrated corporate entities. The quality of institutional limitations is represented through their influence on the efficiency of the functioning of corporations, allowing the latter to reduce transaction and transformation costs. However, taking decisions on the improvement of institutional mechanisms for regulating the integration relations of corporate entities requires taking into account the passivity of their transformation processes. That is why the changes should be incremental, and their stages should be clearly defined. Considering the integration relations of corporate entities, it is necessary to take into account the evolutionary or inductive nature of the environment regarding the formation of qualitatively new institutions for the corporations' business activities.

It is necessary to emphasize the duality of the institutional mechanisms of regulation of the integration relations of corporate entities when it comes to the issues of adaptation of the corporation to changes in the institutional environment. On the one hand, corporate units choose the expedient actions from a number of possible alternatives, and on the other hand, they accumulate knowledge and experience, using different models of management, investment, and innovation implementation, which in turn leads to changes in the institutional environment and the emergence of new institutions. Thus, the benefits of using effective institutions force corporate bodies to rebuild economic relationships in the internal corporate environment and among other market players. Regardless of the classification of transaction costs, the decline of which becomes the dominant cause and condition of the integration of manufacturing companies (on the contrary for non-productive companies, the growth of transactions increases the company's profits), the main result is expected from external impacts that influence the choice of corporate relations model, strategy and development stability. To date, unfortunately, there is no unambiguous understanding

of the range of issues related to the impact of transactions on the regulation of the integration relations of corporate entities, however, the relevance, importance and complexity of this analysis is emphasized [10; 12-14].

Table 1

Comparative analysis of management models of corporate entities

Control model element	Ukrainian model of corporation	Analogue of corporate governance model
Model type	insider	German, Japanese
Institutional terms	The Civil Code of Ukraine, the Commercial Code of Ukraine, Laws of Ukraine On Business Associations, On Joint Stock Companies, On Securities and the Stock Market, On Protection of Economic Competition, Regulations and decisions of the National Commission on Securities and Stock Market of Ukraine (NCSSMF)	German model
Market capitalization	low	Japanese model
Main participants	Financial institutions, banks, investors	German, Japanese
Attracting financial resources	Direct participation of financial institutions, banks	German, Japanese
Share of foreign investors	low	Japanese
Shareholder structure	Financial institutions and organizations, cross-ownership of the shares	German, Japanese
Mechanisms of management	Shareholders' general meeting, board of management, directors, supervisory board	American, Japanese
Principles of management	Centralized organizational structure of companies. Quasi-democratic management	–
Participation of shareholders	– introduction of changes and additions to the charter of the company; – reorganization of the company, participation in integrated associations, professional associations, unions, guilds; – election of members of the board and structural components of corporate governance; – approval of dividend policy.	Japanese
Role of hired workers	low	American
Requirements for disclosure and listing	Financial statements. The stockholding structure is a commercial secret	German
Strategic Goals	maximization of dividends	American

In worldwide practice, the significant experience in regulating the integration relations of corporate entities is accumulated, and, since many corporations are transnational, there are both similar features and prominent differences. Many companies are trying to meet the standards and legislation of the countries of their operation, in particular regarding compulsory disclosure. As the analysis of the activities of world-known corporations showed, the main forms of integration of modern corporations are concerns, conglomerates and financial-industrial groups formed on the basis of the pooling of capital. The diversity of aspects of corporate governance is grouped into two main models: outsider and insider (Table 1). Outsider model (American or Anglo-Saxon) is formed due to the effectiveness of external mechanisms of control over corporate management. Insider model (German or Japanese) is based mainly on internal mechanisms of corporate control.

The reviewed models of corporate governance are relatively conditional, reflecting the national legislative features of the countries of origin, and besides there are a lot of modification variants of various organizational aspects of corporate governance, reflecting the influence of institutional mechanisms on the conditions, features and management of the current trend of economic development of countries.

The Ukrainian corporate governance model, which continues improving after the corporatization of state ownership, contains some characteristics of the major global models of enterprise-type management (Table 1).

The analysis of the characteristics of the Ukrainian model of corporate governance (Table 1) revealed multifactorial aspects in shaping the relations of corporate subjects interconnected by the multidirectional interests of the main participants in the integration process [13; 15; p. 333; 16-18]. There are various groups of participants in the relations: state and local authorities, partners, shareholders, top managers, hired workers having interests that do not always coincide with the assessment of the company. Each of the participants identifies its own priority, which will affect the evaluation of the effectiveness and appropriateness of corporate decisions. Therefore, it is necessary to find evaluation criteria of efficiency that would be relevant for all target groups of corporate relations. Their systematization is presented in the Table 2. Thus, from the standpoint of a multifactorial approach, the effectiveness of integration relations of corporate entities will increase if both group and personal interests are met.

A meaningful analysis of the factors characterizing the interests of certain groups of participants in corporate governance (Table 2) revealed that the effectiveness of relations is determined by the idiosyncratic properties introduced by the majority of the owners of corporate rights, whose efforts are aimed at maintaining investment attractiveness by improving the competitive advantages and corporation development strategy.

From the standpoint of corporate management, it would be wrong to underestimate the manifestation of the synergy of relations and the growth of labor productivity, which in spite of being internal externalities are powerful factors-motivators to external ones: status, prestige, level of wages, rates, bonuses, etc. The balance of interests of individual groups of participants in corporate governance sometimes requires compromise solutions. In any case, the assessment of effectiveness of

corporate entities relations should be specified by the common purpose and interests of the participants. Under these conditions, there are the following the criteria for evaluating effectiveness: labour productivity growth pace, profit, the dynamics of unit costs, profitability of one share, the volume of long-term investments, development of institution of social partnership, reducing transaction costs and other indicators demonstrating both the current state of the company and its potential development.

Table 2

Characteristics of concerned groups' interests in the development of corporate relations

Concerned groups	Characteristics of interests	Expected result
Owners (shareholders)	Maximization of incomes from invested capital, risks reduction, company capitalization growth	Growth of dividends
Government bodies	Stable operating of companies, taxes and payments, jobs preservation, implementation of social projects, development of partnerships with authorities	Stable tax base, institutional and political climate
Management of corporations	Stable company development and personal career growth	Growth of wages, career advancement
Investors (shareholders, lenders)	Appreciation (and free return) of invested capital with fixed interest. Dividend policy of the company	Appreciation and free conversion of the capital
Workers	Guarantees of employment, wage growth, social standards and guarantees	Growth of wages, high social standards and their guarantees, health and ability to work, social security
Partners (corporate relations and interconnections)	Stability of industrial relations and guarantees of supply, performance of contracts	Stability of prices for goods and services. Strategic long-term contracts, partnership development
Consumers	Satisfaction of needs for goods and services. Availability of goods and services	Low prices for goods and services. High quality of goods and services

Attention should be also paid to the sources of company development, such as the rationalization of internal (endogenous) factors of increasing the efficiency of corporate governance in terms of procedures for coordinating the interests of all interested groups, increasing the reactivity to the perception of market information and self-organization. These properties provide the company with competitive advantages on the market. In this aspect, many researchers note the synergistic effect that can only be achieved by a team of top managers capable of co-operating on a high level of management process for development of the internal potential of the corporation and external market effects.

Integration of corporate structures aims at integrating business through concentration of resources, investment ones above all, putting them up into

innovative assets, purchasing other companies, or acquisition of their shares and gaining competitive advantages in the market. Possibilities for implementing state programs and projects will depend on the quality of the institutional environment of the functioning of corporations.

Considering the peculiarities of the formation of the integration relations of corporate entities in Ukrainian realities, we can't avoid mentioning the weak spots of domestic corporations, among which are the following:

- opaque enterprises assets privatization mechanisms;
- lack of institutional mechanisms for regulating controversial issues and the objectivity of market relations, equal for all economic entities;
- large dispersion of small shareholders and their weak influence on corporate decisions, which eventually led to the concentration of shares in hands of several individuals and the transformation of the company from the public form of corporate relations into private;
- a significant proportion of affiliated entities in the ownership structure of the corporation, hence the desire to uphold personal interest rather than corporate;
- concentration of ownership and the formation of oligopoly/monopoly within the markets of products/services;
- ignoring the rights of passive owners;
- low level of paid dividends;
- insufficient level of information disclosure regarding the activity of the corporation, limited by annual reporting;
- low level of top management of corporate governance;
- the formation of corporate associations whose market power can be compared with regional / state authorities;
- overwhelming control of banking structures over production ones;
- unfavorable investment climate and lack of sufficient investment for implementation of programs and projects for the modernization of production capacities;
- incompleteness of national/state strategic programs and failure to achieve the goals of state economy reforming.

Corporations need to respond promptly to these challenges and improve their operations by implementing certain strategies based on the program-oriented and goal-oriented approach as well as on the predictive trends of the scientific and technological development of the industry of company's operation in order to stay up to date within global trends, especially to withstand permanent crises and high global competition. It is obvious that the right choice of strategy is a prerequisite for the development of integration relations, determines their success and forms the competitiveness of the market.

The main approaches to the formation of the strategy of integration relations of corporate entities may vary in two directions.

First, if products (services, work) of corporate entities, their innovative or transactional activity, qualitative or unique characteristics of products (services), scale effect etc. are selected as the object of strategic management.

Secondly, if the potential of integration (tangible and intangible) opportunities

of companies, contract relations, a unique market niche, etc. are chosen as the object of strategic management.

Depending on the object of strategic management, a strategy is developed, which may include the following examples:

- production of unique products, which will increase profitability, open new markets, activities;
- organization of mass production, which allows to achieve the effects of scale production, reduce transaction and production costs;
- innovative products development to meet regional or local needs, which will help to gain a new segment / market share;
- changing the structure of integration relations of corporate entities through mergers, takeovers, acquisitions of other corporations or their shares, which will help to keep market share, change company profile, etc.

The general algorithm of strategic management practice in foreign corporations is to implement the strategy stages at four levels: the highest level of corporate governance; management in specialized corporate units which are the units of the integrated structure; management of functional units, and finally the management of local production units.

A distinctive feature of the integration relations of corporate entities consists in the need to coordinate the activities of all business units that form specialized hubs, therefore, for a conglomerate corporation structure, it is recommended to conduct differentiated planning of the corporate strategy, and for the concern corporation - to adopt a program-oriented approach to the strategies formation [5; 7]. Moreover, strategic management at the stage of formation of the integration relations of corporate entities should make provisions for continuous interaction of all levels of corporate governance in terms of informational support, analytic work, algorithms development and the scenarios choice for strategic development, monitoring and control of critical indicators of strategy implementation.

It should be noted that integration may include a certain group of enterprises of different ownership forms and geographic locations, which are technologically interlinked with the similarity of the target structural and functional relations in the production process.

It should be emphasized that the division of labour, the concentration of resources and the direct geographical proximity of business entities, as can be seen in clusters, do not matter. Despite the various forms of informational and communication relations, the feasibility of integration becomes necessary only if certain externalities are reached, the level of which does not depend on the distance between the enterprises, but is aimed at gaining long-term competitive advantages. The nucleus of such an association is determined by the innovative enterprise as the main company, and all the others as auxiliary and service companies.

The economic origins of the integration relations of corporate entities are represented in a number of advantages brought by the integration to its members, arising in the so-called external economy (externalities), similarly to the internal economy of production scale. This economy is determined as the external since it appears within the framework of the integration relations of the institutional system

of corporate entities. If companies should optimize their operations management in order to maximize internal savings, then, in order to maximize external savings, they should choose a strategy for interacting with their partners and shape corporate relationships. Like internal savings, external savings can increase the productivity of companies that gain them, make them more possibly productive and therefore competitive on other equal terms. Among the main flaws of existing approaches to assessing the effectiveness of the relationship of corporate entities the following are recognized [7]: a very simplistic approach to the analysis of externalities and competitiveness, especially at the micro level; lack of methodical approaches and rules of substantiation of basic system-forming elements in integrated structures; disregarding the level of development of infrastructure and logistics of united corporations, the efficiency of information flows organization, ownership structure, nature of relations, proportions of the united structure, spatial factor; mainly descriptive nature of organizational, economic and socioeconomic relations; lack of evaluation of the effectiveness of different types of interconnections and factors of development corporations in integrated structures.

The formation of relations between corporate entities is determined by the specialization and degree of labour division, international in particular, especially if the main enterprise is resource-dependent on the import of technological components of the production process. The latter determine the coherence of participating companies in the production process, which interconnects all the informational and communication components of production [7; 12; 13; 15]. In other words, this is what for such an association takes place. This way of choosing a parent company a.k.a. the core of the association, may be chosen for any territorial production system, complex, cluster, group of organizations or enterprises. Among the qualitative characteristics of the nucleus of the integrated structure, the scientists [12-15]: structural similarity, or in other words the relations of corporate subjects which can be decomposed to the functional-node level; stream-oriented provision of nodes consisting of flows of production, supply, transportation, service in the production process; the ability to combine and modify nodes and streams; circularity or technological localization; static characteristics – the number of nodes, connections, constituents, spatial localization, etc.); dynamic characteristics – degree of riskiness, stability, elasticity, passivity, adaptability, flexibility, functioning time interval etc. [13].

Quantitatively represented properties are characterized by relevant indicators. Thus, the structural similarity and the ability to combine is characterized by the degree of combination, which is defined as the ratio of the weighted average number of nodes (combinations) to the total number of members of the association. Circularity (or technological localization) is the ratio of the number of structural components, closed in a single technological cycle, to the total number of cycles. At the micro level, special characteristics such as riskiness, resilience, elasticity, passivity, adaptability, flexibility become acute [7].

In our opinion, these system-wide indicators give the chance to evaluate more adequately the essential aspect of company consolidation and the effectiveness of external externalities which will determine the level of macroeconomic sustainability criteria for the development of the integrated structure.

The next step is to find out the conditions and factors that will determine the effectiveness of different forms of the integrated structure of companies.

The following forms of compatibility and connectivity are distinguished [7]: specialization deepening and international division of labour; variety of technological interconnections, informational and infrastructural interconnectivity of enterprises in the market space due to the similarity of resource and ecological support, infrastructure specialization, flows combination and proportionality; informational unity of content of corporate subjects relations; synergy and interdependence through the system of contractual relations [19; 20]. Scientific research analysis in the context of evaluating the effectiveness of corporate subjects' relations integration gave the author an idea about the need to develop a system of criteria for the formation of integrated structures, as well as for evaluating the effectiveness of the influence of institutional mechanisms on their development.

Analysis of the views of domestic and foreign scholars on the determination of the effectiveness of corporate relations has shown that there is no general methodology for evaluating the effectiveness of integration. The author shares the views of the scholars on the need to find general indicators for assessing the effectiveness of the integration of enterprises of corporate type into large business structures. Therefore, it is proposed to consider methodological approaches to assessing the effectiveness of the relations of corporate entities through a system of criteria that reflect their expediency and socioeconomic efficiency, gaining external effects in terms of increasing competitiveness through integration. On the basis of the author's development [7, p. 210-212], the essence of which is the identification of the parent company – the core of the integrated structure, which is potentially able to become the "point" of growth of the national (regional or branch) economy. In its turn, the generalizing (integral) criterion may include the calculation of several others both general and partial criteria (Table 3). The system of calculating the proposed criteria is presented in Table 3.

Table 3

Efficiency criteria of corporate entities relations

Criteria of the selection of priority enterprises	Development criteria
The largest share in production in the technological chain,%	I_{PA} (rate of production activity)
The highest growth rate of production output,%	I_{EO} (rate of export orientation)
The smallest share of losses in industry, region,%	I_{TR} (rate of tax revenue)
Capitalization Ratios; Profitability Level, %	I_{IA} (rate of investment attractiveness)
The share of employed from the total number of employees in the industry/region,%	I_E (employment rate)
Depreciation of fixed assets,%	I_{PP} (rate of production potential)
Transactive Activity	I_{TA} (rate of transactive activity)
Current Ratio	I_S (rate of solvency)
Coefficient of provision by own working assets	I_{FS} (rate of financial stability)
Coefficient of scientific research activity	I_{SRA} (rate of scientific research activity)

General economic criteria that reflect the dynamics of financial results and inform potential investors about the investment attractiveness, the stock activity of the corporation, its market capitalization, determine the effectiveness of corporate governance are the dynamics of profitability, financial stability, the availability of own working capital, liquidity, and others. The proposed partial criteria (Table 3) are within the range of 0 to 1 ($0 < I < 1$), respectively, the aggregated indicator of the efficiency of the integrated structure will accept a value from 0 to 1. In our view, the choice of criteria from a series of proposed, by which the owners of corporate rights take decisions on the merger, make it possible to decide independently what factors of the development of companies are the priority and the most strategically important, to take responsibility for the effectiveness of the companies activity thanks to the fuller reflection of substantial socioeconomic indicators of activity of economic units. An aggregate indicator summarizing the criteria presented in Table 3, characterizes the socioeconomic efficiency of the integrated structure and its impact on the national, regional or sectoral level of production development.

Based on researches of the development of the corporate segment of the Ukrainian economy, the public sector of the food industry corporations was selected as an example, with its dynamics displayed in the figure. By examining the dynamics of financial results of the corporate segment of the Ukrainian economy, one can observe the representation of the general tendencies typical for food industry enterprises.

Although there is a decline in the share of enterprises of a corporate type against the backdrop of economic stagnation, rising financial risks, lower investment, weak stock market development in Ukraine, these enterprises are able to create real prerequisites for the dynamic recovery of the economy. Moreover, global competition requires the search for the new forms of corporate business integration, concentration of resources on the creation of innovative active structures capable of competing in the global market [21]. An analysis of the development of the public sector of food industry corporations showed that there is a significant increase in the volume of commodity production in the industry (+80%).

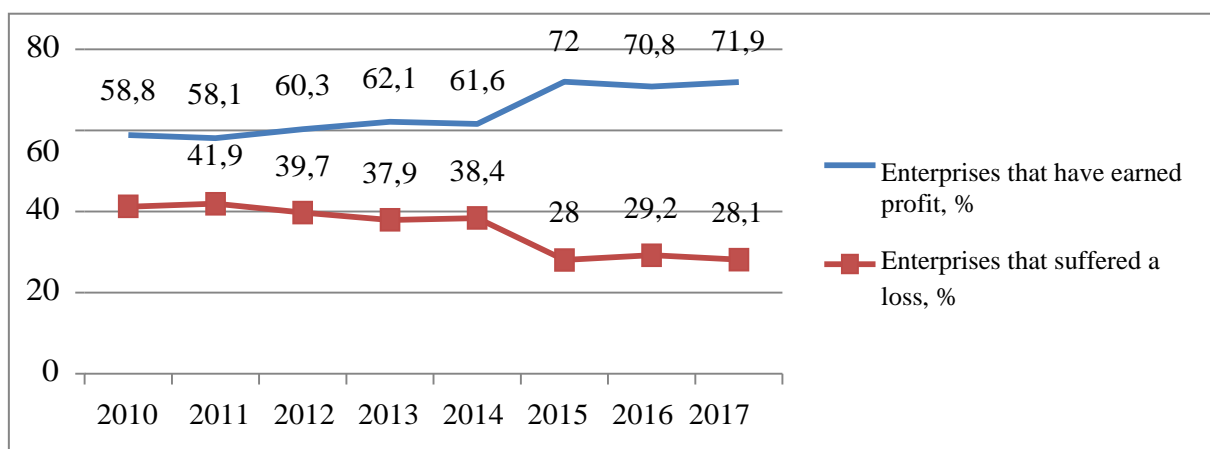


Fig. 1. Dynamics of food industry enterprises that have gained profit/loss

Source: developed by the author [6]

The peculiarity of the formation of the corporate governance model at the

enterprises under study, as well as for all other public or private companies, was the corporatization of state-owned assets in 1996-2002. Subsequently, there was a significant concentration of majority ownership (up to 98%), which transformed them into private enterprises preserving the features of corporate governance.

As of 01.01.2018 all the investigated private joint stock companies (Table 4) are registered within the State Depository of the National Commission on Securities and Stock Market and on the Ukrainian Stock Exchange. However, none of the companies has undergone listing process and has not conducted any stock issues in recent years. In the structure of shareholders there are no shares of state, bank property or property of any foreign investors. All private joint stock companies are large enterprises with more than 250 employees.

Table 4

Net income from sales of products (goods, works, services) of studied food industry enterprises in 2012-2016, million UAH

Enterprise	Year						
	2012	2013	2014	2015	2016	In percentages	
						2016 up to 2015	2016 up to 2012
The Myronivskiy Khiboproduct	11381,6	11826,7	14636,7	23983,1	29597,4	123,4	2,6 times
Kyivkhib	1943,5	1886,5	1692,7	1962,7	2778,9	141,5	142,9
Yagotynsky butter plant	718,8	944,3	1171,7	1659,6	2024,7	121,9	2,8 times
Chumak	606,0	619,8	829,7	996,6	1092,8	109,6	1,8 times
Pyriatynsky cheese factory	752,6	840,3	773,2	759,1	1055,4	139,0	140,2
Roshen	671,5	497,6	294,3	250,5	232,3	92,7	34,5
Odessa Cognac Factory	281,8	336,7	257,0	443,4	433,3	97,7	153,7
Mirgorodsky mineral water plant	263,3	246,3	267,0	324,3	342,8	105,6	130,2
Odessa Baby Food Cannery	9,6	6,5	16,9	18,9	24,6	130,1	2,5 times
Total	16 784,4	17 389,9	20 194,4	30 687,3	37 942,8	123,6	2,3 times

Having calculated the aggregated indicator as the average of the arithmetic sum of the selected criteria for the investigated Public joint stock company (depending on the form and purpose of the integration), it was found that these corporations have the basis for the formation of integrated structures within the territorial division of labor, which is recommended to create cluster type structures. However, the disadvantageous institutional environment and low innovation activity of these companies do not aim them to the formation of such structures, even within the limits of geographical proximity to their partners and technological affinity of the production process.

Taking into account all the above, it should be noted that the integration and

concentration of corporate resources to ensure the transition to innovative development, as the transition itself represents innovation, is not yet actualized by corporate management as a mechanism for increasing the competitiveness of companies. From our point of view, in such circumstances, the issue of the danger and risks of external competitors is raised not only in relation to market redistribution, but also to the loss of technological improvement, investment resources, human potential, and beyond all doubt the fact that the latter is the greatest threat to national economy development.

Solving problems of the corporate form of management receives extensive public nature, which is of fundamental importance for the national economy. The study focuses on the fact that the corporation, reproducing processes for the production of socially useful goods, stands both as the entity and as the coordinator on a par with the market, the state and institutions. Based on the fact that the mixed economy is characterized by fundamentally different control mechanisms on the part of the market, corporate bodies, state and local governments, improving the institutional mechanism of regulation of development corporations is intended to align the interests of all participants of corporate relations.

Performance analysis of corporations showed that the integration ratio of domestic companies only exist de facto: in the form of conglomerates, created on the basis of natural and mining enterprises, clusters as the experience of the industrial associations, corporations with a centralized structure and a large industrial enterprise. These companies have no share in the structure of the national economy significant enough the latter to be considered transparent and open. However, the institutionalization of the status of integration relations of corporate structures as the institutional component of the market economy, legal support, recognition of goals and objectives, subject composition, classification, formation conditions, functioning and liquidation will create a powerful entrepreneurial structures and increase the efficiency of the national companies.

Institutional mechanisms of corporate structures integration relations have a significant impact on how corporations interact at micro and macro level, the improvement of which will ensure the growth of competitiveness of the corporate sector of the economy.

Analysis of the key performance criteria of integration relations of the corporate entities helped to find out that the formation of complex integrated structures has some general features, namely goal achievement, causality, integrity, emergence, structural and functional definitions, synergy, adaptability, and others. Subject-object nature of the relationship provides an adequate selection of the model of the integrated structure, and integration relations of the corporate structures allow recognizing them as market institutions, which determines the openness and publicity of the corporate economy activities and contributes to the formation of the competitive advantages of corporations both in the domestic and foreign market.

The effectiveness of the formation of integration structures of corporate relations is determined by the structural and functional connectivity (emergence) and the interaction of the companies that are subject to the impact of both public institutions and the market.

The proposed methodological approaches to the evaluation criteria of effectiveness of integration for corporate entities allow selecting the parent company a.k.a core of the integrated structure, to evaluate the economic feasibility of its formation on the basis of the system performance criteria of association members, taking into account the social and economic components and giving the opportunity of the assessment of uniqueness and effectiveness of the new model of corporate governance (internal effects) and integrated structure (external effects) in the system of territorial and international division of labour.

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DIRECTIONS OF YOUTH POLICY IN UKRAINE

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The third millennium is the period of radical change of the way of life and the format of human activity. Technical advancement breaks new grounds for people and creates new opportunities for various social groups. Spatial and social mobility of each individual becomes higher and higher.

It appeared to be that youth are the most mobile persons making their roles in social and political life more important. Social and political upheavals that took place seven years ago in Ukraine and recent events in North Africa may serve as an example that makes the issue of the formation and implementation of public youth

policy more current.

At the same time, the public youth policy of Ukraine can hardly be called active and consistent. The lack of attention to the issues and interests of young people, consumer attitude or disparagement towards the youth movements, and financing with whatever funds remain are caused by a poor understanding of the critical importance of youth in social and political life by the representatives of the Ukrainian political elite. Due to the abovementioned factors public and local authorities may lose control over the situation.

Thus, there is the issue of improving the formation and implementation of public youth policy that requires nuanced analysis and rethinking of some of its components.

Public youth policy in Ukraine and some of its aspects have been studied by modern Ukrainian researches many times.

The works of M.F. Holovaty, O.V. Kulinich, N.B. Metolkina, V.V. Orlov, I.O. Parubchak, M.P. Perepelutsia, R.P. Storozhuk and others were dedicated to this topic. However, they were not focused on a comprehensive analysis of the public youth policy within its formation at the beginning of Ukrainian independence and further development.

Consequently, although they managed to make successful generalizations and periodization of the history of the development of public youth policy in independent Ukraine, these achievements are partially outdated.

A conceptual framework of youth family policy

Youth family policy constitutes an integral part of the public social policy, influences the state of the young family, and is a tool for the creation of conditions and guarantees necessary for its social formation and development. It should be viewed as a mechanism used by the government to interact with young family and encourage its socialization. First, it is necessary to define the main categories characterizing this sphere of scientific research, in particular, 'policy', 'public policy', 'youth', 'youth policy', 'family policy', 'public youth family policy'.

The notion 'policy' is one of the most ambiguous terms. In everyday life, the policy means any systematic action: the art of governance of society, demonstration of citizen advocacy, the area of satisfaction of ambitions and strivings, etc.

As an independent social and demographic group of society, youth may be characterized not only by age but also the role they play in the social structure, the peculiarities of social formation and evolution. It may be characterized as follows:

- Youth tend to have an immature spiritual and moral compass, lack of life experience;
- The younger generation is more likely to have a partial engagement in the existing social and economic issues while being the source of social mobility and economic initiative;
- Like any social group, it has its own purposes and interests, forms the image of the future, functions as social reproduction, and serves as a source of innovation, etc.

For instance, according to the authors of the monograph 'The Social View of Youth' O. Vyshnyak and M. Churylov, youth are a social group 19 that is a specific

social community of people occupying a place in various social substructures (social-class, social-settlement, professional-labour, socio-political, family-home), and therefore having similar challenges to be solved, and, consequently, similar social interests and peculiarities of the form of activities of everyday life. Thus, youth are a generation of people at the stage of socialization and understanding educational, professional, and cultural functions; it is being prepared by society for mastering and fulfilling social roles of the adult person.

Youth policy is being introduced in society in all spheres of life of young people both in its own interests and in the interests of youth policy subjects. All social institutions interacting with youth and young people themselves are the subjects of its introduction. Thus, youth policy means the system of measures being introduced by the government to ensure balanced development and active social engagement of youth.

Public youth policy is defined in the Declaration 'On the General Guidelines of Public Youth Policy in Ukraine': 'Public youth policy is a systemic activity of the government in relations with individual, youth, and youth movements being introduced in the legislative, executive, and judicial spheres that is aimed at the creation of social, economic, political, organizational, and legal conditions and guarantees for life self-determination, intellectual, moral, and physical growth of youth, realization of creative potential both in their own interest and in the interests of Ukraine.' This definition clears the aim of public activities towards youth; it is formalized in legislation to be used by public and local authorities.

Public youth policy in Ukraine is focused on the creation of an accessible system of services, offers, and projects that 22 contribute to the social formation of youth; it regulates and ensures effective relations between youth, society, and the government; it constitutes an important part of the internal and foreign policy of the government being a comprehensive system of legal, organizational, managerial, financial and economic measures aimed at the formation of shared responsibility mechanism.

The main target of public youth policy is young people aged 14 to 30 since it is a period of active social formation, socialization, and adjusting to various forms of social relations. On the one hand, youth should be considered an independent social and demographic group, on the other hand, they are an integral part of society, the potential and the role of which is to be taken into account in all spheres of life of society.

Public youth policy strives to have a systemic governmental influence on the processes of younger generation socialization; create and develop social, economic, political, organizational, and legal conditions and guarantees for self-fulfilment as well as fulfilment of valuable roles by young citizens. Depending on the stage of its development, the society strives to create certain standards, values, and rules for the younger generations.

Legal, social, and economic mechanisms provide conditions for the formation, growth, and integration of youth into social structures and personal self-fulfilment as a citizen of a democratic society. Hence, public policy shows the attitude towards the younger generation as a resource of social, economic, political, and cultural

development of society. The ways and methods for solving current issues of young people are at the borderland between public youth policy and the social potential of young people.

Youth policy implementation. The mechanism needs a legislative decree. Adequate legislation ‘moves’ (determines the priority directions of the government) and distributes funding for activities, services, and programs aimed at solving specific issues of young people.

Also, let us try to determine the key factors for the parts to move faster and smoother; they are given in the tables next to the wheels of the mechanism. The legislative part of the vehicle is activated by the political willpower, the importance of understanding social issues (mass media often contribute to it), researches, as well as promotion and lobbying the above mentioned by public organizations.

Professional potential and motivation of employees, a partnership with the relevant institutions or organizations, as well as the availability of appropriate methodologies are crucial for the improvement of activities/services/programs.

The mechanism of youth policy is made up of:

Legislation:

1. Political willpower;
2. Advocacy activities of NGOs;
3. Importance of issues.

Funding:

1. Independent distribution of funds;
2. Adequate distribution of funds.

Program activities and services:

1. Correct methods;
2. Trained personnel (qualification)
3. Motivation;
4. Partnership.

If we talk about the legislative framework of youth policy in Ukraine, it appears to be very broad and covers almost all aspects of the life of young people.

As a post-Soviet country, Ukraine immediately (after becoming independent) started to work on the creation of the legislative system of youth policy and working out systemic approaches in legislative decrees.

The most important laws are: the Constitution of Ukraine, the Declaration on the General Guidelines of Youth Policy, and the Law on the Support of Social Formation and Development of Youth. Also, there is the Law on Childhood Protection, the Family Code of Ukraine, the Law on Youth and Children Public Organizations, the Law on Social Work with Children and Youth, the Law on the Provision of Youth having higher or vocational education with the first workplace and subsidies to the employers (as of 2006-2007 the Law is void), the Law on Equal Rights, the Law on the Family Violence Prevention, the Law on Public Support of Families with Children, etc. (National Report, 2012, p.11).

According to one of the founders of the modern youth policy legislative framework: For the period from 1992 to 2006, there appeared a number of legislative decrees on youth organizations, families, children, orphans, special boarding schools,

and subsidies for employers... Thus, youth policy is secured.

Due to the lack of funding, some Ukrainian laws exist only on paper. Since most of the programs were presented without opinions on the results of their activities, it was difficult for KMO to understand which initiatives were actually implemented. The failure to fund the initiative on the provision with the first workplace and housing may serve as an example. According to one of the respondents, this situation occurs because some legislative initiatives are political promises rather than considered solutions that would provide some opportunities for effective growth.

In addition to the insufficient funding of the crucial programs, there is also an issue of proper funds management. Another issue of Ukraine is the centralized distribution of funds required for the program being directed according to a 'cascade' principle from the national to the local level.

The third element of the youth policy mechanism is the practice that requires funding – activities, services, or programs aimed at the satisfaction of the specific needs of youth and solving their current or urgent needs. In this place, the ability to choose the right methodology to solve current issues is the main political assignment. This report will be discussing the methodology for various areas of youth policy. In the course of consideration of the initiatives of the Public Service of Youth and Sports of Ukraine, the KMO's members noticed that their work was dedicated to shallow and general measures such as competitions, festivals, workshops, and conferences, which, however, are the instruments to solve the current issues of youth, rather than a system designed to support specific groups or solve specific issues. For instance, the business plan competition program simply selected the winners but failed to provide any real support to young entrepreneurs that won the competition (know-how or funding).

The subject matter, peculiarities, and practical implementation of the public youth policy in a particular state are determined by many factors, but the nature, the political system, as well as the way of formation and implementation of the public social policy are the most important factors.

Based on the above, it is possible to distinguish several main models of public youth policy, among which two are dominant in terms of the number of countries where they are present: neoconservative (for instance, in the USA), when the government provides social assistance first of all to those categories and groups of youth that require it the most, and socio-democratic (in most European countries), when the government resolves almost all issues of young people. Youth policy in European countries is implemented in three directions. Thus, the government and its agencies solve the current issues of young people in social, economic, cultural and spiritual sphere, as well as in the sphere of youth movement. Moreover, most advanced countries (Germany, Austria, Finland, and France) continue to develop and improve specific juvenile legislation. A great number of countries tend to implement youth policy through appropriate governmental and regional programs; youth policy in these countries is based on the creation of certain guarantees, conditions for the growth and self-fulfilment of young people.

Youth policy of independent Ukraine started its formation back in the last

decade of the former USSR. Thus, Ukrainian lawyers and scientists S. Holovaty, M. Holovaty, A. Matviienko, and others participated in the development of the first USSR juvenile law, namely 'On the General Guidelines of Public Youth Policy in the USSR', adopted in April 1991.

Even prior to the adoption of this law, Former Soviet Republics, in particular Ukrainian SSR, worked hard to be prepared for the development of juvenile legislation. The said law contained a special article 2 'Competence of the Union of Soviet Socialist Republics and the republics in the field of public youth policy', according to which the Union Republics were obliged to create juvenile legislation at the local level.

The main governmental structures engaged in the development of the first regulatory acts that were supposed to start a brand new public youth policy in Ukraine were the Commission on Youth of the Verkhovna Rada of the Ukrainian SSR of the Twelfth Convocation (chairman – A. Matviienko, deputy – Yu. Zbitniev, secretary – A. Tolstoukhov) and the Ministry of Family and Sports of the Ukrainian SSR (Minister – V. Borzov).

During the first stage of the development of the conceptual frameworks and first draft laws that were supposed to defend public youth policy, there was established the Temporary Youth Creative Team of the Scientific Center for Youth Issues of the Lenin's Communist Society of Youth of Ukraine (later – the Research Institute of Youth Issues).

The first approach and legal paper of the new public youth policy in the newest Ukraine was adopted on December 15, 1992, by the Sixth Session of the Verkhovna Rada of Ukraine of the Twelfth Convocation. It was the Declaration on the General Guidelines of Public Youth Policy in Ukraine. It is important to note that in this paper youth policy was defined as a 'priority and special' area in public policy.

The declaration defines 'public youth policy' as 'a systemic activity of the government in relations with individual, youth, and youth movements being introduced in the legislative, executive, and judicial spheres that is aimed at the creation of social, economic, political, organizational, and legal conditions and guarantees life self-determination, intellectual, moral, and physical growth of youth, realization of creative potential both in their own interest and in the interests of Ukraine, the subjects of such policy are determined. It is important to note that Ukraine proclaimed independence in the period of the start of the creation of institutes of public youth policy. In the summer of 1991, there was the Ministry of Ukraine of Youth and Sports and its department Ukrainian Research Institute of Youth Issues. Later, this department became the main theoretical and methodological centre for further development of the legislative framework and organizational and methodical guidelines for the implementation of public youth policy.

Unlike Ukraine, public youth policy of most countries is focused on so-called underprivileged categories; other categories of youth are simply encouraged by the government.

Like other countries, Ukraine is developing special juvenile legislation. But Ukraine fails to effectively encourage the development of youth movements, support volunteer movement and the activities of specialized social services for youth. Thus,

it is crucial to implement youth policy that would be focused on the state and young people. However, the younger generation should be actively engaged in the implementation of this policy.

METHODOLOGICAL APPROACHES OF EVALUATION ON INVESTMENT ATTRACTION OF THE NATIONAL ECONOMY

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Considering the decisive importance of investment as a source of economic growth, the priority direction of stimulating economic growth and development of the national economy is to ensure the investment attractiveness of investment objects (sectors of the national economy, regions, real investment projects, financial instruments, etc.) at the state and regional levels. Estimating the level of investment attractiveness involves finding out a list of factors-stimulators of attractiveness of objects for potential investors and methodological approaches to their evaluation.

The scientific literature presents numerous methods of forming investment climate ratings and investment attractiveness, which are being developed by the World Bank, the World Economic Forum, the European Business Association, the Peace Fund and other rating agencies. Thus, the World Bank, on the basis of statistical and legal information, assesses the legal environment for doing business. At the same time, it generates a rating of doing business basically on the basis of changes that were assessed by analysts of regulatory acts, which primarily regulate the activities of small and medium-sized companies during the life cycle (from the moment of creation to liquidation). The rating is based on the following indicators: time and cost of company registration, contract performance guarantees, time and cost of closing an enterprise, etc. [1].

The World Economic Forum defined national competitiveness as a country's ability to provide stable economic growth in short-term perspective [2]. The World Economic Forum defines a global competitiveness index on the base of statistic indicators (one third of 113 indicators) and an expert survey of company executives (two thirds of the total number of indicators). Herewith, the indicators are grouped into 12 groups, such as national competitiveness, infrastructure, macroeconomic stability, financial market and labour market development, etc. [3].

If the World Bank and the World Economic Forum determine the factors stimulating the country's investment attractiveness, the Peace Foundation identifies 12 groups of disincentives. These include: uneven economic development, the level of economic instability, the criminalization of state structures, the level of human rights violations, etc. [4].

By assessing the investment attractiveness, solving the issue of its optimality, it is important to systematize methods for its evaluation. In the process of evaluating the investment attractiveness of the investment object, various methods and techniques for analyzing the external macro environment are used. The most common

among them are: PEST – analysis, SWOT-analysis, industry analysis.

PEST – the analysis is used to evaluate and analyze political (P), economic (E), social(S), technological (T), market, international factors. Depending on the priority of groups of factors of external macro-profile, the duration and probability of occurrence of possible influence, various modifications of PEST – analysis are distinguished: STEP- with priority of social factors; PESTLE on account of including Legal and Environmental factors; SLEPT – with accentuation on the legal aspect of investment attractiveness; STEEPLE – analysis taking into account socio-demographic, technological, economic, natural (geographic), political, legal and ethnic factors.

The toolkit for assessing investment attractiveness can serve as a method of ranking the level of competitiveness of the countries of the World Economic Forum (WEF) and the Swiss Institute for Management Development (IMD – Lausanne). Factors that are taken into account have a decisive macroeconomic impact on the functioning of business entities and contribute to improving the efficiency of their functioning, and hence – investment attractiveness. Among them: general macroeconomic situation in the country, the pace of economic development, the availability of financial resources, the level of inflation, the level of taxation, the dynamics of world and domestic energy prices; the level of employment, the level of purchasing power and income of the population, competitive positions of national producers; macroeconomic and political stability in the country.

The selection of indicators to assess the Global Competitiveness Index of the World Economic Forum (WEF) is based on its understanding of the totality of institutions, strategies and factors, which determine the level of efficiency of the economy, which is determined by the cost of manufactured products per unit of expenditures: living labor, capital, natural resources. That is, the efficiency of the economy is an integrated (generalized) indicator of the efficiency of economic entities. Proceeding from the mentioned cause-and-effect relationship, the competitiveness of the economy is determined by the presence of factors of the macroeconomic environment, which stimulate investment activity.

Integrated assessment of investment attractiveness by the European Business Association. An integral characteristic of the totality of political, economic, regulatory and social conditions for the functioning of business entities is the investment climate of the socio-economic environment. The attractiveness of the macroeconomic investment climate, which leads to incentives and contributes to increasing the efficiency of investment activities of business entities, is assessed annually by the European Business Association (EBA). The indices of the European Business Association reflect the state of the business climate of the country and the mood of foreign investors and are calculated as average arithmetic estimates in the following areas: investment climate in general (Investment Attractiveness Index), taxation in the eyes of the business (Tax Index), a review of the country's judicial system (Judicial Index) and an assessment by the business of customs procedures in the country (Customs Index) [5].

There are numerous agencies, scientists which are specialized on the evaluation of the investment attractiveness of countries, regions of a definite country, but

methodic of such estimations often have such characteristics: closed and inaccessible for external analysis; difficult to understand; contradictory. In connection with this, there is a need for a self-study of the dependence of investment attractiveness on various development parameters and the development of such a method for assessing investment attractiveness, which would meet the principles of comprehensiveness, accessibility, objectivity.

Under evaluation it is common sense to understand the result of research of qualitative and quantitative characteristics of the investment object [6]. In particular, the assessment of investment attractiveness is necessary in formulating the purpose of investment, at the stage of preparation and adoption of investment decisions, etc. The process of assessing investment attractiveness should be considered in the relationship of goals, criteria, factors, evaluation methods, etc.

The effectiveness of evaluating investment attractiveness is determined by selected, well-founded principles, criteria and indicators. Thus, the criterion is a sign on the basis of which the evaluation, definition or classification of anything is carried out; checking tool, assessment benchmark. S.A. Petrovska equates the criteria for assessing investment attractiveness to such synthetic categories as investment potential, investment climate, investment activity, investment risks and environmental component [7]. In our view, this thesis requires some clarification, because the investment climate (according to most scholars) holds investment appeal, investment potential as an element can not be the criterion of attractiveness.

Gaidutsky A.P. emphasizes the importance of such components of investment attractiveness: resource, infrastructure, fiscal and regulatory ones. For example, the infrastructure component of investment attractiveness is interpreted by the author as the development of production, service, social and geo-economic infrastructure conducive to doing business, and the regulatory one – as a degree of liberalization of the system of economic relations (land, property, labour, entrepreneurial, managerial and others). A. Asaul highlights a broader list of criteria for investment attractiveness, namely: industrial, labour potential, natural resource, innovative potential, potential of social infrastructure, transport accessibility, etc. [8]. In our opinion there is a certain substitution of concepts. In this case, the production, labour potential, natural resource, innovative potential, potential of social infrastructure, transport accessibility are factors of investment attractiveness, and not criteria.

The justification of the criteria for evaluation and the choice of indicators should be based on the scientific substantiation of the principles. Let's dwell on the most important of them, namely:

- systematic and comprehensive. The principle of systemicity and integrity implies the use of a systematic approach, which is to consider the country as a holistic system, which economic processes are interdependent and complementary. This principle provides for the establishment of an assessment system that is sufficient to make a decision on investing in a national economy or a specific region;

- equality, that is, all work on the assessment of investment attractiveness should be legal, not contradict the current legislation;

- adequacy, that is, the correspondence of the system of indicators to the parameters of evaluation, the opportunity to identify them with a sufficient number of

potential and real investors;

- reliability and sufficiency of information (the number of statistical data should be sufficient for dynamic and comparative analysis of various components of investment attractiveness;

- clarity and comprehensibility, which provides for the possibility of defining clear algorithms for calculating indicators;

- regularity – the periodic evaluation of investment attractiveness and its impact on the increase;

- optimal number of indicators, avoidance of duplication, but indicators of all the most important areas of evaluation, namely: economic-resource, labor, infrastructure, etc., should be analyzed.

Given that investment attractiveness is a multi-faceted concept that consists of an investor's assessment of its elements and factors influencing it, it is suggested that the criteria be systematized taking into account the goals and objectives of increasing investment attractiveness in general and its constituent elements in particular. As you know, the criterion is the rule (norm), which is used to select means to achieve the goal. The purpose in the general case indicates the direction of motion. The criterion complements the understanding of the goal and indicates the effective way to achieve it, makes it possible to optimize the evaluation scores (Figure 1).

Let's substantiate the strategy of choosing the criteria by which decisions are made when accessing investment attractiveness, namely: attracting as much investment as possible in the country while minimizing investment risks.

Justification of the strategy of choosing the criterion of IA evaluation

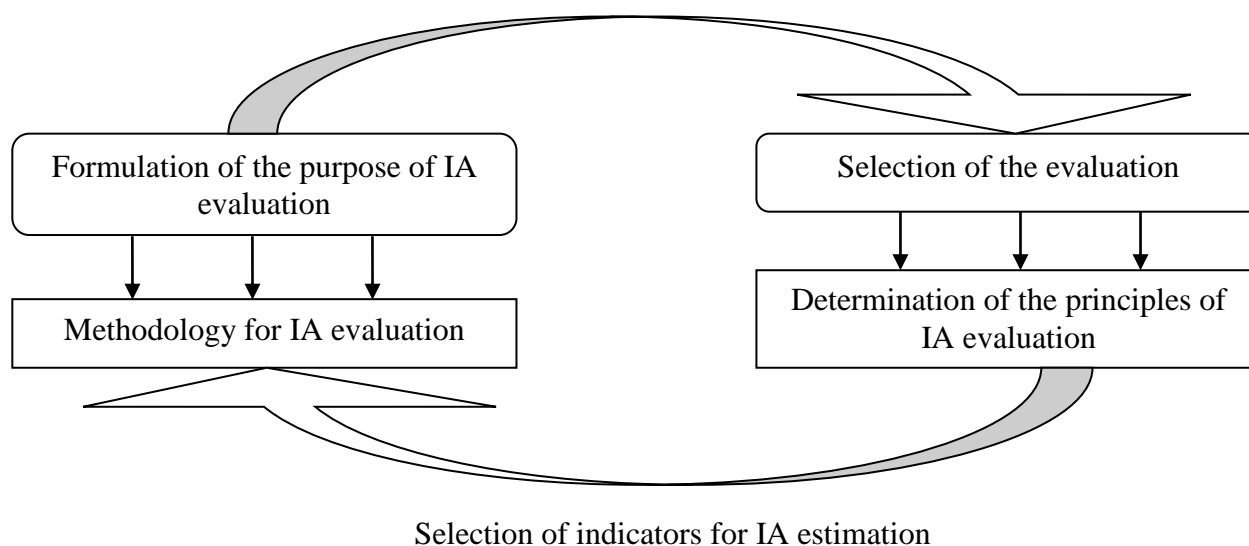


Fig. 1. Graphical construction of the relationship of the purpose, criteria, indicators of evaluation of the investment attractiveness of the national economy

Source: compiled by the author based on [9, c.124]

The strategy of investment attractiveness lies in understanding the fact that increasing of the investments in national economy – it a way to economic growth.

This strategy should be taken into account when possible with different sources of investment financing. It can be both national and foreign sources, both public and private ones. In order to increase the rate of economic growth, the task is to diversify sources of investment financing.

When changing the source of investment financing, the criterion of the effectiveness of assessing the investment attractiveness of the objects and the understanding of the investment attractiveness may change. Let's take this element of the social factor as the unemployment rate. For a foreign investor it is a positive moment, because it helps to reduce the cost of labour. From the point of view of the state investor, rising unemployment is a factor that is a disintegration factor.

As an economic criterion when solving the task of increasing investment in the national economy, it is necessary to increase the investment attractiveness, which can be achieved by increasing the positive impact of the identified factors and the adequacy and comprehensibility of assessing the investment attractiveness itself. Consequently, the main criteria for assessing investment attractiveness should be the validity of the selected indicators for evaluation, their adequacy and availability of obtaining, conciseness and clarity.

In our opinion, it is advisable to distinguish between the following in terms of quantity and variety of content and methods of investment attractiveness assessment:

I. Depending on the methodology for determining the indicators, the following approaches are used to estimate the investment potential: coefficient, integral, statistical:

1.1) the coefficient approach involves the calculation of relative indicators to assess the investment attractiveness. It allows us to assess the dependence between different indicators and their dynamics. It is easy to calculate, which makes it quite used by scientists [10; 11];

1.2) the integral approach for obtaining a summary conclusion on the investment potential involves the use of methods of rating assessment [12; 13; 14];

1.3) indicators that characterize investment attractiveness, based on their dynamics (comparison of actual and retrospective indicators) [15];

1.4) The statistical approach is based on the analysis of the actual statistics on the inflow of investments (the higher the level of investment, the higher the investment attractiveness [16].

II. As far as the rationale is concerned, it is possible to distinguish formalized ones (they are more used by virtue of their validity) and unformalized methodological approaches to the evaluation of investment attractiveness:

2.1) the basis of the formalized methods is based on the analytical dependencies (differential, discount, logarithmic, chain substitutions, etc.);

2.2) informal methods that do not provide for rigorous analytical interconnections and relationships, for example, comparative, expert assessments, construction of a system of indicators and analytical tables, etc. [10].

III. By the degree of universality, one can distinguish universal and specialized approaches to the assessment of investment potential:

3.1) Universal access is used to assess investment attractiveness, regardless of sectoral and economic characteristics [17; 18];

3.2) specialized approaches that take into account the specific sphere of economic activity (eg agriculture, light industry, etc.) [11; 19].

IV. According to the methods used to assess the investment potential of an enterprise; it is possible to identify approaches that involve the use of quantitative, qualitative and mixed methods:

4.1) the first group involves the use of quantitative evaluation methods such as: index, coefficient [17];

4.2) the second group of approaches involves the use of rating, benchmarking methods [16];

4.3) mixed methods of assessing investment potential are a combination of quantitative and qualitative methods (they form the majority of methods for assessing the investment potential of an enterprise) [20].

V. Given the factor of time it is expedient to allocate: expense (in the case of past time, comparative (market) – past and present, profit (outcomes) – future time [20].

So, P. Matvienko, M. Butko, S. Zelensky, O. Akymenko use rating estimation, integral coefficients (for factors that are determined by quantitative indicators), expert evaluation with the following rating definition (for indicators that can not be described by numerical values) [12, p. 67; 13, p. 34-36]. In turn, the rating approach is divided into:

a) rating and analytical approach;

b) rating approach based on polling [16; 21].

The rating-analytical method means the analysis of a comprehensive study of the economy, the formation of analytical indicators on this basis, followed by their definition of the integral rating in the country. The rating approach based on surveys is grounded on a survey of experts (economic entities or investment professionals) [16; 21].

The use of the rating method is rather convenient, since it gives the potential investor the necessary information in the form of an investment rating, that is, the numerical value given to the investment object on the basis of an integrated assessment of investment attractiveness. Convenience is the clarity of the rating and the minimum time spent searching for and processing information about the investment object. It is this method that meets the principles of conciseness, simplicity, and accessibility [22].

When using the expert method, an expert chooses, at his own discretion, the indicators that they consider most important to analyze, draw conclusions about investment attractiveness. Subjectivity is the main disadvantage of this approach [23; 21; 24].

S. Gerasymenko, L. Svystun-Zolotarenko [14, p. 155-159], using an integral calculation method. L. Kyryk estimates the investment attractiveness to be expedient to carry out by constructing single- and multi-factor models [25, c. 59-65]. S. Semiv proposes for accessing of the investment attractiveness of the economy to investigate the strengths and weaknesses of the production potential, scientific and technological level, transport security, sales opportunities, quality of manpower and financial security [26, p. 473].

Based on the analysis of existing approaches, we propose an assessment of investment attractiveness in the following sequence:

1. Preparatory stage, at the stage of which it is advisable to formulate goals, analytical tasks, methodological basis, prepare an information array.

2. Directly the stage of evaluation of investment attractiveness, which includes: selection of methodical problems of investment attractiveness evaluation; developing a methodology for assessing investment attractiveness; formation of a complex of estimating indicators in the context of economic, resource, innovation, social factors; to evaluate the factors of positive and negative impact on investment attractiveness; interpret the obtained data, conduct a structural and dynamic analysis in the context of regions; formation of conclusions on the results of evaluation. Calculate the integral indicator of investment attractiveness.

3. At the third stage, it is envisaged to investigate factors of investment attractiveness, to allocate factors boosters and factors disincentives, factors that can be influenced and have the results of increased investment attractiveness in short-term period (FKD) and long-term period (FDD).

4. At the fourth final stage of the evaluation, it is foreseen to use the evaluation results for a decision to increase investment attractiveness: to explore tools and levers of macroeconomic impact on investment attractiveness; at the state level, develop a concept for improving investment attractiveness at different levels.

Conclusions. The study of various methodological approaches to the analysis of investment attractiveness characterizes it as a complex multidimensional phenomenon. To assess the merit of conducting business in the investment climate, it is necessary to use a significant number of indicators that characterize the state and positive trends in the economic, social, political and other social spheres at the national, regional and sectoral levels.

The analyzed methodological approaches collectively serve as a powerful information base for the objective determination of favourable factors, delays and barriers of forecasting development of the country; provide a significant number of socio-economic, politico-legal, ethno-cultural, environmental and other kinds of problems, the solution of which depends on the improvement of the macroeconomic environment for doing business and the formation of a favourable investment climate for domestic and foreign investors.

The systematic application of various methodological approaches to the analysis of the macroeconomic environment, assessment of investment attractiveness will serve as the empirical basis of proposals for the formation of an adequate economic policy oriented to stimulate a favourable business environment.

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PERSPECTIVES OF REGULATION AND FINANCING OF THE SOCIAL SPHERE IN UKRAINE

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Guba I.

The state has a major role in creating the necessary conditions for implementation of the social policy in accordance with the chosen strategy of development. At the same time, in our opinion, the strategic goals should be to ensure the advance development of social institutions (education, medicine, culture) and the corresponding growth of social investment, directly aimed at the development of the individual.

State regulation of the social processes is primarily the influence of public authorities through various forms, methods and tools for the development of social relations, living conditions and work of the population of the country. The main purpose of state regulation is specified in the special tasks of the state, such as the promotion of the organization of market-competitive relations; achieving economic, political, social goals, adjusting the distribution of resources in order to influence the structure of the national economy.

The task of regulating the social sphere is to create an optimal mechanism for combining market and state levers of influence on social processes, their orientation towards the full satisfaction of the needs of different sectors of society.

The market and state regulation mechanism has a different impact on the efficiency of the social sector, which leads to different policies in this area.

The market mechanism necessitates the intensification of the processes of attraction of special funds, the expansion of the list of paid services by social sector institutions. It involves profitability, commercial focus, rapid return on social institutions.

Different concepts are being developed in the social sphere now. Each of them develops a certain strategy for the development of the industry. But at the same time, all these industries are parts of one sphere. With the expansion of financing health care, education, culture, social needs at the expense of non-inflationary sources, the aggregate demand in a society that, with the appropriate mechanism of implementation, can be an important factor in economic growth. This necessitates the

search for a single approach to the development of a social policy strategy and management of financial flows of the social sphere.

In the problems of the system approach were engaged Blauberg I.V., Yudyn Ye.G. [1; 2; 3]. At present, in the study of social processes, the attention of scientists is paid to a systematic approach. Scientists put forward their vision of the role of a systematic approach in the study of state-legal phenomena [4], in managing working capital [5], the cost of agricultural enterprises [6] etc. The works of these authors cover a variety of problems with the use of a systematic approach, a retrospective analysis of the views of scientists on the content of the system approach in management is given, the components of management systems are generalized, etc. It is noted that the systematic approach determines the methods of system research from the standpoint of integrity and process integration, efficient systems [7]. It makes it possible to find out the complexity of various problems and to develop a strategy for their solution.

Taking into account the results of scientific research in this area, it can be argued that there is a lack of elaboration of the issue of the feasibility of using a systematic approach in the management and financing of the social sphere. One of the conceptual program tasks for today in Ukraine is the creation of tools and infrastructure of the social sphere management, in particular, development of the foundations of the system approach to managing it.

The concept of a system can be given through such signs [1, C. 29]: the system is an integral complex of interconnected elements; it functions together with the environment; any system is an element of a higher-level system; elements of any system can be considered as systems of a lower level.

As the systematics are considered such generalizing provisions, which can exist only in a coordinated form. A characteristic feature of the system is its integrity. The division of the system into parts makes it possible to highlight such components of the social sphere as education, health care, culture, pension protection, etc. The functions of each component are determined taking into account their place and role in the general system.

The control system in this case can be detected and established according to different criteria: functional, institutional, subjective, etc. [8]. The starting point is the issue of the subjects of management. Today is the transition to a decentralized social sector management system. Local government, public associations, which have their own funds of financial resources, are becoming more and more important. Resources for them may come from local budgets, revenue from enterprises, etc. Bodies of executive power may provide such associations with the right to determine the directions of development of the social sphere or its separate subsystems in the region, to formulate its own policy, develop and fund targeted programs. When developing programs it is important to involve not only managers but also experts, the public, sponsors.

Financial management of the social sphere is a reality (Fig. 1). Significant influence on the state of the social sphere, its management has economic and demographic factors, which can only be partially controlled. This means, that the state of the social sphere and its management is in considerable extent determined by

decisions of previous years and economic-demographic tendencies.

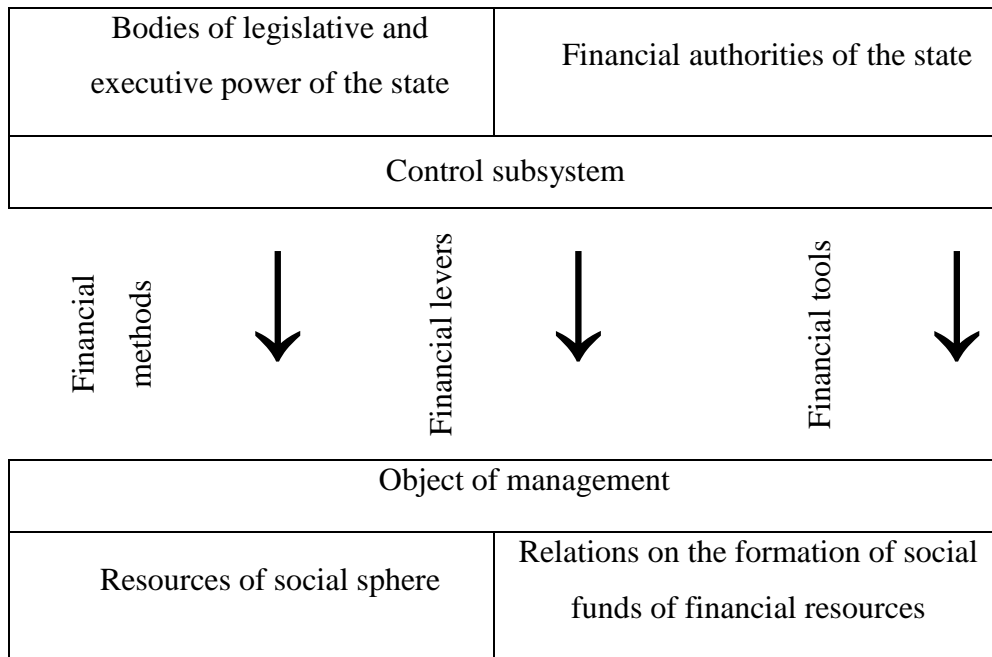


Fig. 1. Financial management system of the social sphere

The system approach involves identifying vertical and horizontal relationships, the degree of interconnectedness of the elements. Thus, the system of financial management of the social sphere consists of a management system of objects of management and methods and means of management.

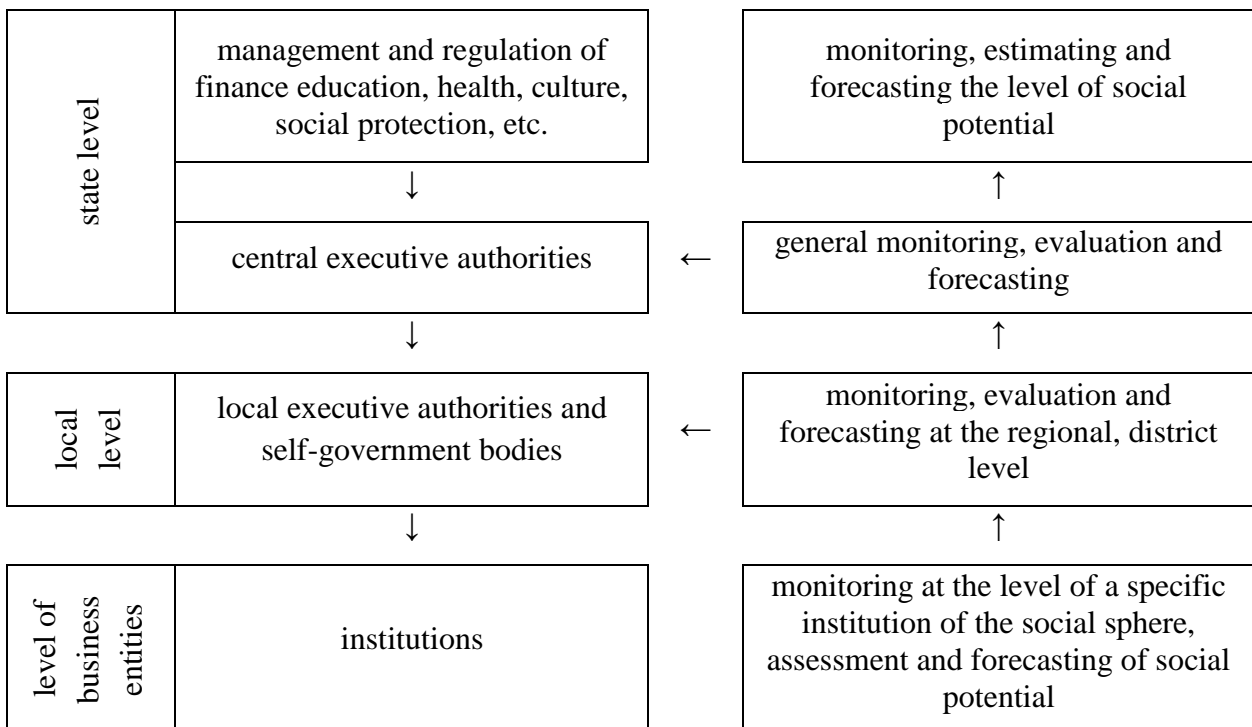


Fig. 2. Scheme of the social sphere management

When characterizing the system of management of the social sphere vertically,

it becomes necessary to determine the levels of the system and the hierarchy between them. The organizational structure of financial management of the social sphere should be constructed taking into account the state, local and grassroots levels (Fig. 2). The system approach implies that problem solving should be carried out at all levels – from state to enterprise level.

At each level, the effectiveness of management must be determined. This goal is consistent with living standards, which are general indicators of social development.

The level of living is influenced by three groups of factors. The first group is a starting point. It covers the material living conditions of the population: food, clothing, housing, consumer goods. The second group is connected with the maintenance of the level of health, medical care, conditions of rest, protection of the environment. The third group involves the development of the social, cultural, spiritual level of personality. These factors determine the effectiveness of the whole social policy. At the same time, the second group is directly formed as a result of the work of social institutions.

In determining the standard of living and in predicting its value, a set of indicators is calculated, namely: fertility and mortality rates, life expectancy; employment, education, culture, health care in the budget, population savings etc.

A way of regulating the multilevel hierarchy of the social sphere system is management, which ensures the normative functioning and development of the system. The structure of the financial management system of the social sphere includes the following elements: normative-legal regulation of the process of formation of incomes of industries of the non-productive sphere and their use; methods of implementing the policy of financial management of the social sphere (forecasting, planning); information provision of industry financing (statistical reporting).

When managing a social sphere and its financing, taking into account the systemic approach, it is necessary: to monitor ongoing processes; to predict the further development of events, to trace possible options for the flow of financial flows; to develop concepts and proposals on improving the functioning and financial security of non-productive sectors and the social sphere as a whole.

The complexity of managing social processes lies in the fact that there is a constant change in the deterministic and stochastic methods of management. It also complicates the management of social processes that they all have two interrelated aspects [9]. The first is objective, which is to change the objective characteristics of such processes, for example, parameters of social structure, working conditions, level of education, demographic composition of groups, level of wages, etc. The second – subjective is to change the motives for activity, life values, goals.

One of the components of control is to obtain comprehensive information. The following main types of information can be distinguished: information on objective processes in society; information on the social consequences of those processes occurring in society; information on the subjective aspects of social processes in society; information on possible ways of solving any social problems that are the subject of social planning.

The search for new methods for managing the finances of the social sphere should be considered in terms of the effectiveness of the use of funds. As you know, the higher the cost of social needs, the more difficult it is to ensure economic growth, because high social payments are accompanied by high taxes [10]. Therefore, the social sphere can be an important factor in the development of the economy only with the effective use of funds, which determines the need to track the elements of funding under the following scheme: allocation of funds – allocation of resources by industries and funds managers – control.

Based on the relevance of the topic under study and the review of the categories that are associated with it, a model for determining the effectiveness of management of the social sphere is proposed (Fig. 3).

The system approach to management taking into account technical, economic, social factors increases the effectiveness of planned activities. On the contrary, focusing only on certain aspects leads to a reduction in the effectiveness of certain measures, to slow down the overall pace of development.

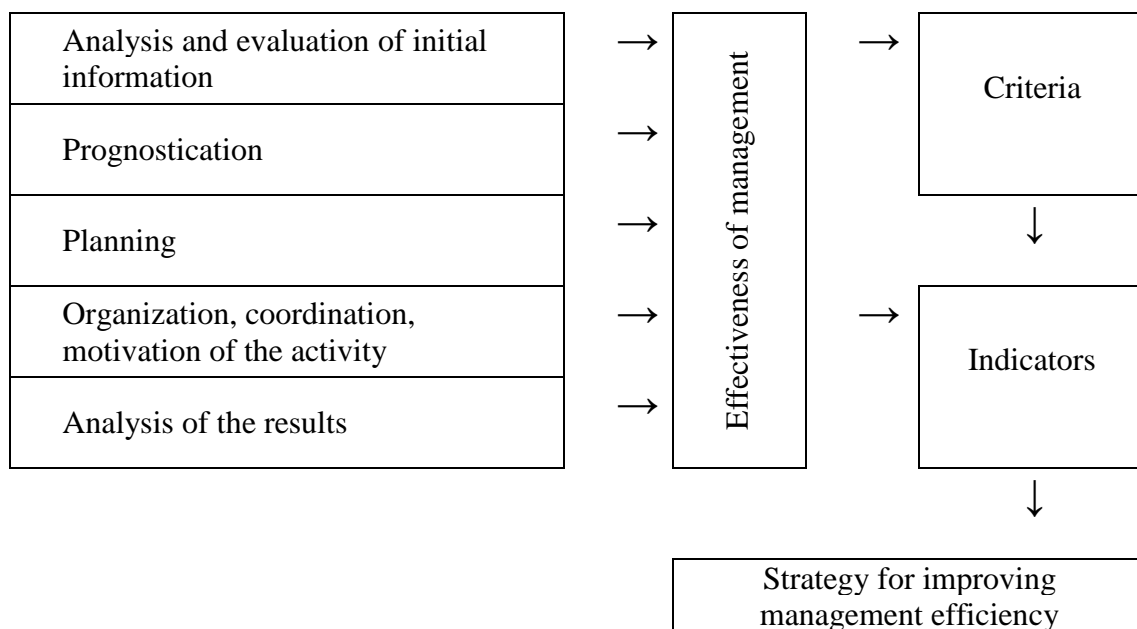


Fig. 3. The process of determining the effectiveness of management of the social sphere

State regulation of branches of social sphere is connected with the formation of state programs, their financing; creation of the regulatory framework and economic mechanisms for supporting and stimulating the development of the social sphere; supporting the functioning and development of modern social infrastructure; stimulating commercial banks to lend to social projects.

The current strategy for economic and social development should be based on indicative planning and forecasting. Indicative planning solves the task of coordinating the use of public resources. But, despite the benefits of indicative planning, it can not replace medium and long-term plans for economic and social development with the establishment of detailed production tasks and timing for their implementation. The effectiveness of the plan of economic and social processes is

confirmed by countries such as France, Japan, South Korea. They develop and successfully implement five-year plans.

The constituent parts of the social sector development programs should be strategic goals, feasibility studies, and the assessment of the resources needed to achieve the goals set, the expected efficiency, the management and control mechanism of the implementation of the programs.

A general indicator of the activity of all sectors of the social sphere should be the standard of living of the population, which should be the basis for economic planning and forecasting. Within the limits of social forecasting it is expedient to allocate three groups of factors influencing the standard of living: material living conditions of the population; maintaining a level of health; social, cultural development of the individual. When predicting living standards, it is expedient to calculate indicators such as fertility and mortality rates, life expectancy, employment, expenditures in budgets of different levels for education, medicine, saving people.

Consequently, the catalyst for the management and financing of the social sphere should primarily be the interests of the ordinary citizen; public policy in the field of health care, education, social protection and social assistance plays a particularly important role. It is necessary to develop a system of step-by-step planning and forecasting of the industry development taking into account diversification of financing forms; the development of health care, education, social protection is possible only under conditions of growth of GDP and NI; to optimize the structure of educational institutions, health care institutions, other social institutions and diversify sources of funding.

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FINANCIAL POLICY AS A TOOL FOR REGULATING THE REAL SECTOR OF THE ECONOMY

Kondukotsova N.

Financial policy involves the implementation of a set of procedures and actions, aimed at implementation of strategic and tactical goals of the society development. That is why the well-being of the population, indicators of economic growth depend to a large extent on its efficiency and timeliness. The determining factor in the process of the financial regulation is its interconnection with other components of the economic policy and the opportunity of the direct or indirect impact on the market situation. This reflects the important role of the financial policy in regulating the development of the real sector of the economy.

Among significant scientific studies of foreign scientists regarding theoretical and methodological features of the impact of the financial policy on the real sector of the economy, the works of the following scholars should be noted: R.Barro, J. Buchanan, J. M. Keynes, P.Krugman, A. Laffer, A. Marshall, D. Ricardo, A. Smith, J. Stiglitz, S. Fisher, M.Friedman. Problems of the functioning and development of the financial policy in the system of economic regulation are highlighted in the research of domestic scientists: T. Bogolib, O. Vasylyk, Zh. Garbar, V. Geys, V. Demyanyshyn, I. Lyuty, V. Oparin, D. Polozenko, G. Pyatachenko, V. Fedosov, I. Chuguniv, S. Yuriy and others. The purpose of the study is to reveal theoretical and methodological peculiarities of the financial policy formation as a tool for regulating the real sector of the economy.

Adaptation of the financial policy to new conditions is largely due to the change in the institutional environment of the society, therefore any changes in the state's financial policy must take into consideration the state of the institutional environment. Financial policy as a dynamic system, evolving depending on the social and economic needs of the society in order to actively influence the economy, should involve regulatory mechanisms and mechanisms that are peculiar to it and proven by the practice of foreign countries.

Structural changes and the need to reach a qualitative level of the economic growth and development concentrate attention on ways to improve the system of formation and implementation of the financial policy, which should be built depending on the economic cycle and spheres of the society, problems and prospects for its development [1, p. 344].

It is important to improve the peculiarities of forming the financial policy for the development of the real sector of the economy through the definition of its characteristic components. Since enterprises, institutions and organizations operate in the economic environment of the country, they are directly involved in the process of forming, distributing and redistributing the gross domestic product. In order to ensure long-term economic growth, it is necessary to increase the financial policy efficiency in the system of stimulating the transition of domestic enterprises to a new technological way, promote innovation and investment transformation of the domestic financial market.

I.Ya. Chugunov and M.D.Pasichny note, that the modern open-end economy requires a systemic policy in the field of export stimulation, increasing the share of high-tech component in its structure. In order to develop domestic industry it is necessary to distinguish the corresponding totals of branches of the economy for definition of tools of their further development and the formation of a system of measures of the state financial support . Mechanism improvement of the budget reimbursement of the value added tax, creation of an export-credit agency will have a stimulating effect on the development of export activity and will help increase the confidence of foreign investors in domestic exporting companies, which is a significant condition for the growth of the real gross domestic product in the conditions of globalization of the economy [2, p. 16].

Financial regulation of the development of the real sector of the economy is carried out through the system of elements of the financial mechanism, which envisages the implementation of certain goals and objectives. In the scientific environment, approaches to the definition of tools and peculiarities of the financial mechanism functioning are presented by A.M. Podderyogin, which characterizes it through "an integral system of financial management, designed to organize the interaction of financial relations and monetary funds in order to optimize their influence on the final results of its activities" [3, p. 15]. Consideration of the principles of financial law and implementation of the regulatory, distributive, stimulating and controlling functions of finance are presented in the research of L.L. Lazebnyk [4]. In general, the financial mechanism includes the following elements: financial methods, financial levers, financial norms and regulations, financial sanctions and incentives.

Implementation by public authorities of tasks and functions entrusted to them with regard to financial regulation of social and economic development is possible only if they have at their disposal a sufficient amount of money funds, the basis of which is the redistribution of primary incomes: profits, wages, property income. This reflects the important impact not only of financial policy on the real sector of the economy, but also the feedback - the real sector provides the financial mechanism with the necessary financial resources.

It is necessary to create fundamentally new methodological principles for the financial mechanism functioning, which will take into consideration the need for full incentives, financial support for the development of priority and strategically important sectors and enterprises of the real sector of economy, development of effective fiscal and customs mechanisms for the implementation of state financial regulation. At the same time, special attention should be paid to ensuring the dynamism and variability of financial policy measures in order to increase the efficiency of management of the real sector of the economy in the face of globalization transformations.

As it was already noted, the financial policy of the social and economic development implies the interconnection of elements of fiscal and monetary policy, which will allow building a holistic system of influence on the economic environment and create additional incentives for enterprises that operate in it.

Domestic scientists note that the fiscal policy is an important component of the

state financial regulation and an effective tool for implementing the country's economic policy to ensure macroeconomic equilibrium in the context of institutional transformation. The purpose of the budget regulation is to create an appropriate public environment for sustainable economic growth and form effective institutional relations concerning defining the priorities of the budget and tax policy implementation, improvement of methodological principles of the financial and budgetary planning and forecasting, distribution and redistribution of available financial resources, effective control over their use, implementation of the main tasks and strategic goals of the social development [5, p. 104].

A well-balanced fiscal policy implies the formation of social development programs based on the activities of state and municipal governing bodies, which based on the relationship between income and spending powers, have an impact on macroeconomic conditions in order to ensure employment and stable rates of economic growth. The latter involves the formation of a gross national product, which will ensure the process of revaluation of the national currency.

In today's conditions of economic transformation it is important to ensure the stability of the budget system in general and indicators of income and expenditure part of the state and local budgets in particular. In the process of forecasting and planning of budget indicators, the use of methodical tools is effective, which allows for a comprehensive characterization and analysis of trends and determinants that have a direct impact on them.

Under conditions of economic transformations, the budget regulation is influenced by a significant number of factors:

- macro-economic factors - general characteristics of the country's economic environment, production;
- financial factors - determine the relationship of the financial system with the peculiarities of the formation and use of financial resources of its spheres and units;
- credit factors - reflect indicators of the monetary system of the country.

In order to achieve the goals of social and economic development in the country, it is also important to choose the mechanism for distributing revenues and expenditures of the budget between different levels of the budget system, namely, between the state and local budgets (Table 1). In Ukraine there are some disproportions in the distribution of revenues and expenditures between the state and local budgets. Thus, expense powers transferred to local self-government bodies significantly exceed their income. The share of local budget revenues in the gross domestic product for 2008-2017 amounted to 6.56 percent, while the share of expenditures was 14.45 per cent. At the same time, revenues of the state budget correspond to the opposite situation – revenues of the state budget in 2008-2017 were at the level of 24.17 percent, expenditures - 19.57 percent. It is clear that this situation is primarily due to the approach of the maximum number of public services to their immediate consumer through the mechanism of intergovernmental fiscal transfers and equalization grants. However, the process of decentralization of financial relations between local authorities and the state budget, which has been launched, requires an increase in revenue sources for the formation of local budgets.

Table 1

Share of revenue and expenditure part of the budget in the gross domestic product for 2008-2017, %

Years	Revenues			Expenditures		
	Local budgets	State budget	Consolidated budget	Local budgets	State budget	Consolidated budget
2008	7.10	23.70	30.80	13.40	19.20	32.60
2009	6.90	23.80	30.70	13.90	19.70	33.60
2010	6.60	21.60	28.20	14.00	20.90	34.90
2011	5.80	24.00	29.80	13.70	18.30	32.00
2012	6.30	24.50	30.80	15.70	19.30	35.00
2013	6.30	23.00	29.30	14.90	19.60	34.50
2014	5.60	22.40	28.00	14.10	18.90	33.00
2015	6.10	26.70	32.80	13.90	20.30	34.20
2016	7.20	25.70	32.90	14.50	20.50	35.00
2017	7.70	26.40	34.10	16.40	19.00	35.40
2008-2012	6.54	23.50	30.04	14.14	19.48	33.62
2013-2017	6.58	24.84	31.42	14.76	19.66	34.42
2008-2017	6.56	24.17	30.73	14.45	19.57	34.02

Source: calculated by the author based on the data of the State Treasury Service of Ukraine and the State Statistics Service of Ukraine

When defining basic principles of the fiscal policy, it is expedient not only to achieve maximum indicators of incomes and expenditures, but also the implementation of fiscal interests of public administration bodies taking into consideration the necessity to achieve the goals of social and economic development of the country and its administrative-territorial units, ensuring social justice, expansion of the real sector of the economy, which requires clarification of the principles of financial resources management.

Budget revenues are formed as a result of the activities of individuals and legal entities, which, on the one hand, operate in the context of competition for a variety of resources, but on the other hand, cooperation and interaction to implement common goals and objectives. This situation is typical of any market economy. In addition, this activity of economic entities is carried out in conditions of economic uncertainty. Uncertainty is largely a consequence of competition in the economy, removes the economy itself from idealistic functioning and adds to the whole economic system the need to ensure the growth of competitiveness indicators.

Combination of forms and methods of state intervention in the economy and social sphere, which will ensure the effectiveness and efficiency of the budget regulation, promote economic development and give an opportunity to raise social standards, improve social and economic relations, evolve in the direction of harmonization and satisfaction of actual social needs, is really important. [6, p. 92].

An important part of the development of the real sector of the economy is an increase in the share of capital investment. The main source of capital investments into the Ukrainian economy is currently the own funds of enterprises and organizations, the share of which in the gross domestic product is on average 12.3 percent for the period of 2008-2017, while credit funds make up only 2.1 percent (Table 2).

Table 2

Share of capital investments into the Ukrainian economy in the gross domestic product by sources of financing in 2010-2017, %

	2010	2011	2012	2013	2014	2015	2016	2017	2010-2017
State budget funds	1,08	1,53	1,25	0,44	0,20	0,48	0,45	0,63	0,76
Local budget funds	0,60	0,68	0,66	0,48	0,43	1,00	1,32	1,70	0,86
Own funds of enterprises and organizations	11,73	12,96	13,14	11,81	11,29	12,88	12,21	12,68	12,34
Bank credits and other loans	2,41	3,22	3,05	2,47	1,59	1,45	1,33	1,21	2,09
Funds of foreign investors	0,39	0,44	0,38	0,30	0,41	0,57	0,48	0,25	0,40
Funds of population funds for housing construction	1,99	1,55	1,73	1,71	1,61	2,23	1,47	1,34	1,70
Other sources of funding	0,82	0,82	0,77	0,57	0,49	0,47	0,37	0,53	0,61
In total	19,02	21,20	20,97	17,79	16,03	19,07	17,63	18,34	18,76

Source: calculated by the author based on data from the National Bank of Ukraine and the State Statistics Service of Ukraine

In general, in Ukraine, the share of capital investment in the economy in the gross domestic product for the period 2010-2017 is only 18.76 percent, which is a rather low indicator compared to developed countries. The above envisages the need for improvement of monetary regulation measures in order to expand access to financial resources of the banking sector. It is advisable to support and develop the financial market, which is an effective tool for attracting temporarily free funds within the country and their redistribution between sectors of the economy. In order to achieve the goals for ensuring economic growth by means of monetary and fiscal policies, an integrated approach to raising the overall investment climate in the country is important.

Tax system is a powerful and effective instrument of the state influence on the country's social and economic development, which is carried out through the provision of the necessary level of income. In this case, methods and instruments of the tax mechanism usually affect the economic dynamics with time lags, as well as are characterized by a multivector. Certain internal contradictions also express functions of the tax system. That is why it is expedient to carry out an assessment of the effectiveness of tax regulation and determine the target criteria for its adaptation to the conditions of structural and institutional reforms.

In modern scientific literature, different methods of assessing the effectiveness of tax regulation are offered. There is also no comprehensive approach to the set of

indicators that will characterize it. Depending on the goals and level of assessment, research is usually directed at monitoring the functioning of fiscal services. Thus, it is necessary to streamline existing approaches and develop new methodological bases for assessing the efficiency of the tax system, which will take into consideration the ambiguity of the regulatory influence of the instruments of the tax mechanism.

It is proved that tax policy has a direct impact on the real sector of the economy, therefore, in order to stimulate its development, it is important to improve its elements of the tax as an object and rate. Effective tax regulations should include the activation of innovation activities and the effectiveness of managing innovative projects. Introduction of a capital outflow tax can increase the investment component of the financial system and create preconditions for reinvesting profits into the real sector of the economy.

Introduction of the tax incentive policy for innovation, in effect, implies inventing methods and balances between public and private interests, the result of which is the mutual satisfaction of the interests of each of the subjects. The state, giving way to its current fiscal interest in tax incentives for innovation, is entitled to rely on other needs, such as investing in released production resources, fundamental research, applied developments, reducing the outflow of intellectual potential from the country and so on. Taxpayer in exchange for a significant financial cost with long-term payback can count on reducing tax pressure, on observance of guarantees of immutable legislation in the long run [7, p. 172].

Ensuring the growth of efficiency and social justice of its functioning in the system of improving the tax system is very important. Characteristic of the essence of the criterion of equity of the tax system allows us to formulate its main characteristics: differentiated perception and interpretation, which is explained by temporal, spatial frameworks, subjective representations of participants (groups) of tax relations, features of the political, social and economic structure of the territory, cultural and historical norms and traditions; the ability to form a perfect order of interrelations between participants, the degree of its achievement cannot be calculated in the form of any indicator (or their system) and the result of which is the harmonious redistributive influence on the processes of equalization of participants' incomes in tax relations [8, p. 8].

Achieving the equity of a tax regulation system should be based on an integrated combination of financial goals of the country, society and taxpayers. The use of tax incentives implies a clear direction - encouraging investment that is in the interests of society, and therefore is fair for the state. Attracting investments into the economy will have a positive impact on the Ukrainian economy as a whole, therefore, all business entities will be able to take advantage of these achievements. The said shows that for other economic entities, that are not related to investment activity, the preferential tax treatment of investors will be fair [9, p. 69].

Thus, basic functions of the tax policy point to certain features of functioning, and the mechanism of tax regulation has a multi-vector effect on the subjects of the real sector of the economy. Using the system of tax benefits, which is a vivid example of the regulatory function of taxes, leads to a reduction in fiscal efficiency,

strengthening of the control function is characterized by the transition of taxation subjects to another tax jurisdiction, expansion of the number of taxes reduces the income of the payer and adversely affects the quality of tax regulation. Conducting control operations concerning implementation the goals and tasks of the tax policy plays an important role in the system of tax incentives of the development of the real sector of the economy.

Fundamental principles of economic growth are based on the effective implementation of the financial policy, formation of such parameters of the monetary regulation that will ensure the macroeconomic equilibrium and create preconditions for the development of the real sector of the economy. In order to support sustainable economic growth, it is expedient to use a flexible and consistent system of regulators by means of the monetary policy, promoting stabilization and increasing the competitiveness of the banking sector, use of innovative instruments of the monetary regulation. Basic preconditions for providing growth are the decisions of economic agents regarding the implementation of investment projects, use of innovative technologies. Taking into consideration the above, the monetary policy is an important tool for stimulating and maintaining sustainable proportions of the national economy development.

Stable functioning of money in the structure of money turnover is provided with a certain amount of money. The size of this value is an important characteristic of the state of money turnover and market conditions in the country, but a direct change in the amount of money in circulation affects the intensity of their turnover, the formation of solvent demand. The state of money circulation is revealed by a system of quantitative indicators that characterize the balance of the volume and structure of the money supply in the country [10].

Monetary policy emphasizes the regulation of the banking system. Impact of endogenous and exogenous factors on market conditions and fluctuations in the international financial markets necessitate the reformation and transformation of the goals, tasks and functions of the financial regulation of the development of the real sector of the economy. It is advisable to formulate a system of target benchmarks that envisage the implementation of not only anti-inflationary measures, but also the tasks of stimulating economic growth. Improving the quality of operational decisions of the National Bank of Ukraine in relation to the regulation of the money supply, a well-balanced emission policy will increase the stability of the system of state and private finance, its independence, have a positive impact on the country's economic security.

The nature of external macroeconomic processes and the relatively slow pace of economic growth require the introduction of additional tools that can provide the economy with new trajectories of growth.

With the purpose of monetary regulation of the social and economic development of the country, tools to reduce the value of money in the economic system through the mechanisms of reducing the discount rate are used. As a consequence, additional liquidity is formed in the financial system, which determines the growth of investment and consumer activity of both enterprises and households. However, the implementation of measures aimed at reducing the growth rate of the consumer price index involves raising the discount rate and

limiting liquidity. Thus, the choice of instruments and levers of the monetary policy impact on economic dynamics is a significant task of the state financial regulation.

Scientists note that the achievement of economic stability in the country should be aimed at combining the use of traditional and non-traditional monetary instruments in order to increase the liquidity of the banking system, namely:

- use of direct tools of the money market in order to systematically co-ordinate measures to allocate liquidity and ensure domestic liquidity through the securities market;
- credit mitigation policies for the restoration of the credit market functioning;
- quantitative easing policy when the official discount rate approaches zero;
- policies of balance accounts to stop the decline in aggregate demand;
- strengthening the use of the tool of informing the public about intentions in the sphere of monetary policy, especially during the crisis [11, p. 957].

Increasing the investment activity of the real sector of the economy involves increasing opportunities for access to the market for long-term loans with a low interest rate. The said will promote the development and practical implementation of long-term investment and innovation projects, infrastructure development, will increase the opportunities for capital renewal of enterprises and their fixed assets.

Main sources of investments financing into the real sector of the economy are: own funds of enterprises, institutions and organizations; loans of the banking sector; loans of legal entities; budget funds; funds of international organizations; funds from the issue of shares and corporate bonds; other monetary means. In order to increase the efficiency of the use of attracted resources, the commercial banking sector needs to provide refinancing instruments. The mechanism for stimulating economic growth and investment and innovation activity with the help of targeted lending to the real sector of economy is also effective.

At the present stage of the innovation restructuring of the national economic system, it is important to identify and characterize the institutional construction of the financial market. Zh.V.Garbar in the work "Institutional structure of the financial market regulation" indicates that the structure is based on such elements of the regulatory system as the actors of influence (regulatory bodies), their powers and regulatory procedures. Subjects of influence are the state authorities, which influence the parameters of the financial market functioning. Regulatory bodies usually include bodies of general competence, which include, first and foremost, the Ministry of Finance, Central Bank, as well as tax, customs, antimonopoly and other executive authorities, and bodies of special competence. Bodies of general competence, in addition to regulating the financial market, carry out many other functions not related to the financial market. Specialized regulators focus only on the control of the financial market [12, p. 19].

Considering the variables that determine the efficiency level of the financial policy, it can be argued, that the construction of a perfect model with a large number of interconnected variables will allow predicting the results of changes in their any number. It is important to note that the utility of such models always depends on the assumptions, especially the causal consequences on which they are based. The well-known Canadian example of such a large-scale quantitative model is the CANDIDE

model used by the Canadian Economic Council in Otaw in 1986. The model contained more than 2000 equations and reflected the dynamic macroeconomic situation in the Canadian economy. Thus, quantitative models of the financial regulation of economic processes reveal their limitations mainly in predicting long-term consequences of the behavior of small population groups and their reactions to a certain problem. They are qualitative in the sense that they are based on the original data in the form of intuitive guesses and judgments, but using systematic methods and computers.

It should also be noted that fiscal and monetary policy are key instruments of the state financial regulation of the social and economic development of the country. It is with the help of their levers that the state can carry out cyclic and counter-cyclical measures, stimulate economic growth and investment and innovation transformation of the institutional environment. The structural and functional model of the impact of the financial policy on the real sector of the economy is based on increasing the structural interaction and coordination of the levers of fiscal and monetary policy, trends of the market situation and taking into consideration the complex impact of exogenous and endogenous factors, which will increase the efficiency of economic transformations due to the growth of the flow speed of money, capital, information, innovation, scientific knowledge and technology. The use of this model will contribute to a holistic understanding of features of the state financial regulation at all stages of economic cycles. Thus, in the process of analysis and characteristics of approaches to the peculiarities of the financial policy development of the real sector of the economy, it is determined, that it is important to have a clear definition of the tasks, goals and mechanisms for their implementation in the short and long term.

Let's prove a significance of the monetary policy for the implementation of the regulatory influence on the course of economic processes. Namely with the means of the monetary regulation the state represented by the Central Bank shall define the vector of the development of the real sector of the economy. Priority tasks of the financial policy at the present stage of economic transformations are to ensure the growth of production of tangible and intangible goods, achievement of the maximum employment of the population, stabilization of inflation processes and exchange rate and adaptation to market fluctuations in foreign capital markets. It is advisable to approach the goals and objectives of the financial sector of the economy to the real, increasing the share of capital investment in the national economy.

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RISKS AND SWOT - ANALYSIS IN THE SYSTEM OF THE ASSESSMENT OF INVESTMENT POTENTIAL OF THE NATIONAL ECONOMY

Volik M.

Theoretical and methodological provisions for assessing investment potential have been widely reflected in studies by leading foreign and domestic scientists. Problems of the assessing investment potential, investment attractiveness are investigated by V.V.Zaytsev and D.M.Khudiakov [1, p. 20], P.I. Miroshnichenko [2], N.M.Murashko and O.P.Lysychenok [3, 4], O. Akymenko, M. Bukto, S.S. Gerasymenko, S.Zelensky, P.Matvienko, L.O. Svystun, Zolitarenko [5, p. 34–36, 6, 7, p. 67]. However, among scientists there is no single vision of the priorities of the state regulation of investment potential, risks and SWOT – analysis in the methodology on the assessment of investment potential are not sufficiently taken into consideration.

Assessment of investment potential should be in line with the following principles: objectivity, that is, neutralize the influence of individual subjective thoughts and decisions on the overall assessment ; adequacy and correctness, which presupposes correct reflection of the structure, constituent elements of investment potential, take into consideration the degree of their reliability and uncertainty; complexity and consistency, that is, components of investment potential are considered in their interrelation with other processes and phenomena, and the process of evaluating investment potential, must be carried out in accordance with the indicators agreed upon among themselves [8].

In order to systematize opportunities, threats, strengths, weaknesses, let's consider the SWOT-analysis (Table 1).

Table 1

SWOT-analysis of the investment potential of Ukraine

Strengths (s)	Weaknesses (w)
<ul style="list-style-type: none"> - availability, accessibility, relatively low cost of water-resources, raw materials, resources; - convenient geopolitical location; - favorable climatic conditions; - conclusion of international agreements on the promotion and protection of investments; - available production and agricultural potential; - labor supply; - high level of the human capital; - high demand for investment resources; - high potential of domestic and foreign market. 	<ul style="list-style-type: none"> - depreciation of production assets, production and transport infrastructure, energy deficit; - high level of external migration; - low income and population demand; - significant interregional imbalances in the development of economy, employment, medicine, education, culture; - decline in production volumes, investment deficit; - low level of deductions to the State Social Fund; - underdevelopment of instruments of savings transformation into investments; - all types of infrastructure must be re-equipped and reconstructed; - low level of stock market efficiency.
Opportunities (o)	Threats (t)
<ul style="list-style-type: none"> - attraction of domestic and foreign investments, modern technology and technologies; - improvement of the investment climate will allow to increase the level of employment, accelerate the development of entrepreneurship; - improvement of the administrative environment, support and advice to investors; - formation of investment funds and attraction of domestic and foreign investments, modern technology and technologies; - implementation of the policy of energy, ecology, resource efficiency; - dynamic economic development, increase of economic growth rates; - stimulating the development of public-private partnership; - development of industries producing products with high added value; - promotion of ecological way of life, ecological technologies, consumption of organic products; - growing demand for natural resources and agricultural products in the world; - increase of export potential. 	<ul style="list-style-type: none"> - presence of the shadow economy and the informal sector of the economy; - loss of the industrial potential of the country due to the breakdown of traditional economic ties and depreciation of production assets; - outflow of labor resources; - high cost of credit resources; - natural decrease in the working-age population; - subsidy of a significant number of budgets; - low level of investment attractiveness of the country and presence of diverse, high risks; - high transaction costs of investors; - instability of economic, investment policy, its dependence on the political situation in the country.

The SWOT-analysis allows specifying the positive (negative) influence on the process of formation and increase of investment potential in order to systematize strengths and opportunities of the national economy. Strengths of the national economy are manifested in the convenient geopolitical location, availability, accessibility, relatively low cost of water, natural resources, raw materials, labor resources; conclusion of international agreements on the promotion and protection of investments, etc.

Opportunities for the future growth of Ukraine's investment potential are: attraction of domestic and foreign investments, modern technology and technologies; improvement of the administrative environment, support and advice to investors; formation of investment funds; dynamic economic development and economic growth; stimulating the development of public-private partnership; development of industries producing products with high added value; increase of export potential.

Obstacles in increasing investment potential (weaknesses) are: depreciation of production assets, production and transport infrastructure, energy deficit; high level of external migration; low level of the population income and payment demand; low level of the stock market efficiency.

Threats to the formation and increase of investment potential are seen in presence of the shadow economy and the informal sector of the economy; loss of industrial potential of the country due to the breakdown of traditional economic ties and depreciation of productive assets; high transaction costs of investors; instability of economic, investment policy, its dependence on the political situation in the country; a low level of the investment attractiveness of the country and presence of diverse, high risks.

In order to identify the relationship between strengths and weaknesses of the investment potential and opportunities and threats, a SWOT-matrix of the investment potential of Ukraine was formed. In particular, potential opportunities for building up investment potential are analyzed (Figure 1).

Potential opportunities for building up investment potential are as follows. Ukraine has a significant volume of water, natural resources and raw materials. Promotion of ecological lifestyle, ecological technologies, consumption of organic products, introduction of energy, ecological and resource efficiency at the state level will allow preserving, and to some extent, increase available natural resources, promoting the development of industry, agriculture, and sectors of the social sphere.

Attraction of investments, diversification of sources of their receipt, creation, renovation of enterprises with high added value positively affect the development of manufacturing and non-productive sectors.

Improving investment climate will make it possible to influence practically all areas of life: intensify positive shifts in transit infrastructure, industry, and agriculture; increase employment; accelerate the development of entrepreneurship; satisfy in whole or in part the demand for investment resources; contribute to raising the level of the population incomes and payment demand; will remove the problem of deterioration of production assets, production and transport infrastructure; health; will

be one of the factors reducing motivational factors for leaving the able-bodied population outside the country.

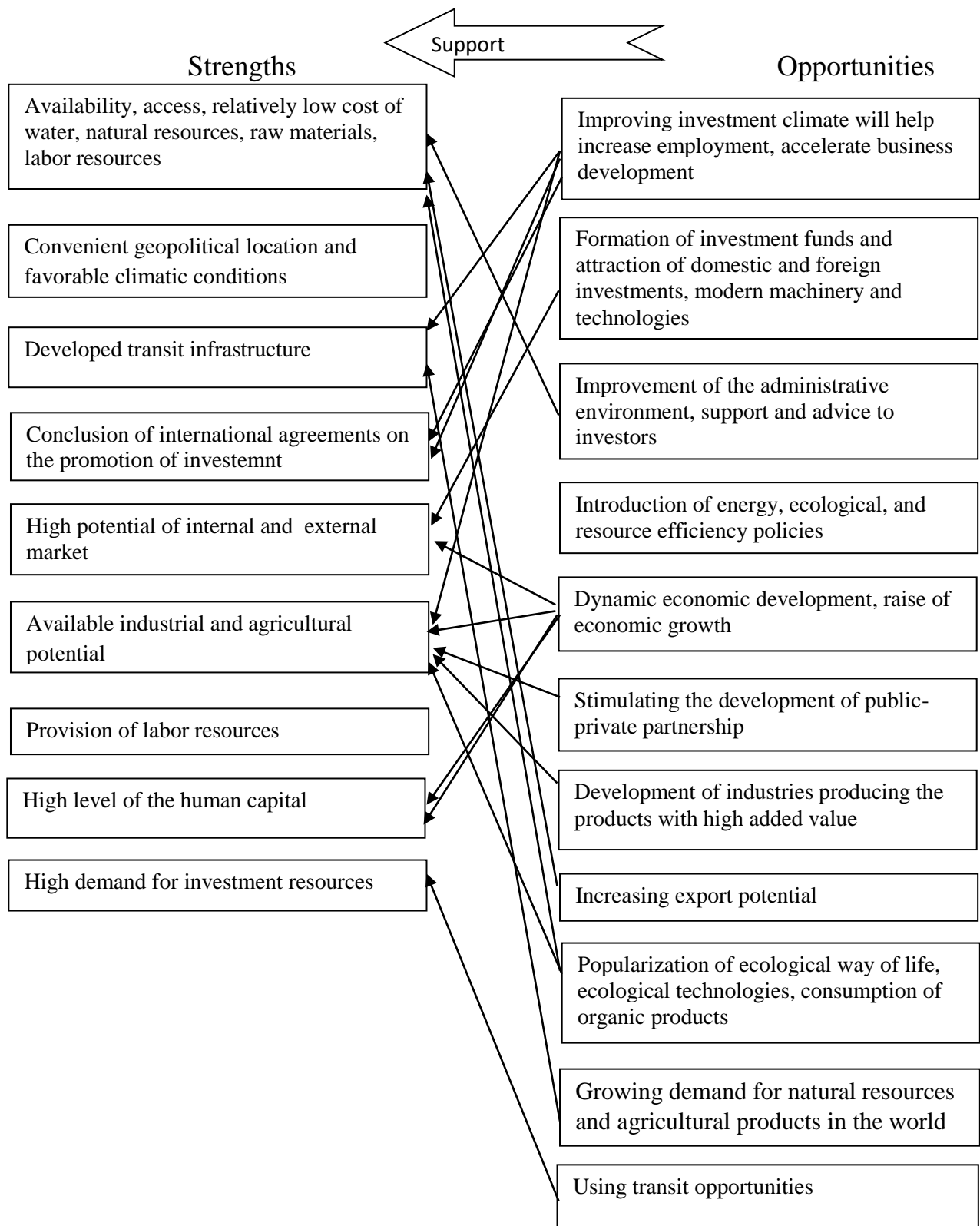


Fig. 1. Potential opportunities for building up investment potential

Growing demand for natural resources and agricultural products in the world contributes to the implementation of natural and agricultural potential.

Creating at the expense of investments of processing enterprises that produce products with high added value will accelerate the development of entrepreneurship, increase employment.

Due to dynamic development of the country, increase in the rates of economic growth, preconditions for the increase of the human capital, expanding the capacity of the domestic consumer market, development of the productive and agricultural potential, increase of the export potential will be created. In turn, the ability to sell products outside the country not only increases currency earnings, maintains the stability of the national currency, but it is also a factor in suspending the decline in production, elimination of interregional imbalances in the development of production, and the social sphere.

On the one hand, investment risks affect the investment potential, but on the other hand - the investment potential regulates the level of investment risks, that is, these indicators are interconnected, and with their help the investment attractiveness of the region is determined. Risks associated with the entrepreneurial activity are the object of managing institutional units and are profit-oriented. The purpose of risk management at the level of economic entities is to maintain financial stability and continuity of activities. To the functions of the state at the macro level, in addition to maintaining the financial stability and continuity of activities, in the management of risks, the maintenance of the institutional balance, reduction of risks as a prerequisite for the growth of investment potential is shifting to the forefront.

The policy of the state on the investment risk management, their minimization is closely linked with the state investment policy, which functions in a single system of the state regulation of the economy and is consistent with goals and principles of other forms of the state regulation.

First of all, it is necessary to focus attention on minimizing investment risks in carrying out structural and sectoral policies. Investment risks in this context are that - if the state, creating a positive investment climate, directs investment flows by enterprises, industries producing products with high added value, then high technological processes in industry will not be supported, there will be no increase in living standards of the population, and therefore - Ukraine will not be able to fully develop its potential.

The investment risk that is a probability of financial losses occurrence in the form of loss of the capital or income due to uncertainty of terms of the investment activity increases the probability of incomplete use of the investment potential. Due to the fact that external risks depend on political, social, economic, ecological, criminal situations, this leads to their division into: legal, political, criminal, environmental, social, financial and economic, etc.

By assessing economic risks, the following should be taken into consideration: current state of the budget, financial, investment and tax system; state and efficiency of the banking system functioning; restrictions on the export of profits and capital abroad; presence of incentives for the importation of the capital and its investment in the national economy; inflation rate; the structure of the region's economy; exchange rate of the national currency. Decline of traditional export flows

along with the reduction of the NBU's foreign exchange reserves significantly increases currency risks. Business entities may have inflation and deflation losses as a result of: reduction of the real initial value with preservation or increase of the nominal value; as a result of tax increases, accounting interest rates, budget cuts, savings growth, etc.

Efficiently operating budget, tax, monetary policy, justifying the tax burden on business, generating revenues of budgets of different levels, optimizing expenditures aims and has the tools of influence on minimizing risks, namely: monetary (providing the economy with the required amount of money supply, maintaining the stability of the national monetary unit); credit (attracting money from the population, business structures to the banking system, increasing the level of credit availability and fulfillment of contractual obligations); price (ensuring stability and price parity, eliminating monopolistic influence on pricing); foreign exchange (maintaining the appropriate level of government currency reserves, the parity of the rate of national and foreign currencies).

When characterizing economic risks it is difficult to ignore sovereign, structural risks, that is, sensitivity of the national economy to the size of the state (guaranteed by the state) debt of Ukraine, attraction of external financial resources to industries with a low share of value added depending on the value of imported energy resources.

Legal, criminogenic (high level of crime) risk and imperfection of the market of political institutions (limited information to voters, bureaucratic obstacles, changes in the political situation within the country, changes in foreign policy affecting the presence (absence) of stability, power of authorities) form institutional risks. Under legal risk, legislative and legal factors that affect the investment activity of the subject, such as imperfections, contradictions in legislative and legal acts, etc. should be understood. Neutralization of the said group of risks is within the competence of the authorities and management, law enforcement agencies. In this context, the task is to ensure communication between investors and local authorities in protecting property rights, minimizing the impact of criminal factors on investors [9].

Issues of ecology were and still remain relevant in Ukraine, therefore they must be surely taken into consideration by investors. Ecological risk takes into account the degree of environmental pollution, radiation situation, availability of various types of ecological disaster zones and programs for their elimination, etc. The task of environmental policy in minimizing risks is the economical use of natural resources, preservation of safe living conditions and labor of the population.

Social risks, that is, the demographic burden on one working person (risks of non-filling of Social Insurance Funds, which is directly reflected in the living standards of the population), low level of social and business activity, threatening scales of pendulum, interregional, international migration, lack of moral and material incentives for increasing labor productivity in society, high level of social tension, low level of social infrastructure development, an increase in unemployment, etc., decrease the level of the investment potential [10, 11]. Measures of the social policy to secure an economically justified level of wages

and incomes, employment, social protection and social security puts the prospect of these risks minimization.

Internal investment risk may be operational, functional, selective, credit, etc. Operational investment risk involves the probability of investment losses due to technical errors in the conduct of operations, personnel actions, emergencies, malfunctioning in computer technology, security breach, and functional one – losses in the formation and management of an investment portfolio. Selective investment risk is the probability of wrong choice of the investment object. Credit investment risk manifests itself as a result of the investor's failure to fulfill his contractual obligations.

Instability of the country's environmental and political situation negatively affects the flow of investment processes in the country. Breakdown of traditional economic ties is one of the reasons for the decline in production volumes.

Opening of external labor markets, low-income level in the country is due to the outflow of personnel from Ukraine. Depreciation of production assets and transport infrastructure, the energy deficit formed in the country requires a significant amount of investments, funds raised in the form of loans. The high cost of credit creates a threat to build up the investment potential.

Low level of investment attractiveness, presence of diverse, high risks do not stimulate the transformation of people's savings into investment resources. In addition, natural reduction of the able-bodied population, presence of the shadow economy and the informal sector of the economy, hiding from the taxation of wages, reducing the level of deductions to the State Social Funds, the Pension Fund, which also potentially reduces the level of income, and therefore the level of potential savings.

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THE BASIC PRINCIPLES AND DIRECTIONS OF STATE POLICY IN THE AREA OF SUSTAINABLE WASTE MANAGEMENT

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Waste management policy is a statement of its intentions and principles that provides a framework for waste management activities and the ability to set waste management goals and objectives [1].

The state policy of the National Commission, which carries out state regulation in the areas of energy and public service, in the areas of disposal and recycling of household waste consists in:

- balancing the interests of business entities, consumers and the state;
- protecting the rights of consumers of goods and services in terms of obtaining goods and services of an adequate quality and sufficiently at economically reasonable prices, as well as promoting their quality and satisfying their demand;
- formation and provision of forecasting of price and tariff policy in the markets which are in a state of natural monopoly and related markets in the area of disposal and recycling of household wastes, facilitate the implementation of incentive methods of prices regulation;
- ensuring self-sustainability of activities of natural monopolies (household waste disposal) and business entities in adjacent markets (recycling of household waste);
- ensuring equal opportunities for consumers to access products (services) in markets that are in a state of natural monopoly (disposal of household waste);
- limiting the influence of natural monopolies on state policy and promoting competition in related markets in the area of disposal and recycling of household waste in order to ensure the efficient functioning of these industries [2].

Ukraine participates in international cooperation in the field of waste management in accordance with the norms of international law formulated in the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other

Materials (London, 29.12.1972), the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their removal (Basel, 1989), the Agreement on Interstate Transportation of Dangerous Goods MORPOL 73/78 (Ashgabat, 1993).

The implementation of the tasks identified by the listed documents is rather slow, which was determined at the state level. Thus, by the Verkhovna Rada of Ukraine Resolution "On the State of Implementation of Legislation in the Field of Waste Management in Ukraine and the Ways of Its Improvement" dated October 6, 2005 No. 2967-IV [3] "The activities of the CMU in ensuring the effective implementation of state policy in the waste management area, improvement of the legal and regulatory framework for the organizational and economic mechanism for stimulating economic activity in the field of waste management as secondary material resources, public administration in the organization of collection and recycling and using it as secondary material resources found to be unsatisfactory".

It was recognized that the consequences of unsatisfactory public administration, the imperfect regulatory framework in the waste management area are:

- the negative impact of generated and accumulated waste on the health of people and NPPs;
- absence of effective economic incentives for the collection and recycling of a significant amount of waste;
- imperfection of economic and legal mechanisms of management in this sphere;
- imperfection of the established in Ukraine infrastructure and practice of collecting and removing solid household waste, which does not provide selective collection of useful components of waste as secondary raw materials;
- low level of information provision of business entities on waste utilization technologies, construction and operation of waste management facilities and the absence of measures aimed at clarifying waste legislation among the population, creating the necessary conditions for stimulating the involvement of the population in harvesting and harvesting certain types of waste as secondary raw materials;
- lack of effective control over waste streams and imperfect forms of statistical reporting, which makes it impossible to obtain reliable information on the volume of education, use of waste, the state of the internal market of secondary resources and complicates the adoption of sound decisions on regulating this market;
- low fees for waste placement, which does not meet modern requirements and world practice;
- lack of effective control over waste streams and imperfect forms of statistical reporting, which makes it impossible to obtain reliable information on the volumes of formation, waste uses, the state of the internal market of secondary resources and make it difficult to make sound decisions on regulating this market;
- low fees for waste placement, which does not meet modern requirements and world practice;

– illegal waste operations at transboundary transportation, utilization or removal of hazardous waste during their import or transit through the territory of Ukraine;

– lack of systematic study and examination of the world's newest scientific developments and modern technologies of waste processing and their introduction in Ukraine.

Business entities in their activities should be guided by the following normative and legal acts [4-7].

The management of waste management activities is carried out through the system of public authorities, which include: central bodies of legislative and executive power, regional authorities, local self-government bodies and their executive bodies.

The enterprises, which are generating waste, enterprises for their utilization and dumping, act as objects of management. There are four hierarchical levels in the waste management system (Fig. 1).

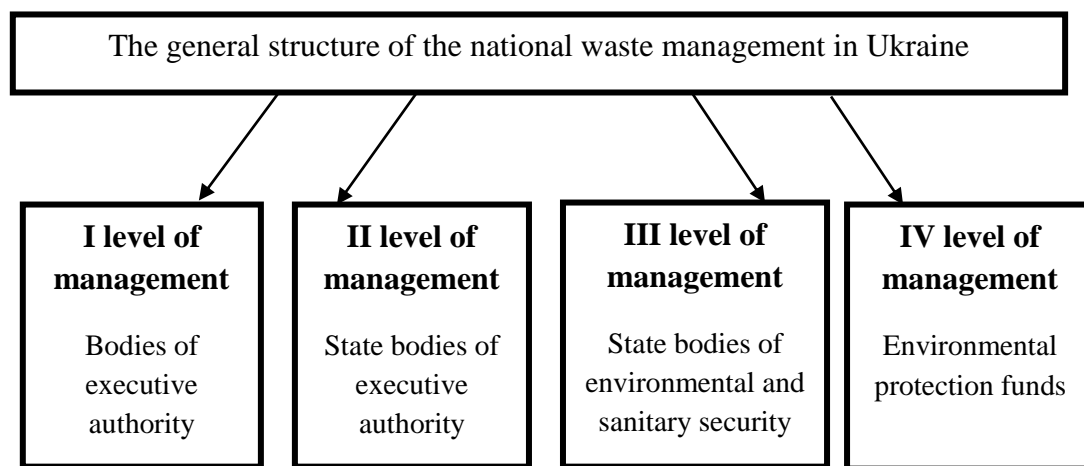


Fig. 1. The general structure of the national waste management in Ukraine
Source: developed by the authors according to the data [8].

The first level of management

The central bodies of legislative and executive power exercise direct and indirect management of waste. Indirect regulation is carried out in the process of managing all economic activity. Direct management is provided through special legislative and regulatory acts.

The President of Ukraine regularly influences by issuing Orders, which may relate to certain aspects of waste management, which require an urgent decision.

The Verkhovna Rada of Ukraine carries out legislative implementation of activities in waste management range, defines the state policy and strategic goals in this area.

The Cabinet of Ministers of Ukraine carries out the organization of executive and administrative activities of all executive authorities regarding the practical realization of laws, other normative acts, legal regulations, operational and dynamical management in the field of waste management.

The Ministry of Ecology and Natural Resources of Ukraine carries out its powers through the state environmental safety in the regions, Kyiv and Sevastopol cities, specially authorized bodies of state executive authorities in the field of environmental safety of the Autonomous Republic of Crimea (ARC), inspections, research and educational institutions, and other enterprises, institutions related to the area of its management.

The task of the Ministry of Ecology and Natural Resources of Ukraine includes the implementation of state policy, the implementation of regulatory and legal regulation in the waste management field, state control over abundance by the requirements of the legislation, the implementation of rules, norms, standards, standards in this area and conducting environmental assessment.

The State Service of Ukraine for Food Safety and Consumer Protection of Ukraine carries out state sanitary-and-epidemiological supervision of abundance by legal and natural persons sanitary legislation. The purpose of surveillance is to preventing, detecting, reducing or eliminating the harmful effects of waste on the environmental and human health during their formation, collection, transportation, storage, processing, recycling, utilization, disposal and burial. The structure includes the administrations, institutions, organizations of the sanitary and epidemiological profile of the Ministry of Health of Ukraine, the relevant departments of other ministries and departments, determined by the legislation.

Other specially authorized bodies of executive power in the waste management area is performing waste management functions within the limits of their competence, determined by the relevant Ukraine laws.

The second level of management.

The State bodies of executive power in the positions which are controlling the execution of legislative and regulatory acts, are engaged in issuing and account permits taking into and licenses, checking projects and agreeing limits on the waste formation and placement, conducting a bank issued limits, checking charges and payments for environmental pollution, conducting regional registries objects of formation, processing, utilization and waste disposal, monitor the environmental condition, collecting and processing primary reporting.

Third level of management.

The State bodies of environmental and sanitary safety on the position realize state control over the third level of management: enterprises - manufacturers of industrial waste; specialized enterprises for collecting, transporting, processing and utilizing waste; specialized enterprises for the waste disposal and burial.

At this level, waste management takes place within the group of enterprises, consortia, companies and can be carried out in the following areas:

- processing and full recovery of the wastes which are generated in the production cycle of its enterprise for the production of basic or supporting products;
- processing and waste transfer to a specialized enterprise for decontamination and burial;
- recycling of waste to the necessary conditions of secondary material resources (SMR) and transfer for sale on the market through the stock exchange or directly to enterprises;

– a combined solution.

Fourth level of management.

The fourth level of management include: commodity exchange and SMR; Environmental protection funds; NGOs. At this level, management is carried out within the framework of one enterprise or unit of the enterprise, the administration of the enterprise. The subject of management (the decision-maker) is the leadership of the enterprise, controlling actions are usually have administrative nature almost it has same set of options as in the preceding case [8].

The following information about tariff for household waste disposal service applies exclusively to business entities that carry out disposal of household wastes and which come under the tariff regulation of the NKREKP in accordance with the laws of Ukraine "On State Regulation in the Utilities", "On Municipal Services».

The tariff regulation of business entities that carry out the disposal of household waste and which is not come under the NERCP regulation is exercised by local self-government bodies in accordance with the laws of Ukraine "On Local Self-Government in Ukraine" and "On Housing and Communal Services".

According to the first part of Article 1 of the Law of Ukraine "On the National Commission for the State Regulation in the Spheres of Energy and Municipal services", which entered into force on November 26, 2016, NKREEC is a permanently acting independent state collegial body whose purpose is state regulation, monitoring and control over the activities of economic entities in the energy and municipals services [9].

Paragraph 1 of Article 5 of the Law of Ukraine "On Natural Monopolies" stipulates that the activity of subjects of natural monopolies in the disposal field of household waste is regulated in accordance with this Law, and Article 6 of the same Law determines that the adjacent markets, which are regulated in accordance with this Law , belongs to the recycling of household waste.

The Law of Ukraine "On Licensing Types of Economic Activities", subparagraphs 31 and 32 of the first paragraph of Article 7, stipulates that the next types of economic activity like subject to licensing such as the processing of household waste and the disposal of household waste [10].

In accordance with Article 1 of the Law of Ukraine "On State Regulation in the Municipal services", the subject of a natural monopoly is the management subject of any form of ownership that carries out activities on a market which is in natural monopoly condition of household wastes disposal field, and a business entity in the adjacent market is a business entity that carries out activities in the field of recycling household waste [11].

Article 2 of this Law indicates that the authority of state regulatory in the communal services area is a National Commission that carries out state regulation in the fields of energy and municipal services (NKREKP), which, in accordance with paragraph 1 of the first part of Article 6 of this Law of Ukraine, is involved in the formation and implementation of state policy in the field of household waste disposal. In this case, in accordance with Article 5 of the Law, the NKREKP applies, in particular, such means of regulatory influence as licensing of economic activities and

the further establishment of tariffs for municipal services to licensees who are licensed (NKREKP licensees).

The Law of Ukraine of "On Housing and Communal Services" in the article 5 defines that NKREKP is a state collegial body that regulating activities in the field of heat supply (except for the activities of economic entities that carry out combined heat and power production and / or use non-traditional or renewable sources of energy), centralized water supply and drainage, recycling and disposal of household waste for facilities servicing in populated areas with a population of more than 100 thousand people and facilities with a capacity of processing or disposal of more than 50 thousand tons or 200 thousand cubic meters of household waste per year [12].

The Law of Ukraine "On Waste" defines the terms for the processing (treatment) of household wastes - the implementation of any technological operations related to the physical changes, chemical or biological properties of household wastes in order to prepare them for environmentally safe storage, transportation, recycling or refuse collection and services of household waste disposal - services for the final placement of household waste after their processing (treating) in specially designated places or on area in such a way that long-term the harmful influence of waste on the environment and human health does not exceed the established norms [13].

The Resolution of the NKREKP dated 27.04.2017 № 601 "On Approval of the Procedure for the Formation of a Tariff for a Service for the household waste disposal" established that the tariff for a service of of household waste disposal is the unit cost (1 ton) of household waste disposal, defined as the monetary expression of the planned economically justified costs , expenses for covering the losses of the licensee and the planned profit, which is established by the NKREKP without added value tax [14].

Article 10 of the Law of Ukraine "On State Regulation in the field of municipal services" defines:

- tariffs for municipal services of natural monopoly entities (disposal of household waste) should provide for the reimbursement of all economically justified planned expenses for their production, based on planned profit;
- the establishment of tariffs for municipal services, which are lower than the economically justified spending on their production, is not allowed and can be appealed in court [11].

According to the Law of Ukraine "On Housing and municipal Services", performers / producers are making calculations of economically justified spending on production (provision) of housing and municipal services and submit them to bodies authorized to set tariffs [12].

According to Article 10 of the Law of Ukraine "On State Regulation in the field of municipal services" tariffs on municipal services are formed by the subjects of natural monopolies in accordance with the procedures (methods) established by the NKREKP [11].

In accordance with the Laws of Ukraine "On Housing and municipal Services", "On State Regulation in the municipal services", "On the National Commission for State Regulation in the Spheres of Energy and municipal services" to the powers of the NKREKP, in particular, the establishment of tariffs for communal services

subjects of natural monopolies and economic entities on adjacent markets whose licensing activities are carried out by NKREKP.

At the same time, in Article 31 of the Law of Ukraine "On Housing and municipal Services" [12], when setting prices / tariffs for services that are produced by natural monopolies, whose activities are regulated by the NKREKP, in accordance with the legislation, the powers of local self-government bodies are exclusively spread to the tariff (component of the tariff), which is not subject to these establishment of national commissions.

Together with this Law of Ukraine "On Local Self-Government in Ukraine" in Article 28 is noted that the authority of the executive bodies of village, settlement and city councils behave the establishment of tariffs for household, municipal (except for heat energy tariffs, centralized water supply and drainage, processing household waste and disposal, centralized heating services, centralized supply of hot and cold water, sewage services, water services (with using of in- house systems), established by NKREKP), transport and other services [15].

In this case, NKREKP, in accordance with Article 5 of the Law of Ukraine "On Housing and municipal Services" [12], regulates activities in the field of heat supply (in addition to the activities of economic entities, that carry out combined heat and power production and / or use non-traditional or renewable sources of energy), centralized water supply and drainage, recycling and disposal of household waste for facilities serving settlements with a population of more than 100 thousand people, and objects with a capacity for recycling or disposal of more than 50,000 tons or 200,000 cubic meters of waste per year.

Thus, the research of the legislative framework, which is regulated waste management, revealed the lack of a specific structure that has the functions of monitoring compliance with the current legislation, so, there is a need for the relevant authorities that will monitor compliance with the relevant requirements for sustainable development.

It has been found that in developed countries it has established an extensive economic waste management system that responds to international standardization (ISO Series 9000 and ISO 14000 series).

The research of best practices in the area of management and waste management (in Sweden, Germany, Switzerland and Poland) has shown that a separate collection of waste plays a decisive role.

This provides the opportunity to sort garbage by fractions, which will be further directed directly to processing plants. Another commonly used option for successful control of waste management is introduction taxes by the state on materials that are not subjected to processing.

Introduction with the Environmental Directives, which regulates the main principles of waste management, requirements for their storage and disposal, showed that the main objectives determine the increase of recycled waste, reduction of buried waste, the possibility of early forecasting and prevention.

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ANALYSIS AND EVALUATION OF THE PREREQUISITES FOR SUPPORT OF THE SUSTAINABLE DEVELOPMENT OF THE NATIONAL ECONOMY OF UKRAINE

Semchenko-Kovalchuk O.

Under current conditions of the national economy development of Ukraine, ensuring sustainable development involves implementing a strategy of social and economic transformation. Sustainable development of the country and its regions can be considered as an increase in the level of overcoming of adverse social, economic and environmental risks and threats. Balanced development of the regions of the country should be oriented towards ensuring conditions, which will enable each region of the country to have necessary and sufficient resources to ensure decent living conditions for the population, complex development and increase of competitiveness of the national economy.

In developed countries, issues of economic independence, security and sustainable development of the country are becoming key ones. The analysis and assessment of the sustainable development of the national economy of Ukraine is needed to identify internal and external threats, which will allow the development of measures to prevent their negative impact in order to identify scenarios of the development and production of an optimal strategy for the country's operation. Restoration of economic growth is one of the main strategic aspects of the program of economic reforms, aimed at building a modern, sustainable and competitive economy of Ukraine on a global scale. Numerous existing economic, social and environmental problems forced the world community to look at the natural environment not only as an object of nature use and a compulsory component of economic growth, but also in the context of limited natural resources and existing environmental threats. These threats have led to the realization that the economic system is a part of the overall ecological and social system. As a result, national economies in most countries of the world are in a state of transformation from a consumer-oriented approach to the optimal combination of bioenergy and food production and the preservation of the environment – the stage of transition to bioeconomy and sustainable development. The main task of improving the environment and preserving and enhancing natural resources is currently very relevant and of great economic importance. The basis of the formation of a new type of ecological and economic growth should be the most sustainable development. Reforming the domestic social and economic system, overcoming the financial and economic and social and political crisis in the society, is intended, above all, to ensure sustainable development of the country, which aims at balancing the satisfaction of today's human needs and protecting interests of future generations, preserving the natural environment. Solution of this matter is one of the most important tasks of the present days.

In order to determine Ukraine's readiness for the sustainable development and its state in the global dimension, let's consider its position in the world in comparison with the countries with the best indicators for a certain component of sustainable development, as well as with countries of the post-Soviet area, which began

reforming their economies simultaneously with Ukraine and had roughly identical starting conditions at the time of independence (for many parameters, Ukraine had even more potential than other countries). Ukraine, because of economic crises with its powerful development potential at the time of declaration of independence, according to the World Bank, [1] is now classified as a category of countries with lower income per capita (groups “Lower Middle Income Countries”). If in 1990 the country ranked the 94th position out of 183 countries in terms of gross domestic product per capita, then in 2017 it dropped to the 133th place out of 188 countries by this indicator, and in terms of GDP by purchasing power parity, the country ranks the 50th place in the group of countries along with Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, as well as its macroeconomic indicators

Analyzing GDP per capita for 2017, one can see that Ukraine is on the 133rd pillar and is \$ 2459 . Considering GDP per capita (\$ 7,970) per purchasing power parity, we can see, that our country takes the 15th step, it received 66.43 points out of 100 possible, entering the group of countries with a level of social development "below the average" [1]. At the last 183th place is the Central African Republic - \$ 629.7. It is noted that GDP per capita in Georgia is \$ 9,630, in Belarus – \$ 14.107 and in Russia – \$ 24.26. Qatar takes the first place (\$\$ 132.098), the second - Norway (\$ 68.430) and the USA close the top three (\$ 55.805) [2], as depicted in Fig. 1.

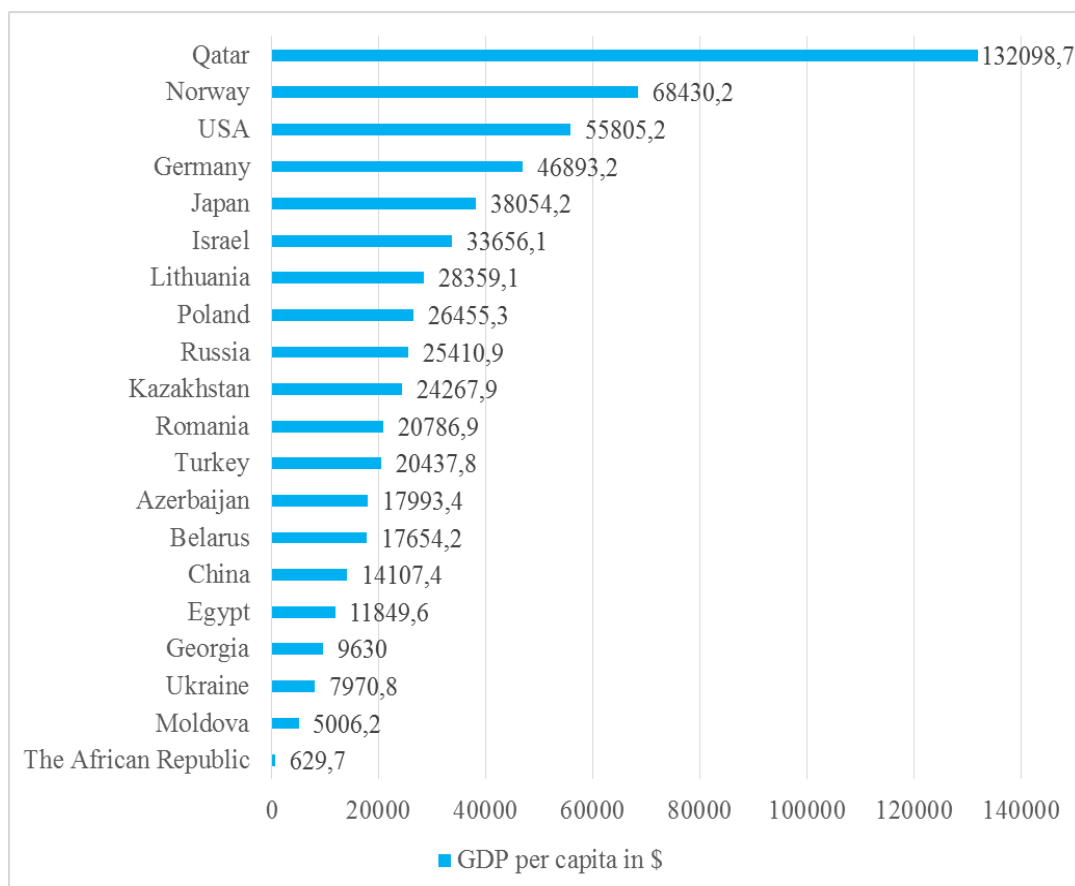


Fig. 1. GDP per capita for Purchasing Power Parity (PPP) among countries of the world – Index of Economic Freedom as of 2017 [2]

According to the World Bank [1], "Of the 166 countries that released the full GDP statistics for the period 1991-2017, it only declined in five countries, Ukraine in this list" outstripped "all other countries: Moldova (-29%), Georgia (-15.4%), Zimbabwe (-2.3%) and the Central African Republic (-0.94%), which indicates a gradual decline in the sustainability of the national economy "and is confirmed by the negative dynamics of macroeconomic indicators and other indicators of social and economic development." It is noted that Yemen has the highest negative index of the GDP dynamics - 28.1%. Sierra Leone takes the second place (-21.5%). Three of the leading anti-rating leaders is closed by Macao (-20.3%). Next in the ranking is Equatorial Guinea (-12.2%), the fifth place is occupied by Ukraine, where the GDP dynamics is -9.9%. However, the highest GDP growth rate was recorded in Ethiopia (10.2%) and Papua New Guinea (9%) [2]. Dynamics of the GDP change is shown in Figure 2.

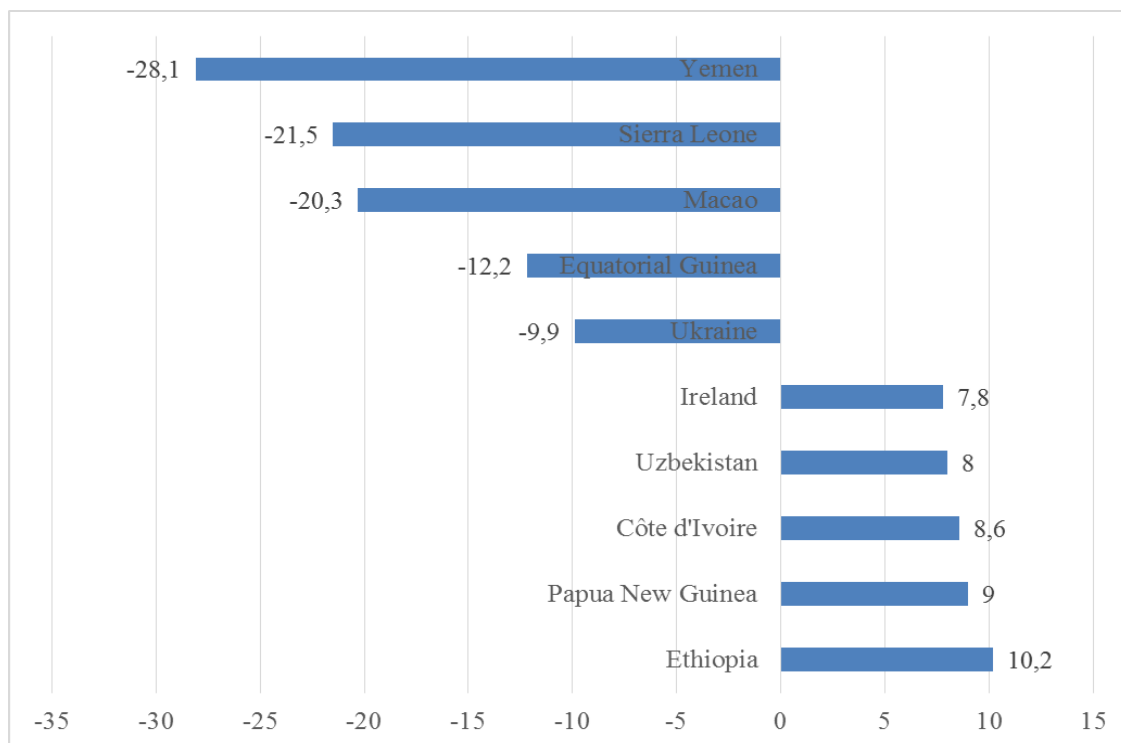


Fig. 2. Dynamics of the GDP change (%) among countries of the world in the period of 2016 up to 2015 – IEC 2017 [2]

Three of the major economic crises during the period of Ukraine's independence negatively affected by ensuring the sustainable development of the state: the first economic crisis of 1991-2000, the second – of 2008-2010 and the third, extremely deep social and economic crisis that began in 2013 and continues to this day and demonstrates all signs of a systemic crisis – a crisis of basic relations in the social and economic, political and legal spheres on which the current model of the country's development was built. According to most forecasts of international organizations, the crisis phenomena in the country's economy will continue to be

resonant and, probably, lasting. In the last five years, GDP in Ukraine has changed by (-2.1%), in Equatorial Guinea - by (-2.3%), in Greece- by (-3.8%). Also, since 2011, the GDP has changed in the Central African Republic by (-4.7%), in Yemen - by (-6.8%). In addition, in this period, GDP grew in Turkmenistan by 10.6%, Mongolia - 10.3%, and Ethiopia -10.1%. [2].

According to the State Statistics Service of Ukraine, the real gross domestic product (GDP) in 2017 compared with 2016 increased by 2.5%. Nominal GDP was UAH 2982.9 billion, and GDP per capita - UAH 70,210. According to the updated data of the State Statistics Service, GDP for the first quarter of 2017 to the corresponding quarter of the previous year increased by 2.8% - to UAH 591.008 billion, for the second quarter increased by 2.6% - to UAH 664.760 billion, for the third quarter increased by 2.4% - to UAH 833,130 billion, for the fourth quarter increased by 2.2% to UAH 894.022 billion, as can be seen from Table 1 [3,4].

Table 1

Gross Domestic Product of Ukraine in 2017 (UAH million) [5]

2017	Nominal GDP (in actual prices)	Actual GDP (in 2016 prices)	Difference (actual - nominal)	
I quarter	591008	510447	-80561	-13.6%
II quarter	664760	570690	-94070	-14.2%
III quarter	833130	700131	-132999	-16.0%
IV quarter	894022	664319	-229703	-25.7%
in a year	2982920	2445587	-537333	-18.0%

Actual growth rate of real GDP in Ukraine in 2017 was 2.5% above the National Bank's expectations, which are published in the Inflation Report of the Regulator for January 2018 (2.1%). This is stated in the comments of the NBU on the final statistics on GDP growth in 2017 by 2.5%. The Regulator noted that the recovery of Ukraine's economy is faster than expectations, and the main driver of growth was consumer demand, investment activity was also a significant driver. In addition, the growth of real GDP is facilitated by external conditions, as the volume of exports of goods and services in real terms increased by 3.5% year-by-year [6].

At the same time, according to the World Bank, according to the results of 2018, the gross domestic product of Ukraine grew by 3.5% (previously forecasted increase of 3.3%). In 2020, the economy should grow by 3.4%, and in 2021 - by 3.8% [7]. The State Statistics Service of Ukraine provides statistics both in the branches of the economy, both by types of payments and by the end consumer. According to these data, the real GDP for the first half of 2018 amounted to more than UAH 1.5 trillion. The largest contribution to this amount was made by taxes - almost UAH 250 billion, or 16.7% of GDP. The second place - UAH 218 billion, or 14% of GDP, - belongs to the trade and repair of motor vehicles (here it is, "benefit" from bad roads and rate cars with European license number). These activities have been leading in the structure of GDP for many years. True, by 2015, trade was in the first place with 14-15 per cent, while taxes were on the second (13-14 per cent) [3].

The third place for filling the GDP - also many years in a row - is the processing industry. Its share in 2018 accounts for 12.6% of GDP, and this share has slowly increased in recent years (12.2% in 2014, 12.4% in 2017). And in the fourth place on the contribution to GDP traditionally is agriculture (including forest and fish).

Moreover, the value of this industry in the structure of GDP in recent years has increased significantly: 2012 - 7.8% of GDP, 2014 - 10%, 2016 - 11.7%. True, last year the product produced by agriculture amounted to only 10.2%. How it will be this year is too early to judge: agriculture makes the most significant contribution to GDP in the second half of the year, after harvesting [3, 8].

A good percentage in the structure of GDP is taken by transport. However, in recent years this contribution has only declined (7% in 2012, 6,7% in 2015, 6,4% in 2017).

If we talk about the structure of GDP by type of payment (distribution method), the main content is the article "wages of hired workers" - 45% of GDP. And the main end consumer of the product produced in Ukraine is households - almost 70%. Exports of Ukrainian products also make a significant contribution to GDP (second after salaries). But imports are losing out of the country a lot more money than bringing exports [8]. Results of the assessment of the main indicators of the national economy, according to analytical and statistical data, showed that high-tech sectors of the industry reduced production volumes at a higher pace than raw materials, although the fall rates were comparable, there is a gradual shift in the country from the goods of the processing industry to the food raw material. The producer price index in Ukraine in December 2018 amounted to 99.6%, in the year – to 114.3%.

Table 2

Consolidated table of producer price indexes from 2010 to 2018 (%) [9]

	Jan	Feb	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
2010	101,9	101,9	103,0	103,0	104,4	99,5	99,8	100,9	100,1	102,4	99,7	100,9	118,8
2011	101,3	104,8	102,1	103,4	102,6	100,5	100,1	100,5	101,2	98,2	100,6	98,2	114,1
2012	99,2	100,8	101,1	103,7	100,2	100,7	97,1	100,5	100,2	98,5	100,0	98,5	100,4
2013	100,3	98,4	102,2	102,5	103,1	97,3	97,1	101,2	100,2	100,2	98,7	100,7	101,7
2014	100,5	99,7	102,7	106,1	104,3	103,6	102,7	102,6	102,4	99,3	104,2	100,0	131,7
2015	102,3	104,8	110,5	104,0	99,6	100,6	102,0	99,7	102,0	97,6	100,1	100,3	125,5
2016	98,9	101,5	104,0	103,6	105,3	100,0	104,3	100,2	102,6	105,4	102,2	103,2	135,8
2017	99,7	103,1	103,5	101,6	98,7	99,4	101,8	100,4	101,6	102,3	101,8	101,7	116,6
2018	104,4	101,2	100,3	100,0	100,8	101,1	101,6	101,3	101,2	100,3	101,7	99,6	114,3

The Producer price index covers all stages of production: raw materials, intermediate stages, finished products, as well as all sectors: industry, mining, agriculture, but the prices of imported goods are not included in it. Growth of producer price index may become a harbinger of higher consumer inflation rates; thus, its changes are an early inflation indicator. In addition, the producer price index reveals how much the purchasing power of the national currency has changed.

Analyzing the data, one can see that the indexes of industrial producer prices have unstable dynamics. Thus, since 2010, it has decreased by 17% by 2013, and in 2014 it has increased by 35.7%.

The results of the assessment of the dynamics of export-import potential of Ukraine showed that in 2017, exports of goods to EU countries amounted to US 17534.5 million dollars and increased compared with 2016 by 29.9% (by US 4038.2 million dollars), import - US 20795.8 million dollars and increased by 21.3% (by US 3,655.0 million dollars) [3].

In January-November 2018, the export of goods amounted to US 43247.6 million dollars, or 109.9% compared to January-November 2017, imports – US 52113,3 million dollars, or 116,7%. The negative balance was US 8865.7 million dollars (in January-November 2017 the balance was also negative – US 5323,0 million dollars). The export coverage ratio was 0.83 (in January-November 2017 – 0.88) [3].

Obviously, along with the growth of export-import operations, imports into Ukraine in recent years are chronically outperforming exports, and their difference sometimes amounts to 8% of GDP (Fig. 3).

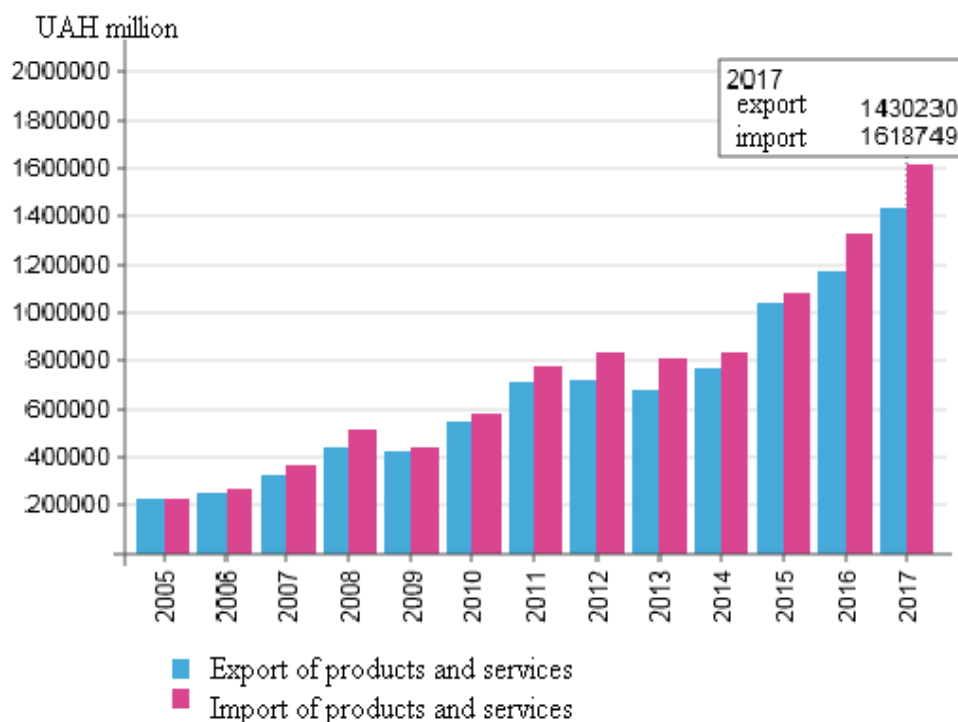


Fig. 3. Export and import ratios in Ukraine [11]

The largest volumes of exports to the EU countries were products of the agro-industrial complex and food industry – 32.2% of total exports, non-precious metals and articles thereof - 21,4%, incl. ferrous metals and articles thereof - 20.2%, mechanical and electric machines - 14.2%. The largest export deliveries were made to Poland - 15.5% of total exports to EU countries, Italy - 14.1%, Germany - 10.0% [10].

The largest import volumes of goods from EU countries were mechanical and electric machines - 21.8% of the total import volume, production of chemical and related industries - 17.2%, mineral products - 15.0%. The largest import deliveries among EU countries were made from Germany - 26.2% of total imports to EU countries, Poland - 16.6%, Italy - 7.8%, France - 7.5%, Hungary - 5.5%, the Czech Republic - 4.2% and Great Britain - 3.8% [3, 10].

Exports of services to the EU countries in 2017 amounted to US 3329.6 million dollars and increased compared to 2016 by 10.8% (by US 324.7 million dollars), import - respectively US 2503,0 million dollars and increased by 3.4% (by US 81.4 million dollars). The largest volumes of exports to EU countries accounted for transport services - 36.9% of total exports of services to EU countries, on the processing of material resources - 24.7%, in the field of telecommunications, computer and information - 19.0% and business - 12.7%. Among the EU countries, the largest volumes of services were provided to the United Kingdom - 17.2% of total exports of services to EU countries, Germany - 15.7%, Poland - 8.3%, Cyprus - 8.0% and the Netherlands - 4.9% [3, 10].

Transport services accounted for the largest share of total imports of services from EU countries - 26.7% of total imports of services from EU countries, business - 17.2% and travel-related services - 12.3%. Among the EU countries, the largest volumes of services were received from Great Britain - 19.9% of total imports of services from EU countries, Germany - 14.8%, Cyprus - 9.0% and Poland - 5.8% [10].

As for investment, in 2017, investors of the EU countries invested in the Ukrainian economy US 1244.0 million dollars of direct investment (equity), which is 66.5% of the total revenues in Ukraine. The largest investor countries in 2017, which account for 78.8% of total direct investment income from EU countries, include Cyprus – US 506.0 million dollars, the Netherlands – US 262.5 million dollars, and the United Kingdom – US 211, 7 million dollars. The volume of direct investments (share capital) to the Ukrainian economy from EU countries as of December 31, 2017 amounted to US 27465.5 million dollars, which is 70.2% of the total volume. The largest volumes of direct investments in 2017 were sent to Latvia, Hungary and the Czech Republic. The volume of direct investments (share capital) from Ukraine to the economy of the EU countries as of December 31, 2017 amounted to US 6091,6 million dollars, which makes up 96,1% of their total volume [3, 10].

The above determines the necessity of specifying the state of economic and environmental performance, the level of social security of the country in the global dimension, on the basis of the international indexes of measures of sustainable development of the countries, taking into consideration existing approaches to the parameters of the sustainable development. The outcomes of the analysis of the ranking of countries and places of Ukraine in the global dimension by the competitiveness index [12] and the index of economic freedom as the economic parameters of the sustainable development showed the following:

1. Ukraine continues to lose its position in the global ranking of countries in terms of economic competitiveness. Thus, according to The Global Competitiveness Index 2016-2017, which was published by The World Economic Forum, Ukraine

ranked the 85th among 138 countries, losing six positions in the year (ranked the 79th in the previous ranking) (between Namibia and Greece with index 4) [12, 13], in comparison with the post-Soviet countries (Belarus, Turkmenistan, Uzbekistan not included in the rating), the worst position is only in Moldova (the 100th place, index 3.9) and Kyrgyzstan (the 111th place, index 3.7); Already traditionally, the rating was headed by Switzerland and Singapore. The top ten most competitive, as in the previous study, included the United States, the Netherlands, Germany, Sweden, the United Kingdom, Japan, Hong Kong and Finland. Russia this year took 43th place in the rating, having improved its positions by 2 points (Fig. 4).

The Global Competitiveness Index consists of more than 100 variables grouped in 12 benchmarks ("Institutions", "Infrastructure", "Macroeconomic Environment", "Health care and primary education", "Higher education and training" "Efficiency of the goods market," "Efficiency of the labor market", "Development of the financial market", "Technological availability ", "Market size","Business compliance with modern requirements "and" Innovative potential ") under three main sub-groups: "Essential requirements", "Performance enhancers" and "Innovations and improvement factors".

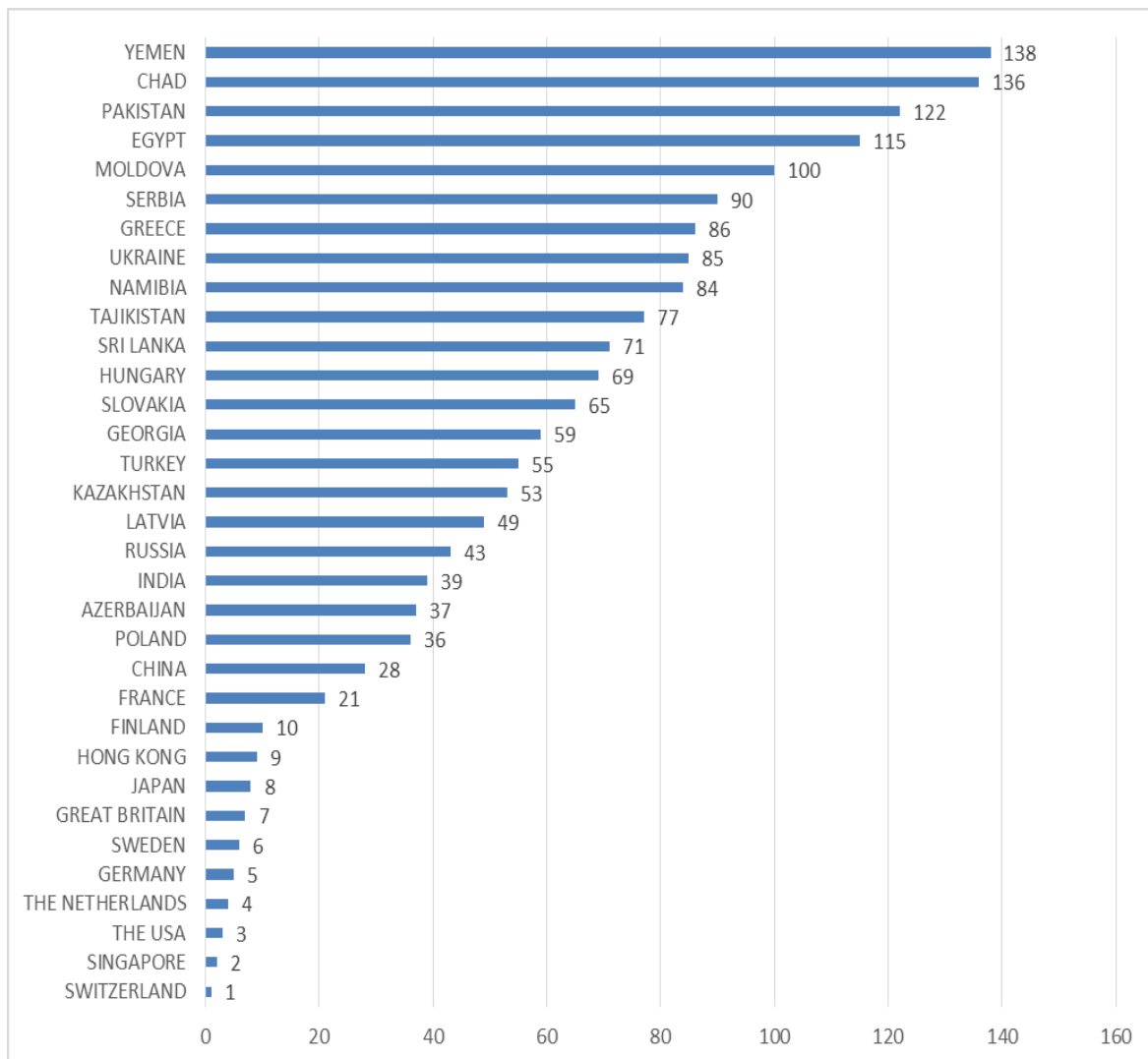


Fig. 4. Position of Ukraine in the world ranking according to the Global Competitiveness Index 2016-2017 [12, 13]

The Global Competitiveness Index of Ukraine by main indicators is shown in Table 3.

Table 3

The Global Competitiveness Index of Ukraine by main indicators for 2015-2017 [12,13]

The Global Competitiveness Index of Ukraine	2015-2016 (140 countries)	2016-2017 (138 countries)	
		position in the ranking	index
	79	85	4,0
main requirements	101	102	4,0
institutions	130	129	3,0
infrastructure	69	75	3,9
macroeconomic environment	134	128	3,2
health care and primary education	45	54	6,0
increasing productivity	65	74	4,0
higher education and professional training	34	33	5,1
efficiency of the goods market	106	108	4,0
efficiency of the labor market	56	73	4,2
development of the financial market	121	130	3,0
technological availability	86	85	3,6
the market size	45	47	4,4
innovations and factors of improvement	72	73	3,5
market compliance to current conditions	91	98	3,6
innovations	54	52	3,4

2. Ukraine in the Economic Freedom Rating is ranked the 162th position among 178 countries. The level of economic freedom in Ukraine over the past year has not changed much. This is evidenced by a rating from the Heritage Foundation Research Institute and the The Wall Street Journal. In the index of economic freedoms Ukraine occupies the 162th place, just like a year earlier, and is part of a group of countries with a so-called "oppressed economy", next to Solomon Islands (161) and Democratic Republic of the Congo (163). Belarus in this group takes the 157th place. At the same time, positive measures include strengthening the fight against corruption, improvement of the situation with the observance of property rights and growth of investment attractiveness. In total, the ranking includes 178 states - in the first place, as in the past year, is Hong Kong. Top ten countries with the freest economies also include Singapore, New Zealand, Switzerland, Australia, Canada, Chile, Ireland, Estonia and the United Kingdom. The report said that Russia ranked the 153th in the ranking, which meant a worsening of the result at once by ten positions [12, 14].

Thus, it can be noted that since 2009 the level of economic development of the national economy has decreased significantly and is generally at a relatively uniform, low level. According to the results of the economic development assessment, it should be noted that improving the state of the subsystems and the national economy system as a whole can be achieved if the following factors are significantly changed:

investment in fixed assets, index of industrial products and emissions of pollutants into the atmosphere. It is also necessary to improve the state of social factors. The developed methodological basis of the integrated assessment of economic development should be the basis for the development of managerial decisions, aimed at ensuring sustainable economic development of the national economy. However, along with this, the formation of appropriate managerial decisions requires research to identify the effects of accelerating the economic development of the national economy and development of methodological approaches to their quantitative definition.

In today's conditions, accelerating the pace of globalization, social development and increasing trends of uncertainty, attention to the problems of sustainable development and conditions for its provision is constantly increasing. Achievement of the sustainable development is defined by the Millennium Development Goal, which is supported by 189 countries and includes three equal interconnected components - economic, social and environmental. Therefore, problems of sustainable development, rational nature management, environmental safety are constantly on the agenda of the UN, are discussed at the Davos Economic Forum, G-7 and G-20 meetings, which generally confirms the relevance of this topic. In this regard, we aim to identify main obstacles, challenges for sustainable development, and rational use of the nature in Ukraine and to analyze the international assessment of the ecological state of the national economy [15].

As you know, economic results of Ukraine in 2017 are disappointing. The state of the Ukrainian economy has steadily deteriorated and worsened against the background of exacerbation of the military conflict in the East. Among the main economic problems that hamper economic development in the country is the deterioration of public finances (high level of budget deficit, reduction of tax revenues, and rapid growth of debt obligations), tension in the money market, significant devaluation of the hryvnia, and lower confidence in the banking system, outflow of investments, etc.

It is worth noting that solving problems in accordance with the adopted "Strategy for Sustainable Development Ukraine-2020" in order to ensure an adequate level of development and progress of the national economy without overcoming social and environmental problems is impossible.

Ecological efficiency of Ukraine's sustainable development is measured using the international EPI (Environmental Performance Index) according to Yale Center for Environmental Law and Policy and Columbia University and the World Economic Forum [16]. This rating of 22 indicators in 10 categories according to the main criteria allows us to assess the achievements of the country compared with others in terms of the state of ecology and management of natural resources [17; 18].

Positions in the ranking are distributed on the basis of The Environmental Performance Index 2018, reflecting achievements of countries in the field of management of natural resources and their rational use. First of all, it should be noted that the mentioned rating was published every 2 years. Instead, this year's study is prepared on the basis of a modified methodology for the Index formation, which makes it impossible to reconcile the rating indicators in retrospect.

The Environmental Performance Index 2018 assesses the state of the environment and the viability of ecosystems in 180 countries of the world. This year, Switzerland is recognized as the leader in terms of environmental efficiency.

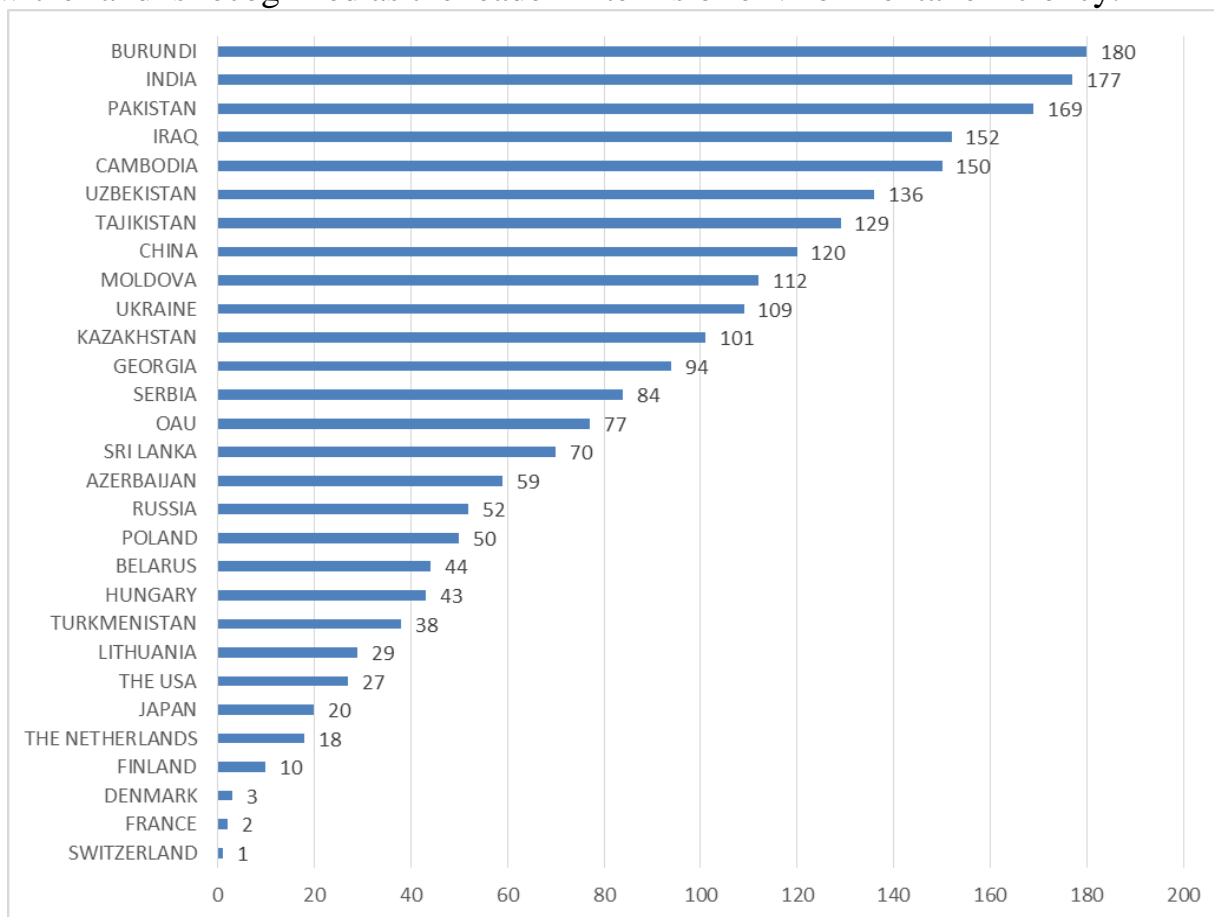


Fig. 5. Rating positions of the countries of the world according to The Environmental Performance Index for 2018 [19]

Top ten leaders also include France, Denmark, Malta, Sweden, Great Britain, Luxembourg, Austria, Ireland and Finland. Ukraine ranked the 109th position in the ranking and was between Turkey (108) and Guatemala (110). Last rankings ranked Bangladesh and Burundi. (Fig. 5).

The Index value is formed on a scale from 0 to 100 (worse-better) based on the assessment of 24 indicators, grouped into 10 categories that reflect different aspects of the state of the environment and the viability of ecosystems (the conservation of biological diversity, the level of economic activity on the environment, the effectiveness of state policy in the field of ecology, etc.). (Fig. 6).

This year the Index of Ukraine was 52.87 points. In addition, the worst value was given by the indicator, which estimates the loss of forest cover (14.08). Besides, a number of indicators are rated less than 50 points. The best score (88.71) was assigned to Ukraine according to the category "heavy metal pollution", which considers the influence of the contained lead in the air, water, soil and artificial materials on the health of people [19].

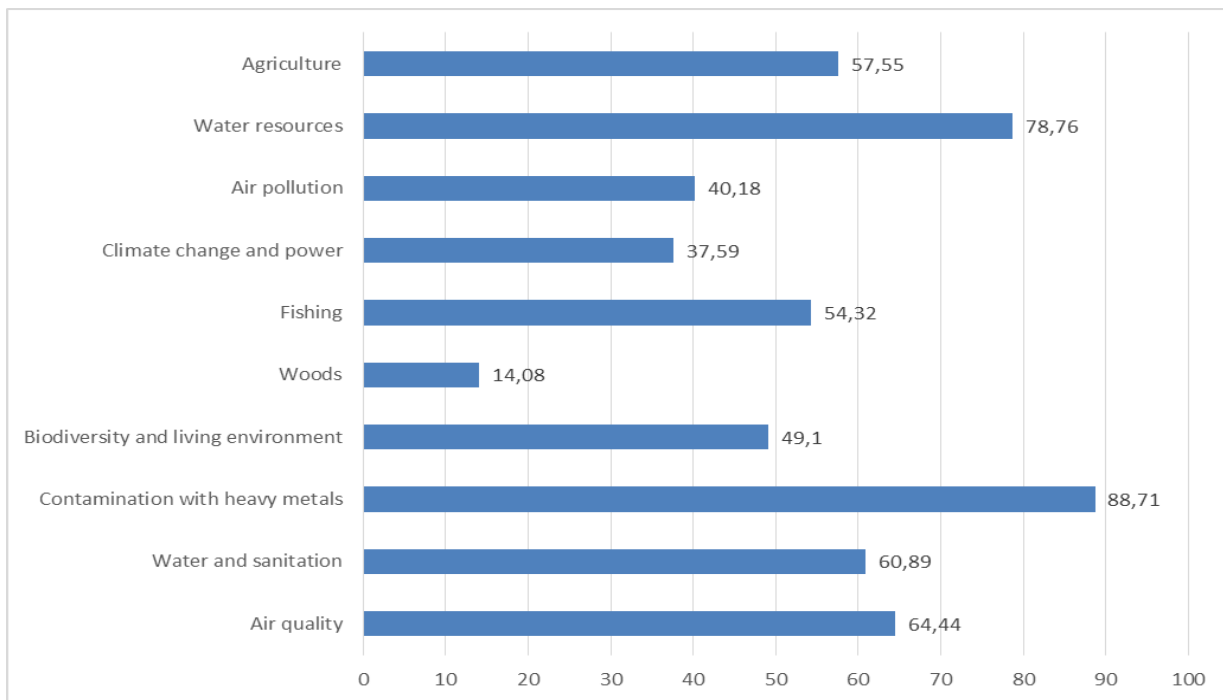


Fig. 6. The value of 10 main categories of The Environment Performance Index of Ukraine in 2018 [19]

Reform of the national economy of Ukraine, overcoming of the financial-economic, ecological and social, and political crisis in society is called, first of all, to ensure the sustainable development of the country, aimed at balancing the satisfaction of today's human needs and protecting the interests of future generations, preservation of the natural environment. Solution of this issue is one of the most important tasks of the present.

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Part 3. Strategic priorities of economic entities development in the conditions of European integration processes and globalization

INSTRUMENTS OF REGULATING THE SPHERE OF GOAT FARMING IN THE TIMES OF GLOBAL CHALLENGES

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Goat farming in Ukraine is developing rapidly in the time when Ukraine's economy is integrating in Europe and the organization and economic mechanism of an agrarian sector is being restructured. The enterprises which have been set up in recent years function to meet international standards of food quality and safety and are novel for national animal industry. Ukraine's feedstock resources provide with an opportunity to develop a competitive and export-oriented production of goat products when the state regulation is up to European principle of traceability.

The regulation of goat farming in the times of global challenges needs aligning national legal standards and rules with European legislature. Goat farming is a rather inviting branch for investors, however, the current regulatory instrument should be transformed structurally to eliminate non-tariff obstacles of national food.

Ukrainian and foreign scientists such as V. Halushko [4], S. Kvasha [7], O. Mohylnyi [10], G. Ternep [5], B. Hai [2] and others studied the instruments of the regulation of goat branch to tackle the global food crisis and in terms of European integration transformations.

The earlier researches are mostly carried out in the area of general development of livestock breeding. Thus, the regulation of the development of goat farming in Ukraine needs a thorough study as it is a promising branch of economy which is developing rapidly.

The research objectives are to study the instruments of the regulation of the development of innovative subjects of farming in the area of goat industry and to formulate the principles of functioning goat branch in the time of implementing European standards of food quality and safety.

An agrarian sector of economy is regulated by the instruments of state and market influence. Here, we can speak about taxes, subsidies, interventions, administrative limits and permission, tariff quotas, standards, etc. We strongly believe that the instrument of standardization of conditions of the production process needs developing as it is an object of an economic transformation in the branch of goat industry for it to be more competitive.

The economic prosperity and the enhancement of life quality of well-developed countries of the world depend on innovation activities of the subjects of management. It, in its turn, depends on economic and scientific and technical potential of the

country, its regulatory policy and resources. At an enterprise this innovation activity depends on the choice of the strategy and management, flexibility of production systems and resources utilization.

Innovation activity of subjects of management in the area of goat farming is performed due to the processes of aim-oriented work in order to create, to produce and to promote food, technological and organization and management novelties. It demands changing the content and the structure of means of the production (it will improve main funds and working assets), professional and qualification structure of employees of an enterprise.

Between 2015 and 2018 the branch of goat farming is rapidly developing and increases the amount of produced products. As food products are produced in accordance with modern international standards of food quality and safety, they can be treated as innovative. The researches which have been conducted showed that among the top innovative enterprise of Ukraine which produce goat products there are such farms as: «Tetiana 2011» (TM «Zinka»), the village of Usivka, Zgurivskiyi district.

They grow 900 goat with further increase the number of goats to reach 2,500-3,000 goats; «Lukachivka-Eko», having 200 goats, the village of Vilhovets, Bohuslav district and «Rubchenetska krasunia», having 2,000 goats, the village of Yablunivka, Makariv district. The latter started to function in 2017. Among other farms in Ukraine we can mention «Shevret», «Babyni kozy», «Dobra ferma», «Medvyn». But these farms are not enough to satisfy the needs of national product market.

That is why Ukraine exports goat products a lot. However, domestic demand for goat products encourages the appearance of powerful enterprises, which should be built and organized in a strict accordance with Ukraine's regulatory determinant. The method of regulating the functioning of farms in the area of goat production has changed since 2017. Law of Ukraine «On Introducing Changes to Certain Legislative Acts of Ukraine to Improve Activities of City Building» on 17.01.17 №1817-VIII, which started to work on 10.06.2017 states one's administrative responsibility for violating the requirements of legislation, building codes, standards and rules during the construction. Law of Ukraine «On Evaluation of Effect on Environment» on 23.05.17 №2059-VIII demands documents which fix the effect on environment to be included into a set of project documents from those who plan to produce goat products due to the fact that these refer to the second category of planning activity having a significant effect on environment.

Challenges which an agrarian sector of economy face urged the appearance of innovation enterprises in Ukraine. These positive steps supported a successful report of inspectors of Food and Veterinary Office (FVO) of Directorate-General for Health and Food Safety (DG SANTE) in 2016. As a result, Euro Commission included Ukraine into the list of countries which are permitted to export dairy products to Europe. These are enterprises which passed an independent examination of quality standards (Fig. 1.).

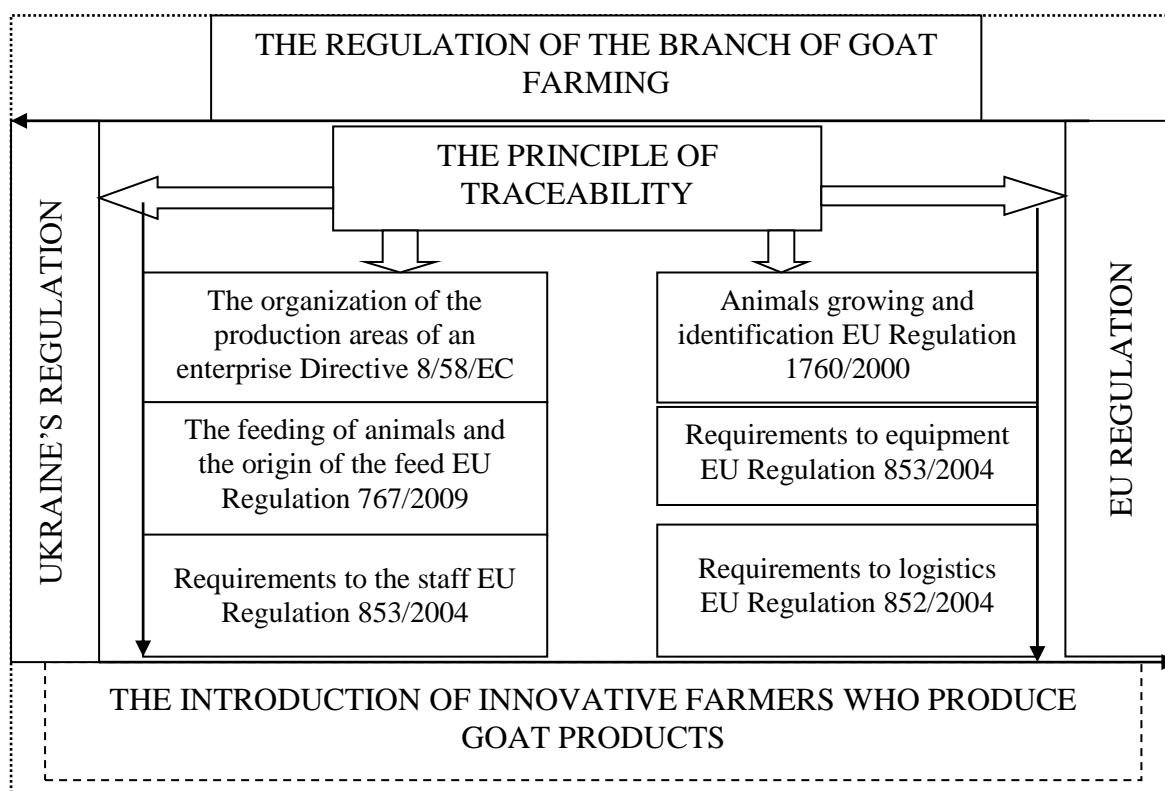


Fig. 1. Instruments to regulate the branch of goat farming

A close look at Fig. 1 shows that main general requirements to an enterprise are conforming to the principle of traceability. According to Article 18 of EU Regulation 178/2002, a farmer who works in the field of the production of goat products can trace the produced products after they are sold. The information about the movements of products should be available on request of EU inspectors of according part III, Annex I, EU regulation 852/2004.

It is obligatory to work out and use fundamental instruments of the regulation of the functioning of an enterprise such as the requirements of the management of production and non-production areas according to Directive 98/58/EU; animals growing and identification according to Regulation EU 1760/2000; the feed production and animal feeding according to Directive 98/58/EU; the requirements to the building of a farm, the hygiene of the staff and milk preservation Regulation EU 853/2004; the electronic registration of the feed and its origin, veterinary drugs, cases of animal diseases; the registration of biological assets of animals arrival and birth, the results of laboratory tests of animal health at an enterprise. All this is necessary for an innovative and export-oriented enterprise to function. If Ukraine conforms to international rules and modifies national regulation instruments, it will become possible to make Ukraine's branch of goat farming more competitive at the import market. To evaluate the functioning of an innovative farming enterprise in Ukraine we use a straight-line correlation and a mathematical model:

$$y = a^0 + a^1x,$$

y – is theoretical values of an effective feature (the introduction of international standards of food quality and safety in Ukraine); a^0 – is the starting point; a^1 – is a

coefficient of regression (it shows how an effective feature changes when a factor feature changes by one); x – is a value of a factor feature (here it is gross production of goat farming in Ukraine). Thus, taking into consideration the instrument of standardization of the production and processing of goat products to get quality and safe food which is used in Ukraine, it is possible to make a prediction that the number of goats will increase. This is likely to develop the ability of Ukrainians to provide themselves with all necessary due to the increase of the number of highly productive goats at agricultural enterprises (Fig. 2).

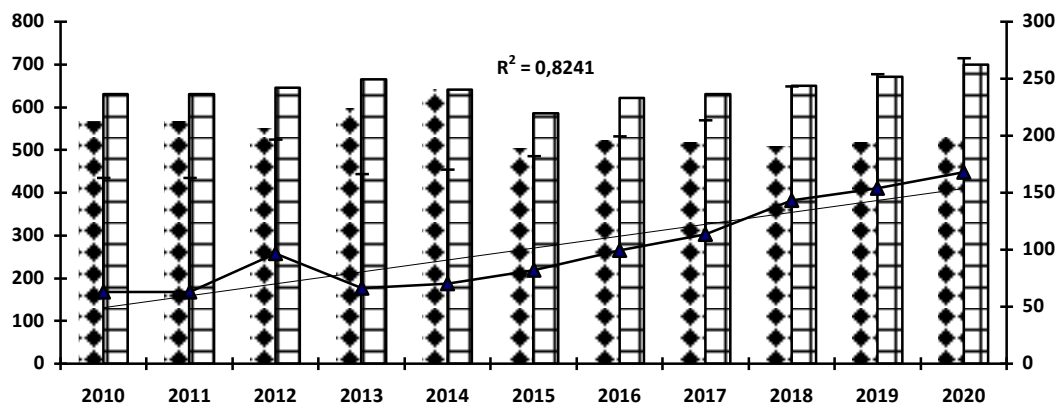


Fig. 2. The prediction of the development of farmers in the sphere of goat products production when it is impacted by regulation instruments

Fig. 2 gives information about the density of goats at Ukrainian enterprises between 2010 and 2017. However, the application of the suggested regulation instruments in the branch of goat farming is likely to enlarge the number of farmers in this area, it will, in its turn, promote the import of high-quality breeds of goat for further reproduction in Ukraine. The current management of goat farming is limited due to the differences between legislature of Ukraine and EU, in particular, in the issue of transporting milk from a milking to a processing farm. Sanitary rules which act in Ukraine make it impossible to support sanitation during the process of double pumping of milk, first into a milk tank vehicle and then into a milking tube of a processing plant. This is a main obstacle to start the production of national baby food from goat milk. In well-developed countries the transportation of milk from a milking to a processing plant is done by pipelines without any access to air. The development and approval of modern rules of technological projects on the basis of international standards opens up the possibility to produce baby food which is a crucial issue of food safety of Ukraine.

The modern development of the domestic market of food products, the implementation of international standards are characterised by separating new areas of production by means of differentiating the structure of an agrarian sector. The increase of goat products demands raising the problem of improving the existing and finding new mechanisms of regulating the development of the area. The article presents methodological component of regulating Ukrainian industry of goat products in terms of forming global food systems and domestic markets. Some ideas are

developed for the domestic market of goat products to function.

The article aims at studying the problems of goat industry functioning. It promotes the development of methodological foundations for solving the problem of replacing import products at a domestic market with domestic goat products and providing the population with affordable food products. The article considers the issues of regulations for functioning the industry of goat products. The necessity to develop methodological and scientific and practical recommendations is emphasised to achieve the goal to replace import products with products of domestic producers.

Many leading scientists and economists elaborate the issue of focuses of regulating the areas of an agrarian sector of economy and the study of peculiarities of structuring the production of agricultural products. Among them there are S.M. Kvasha, V.Ye. Andriyevsky, A.D. Dibrova, N.M. Korobova, S.M. Chystov, A.-M. Slaughter, J.E. Stiglitz and many others authors [1; 2; 3; 5; 7].

The scientific and professional works deal with questions of finding the ways to increase the competitiveness of domestic producers. The problem that hinders the development of goat industry as an area is its separation from sheep industry. Thus there are opportunities which should be used to provide the population with appropriate food. The main problem that hinders the development of the goat industry is the lack of a methodological component of its autonomous functioning as a part of sheep industry as well as its functioning at the agricultural market.

The research objective is to identify a methodological component of forming the goat products market in Ukraine taking into account modern global components of economic development of an agrarian sector.

The adaptation of economic processes in Ukraine to the chosen European integration focus has stimulated the reforming of the focus of development of livestock products production. In terms of general state of economy of Ukraine, objective regional and industrial problems the modern state of goat industry is suffering the state of the lack of industrial complexes when productive resources are concentrated in people's households. Establishing goat industry as a separate biological asset is a conceptual and methodological basis of the revival and sustainable development at a modern market. The state regulation of agriculture is highly transformational with a clearly defined vector focusing the establishment and maintenance of running a competitive agrarian business.

Modern achievements and trends in the agricultural world, which caused considerable value products goats, their high adaptive properties and availability of natural and economic conditions are a prerequisite for the development of industry in Ukraine. However, among all variety of products goats milk is the most valuable product. In recent decades, there are substantial changes in the use capacity of our planet. Under the influence of technological progress, industrial development, increasing intensification of livestock production is observed depletion of fresh water and pollution. In recent years, residents of areas where there is livestock production, particularly pig and poultry organize mass protests against the pollution of surrounding areas and air waste from production. In this respect, the establishment and development goat products can provide the population with high-quality milk and meat products without compromising the pollution point of their localization.

It should be noted that the legal framework is formed according to the new nature of European integration has, however, at present has formed complex mechanisms and instruments for the recovery and promotion of goat products in Ukraine is not efficient enough and needs reform. In addition, existing regulations are often agreed among themselves and contain omissions that do not contribute to the full development of the livestock industry, including the definitions, recognition and measurement of biological assets goat [2].

Economic transformations of Ukraine's economy challenge the food focus of the population. Thus effective demand differentiates towards the expansion of food offer of the consumer market. An increasing demand for goat products can be seen together with the demand for traditional leading cattle, pig and sheep products. The conducted analysis shows the significant import dependence of Ukraine in this domain. It is caused by the utmost lack of domestic goat production. Goat industry is one of the areas of the single economic mechanism of an agrarian sector. The intensification of this area development is impossible without a targeted strengthening of state regulation of solving problems of standard and legal support of the development of goat industry according to international safety standards and product quality [1, 2]. The formation of global food systems and domestic markets stimulates and enhances the development of different livestock products. It also reveals the necessity of its areas structuring. In terms of general state of Ukraine's economy, objective areas problems the modern state of goat industry is in the state of utmost lack of industrial complexes. Here, productive resources are mostly concentrated in people's households.

At present goat industry in Ukraine is on the way to become a separate area of agriculture. To achieve this goal a set of technological regulations and standards which meet international demands must be developed. As we can see in order to establish the foundations for Association Agreement between Ukraine and European Union some standard and legal documents were approved. They are about economic mechanism of the development and the formation of the market of livestock products. Among them there are Law of Ukraine: «On breeding business in livestock industry» on 15.12.1993 №3691-XII, «On basic principles and requirements for food quality and safety» on 23.12.1997 №771/97-VR, «On the identification and registration of animals» on 04.06.2009 №1445-VI, «On approval of the concept of State program of the development of an agrarian sector for the period till 2020» on 30.12.2015 №1437-p, Regulations (standard) of accounting 30 «Biological assets» on 05.12.2005 №1456/11736, methodological recommendations for accounting biological assets [3; 4; 5; 6]. Scientists, economists and agrarians make attempts to prove that the established legal framework has a stimulating nature. At the same time the lack of a complex of mechanisms, measures and tools for the revival and stimulating the development of the production of goat products is not effective enough and needs developing. According to Regulations (standard) of accounting 30 «Biological assets» on 05.12.2005 №1456/11736, goat industry is a part of sheep industry in terms of biological assets and agricultural livestock products. This Regulation says: «sheep industry (goat industry) co-fine wool, half fine wool, half rough wool, rough wool». This classification does not stimulate the progress of the goat industry in

Ukraine, though there are many positive changes in this area. The world experience shows that this area is negatively impacted because goat industry is not acknowledged as a separate area of livestock industry, it is not documentarily identified as a biological asset.

The precondition for the development of goat industry in Ukraine is highly adaptive qualities of goats and the presence of natural and economic conditions in Ukraine. In recent decades significant changes have been taking place in using bio productive opportunities of our planet [6; 7]. In terms of enhanced anthropogenic pressure, influenced by a technological progress, industrial development, increasing intensification of livestock production, there is fresh water depletion and environmental pollution. In recent years, people who live on the territories where livestock products are produced particularly pig and poultry products strike against the pollution of air and surrounding areas with waste products. Here the development of goat industry can provide the population with high-quality milk and meat products without polluting the environment. It is clear that the production of goat products is characterized by eco-friendly production processes and saving fresh water. According to European technological standards of utilizing production areas when producing livestock products one milking cow consumes 48,5 m³, one sow with piglets consumes 30 m³, and one milking goat consumes 4,4 m³. Besides taking into account a complicated epizootic situation in Ukraine due to often outbursts of animal diseases (African swine fever, rabies, brucellosis, tubercle and others), the goat has the highest immunological potential. Goat's resistance for such diseases reduces the cost of veterinary protection and is one of the lowest cost in livestock industry. This animal feature allows reducing risks for running goat business and predicts high profitability of goat products.

Goat industry progress in Ukraine is possible only after goat industry is differentiated from sheep industry. Due to the globalization of sustainable development and multi functionality of this area, the main focus is to take into account the peculiarity of goats as a biological asset and to support goat industry at the legislative level in order to consolidate all possible ways of increasing the profit and preventing further decline in production. The current state is characterized by an autonomous existence of goat industry. It is necessary to emphasize one more time that legally there is no such an area in livestock production as goat industry. Under these conditions it is difficult for this industry to develop. The researches outcomes prove that goat production is mistakenly divided into co fine wool, half fine wool, half rough wool and rough wool. Global goat breeding has defined four main categories of goat productivity and one additional such as milk, meat, down and wool.

Therefore, the conditions for the development and growth of all livestock species gradually increases. Goat products recognition as a separate component of the livestock industry, will encourage the active selection and breeding work. Aboriginal rock, historically bred in Ukraine need to increase herd size and improving the productive qualities. Growing demands on the quality of farmed species and animal adaptability to technological conditions. In this respect, the import procedure unobstructed foreign animal breeding is necessary for the formation of a full

domestic kozivnystvta to ensure food security and prosperity of our country. From the state of regulation depends on the profitability of livestock industries and investment attractiveness, production level to meet the needs of the population in the necessary foodstuffs and increase the export potential of Ukraine [4; 5]. World experience shows that goat production, especially dairy historically been attractive to the family business, so the legal prerequisites creation in Ukraine of family farms is the key to a qualitatively new development of the agricultural market. The legal framework which is formed at the present stage of economic development opens up the possibility of introducing foreign experience dairy farms for the production of various types of cheese, and whole milk diversify domestic sub. Becoming goats industry requires the state regulatory measures for the effect of market self-regulation. Land and favourable climatic conditions, availability of labour suggest that goat industry has great potential in Ukraine.

The area of decorative goat industry is being developed; it is very popular in countries with high standard of living where goats are grown for aesthetic perception. The current development of the food market stimulates to improve the mechanism of state regulating and solving the problem of separating goat industry from sheep industry and identifying it as a separate biological asset if to take into account the demand for goat products.

Thus, we can draw the following conclusions and recommendations:

1. Stimulating the offer at a food market causes the demand for goat products. The development of an agrarian market requires the improvement of standard and legal framework for goat industry in Ukraine. The increase of the offer for goat products is hindered by a poor mechanism of state regulating the development of this area.

2. The existing identification of goat industry and sheep industry demands their separation and identifying them as two different areas of economy. The identification of goat industry as a separate biological asset is a conceptual foundation of the revival and sustainable development of an agrarian sector of the economy in terms of forming global food systems and local markets. In these conditions the important thing is to establish the market of goat products in Ukraine taking into account modern globalised components of the economic development of an agrarian sector of economy which are mentioned in this article with clearly defined vector focusing the establishment of a competitive agrarian business.

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IMPLEMENTATION OF EUROPEAN UNION NORMS IN THE NATIONAL TRANSPORT SECTOR OF UKRAINE

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Creation of promising and long-term conditions for stable economic growth in the country, dynamic development of business entities can be ensured only through the established system of management of their potential. The processes of globalization and the entry of Ukraine into the world economic space necessitate an increase and effective use of the economic potential of transport enterprises, expansion of the possibilities of its realization in the process of deepening the integration of the national economy into world education.

Harmonization of the Transport Strategy of Ukraine with the European Transport Strategy and, accordingly, correcting and clarifying the main mission on the basis of the transition from the narrow-to-functional approach, the creation of an integrated transport system based on institutional, structural, technical and technological changes on the basis of European integration and sustainable eco-friendly development through application The combined transport policy, which involves a combination of rationalism and liberalization, is the first task for the authorities of government.

The main objective of the EU White Paper is a competitive and resource-efficient transport system. The concept of a competitive and environmentally sustainable transport system set out in the White Paper provides for the following objectives:

- Transport development and mobility support in achieving the goal of 60% emission reduction;
- An efficient base system for multimodal intercity transportation and transport;
- Worldwide level competition conditions for long distance and intercontinental freight traffic;
- Environmentally friendly urban and suburban transport.

The main tasks and target indicators for their implementation by 2030 and 2050 by the first sub-target are grouped in Table. 1.

Table 1

The main objectives and target indicators of the EU White Paper's Underestimate "Transport Growth and Mobility Support in Achieving 60% Reduction in Transport Emissions"

Tasks	Target indicators
Development and implementation of environmental fuels and power plants	<p>1. To reduce the half-use of cars "traditional fuels" in urban transport by 2030, gradually to abandon them in cities until 2050, to achieve essentially carbon-free city gas logistics in major city centres by 2030.</p> <p>2. The use of low-carbon, environmentally friendly fuels in aviation should be 40% by 2050. It is also necessary to reduce the carbon dioxide emissions from bunkering fuel by sea by 40% (if practically possible – by 50%).</p>
Optimization of the operation of multimodal logistic schemes due to the widespread use of more energy-efficient modes of transport	<p>3. Thirty percent of road freight transport over 300 km should be transferred to other modes of transport, for example, by rail or sea, by 2030, and by more than 50% by 2050, with the help of efficient and green freight corridors. Execution of this task will also require the development of the appropriate infrastructure.</p> <p>4. Complete the formation of the European high-speed rail system by 2050. Increase three times the existing high-speed rail network by 2030 and maintain a dense rail network in all member countries. By 2050 most of the passenger transportation on medium distances must be carried by rail.</p> <p>5. Fully functional multimodal "base network" of TEN-T on a scale of the whole of Europe up to 2030, high-quality and powerful network up to 2050 and an appropriate set of information services.</p> <p>6. Connect to 2050 all airports of the basic network with a rail network, preferably high-speed, provide a satisfactory mix of all major airports with rail freight lines and, where possible, an inland waterway system.</p>
Improved transport efficiency and infrastructure use at the expense of information systems and market incentives	<p>7. The use of modernized air traffic management infrastructure (SESAR) in Europe by 2030 and the completion of the formation of a common European airspace. The use of equivalent land-based and waterborne traffic management systems (ERTMS)¹⁵, (ITS)¹⁶, (SST and LRIT)¹⁷, RIS¹⁸. Use of the European Common Navigation Satellite System (Galileo).</p> <p>8. Create by 2020 structure for the European information, management and payment system for multimodal transport.</p> <p>9. By 2050 to make progress towards achieving a zero indicator of accidents with fatal consequences in road transport. In the context of this goal by 2020 The EU intends to reduce half the road accident. To provide EU leading positions in the field of technical and public safety of transportation on all types of transport.</p> <p>10. To move forward to full use of the principles of "users pays" and "pays the polluter" and the involvement of the private sector in eliminating disparities, including harmful subsidies, revenue generation and financing for future transport investments.</p>

Source: Compiled by the authors on the basis of the EU White Paper

This in turn will stir up a review of specific goals of modernization and further development of the transport system of Ukraine in a context that, in our opinion, may be as follows:

1. Formation and support of a single transport space of the country on the basis of balanced development of transport infrastructure for production and population needs.

2. Integration into the world and European transport system and implementation of transit potential.

3. Provision of affordable, high-quality, competitive in the foreign markets, transport services of the country.

4. Ensuring accessibility and quality of transport services for the population.

5. Improvement of the safety of transport and its infrastructure and readiness to work in unstable climatic conditions.

6. Reducing the dangerous impact of transport on the environment.

7. Ensuring investment attractiveness and inflow of direct investments into the transport system.

At the new stage, the state transport strategy of Ukraine should express the state's active position in the improvement of the transport system, first of all it concerns the reduction of the total expenses of a society dependent on transport, increase of competitiveness of the domestic transport system, strengthening of innovative, social and environmental direction of development of the transport sector, which shows first of all research conducted.

In accordance with Article 1 of the Law of Ukraine "On State Forecasting and Development of Programs of Economic and Social Development of Ukraine" №1595-III of March 23, 2000 "the forecast of economic and social development is a means of justifying the choice of a particular strategy or adoption of concrete decisions by bodies of legislative and executive power, local self-government bodies on regulation of social and economic processes". That is, according to the current legislation, the development of a strategy (national, regional, local) should be preceded by a qualitative and well-founded forecast of economic and social development (state, industry, city). The development of programs of economic and social development with the definition of goals and priorities, means and ways of achieving, the formation of mutually agreed and integrated systems of measures of legislative and executive bodies should be aimed at effective solution of problems of economic and social development, achievement of stable economic growth.

The law positions the unity and systemic nature of forecast and program documents, however, it is not legally defined what is the activity in developing strategic documents for the development of the state, region or industry, which is a strategy of socio-economic development of the state, who are developers and responsible (subjects) for implementing such a strategy.

This gap should be closed by the Law of Ukraine on "State Strategic Planning" project, which presents the system of documents of state strategic planning, which are documents of long-term, medium-term and short-term nature. Among the long-term documents, the following documents are selected for development:

- 1) the development strategy of Ukraine;
- 2) the strategy of regional development of Ukraine;
- 3) development strategies of the city of Kiev.

However, it is significant that among the documents of a strategic nature, this bill does not foresee the development of strategies for the development of economic sectors, types and spheres of economic activity or sectors of the economy (sectoral strategies). Only in the "Principal tasks of economic and budgetary policy", which will be developed for the short-term period, mention is made *of the sectoral sphere of activity (along with investment, monetary, foreign-economic, social)*.

According to Ya. Zhalila, "the economic strategy in a dialectical relationship with economic tactics is the economic policy of the state, which can be defined as the activity of state authorities and management to determine the strategic goal, directions, tasks and priorities, the means of economic tactics for their achievement, as well as the use of these funds". The scientist notes that the economic strategy of the state as an integral system of actions of the subject aimed at realizing the goal, tasks and priorities of its economic reproduction, taking into account the complex of influences of endogenous and exogenous factors, which is designed for a long period of time, is institutionalized through the system of state authorities " [305] In his opinion, the "need to translate a strategy from the sphere of ideological constructs into a direct transforming force and a guide to action that prompts: the formation of a comprehensive scientific deed on strategy as a social phenomenon, a component of social relations, which develops under certain internal laws; the most complete introduction of this concept into the subject of the study of economic science. "In general, the strategy is not an arbitrary chosen position or an analytically designed plan, but a prospect that deeply penetrates the consciousness and determines how the organization absorbs new ideas, percepts and evaluates the thoughts and reactions to changes in external environment [1; 3].

The analysis of scientific sources and foreign branch strategies (in particular, infrastructure development and transport) shows that the transport strategy of the state, adopted at the state level as a systematic document in a dialectical relationship with transport tactics, constitutes a transport policy of the state, which is being implemented through state authorities, at the moment – Ministry of Infrastructure of Ukraine and other interested central and local executive authorities.

By the order dated May 30, 2018, №430-r, the Cabinet of Ministers of Ukraine approved the National transport strategy of Ukraine for the period up to 2030. This document is extremely important for the transport industry in Ukraine. The global trends in the development of transport systems demonstrate the need for the rapid integration of transport technologies and regional mobility projects. Transportation is becoming more energy-efficient and "green", safe and user-friendly and environmentally friendly. Many countries in the world are planning to replace most of the cars with internal combustion engines on electric vehicles by 2030. The growth of speed, efficiency and environmental friendliness of vehicles is a major trend in all modes of transport. Rail transport at 350 kilometres per hour becomes a reality, and the technology "Maglev" now provides a speed of 500 kilometres per hour and more.

Modern infrastructure, fair market conditions and free market competition, effective development and coordination of various modes of transport together with the introduction of an effective system of state regulation and management will provide the basis for the development and functional growth of the national transport

system of Ukraine. Improving the efficiency and quality of transport services will improve its competitiveness, stimulate Ukrainian exports and promote the development of domestic production and trade.

The strategy determines the main directions of improvement of the quality of transport services provision, provides for the level of their provision and development of infrastructure to European standards, increase of safety and reduction of negative impact on the environment, responds to the need to improve the system of governance, administrative reform and decentralization of powers of central executive bodies authorities, introduction of anticorruption policy, corporate governance in the state sector of the economy.

The aim of the Strategy is to create an integrated, safe and functioning Ukrainian transport system integrated in the world transport network, meet the needs of the population in transportation and improve the business environment in order to ensure the competitiveness and efficiency of the national economy.

Implementation of the Strategy will facilitate Ukraine's approximation to the EU, as it concerns the implementation of the Association Agreement and the creation of conditions conducive to the gradual integration of Ukraine into the EU internal market; improving the quality of providing transport services, effectively implementing administrative reform, fighting corruption, transparency of decision-making, a clear separation of functions and the division of powers between executive authorities and business entities, ensuring equal conditions for the provision of transport services.

The implementation of the provisions of the Strategy will make it possible to strengthen the institutional capacity of organizations involved in the process of harmonizing Ukrainian legislation with the EU and will create grounds for strengthening the mechanism for monitoring its implementation in order to obtain a high-tech transport system.

The system of documents of strategic development of Ukraine is presented as interlinked with the National Strategy of Economic and Social Development of the country, which in turn is system-formative for the development and implementation of the Strategy for the Development of Regions of Ukraine and the Strategy for the Development of the Spheres of Activity (Industries) [2; 5]. In turn, we propose the Strategy for the Development of Transport of Ukraine to align with the Millennium Development Goals, the Strategy for Sustainable Development, the Energy Strategy until 2030, and prolong its action by 2050 (Table 2).

It should be noted that in the Recommendations of the Parliamentary Hearings on the theme: "Strategy of Innovation Development of Ukraine for 2010-2020 in the context of globalization challenges", approved by the Resolution of the Verkhovna Rada of Ukraine dated October 21, 2010 №2632-VI [3] states that in Ukraine "lacks a proper system of prediction of scientific and technological and innovation development, and there are no long-term strategies for sustainable socio-economic, scientific-technological, innovative development of the country and their related external and internal economic policy". The issue of complex development of a mutually agreed system of state documents aimed at implementation of the state transport policy, which covers the self-organization of the regional transport services

market, and defines the direction for the long-term perspective of state and regional transport policy, has not been implemented to this day.

Table 2

System of documents of strategic development of Ukraine

Long term (five years or more)	Mid-term (3-5 years)	Short term (one year)
<i>Millennium Development Goals Strategy for Sustainable Development Energy strategy of Ukraine for the period up to 2030 (2006), etc.</i>		
National Strategy for economic and social development of the country	Annual Messages of the President of Ukraine to the Verkhovna Rada of Ukraine	
	The program of activity of the Cabinet of Ministers of Ukraine	Government action plan for the year
	Forecast of economic and social development of Ukraine in the medium term	Forecast of economic and social development in the short-term period
	State program of economic and social development of Ukraine	State Program of Economic and Social Development of Ukraine for a year
Strategy for the development of regions	Program of economic and social development of regions, regions, cities	The region's budget for the year and the next three years
Strategy of development of industries (spheres of activity) and State target programs of long-term or other nature (according to the Resolution of the Cabinet of Ministers of Ukraine dated January 31, 2007, №106)	Forecast of development of separate branches of economy	Annual plan of the ministry, other executive body
	Program of development of separate branches in accordance with the strategy of the Ministry	
Strategy of transport development of Ukraine up to 2050 (transport strategy)	Strategies for developing modes of transport by 2050, Programs of development of separate types of transport Priority transport sector development programs, such as a program for the development of combined transport, a comprehensive program for upgrading the rolling stock of rail transport by 2020, etc.	

Source: Added by the author on the basis of [4]

The first reason for this situation is the low efficiency of the institutions that form and implement the transport policy. Considering the problem of the state institution and the problem of updating industrial policy in Ukraine, Y. Kindzersky states that "destructive phenomena in the domestic industry should be associated with the degradation and ineffectiveness of the state itself as an institution" [6].

Unity and coherence of goals, priorities, tasks, indicators, mechanisms and measures of long-term strategy of economic development with goals, and other state transport strategy based on long-term forecasts of socio-economic development.

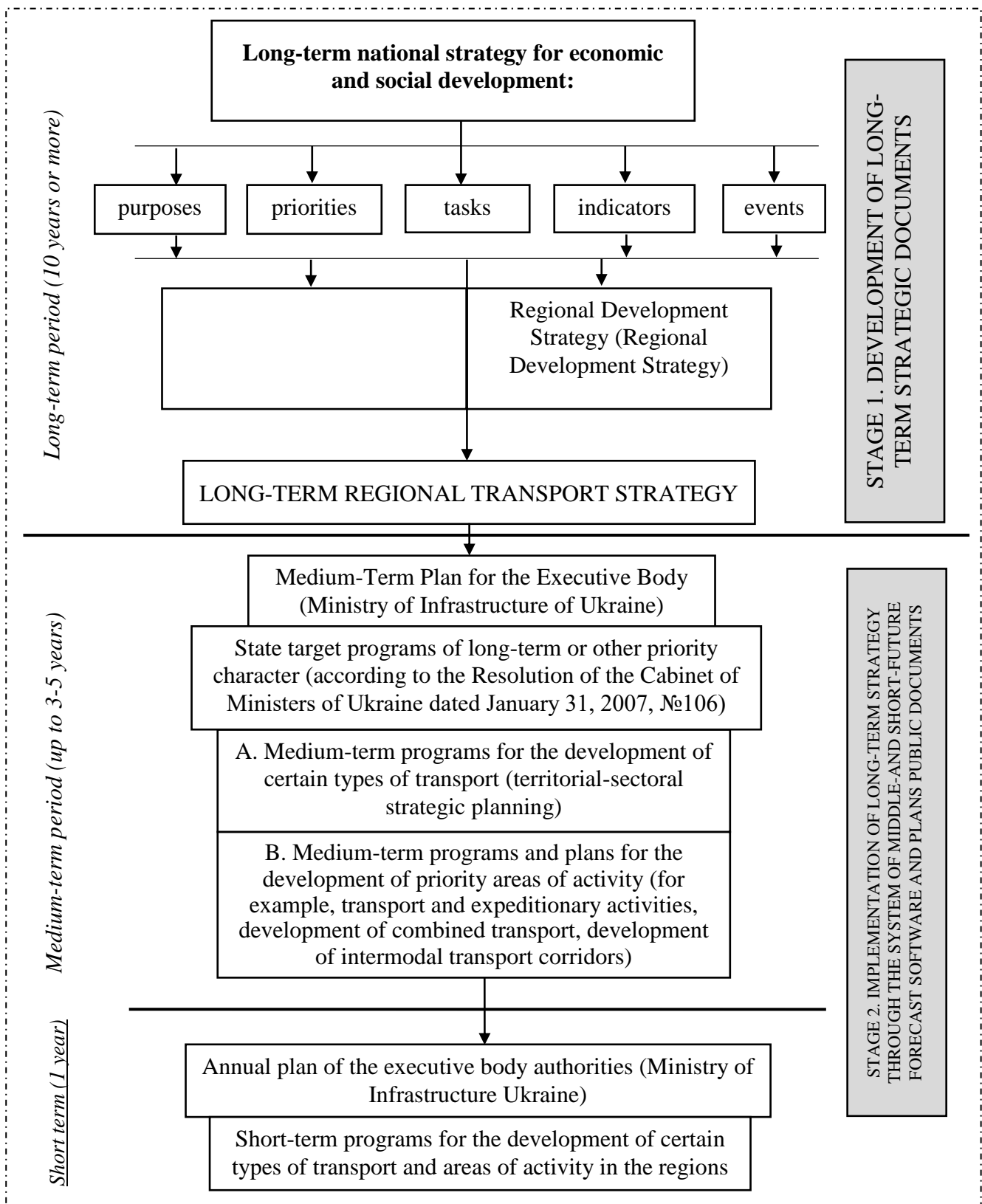


Fig. 1. System of documents of strategic development of transport of Ukraine of long-term, medium-term and short-term nature

The effectiveness of transport policy will depend on the horizontal links between sectoral programs among themselves (this applies to sub-sector transport development programs) and vertical links (between strategies for economic and

social development of regions and the overall transport development strategy).

However, it is necessary to state "the loss of systematic and functional unity of the plan of forecast and program documents at the level of public administration, which devalues them at the level of business entities. All participants in the economic movement find different, commercially advantageous at a certain point in time (long-term perspective in their calculation do not take) the trajectory of development [7]. Detailed factors of the violation of systemic forecasting and programming at the state level are developed in the work of N. Solovyov, the main - factors of the first order – are: 1) low discipline of the implementation of state services management tasks and functions of the state; 2) imperfect scientific and methodological substantiation of systematic forecasting of planning; 3) the principle of "departmental co-ordinated" non-transparency of distribution of budget funds; 4) the principle of promoting the forecast and program objectives, along with the lack of vowel coverage of the results of programs.

1. The coherence of the State Transport Strategy with the Strategy for the Development of the Regions will be realized in the development of the Long-term Regional Transport Strategy, the tasks of which will be developed and implemented through the development of specific regional transport projects on local objects on the ground (villages, districts, cities, regions) within the medium-term and short-term tasks of the regional transport strategy, which are coordinated with the budgets of the regions for each subsequent year.

In addition, the interconnectivity of the transport strategy with other sectoral strategies, such as the strategy for environmental protection and the reduction of anthropogenic impact on the environment, is equally important.

In an institutional system, the principle of paternalism and a unified management center and the involvement of the following national institutions must first be taken into account when developing, implementing a state transport strategy and controlling its implementation (Figure 2):

1) at the development stage – the central executive authorities for the development of transport policy – the Ministry of Infrastructure of Ukraine, the National Academy of Sciences of Ukraine, scientific research, industry, project transport organizations;

2) at the stage of strategy implementation – sectoral-functional institutions (carry out strategic tasks to their specific object), co-ordinating institutions (provide a dialogue between carriers of interests and promote the adoption of qualified, authoritative and legitimate decisions), regional state institutions (contributing to the coordination of economic policies within the regions) and non-state institutions (aimed at structuring the interests of economic actors, formulation of group interests, harmonization of entrepreneurial actions on micro-, meso- and macro levels and should be closely linked to state-level contracting authorities) [8; 9];

3) at the stage of monitoring and control over the implementation of the strategy, economic entities that are involved and use the results of the State Regional Transport Strategy may be involved.

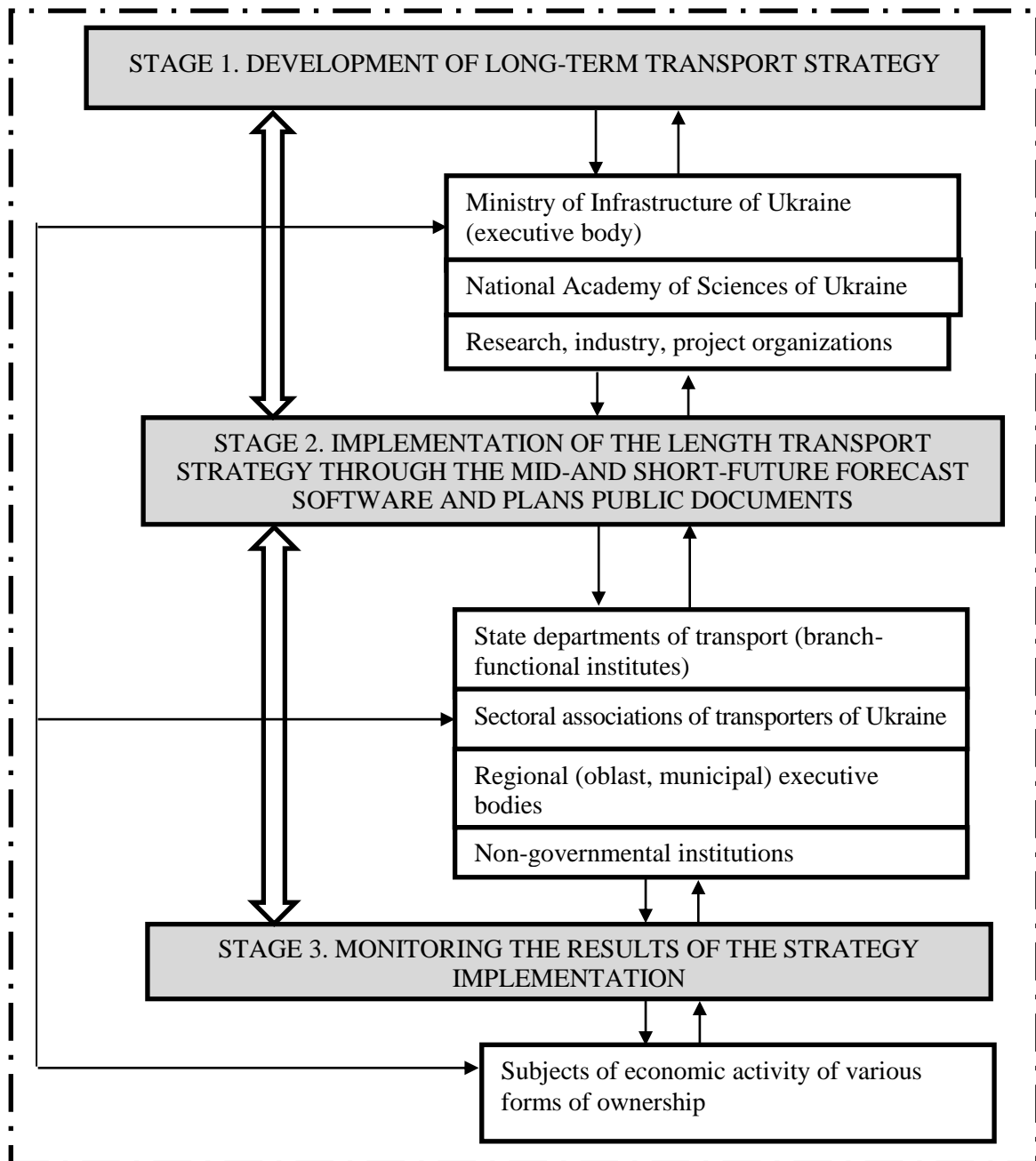


Fig. 2. The system of institutes for the development, implementation and control of the state transport strategy

Source: developed by the author

Thus, a perfect feedback can be provided when a package of contractual conditions is made, in which the agreed directions, tasks and priorities of strategic development are formulated and which will be taken into account in the current strategy at the next stage (this can be done in real time in modern conditions development of information and communication infrastructure).

By developing the general principles for the conclusion and monitoring of the Transport Strategy, we note that the development and implementation of a long-term

state transport strategy should be based on:

1) Harmonization with the global transport strategies, including the European transport strategy until 2050, research of competitive transport strategies of the EU member states and neighbouring countries of Ukraine;

2) Coordinated, hierarchically organized system of documents of strategic development of transport of Ukraine of long, medium and short-term nature and through the system of national institutions;

3) Principles of the "single management centre" with the possibility of independent evaluation of the activity of such a management centre;

4) The implementation of the strategy should be secure from political cycles, political situation and changes in power teams, which should introduce legislative restrictions on the circumstances, possibilities, frequency and depth of review of the approved strategy;

5) Monitoring of the results of this strategy should take place together with the establishment of a collective (government) and individual responsibility for the results of the implementation of specific strategy decisions, their compliance with the goals and objectives set on the basis of the proposed indicators. To monitor the activity of this strategy as a result of the profile of the Ministry, a comprehensive assessment of the system of global economic indexes should be carried out.

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Part 4. Development of separate territories: environmental problems and effectiveness of management decisions

ANTHROPOGENIC POLLUTION OF RIVERS AND ITS INFLUENCE ON THE ECONOMIC COMPLEX

Derii Zh.

Shadura-Nykykyporets N.

Minina O.

Under pollution of water resources, we understand any changes in physical, chemical and biological properties of water in reservoirs in connection with the discharge of liquid, solid and gaseous substances in them, which cause or may create inconvenience, making water of these reservoirs dangerous for use, causing damage to the national economy, health and safety of the population. The Oster, the left tributary of the Desna (river-basin of the Dnipro), flows through the territory of the Chernihiv region, in particular in the Bakhmach, Bobrovytsia, Borzna, Ichnia, Kozelets, Nizhyn, Nosivka districts.

Anthropogenic factors are fundamentally different from the natural factors. Anthropogenic factors are consequences of the production activity of the society, and only occasionally, they are produced for a special purpose – to change the elements of nature in the desired direction (planting of forests, creation of reservoirs, destruction of harmful organisms, etc.).

Those or other "events" in the biosphere, caused by anthropogenic factors, develop on the principle of chain reaction; causing the change of the main elements of the biosphere and causing revolve negative reactions.

It is especially worth noting that the specifics that make identifying, assessing and leveling the negative effects of anthropogenic factors more difficult is the fact that their manifestation is prolonged, cumulative and external. This necessitates the need to operate not only moment and point data and characteristics during the research process, but to engage in the analysis the data at long intervals and not limited to the territory of the river bed.

Anthropogenic factors of influence on the Oster River can be grouped by separating in their composition bodies, substances, processes and phenomena:

factors-body – have spatial certainty and long duration of action (relief, canals, cultivated soils, buildings and structures, introduced organisms, etc.)

factors-substances – when entering the water, they do not have spatial certainty, constantly change the concentration and migrate in the medium, change the degree of influence on nature elements through the concentration dynamics in the environment. They can be both unstable (are quickly destroyed) and stable (are stored unchanged for a long time, are accumulated in the environment), (conventional and radioactive chemicals, artificial chemical compounds and elements (xenobiotics), aerosols, sewage and ventilation emissions, etc.);

factors-processes – are often associated with restricted areas, but may also cover large areas. The processes are highly dynamic and sometimes they are unidirectional (diverse human activities in nature, impact on the nature of domestic animals and cultivated plants, destruction of harmful and reproduction of useful organisms, picking wild plants, extraction minerals in the nature, anthropogenic erosion of soils, anthropogenic cycle of substances, etc.);

factors-phenomena – have exact parameters and from the source of the change are replaced by a clearly defined gradient (heat, light, radio waves, electric current, electromagnetic fields, noise, sound waves, ionizing radiation, pressure, atmospheric dust, etc.).

Quantity, species composition and variety of anthropogenic factors are extremely large, therefore they are classified by a number of features:

by their nature – mechanical: suspended matters in water, currents, deforestation, picking wild plants, obstacles for organisms migration, overturning of soil layers, etc.;

physical: heat, light, electromagnetic field, radio waves, infrared and ultrasound, noise, ionizing radiation, colour, transfer of substance from one state to another, change in humidity;

chemical: chemical elements and their compounds;

biological: influence of introduced organisms, anthropogenic natural selection, artificial selection in populations of wild organisms, forests planting;

landscape: artificial reservoirs, relief, reclaimed areas, canals, artificial forests and meadows;

by time of origin and nature – made in the past:

a) those who have ceased their actions, but their consequences are felt now (extermination, grazing, burning, etc.);

b) those that continue to operate now (artificial relief, canal, reservoir, planted forest, introduced species, etc.);

– currently implemented:

a) those operating at the time of production (sound vibrations, electromagnetic waves, etc.);

b) those operating at a certain time after the end of production (persistent chemical pollutants, cut down forest, altered relief, etc.);

by duration of action upon termination of occurrence:

– those that operate only at the time of their production (electromagnetic field, sound waves, light rays, etc.);

– of short-term effects (spraying, irrigation, contamination with rapidly evaporating substances, etc.);

– of prolonged action (radioactive contamination, artificial relief, introduced species, etc.);

by their ability to accumulate:

– not capable of accumulation, parameters of which depend on the volume and intensity of their generation (sound stimuli, vibration, etc.);

– capable of short-term accumulation with further strengthening of its influence (pesticides in the soil, unstable chemical compounds in water, etc.);

– capable of continuous and indefinitely prolonged accumulation (long-lived radioactive substances with a half-life, stable chemical compounds, significant changes in the relief, hydro pinches, etc.);

by their ability to migrate:

– migrating: act in the place of production and at some distances from it (relief, electromagnetic field, sound vibrations, light, etc.);

– migrating with streams of water and air (dust, heat, chemicals, gases, aerosols, etc.);

– migrating with means of their production (vessels, means of automobile and railway transport, etc.). This includes a variety of factors, including some of the previous groups;

– migrating independently (introduced species of animals, wild animals);

by volume of space covered:

– act only in the place of production (the death of animals under the wheels of cars, etc.);

– operate in the place of their production and at a certain distance from it (organic substances in water, dust, etc.);

– the action extends over huge distances, and sometimes to the whole planet at rather high volumes of production (persistent chemical substances in water, radioactive substances with a long term of half-life, etc.);

by stability of changes caused by them in the environment:

– cause temporary reverse changes (any temporary impact on the environment that does not lead to the complete destruction of species; water pollution by unstable substances, etc.);

– cause relative irreversible changes (individual cases of introduction of species, creation of reservoirs, destruction of reservoirs, etc.);

– cause absolutely irreversible changes in the environment (complete destruction of species, extraction of minerals, etc.);

by types of human activity:

1. Individual influence (poaching, tourism, etc.).

2. Collective influence in the process of organized production activity:

– mining of minerals;

– power industry;

– manufacturing industry;

– transport, construction industry;

– forest industry;

– agriculture;

– health care (creation of recreation areas, resorts);

by object of formation:

– formed by the population (household influence);

– formed by social production (industrial influence);

– formed by joint action of objects (complex influence);

by their common features:

– primary – those that are directly produced by the man;

– secondary – those that appeared in nature under the influence of the primary

factors and their interaction with natural factors (pesticide decomposition products, river bed rubbing after deforestation, etc.).

In this case, the form of their manifestation may be chemical, physical, biological, radioactive and thermal (Table 1).

Table 1

Types of waters pollution of the river Oster*

Types of pollution	Composition	Contaminants
Physical	increase in the content of water of insoluble impurities (sand, clay, silt) as a result of flooding of rainwater from soils from the fields, mining dust, which is spread by the wind, and others	insoluble admixtures: clay, sand, mud, dust, etc.
Chemical	getting into the water of various chemicals, waste from various industries: petrochemical, pulp and paper, as well as municipal wastewater, waste animal farms, etc.	heavy metals, acids, alkalis, mineral salts, oil and petroleum products, synthetic surfactants (SAS), detergents, carcinogens, mineral fertilizers, pesticides
Biological	getting into the reservoirs together with sewage of various pathogenic microorganisms (bacteria, viruses), spores of fungi, eggs, worms, etc.	various microorganisms (bacteria, viruses), eggs of worms, spores of fungi The main sources of biological pollution are communal household waste water enterprises: sugar factories, meat and woodworking industry, etc. Particularly dangerous are such pollution of reservoirs in places of mass recreation (resort zones seaside and seas).
Radioactive	An example of radiation contamination is an accident at the Chernobyl Nuclear Power Plant.	radionuclides (cesium-137, strontium-90, potassium-40, etc.)
Thermal	make up drains of heated water from thermal power stations and nuclear power plants	heated water from TPPs and NPPs and other sources

**grouped by the authors*

During 1937-1988 years, in view of the redevelopment of the territory in the floodplain of the river, especially in the spring, which did not allow the effective use of agricultural land; the need to improve the drainage of the territory; acceleration of surface runoff and reduction of groundwater levels in the river basin, three lines of the Oster reclamation system were put into operation. The Oster drainage system – is a hydro-amelioration system, built to drain the lands in the floodplain of the River Oster. It was built in three stages during 1928-1955. The area of drained lands – 34,2 thousand hectares (1980). Reconstruction was carried out in 1960-1961 and 1964-1968. In 1964-1968 the first (Fig. 1.4) and the second stage of the Oster drainage system on the area of 22.1 thousand hectares were reconstructed. The main water intake system – the regulated river land of the Oster, which at the same time is a

trunk channel. In the 1960-1961, 4 hydroelectric plants were built – (pumping stations and retaining locks) for water supply along drainage canal of the Desna in order to water Trubizska drainage system. Drainage and regulation of the water regime should be carried out for the additional channels 673 km long, including a main channel of 207 km long, and 246 regulator locks.

The present Oster is an affected by anthropogenic activity river, in which natural regenerative functions are destroyed, and the ecological state is fully dependent on the economic activity in its basin. The anthropogenic impact on the hydrological and ecological state of the river is made by the following users: enterprises of the city Nizhyn, housing and communal sector of the city, agricultural producers of Nizhyn, Nosivka, Kozelets districts, households of the cities Nizhyn, Kozelets, Oster. According to the results of the research and the assessment of the impact of economic activity on the River Oster, the areas of the river basin with the largest anthropogenic load, which require first-priority measures to stabilize the ecological state, were discovered. Particular attention should be paid to the use of land resources in the river basin and pollution of surface water. High agricultural development of the basin, exhausting agriculture (cultivating monocultures), erection of buildings and structures, appearance of anthropogenic forms of relief are major kinds of anthropogenic load on land resources in the river basin.

Water pollution of the river Oster is multicomponent, which has a synergistic effect that in conjunction with environmental factors led to a change in structural and functional properties of the river. According to the survey, practically the whole area of the river in Nizhyn, Kozelets, Oster needs to be completed to clean up and improve sanitary conditions and environmental improvements. The status of the coastal protective belt of the river in most cases is defined as unsatisfactory and requires improvement. Most of the hydraulic structures constructed in the 50-60 years of the last century in the MC Oster have already completed their work and need reconstruction or construction of more perfect ones. Drain of untreated and insufficiently treated wastewater in Nizhyn to the Oster is one of the problems of water use.

One of the most dangerous sources of pollution in the Oster is untreated wastewater household water and lack of efficient management of it. To a large extent, it depends on consumer culture, hygiene and self-awareness of the population. The residual principle of allocating funds for environmental purposes, the lack of communication of planned tasks with the size of damage due to environmental pollution does not allow to react quickly to crisis situations in water use. The study of changes in the species composition of the ichthyofaunal of the Oster indicates that, in the first instance, species disappearing, which predominantly live in pure, running cold water saturated with oxygen, give preference to deep sections of the river. The reason for their disappearance experts consider changes in hydrological, chemical, biological regimes of reservoirs, caused primarily by the regulation of the flow of rivers, straightening of channel sections, hydraulic engineering, as well as water pollution. The main reason for fish wholesale death in the Oster in 2016 – a catastrophic state of the ecological culture of managing and using the useful properties of rivers. Illegal sewage, fields, livestock complexes change the ecosystem

of the river.

Summarizing the results of the study, we can conclude, that over the past thirty years there have been significant changes in the quantitative and species diversity of the ichthyofauna of the Oster River caused by anthropogenic influences. If, in the first half of the investigated period, the prerequisite for these changes was the measures taken to regulate the river and the construction of hydropower and drainage systems, then in the second – intensification of the activity of agricultural producers, intensification of industrial pollution and neglect of simple rules of rational environmental behaviour. It was also found that over the past 15 years farming has been accompanied by an intensification of the use of mineral fertilizers, and taking into account a significant share in the total area of the region – formation of unfavourable ecologic environment assumes the role of the key factor. Over the past 35 years, the re-orientation of the agricultural production of the Chernihiv region to the cultivation of non-typical crops has taken place: the largest area is occupied by the cultivation of corn for grain, sunflower seeds, soybeans and wheat. The peculiarity of the current state is that almost half of the area is reserved for growing crops that deplete the soils. In addition, this means that during crop rotation, there is a need for the restoration of land at the expense of fertilizing usually in much higher concentrations. As of 2016, the total share of agricultural land allocated for the cultivation of soybeans, sunflower and corn amounted to 66.7% for Kozelets district, 73.4% – for Nizhyn district and 72.9% – for Nosivka district. At the same time, for all regions of the Oster basin, the characteristic was one and a half times worse than in the region as a whole, and was accompanied by a further increase in areas allocated for cultivating soya. It is also worth noting that during the cultivation of these crops; almost all of their fields were fertilized with mineral fertilizers. The amount of mineral fertilizers applied per unit area of soybean cultivation for all studied regions is characterized by low indicators, which are twice lower than the average for all crops, but when cultivating corn for grain in all farms, the amount of fertilizer significantly exceeded the average.

Studies have revealed yet another interesting fact – as for the amount of mineral fertilizers per unit area, the worst characteristics were within the limits of the Kozelets district for potato producers (428 kg/ha) and vegetables producers (631 kg/ha), in Nizhyn district – sugar beet producers (653 kg/ha) and potatoes (472 kg/ha), in Nosivka district – the producers of potatoes (510 kg/ha), sugar beets (374 kg/ha) and rape (208 kg/ha). These characteristics are perceived even more critically in comparison with the national indicator: the amount of mineral fertilizers (in nutrients) per 1 hectare of sown area in general for all crops in Ukraine amounted to 38.8 kg in 2015.

It should also be noted that volumes of mineral fertilizers are varied both in separate territories and in the context of agricultural crops and in periods, which indicates the rather unstable nature of the mineralization of the lands of the Oster River.

The study leads to the conclusion that there is a serious concern about water pollution in the Oster River by pesticides, which are excessively and uncontrollably used by agricultural producers. The area at which, in 2016, the means of plant

protection at the farms of Kozelets district amounted to 23,76 thousand hectares (48,5%), Nosivka district – 39,5 thousand hectares (78,4%), Nizhyn district – 47,44 thousand hectares (83,6%), including the use of pesticides, respectively, in areas 23,76, (48,5%), 38,83 including the use of pesticides, respectively, in areas (77,0%), 44,74 , including the use of pesticides, respectively, in areas (78,8%). Given the negative effects of the use of pesticides and the massive number of areas cultivated in the Oster basin, this factor should be included in the list of the most important.

In the course of field studies, massive violations of the provisions of the Land and Water Codes of Ukraine regarding the use of coastal belts were detected, the main negative consequences for the river Oster are its anthropogenic pollution. Lack of water protection zones and coastal protective belts along the coast is an additional factor that increases the level of man-made load on the river.

A significant number of canals, which are currently transferred to the use of rural communities and their coastal areas, are exploited in violation of the requirements of the current legislation. Lack of financial resources at the local level lack of understanding of the strategic importance of sometimes-dehydrated canals, as important infrastructure for the development of the territory, formed a significant part of the territorial communities to consider the inappropriate use and maintenance of such facilities in a technically favourable condition.

In general, the study confirms, that principles of agricultural production and the territory of the basin of the Oster contribute to the formation of the significant anthropogenic impact on its condition. Lack of regular research on surface water quality in the Oster and its main influx, violation of planned schedules for conducting analyzes does not provide reliable information about the state of the river and the possibility of timely response to environmentally threatening situations. There was also a discrepancy in the exchange of information among the key actors involved in monitoring the water problems of the Oster: Desnianske Basin Management, Department of Ecology and Natural Resources, Chernihivderzhrybokhorona, Department of Agricultural Development, united territorial communities.

One of the major problems, characterizing the state of the Oster River and its canals, presence of trees on their shore edge, the roots of which are washed with water, and the trees subsequently fall into the water, forming an unfavourable water regime. In the last 20 years, there is virtually no land reclamation work to clear the muddy leakage of rivers, which causes the river militia to dry up. The problem is exacerbated by the fact that in recent years, there is a low water level – the rivers are filled only by 70% of the norm. During the period of operation of the object, biological sewage treatment plants of the city Oster of Kozelets district of Chernihiv district is brought to a critical state, do not perform the assigned functions, and as a result, become unfit for further exploitation, which impedes the provision of quality services to the population.

General assessment of the water of the Oster by the whole set of indicators shows that water in all research periods (except 1971-1980, 2006-2010, 2014 and 2016 and 2017) belonged to the 3rd categories of quality – moderately polluted. In other research periods, river water was classified as dirty in 1971-1980, 2006-2010, 2014) and very dirty (2016 and 2017).

In order to improve the status of the Oster River and to eliminate the negative effects of anthropogenic impact on its condition, we recommended a number of measures based on the results of the study:

- in the basin of the river Oster it is necessary to achieve such an ecological balance, in which the most fully preserved and increased the diversity of ecosystems, and the actual river itself could be self-cleared, self-regulating and self-regulating. To do this, it is necessary first of all to optimize water protection zones, that is, to provide these zones with the most advantageous characteristics or ratios;

- it is necessary to develop a plan of phased melioration work to clear the muddy leakage of the river;

- in order to obtain detailed information on the level of pollution of agricultural land in the Oster basin, it is necessary to assess the condition of each agricultural area for the application of mineral and organic fertilizers, plant protection products, including pesticides. To this end, it is necessary to carry out work on the formation and sending of requests for public information by the competent authorities;

- the negative situation that has emerged regarding the operation of the canals of the river Oster and its protective zones, transferred to the balance of the united territorial communities requires the holding of information and advisory activities and explanatory works, aimed at forming a unified regional policy in the area of operation of the river Oster, elements of its drainage system, other hydropower structures and coastal protective bands;

- to inventory and balance the land resources in the Oster basin, to check the conformity of the intended use of lands, assigned in accordance with the norms of the Land Code of Ukraine and the Water Code of Ukraine to the lands of the water fund and coastal protective belts. Arrangement of water protection zones and coastal protective belts of rivers is one of the important measures for the protection and rational use of water resources. These measures are needed to reduce discharges of contaminated slope, nitrogen, potassium, phosphorus compounds, which are used for fertilizing agricultural land, pesticides, etc. In order to perform their protective functions, these zones must correspond to the size, nature of the vegetation, specific tasks, based on the level of economic development of the river basin, as well as on their ecological status;

- to develop measures to assess the conditions of use of coastal protective belts, which are a protected area with a limited economic activity regime and control over compliance with the provisions of the Water Code of Ukraine, under which it is prohibited: plowing and gardening; storage and use of pesticides and fertilizers; arrangement of summer camps for cattle; construction of any structures (except hydro technical, hydrometric and linear), including recreation centers, cottages, garages and parking lots, etc. We offer these authorities to delegate to the newly formed united settlement communities;

- in order to increase the effectiveness of monitoring the water status of the Oster River and the consequences of anthropogenic impact, we propose the use of biological control. The main reason for the transition to biological control is the fact that the grouping of aquatic organisms can reflect the combined effect of environmental factors on the quality of surface water, and the realities of the present

state of aquatic ecosystems are such that they have to constantly react to the complex pollution with multicomponent sewage;

- the received data on changes in the ichthyofauna, the regime of water use, as well as the analysis of the development of the economic and communal sphere indicate the need for increased attention to the problems of preventing emergencies, ensuring the reliability of water supply and sewage systems and treatment facilities;

- improvement of the system of monitoring the resource status of water objects by including in the list of obligatory periodic timetables the measurement of hydro-meteorological data on the river Oster and its main tributaries;

- creation of a unified platform for continuous monitoring of the hydro-chemical and biological status of the river through the placement of laboratory data of water samples by biological, hydrological, chemical, physical and chemical indicators in different periods of the year. Such a platform will allow for the exchange of information and response to changes and violations in the ecosystems of the Oster River;

- regulation of the Oster basin requires the use of integral management of its water resources, which will create favourable conditions for the formation of a balanced ecological state of the river and its basin. To this end, and to summarize the diverse information, we suggest organizing a single work platform involving employees and information from various sources. (Desnianske Basin Management and its departments, Department of Ecology and Natural Resources of Chernihiv region, Chernihivderzhrybokhorona, Department of Agro-Industrial Development, united territorial communities) on a permanent basis. This will eliminate duplication of functions, timely response to phenomena and events of a natural and man-made nature increase the objectivity of the proposed management and business decisions;

- improvement of the river state can be achieved as a result of further development of regulatory documents for its use. Relevant documents should be supplemented with an article on liability not only for violation of the state of the river, but also for the state itself. Adoption of this provision will raise the status of monitoring and, accordingly, promote its development, including increasing the connection with the economic sphere;

- since in the last decades the nature and composition of household sewage is characterized by the presence of significant changes – large quantities of detergents, chemical additives for detergents are now contained in waste water, it is necessary to carry out major overhaul of sewage treatment plants in Oster, Kozelets of Kozelets district of Chernihiv region;

- a cardinal measure to clean the river is a proposal from Trubizska Interdistric Water Management. In the autumn-winter period, it is necessary to gradually "put" all four gateways from the city of Kozelets to the village Danivka and pour water into the Desna. To clear from the silt fairway. In spring, during the flood, to pump into the Oster clean water from the Desna;

- regular educational activities through public organizations, state authorities and local self-government, educational institutions and establishments;

- establishment of protective coastal belts and the regime of ecologically safe functioning of the river within the boundaries of settlements;

- inventory and development of a river *certificate* within the city of Nizhyn, urban area of Kozelets, Oster city;
- clearing the river from the bottom sediments and household rubbish, creating protective shrubs along the river in the territory of the country's massif and micro district Mygalivka, Magerky;
- clearing water waste from household rubbish, shrubs within settlements;
- carrying out reconstruction of hydraulic structures. Implementation of measures in this direction involves the execution of works on the construction and reconstruction of existing hydrotechnical structures, shore fortifications for the revival and maintenance of favourable hydrological status of the river, ensuring the possibility of implementing the regulation of drainage;
- to organize carrying out by the departments of Desniansky Basin Management, Department of Ecology and Natural Resources of Chernihiv region and the united territorial communities of anti-erosion agro technical measures and the creation of protective forests on erosion-hazardous lands, infestation of erosion-dangerous and strong eroded lands;
- to improve the hydrological regime of the MC of the city Oster, it is necessary to clear the water reservoirs and main channels of drainage systems, which are subordinated to inter-district water management departments (IDWMD), which are heavily overgrown and silt up;
- the plans for repair and maintenance works on water management systems must be implemented in full and must include in their list: clearing of "emergency" trees and shrub vegetation on shores and slopes; arrangement of leakage of small rivers; installation of watermarks, if none; current repair of hydraulic structures, the level of wear of which is 70%;
- creation in the united territorial communities of services on care of the river and the performance of work on care, inventory of water objects transferred to their property;
- development of the rules of technical exploitation of the certification of artificial canals, reservoirs in the river basin with the further development of rules of technical exploitation, to ensure their environmentally safe operation and to ensure the establishment of appropriate operating regimes in accordance with Article 76-78 of the Water Code of Ukraine.

ASSESSMENT OF THE CHEMICAL COMPOSITION OF HONEY AS AN INDICATOR OF CONTAMINATION BY ANTHROPOGENIC POLLUTANTS OF URBANIZED ECOSYSTEMS

Kupchyk O.

Honey is the most valuable product of food. It because of its complicated chemical composition (includes: enzymes, glucose and sucrose, proteins, amino – and organic acids, vitamins, lipids, flavonoids, phenol acids and mineral components) has a therapeutic effect on the body. Regular use of honey increase organism resistance to

various infections and colds. Honey is widely used in food, medical, cosmetic industries. Honey and other beekeeping products should be of good quality and safe, should correspond to the requirements of current normative documents concerning maximal allowed level of the substances content which are safe for the consumers health [1-3].

Investigations of the last years show that bees and beekeeping products can selectively accumulate some heavy metals, radioactive substances, pesticides and other contaminants. Extent of heavy metals accumulation on the territory of Ukraine, as toxicants of techno genic origin, unfortunately grows. Contamination of the farmland by heavy metals, in general, is realized on account of harmful industrial emissions of industrial enterprises and auto transport in the atmosphere, their presence with the waste of livestock farms and as a result of fertilizers and pesticides use [4]. The most dangerous toxicants which have prolonged influence, some heavy metals have been recognized, namely: lead, mercury, cadmium, arsenic, zinc, nickel, copper, etc., which come to the environment and are accumulated as grounds. Then they migrate into natural waters, absorbed by plants and enter the food chain. Toxic influence of heavy metals in the human organism is realized slowly and appears to reduce the action of the functions of separate parts and organs, immunodeficiency state of the body, cause mutagenic, teratogenic and embryo toxic effect [5].

Pesticides are powerful, constant active negative ecological factor. They enter the grounds, atmosphere, water bodies and agricultural products. Thus, the main sources of pesticides entering in honey are honey plants, water, soils and bees themselves [3].

Modern analytical and sanitary-hygienic service of heavy metals control in food and environmental objects puts the following requirements to the instrumental methods of the analysis: high accuracy and sensitivity; possibility to conduct the analysis by minimal quantity of preparatory actions; automatization and computerization of the analysis processes [5].

Despite considerable progress in the development of physical and chemical methods of bee products analysis, for instance, spectroscopic ones [1; 6-14], chromatographic ones [15], such analysis differ by complicated and valuable equipment, and as a result – by high price.

Electrochemical analysis methods are characterized by high sensitivity and selectivity, quick response to the composition change of the analyzed object, they are easy in automatization, don't need expensive analytical equipment and there are no special demands to its erection and installation [16]. Thus, method of stripping voltammetry which allows to determine zinc, copper, cadmium and lead in the sample on condition their simultaneous availability, seems to be more perspective for analysis of the consumer goods.

Elementary analysis of honey samples needs destroying of the organic matrix of the sample, transferring determined elements into the solution. Unfortunately, because of the big amount of the samples types there is no universal methodology for samples preparing which corresponds to all demands. For full destroy of the organic matrix of honey samples usually dry and wet ashing is used which is made mostly by acids: nitric acid [1; 8], chloride [16], mixture of nitric and chloride acids [8], mixture

of nitric and sulfate acids [9], as well as by nitric acid and hydrogen peroxide [7; 13; 15] and mixture of nitric acid and magnesium acetate [10; 14]. But it remains unclear what composition of acid/acid mixture is more rational relating to the used apparatus and definite analytical method of investigation.

So, the purpose of this work was the definition of such heavy metals as zinc, lead, cadmium and copper in honey types of the method of stripping voltammetry, as well as correlation of the efficiency of three methods of samples preparing – dry and wet mineralization and their combination, pesticides detection by gas chromatography as well as some peculiarities of physical and chemical indexes in different types of honey gathered on the territory of Chernihiv region.

The investigation was performed on honey samples out of grasses, which were bought in the specialized honey shop, and by beekeepers in different parts of Chernihiv region (Fig.1).

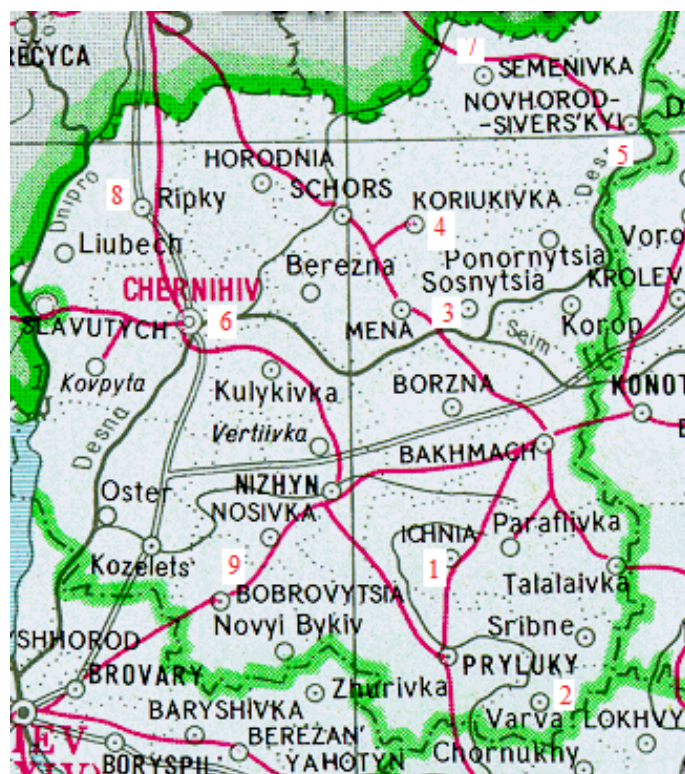


Fig. 1. Chernihiv region map

Honey samples were fresh, not pasteurized, i.e. they were thermally treated. Bought (100 g) honey samples were gathered for the analysis in glass jars at room temperature with light access. To understand the sources of entering contaminants to honey the investigation was performed on the middle sample out of 3 samples of each type of honey: lime, of grasses, out of thistle, out of acacia and raspberry, rape, clover, sun flower, meadow, forest, buckwheat and field.

In order to schedule an organic component of matrix and transfer determined components in solution in electrochemical-active forms the programmable two-chamber furnace (PTCF) was used P – Lab. Samples preparing was made by three methods:

1. “dry” ashing.

Sample weight of honey in mass 1 g was mixed with magnesium acetate (1 mg/ml), then it was dried in porcelain cup under the temperature 100°C during 2 hours. 2,5 ml of nitric acid was added to the dried sample (5n). Then the cups with samples were put in cold muffle oven and, due to the possibility of programming, gradually heated the samples up to the temperature 600°C, then they were ashed by the temperature 600°C during 4 hours. If ashing of the sample failed (the sample contained dark inclusions), after cooling to each sample were added 2,0 ml of nitric acid (5n) and repeated the process of drying and ashing (by 600°C during 15 minutes) until getting homogeneous ash of white, yellow or grey colour. Ash was dissolved in 1 ml of concentrated formic acid and solved by bidistillate up to 10 ml. In quartz electrochemical chamber 10 ml of distilled water, 0,2 ml of concentrated formic acid and sample aliquot in volume of 0,5 ml were added water.

2. “wet” ashing.

Sample weight of honey with mass of 1 g was added with 10 ml of concentrated nitric acid in 50 ml ashing dish and heated up to the temperature 30-40°C until gassing termination. Then 3,0-3,5 ml of concentrated nitric acid and 1,5-2,0 ml of 30% solution of hydrogen peroxide were added, then it was evaporated by the temperature 120-130°C. Process of adding hydrogen peroxide, nitric acid and evaporation was repeated 3 times until getting homogeneous ash of white, yellow and grey color. Then samples preparing for analysis was conducted in the same way as in previous case.

3. “wet” mineralization and dry ashing with additives.

Sample weight of honey with the mass of 1 g was mixed with 2,5 ml concentrated nitric acid in quartz glass, heated up to the temperature 150°C until gassing termination and evaporated up to 1/3 of the initial volume. Then 2,0 ml of concentrated nitric acid and 1,0 ml of 30% solution of hydrogen peroxide were added, then it was evaporated until the dry state during 60-70 minutes under the temperature 150-350°C. The sample was ashed under the temperature 450°C during 30 minutes. The process of nitric acid, hydrogen peroxide adding, evaporation and ashing was repeated two-three times until getting homogeneous ash of white, yellow or grey colour. Then samples preparing for the analysis was conducted in the same way as in previous cases.

The content of heavy metals was determined on the voltammetry analyzer TA-Lab (Research and Development Enterprise “Tomanalit” RF) in a three-electrode electrochemical cell. As an indicator electrode amalgam electrode was used. As an electrode for comparison and as an auxiliary electrode KCl electrode filled with the solution 1M of potassium chloride was used.

The analysis was performed on background electrolyte, which contains 200 mcl of concentrated formic acid (chemically pure), on the following conditions: electrochemical purification of the indicator electrode at potential +0,050 During 15 seconds, metals accumulation on the surface of the indicator electrode at potential – 1,500 During 30 seconds, solution calming at potential – 1,300 V during 5 seconds, anodic oxidation at a liner speed of scanning the potential with speed 80 mV/s.

A probe of each honey sample was analyzed in there parallel experiments.

Metals definition was performed by the method of additives using standard solutions which contain 1 mg/l or 10 $\mu\text{g/l}$ of each of the defined metals, which were prepared on the base state standard samples and bidistillate. Calculation of the metals concentration was performed with the help of specialized computer program TA-Lab (version 3.6.10).

In Fig. 2 typical samples of voltammetry curves of the background (1), honey samples without additives (2) and with additive (3) of the analyzed metal, obtained for the honey sample, are presented.

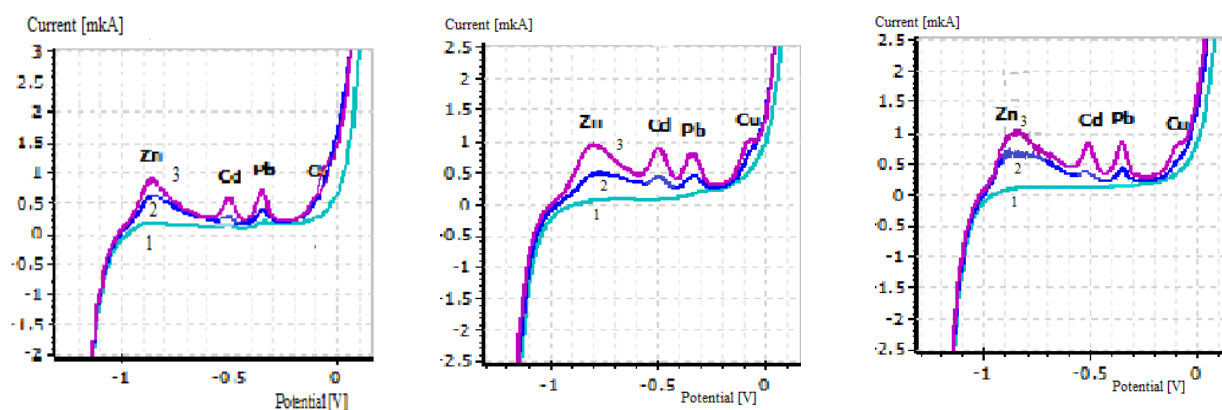


Fig. 2. Voltammetry curves of the honey sample №3:
a) “dry” ashing b) “wet” ashing c) “wet” mineralization and dry ashing with additives

You can see in Fig. 2 that on the voltammetry curves of the background solutions in the intervals of the potentials from -1200 mV to $+100$ mV there are no currents peaks of the oxidation (curve 1).

This certifies about the purity of the background electrode, in particular about the absence in it zinc, cadmium, lead and copper, because in terms of voltammeter curve registration anodic dissolution is possible before of earlier concentrated on the indicator electrode only those metals. On the voltammeter curves of the sample №2 there are maximum four of currents-at potentials -900 , -550 , -320 and -50 mV, which correspond to the processes of anodic oxidation of zinc, cadmium, lead and copper correspondingly.

By entry into the solution the additive probe of the standard solution, which include all metals, currents peaks of zinc, cadmium, lead and copper oxidation on the voltammeter curves increase proportionally to the increase of these metals concentration.

Curves comparison, presented on fig. 2, show nearly full identity. That can certifies that in the samples prepared by three different methods nearly the same metals in the same amounts are contained.

The same voltammeter curves are registered for other samples of honey, which are under investigation.

By the difference between the voltammeter curves of the sample with additives, sample of the background electrolyte the average content of heavy metals content in honey is calculated. The results of defining zinc, cadmium, lead and

copper are given in table 1-3.

Table 1

Heavy metals in honey samples (mg/kg), after “dry” ashing

Place	Zn	S _r , %	Cd	S _r , %	Pb	S _r , %	Cu	S _r , %
1	0,20±0,08*	1,2	0,071±0,002	0,9	0,42±0,04	1,0	0,21±0,07	0,8
2	2,36±0,11	0,4	0,009±0,004	4,2	0,060±0,026	4,4	0,087±0,014	1,5
3	0,85±0,06	0,8	0,017±0,004	4,0	0,089±0,032	3,0	0,64±0,02	0,5
4	0,75±0,07*	0,9	0,083±0,005	2,7	0,18±0,08	2,3	0,15±0,03	1,8
5	0,0010± 0,0005*	2,4	0,015±0,005	3,6	0,065±0,013	3,5	1,72±0,06	0,4
6	0,71±0,04*	1,3	0,043±0,008	2,8	0,27±0,08	2,3	0,091±0,011	1,3
7	2,45±0,08	0,6	0,0008±0,0007*	5,3	0,23±0,07	2,4	0,74±0,04	0,8
8	0,25±0,04*	0,7	0,008±0,008	4,0	–	–	0,32±0,04	0,7
9	0,00039± 0,00011*	2,8	0,015±0,005	3,7	0,12±0,05	2,5	0,24±0,06	1,5

*– below the limit of determination

Relative standard deviation (S_r) of zinc, cadmium, lead and copper definition in honey samples is not higher: 2,4; 5,3; 4,4 i 1,8% correspondingly. Intervals of the defined contents of zinc, cadmium, lead and copper content for all tested samples are in range, mg/kg: from 0,0005 to 0,11; from 0,0007 to 0,004; from 0,013 to 0,08; from 0,011 to 0,07 correspondingly.

Table 2

Heavy metals in honey samples (mg/kg), after “wet” ashing

Place	Zn	S _r , %	Cd	S _r , %	Pb	S _r , %	Cu	S _r , %
1	0,97±0,04	0,8	0,053±0,003	0,8	0,10±0,04	2,2	0,63±0,08	1,1
2	0,95±0,09	0,4	0,010±0,004	2,2	0,065±0,020	3,4	0,078±0,016	1,4
3	1,02±0,06	0,6	0,022±0,003	1,5	0,094±0,027	2,7	0,45±0,02	0,6
4	0,78±0,06*	0,9	0,089±0,002	0,5	0,24±0,07	1,2	0,14±0,04	1,5
5	0,0013± 0,0004*	1,5	0,019±0,005	1,6	0,067±0,011	2,5	1,8±0,06	0,3
6	0,75±0,06*	0,5	0,052±0,003	0,7	0,25±0,08	1,7	0,092±0,015	1,6
7	2,57±0,05	0,6	0,0014±0,0003*	4,1	0,22±0,07	1,6	0,67±0,04	0,7
8	0,37±0,05*	0,8	0,014±0,003	1,4	–	–	0,27±0,04	1,1
9	0,00039± 0,00010*	1,7	0,021±0,004	1,2	0,13±0,04	1,8	0,18±0,07	0,5

*– below the limit of determination

Relative standard deviation (S_r) of zinc, cadmium, lead and copper definition in honey samples is not higher: 1,7; 4,1; 3,4 i 1,6% correspondingly. Intervals of the defined contents of zinc, cadmium, lead and copper content for all tested samples are in range, mg/kg: from 0,00010 to 0,09; from 0,0003 to 0,005; from 0,011 to 0,08; from 0,015 to 0,08 correspondingly. Relative standard deviation (S_r) of zinc, cadmium, lead and copper definition in honey samples is not higher: 1,5; 1,6; 2,9 i 1,6% correspondingly. Intervals of the defined contents of zinc, cadmium, lead and

copper content for all tested samples are in range, mg/kg: from 0,00010 to 0,07; from 0,002 to 0,006; from 0,011 to 0,08; from 0,015 to 0,08 correspondingly.

Table 3

Heavy metals in honey samples (mg/kg), after “wet” mineralization and dry ashing with additives

Place	Zn	S _r , %	Cd	S _r , %	Pb	S _r , %	Cu	S _r , %
1	1,00±0,03	0,7	0,049±0,003	0,8	0,13±0,04	1,8	0,57±0,08	0,5
2	1,30±0,04	0,2	0,011±0,003	1,2	0,068±0,020	2,9	0,083±0,016	1,5
3	1,00±0,03	0,6	0,020±0,002	1,5	0,092±0,027	2,4	0,54±0,02	0,6
4	0,81±0,07*	0,7	0,091±0,004	0,5	0,23±0,07	1,0	0,11±0,04	0,7
5	0,0011± 0,0004*	1,4	0,018±0,005	1,6	0,070±0,011	2,4	1,6±0,06	0,4
6	0,73±0,04*	1,1	0,050±0,003	0,7	0,27±0,08	1,8	0,089±0,015	1,6
7	0,23±0,06*	1,3	0,074±0,002	0,9	0,40±0,04	1,1	0,19±0,07	0,7
8	0,45±0,05*	0,9	0,010±0,005	1,4	-	-	0,23±0,04	0,4
9	0,00042± 0,00010*	1,5	0,019±0,006	1,2	0,15±0,04	1,6	0,21±0,07	0,6

*– below the limit of determination

As you can see from the data in table 1-3, all honey samples contain heavy metals, except white honey, where such toxic metal as lead wasn't found. The biggest content of the lead was defined in the sample of sunflower honey, that is not higher than GDK level ($C(\text{Pb}^{2+}) = 1,0 \text{ mg/kg}$) [17; 18]. Below the limit of determination the cadmium content is in buckwheat honey sample, at the same time the highest content is in rape honey sample. Besides, if to compare cadmium content to the GDK norms in Ukraine ($C(\text{Cd}^{2+}) = 0,05 \text{ mg/kg}$) [17], then the increase was found in two samples of honey: rape and sun flower, content in field and clover honey samples is on the GDK level. However, if to compare with the indexes of honey safety in EU countries ($C(\text{Cd}^{2+}) = 0,1 \text{ mg/kg}$) [18], then all the samples meet the requirements. Thus, the most contaminated as to cadmium and lead content is sunflower honey, as to cadmium content – rape and sunflower honey.

The content of zinc and copper in honey are not standardized. However, it is interesting, the zinc content in majority of samples is less 1, i.e., is below the limit of determination of that element. Maximal zinc amount is in flower honey with thistle, minimal is in meadow. The highest content of copper was found in wood honey, and the lowest – in honey out of grasses. The got is given in relation to content of heavy metals in honey coincide with values that is presented in literature [1-3; 6-15; 19].

It can be seen in Tables 1-3 that all methods of the samples preparing are satisfactory. But defined ions amounts of zinc, cadmium and lead in case of defining by dry ashing method are lower than in other cases. Thus, that can be the result of losses because of the volatility of corresponding chlorides. Method of wet ashing and combined one give more similar between each other indexes. But method of wet ashing need more consumption of chemical reagents. That's why “wet” mineralization and dry ashing with additives can be recommended as relatively not so expensive, easy and fast way of honey samples preparing for further quantitative

definition of heavy metals by method of stripping voltammeter.

You can see in Fig. 3 that on the diagram of the total content of heavy metals in honey samples from the different places of the Chernihiv region.

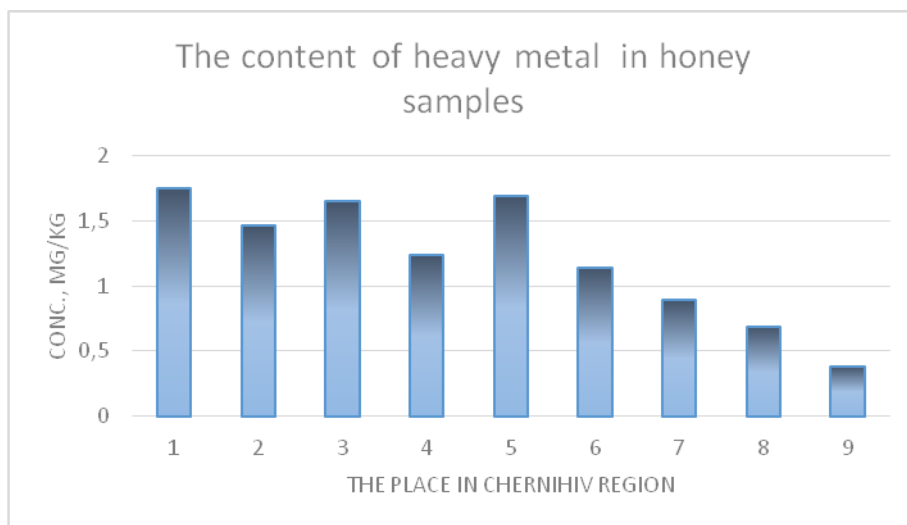


Fig. 3. The total content of heavy metals in honey samples from the different places of the Chernihiv region

As can be seen from the presented diagram, the biggest total amount of heavy metals is contained in honey samples from the following places in Chernihiv region: Ichnya, Sosnitsa and Novgorod-Seversky, and the smallest – from Bobrovitsa.

At the same time, if we consider the total content of toxic and essential metals you can see in Fig.4. As you can see, the content of toxic elements of cadmium and lead prevails in three other places of the Chernihiv region: Koryukovka, Semenovka and near Chernigov, which may be due to the presence of industries and road transport.

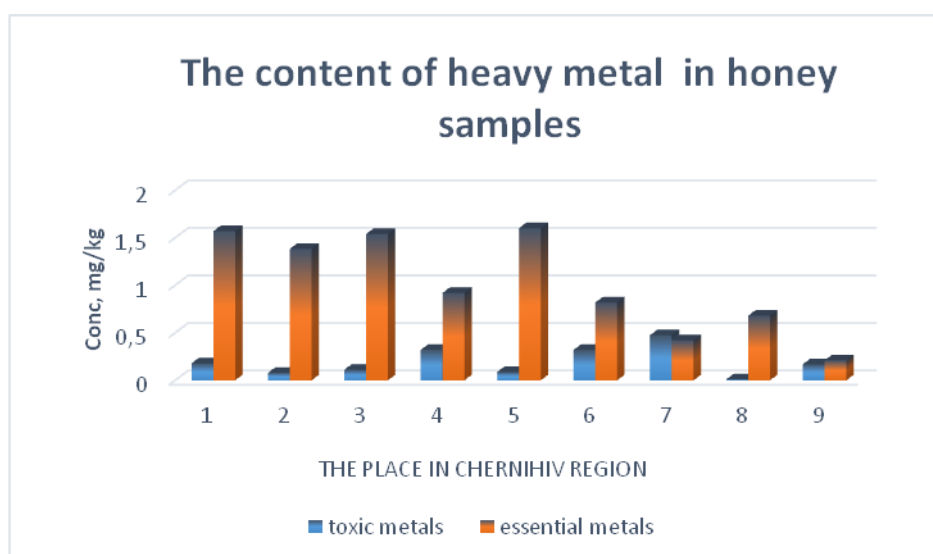


Fig. 4. The content of toxic and essential heavy metals in honey samples from the different places of the Chernihiv region

Least of all these toxic elements are observed in honey samples in Repkinsky area. The tendency of the content of essential elements corresponds to the total content of heavy metals in the samples under study.

To extract the pesticides out of honey the methodology which is provided by DSTU 4497:2005 “Natural honey. Technical conditions” was used. [17]. Chromatography was conducted on the gas chromatographer model 3700. Column temperature 180oC, glass column chromaton NAW – silonized NMDZ – 5% SE-30 (inner diameter 3 mm, length 2 m), carrier gas – nitrogen, detector temperature (PID) 230°C. Sample volume 3 mcl, analysis time 30 minutes. Program of data processing MULTISPECTR 4.1 (Kharkov).

It was investigated by gas chromatography the presence in honey samples the following pesticides: γ -isomer of hexachlorocyclohexane (HCCH), aldrin, heptachlor, DDE, DDD and DDT. It was experimentally established that there were no above mentioned pesticides in all defined samples. In Fig. 5 chromatograms of the standard solution of the pesticides and honey sample No. 1 are presented. Same chromatograms were obtained for other honey samples.

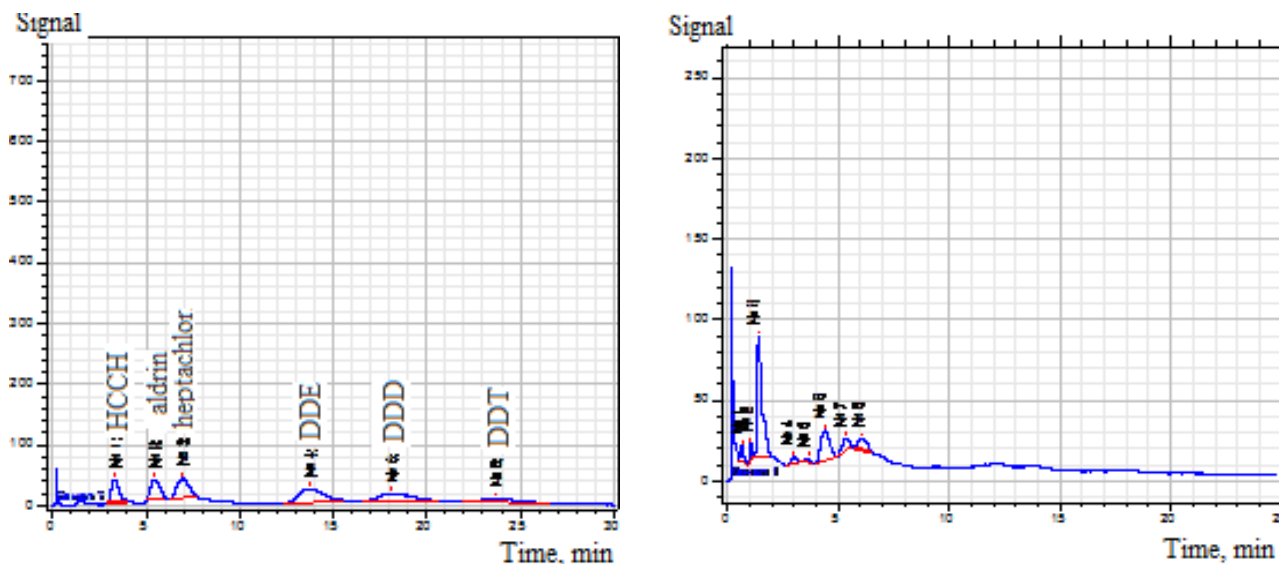


Fig. 5. Chromatograms

a) of the standard sample containing 6 pesticides

b) of honey №1

Some authors specify that in bee products it is most common as in other food products that the rest of DDT and its metabolites, HCCH and its isomers are kept [20]. Otherwise, absence of all pesticides in samples can be explained by the fact that possible track amounts of some of the pesticides are present, but their amount is below the limit of definition of this methodology.

Water content in honey, mass share of sucrose and renewable sugars (to anhydrous substance), qualitative reaction as to honey fall presence were defined according to DSTU 4497:2005 “Natural honey. Technical conditions” [17].

To confirm natural character and falsification absence some physical and chemical indexes of honey are used. The most important of them are water, sucrose,

renewable sugars share and presence of honey fall (table 4).

Thus, the investigated samples of honey are characterized by low content of water and sucrose, high content of renewable sugars (except samples №5, №6) and absence of honey fall, which is a prove of the natural character of flower honey. On average, mature honey contains water from 17 to 19% and sucrose content in sugar mature honey is only 1...3% [21, 22].

Table 4

Physical and Mechanical Indexes of Honey

Place	Mass share, %			Qualitative reaction to the honey fall presence
	water	sucrose	Renewable sugars	
1	16,4	2,4	83,5	negative
2	17,8	1,8	93,2	negative
3	18,4	2,8	85	negative
4	27,4	7,2	62,5	negative
5	18,0	2,3	87,5	milky-white solution
6	16,6	1,8	92	negative
7	18,6	2,5	91	negative
8	17,5	2,6	96	negative
9	28,8	6,4	55	negative
GDK (DSTU 4497:2005) [17]	not more 21	not more 6,0	not less 70,0	negative or milky-white solution
GDK (EU Regulation 110/2001) [18]	not more 20	not more 5,0	not less 60,0	–

That's why the obtained data for rape and clover honey samples can indicate to the honey false origin or premature selection of honey from hives.

Chemical composition and nutritional value of honey vary and they depend on the type of honey plant, honey maturity, climate conditions, industrial methods of treatment and storage. On the base of conducted investigation we can make the following conclusions:

1. As a result of investigation of inversion voltammetry with the relative deviation not more than 6% the content of the following heavy metals was determines: zinc, cadmium, lead and copper in honey samples. It was determined that honey samples contain zinc and copper. It was also noted that lead content in all honey samples corresponds to the allowed norms, defined by the current inner legislative acts. However, cadmium content in two samples increases the norm, and in two samples – is near to it. At the same time lead and cadmium content in all samples of honey corresponds to the requirement of EU countries and GCC countries. So, to obtain objective evaluation of the honey quality it is recommended to use definite definition by each toxic metal.

2. Pesticides absence or their remaining share correspond to GDK norms, indicates the importance of use of traditional agricultural practices and specifies toxicological safety of all investigated honey samples.

3. By physical and mechanical indexes of honey quality it was defined that the vast majority of samples correspond to the current quality standards of Ukraine.

However, in some honey samples some deviations from the standard indexes were defined, which can be the results of natural and anthropogenic involvements.

4. Obtained results give the basis for further investigation of bee products of Chernihiv region, soils samples, water and honey plants investigation.

Thus, Chernihiv region doesn't have any powerful production, that's why lead content, which corresponds to the standards, indicates the location of honey lands on the safe distance away from the highways. But cadmium content is disturbing: 2 honey samples contain increased cadmium content and 2 more – even closer to GDK. It can be the result of mineral fertilizers use which contains cadmium.

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Part 5. Information economy: theoretical aspects, trends and prospects of development

MODERNIZATION AND SYSTEM INTEGRATION OF INFORMATION SYSTEMS AND TECHNOLOGIES IN ACCOUNTING AND MANAGEMENT ENTERPRISES

Volot O.

The new economy requires unorthodox, innovative approaches administered by economic activities in order to enterprises remain competitive in conditions of constant development of information technology and the emergence of new ways of meet consumer demand [1].

The globalization of information systems – is a process of worldwide informational integration and unification. In a broader sense – the conversion and erection of the term "information system" to the planetary, one that applies to the entire of Earth [2]. The globalization of information systems is reflected in attracting of all users to a single system. Society has felt the need for a free exchange of information between individuals, departments, companies, as therefore awareness of the importance of solving the problems of modernization and system integration of information systems is a vector of formation and development of the information society.

The essence of integration systems is that different systems work as one unit, ie the output data one subsystem serve as input for another and at presence theirs the union can get more information via convenient way for a shorter period. System integration is the process of unification of different computing systems and software physically or functionally order to achieve maximum the efficiency of the system by establishment of effective interaction of its subsystems. The results of the system integration are simplification and automation of business processes, the most effective management of the organization, improving the reliability and safety integrated systems, the effective interaction of systems based on a common platform, the reducing costs for further modification [1].

The modernization of information systems in the context of the topic relates to all kinds of changes of systems, which are will improve their quality and work, and will allow in the future to integrate to form a unified information space. Combine a number of different types of systems – not an easy task through a number of problems: different data format, a variety of sources and others. Therefore, In order for integrate the systems into one, they must be first are modernized, to lead to certain of common standards. The second aspect of modernization concerns the of upgrade information systems in accordance to scientific and technical progress and, respectively, to the new requirements for these systems [3].

Interest to the innovative solutions in the field of research increases, enterprises even more often resorting to unite all existing business applications to a complete and

workable system of software services on hardware and software level, that ensures their functioning within a single business logic through one user interface. Especially are felt the prospects of globalization in systems of corporate type [1] (Tab. 1).

Table 1

Characteristics systems of corporate type*

Species	Functional purpose	Features of	Examples
1	2	3	4
ERP (Enterprise Resource Planning System)	Serve as to create a single information space of company (combining all departments and functions), effective management of resources company, which are related to the production, trafficking of orders, sales	Of fundamental use of a single transactional systems for various operations and business processes enterprises. The versatility and the possibility of the take into consideration of sectors specifications. Modular principle of construction	CIS "BiznesLyuks"; CIS SIKE; "Galakty`ka" ERP; MONOLYT SQL;"OPTIMA-WorkFlow"; CIS "Y`LADA"; AVARDA; Lawson M3ERP; DeloPro 4.0; Organic ERP; TRONIX and others
CRM (Customer Relationship Management System)	Designed to improve and manage relationships with customers. Collects, analyzes and stores data about customers and their needs	Executes functions by providing all available information to employee about a particular relationship with the client	By`try`ks24; AmoCRM; ASoft CRM; Microsoft DynamicsCRM
MES (Manufacturing Execution System)	Designed for organization of optimal distribution of resources, production scheduling, quality management, analyzes the efficiency, abbreviation of costs and increase profits	It operates exclusively with manufacturing information and allows you to adjust and to rebuild the production schedule as many times as needed for one shift	MES HYDRA; DIAMES; Zenith SPPS; IDbox; Y`nfokont; IFS Applications; IT-Enterprise APS/MES; JobDISPO MES
WMS (Warehouse Management System)	It optimizes and automates the work of the warehouse of company: the acceleration of product set, the providing accurate information on placement of goods in a warehouse, effective management of product with limited shelf life, the management of using warehouse and others	Is issued in several editions: system the entry level (small shops and warehouses); "boxed" systems (warehouses with low turnover of goods, but 10,000 m ²); systems that adjust to (warehouses of 5,000 m ²) and systems that configurable (large warehouses with high turnover of goods and nomenclature)	Warehouse Expert; Oracle E Business Suite WMS; Warehouse Advantage; AldataWarehouse Management; RedPrairie DLxWarehouse

EAM (Enterprise Asset Management)	Analyzes ways to reduce costs for equipment service, are optimized its work, logistical support, management of stocks, finance, quality, of human resource on maintenance	These modules are part of the almost every general management information system, as well are specialized EAM, which focus on specific sectors	IBM Maximo; Mincom Ellipse; Infor EAM; DPSI iMaint; SPP Spectec TRIM; SAP BusinessSuite; Galakty`ka TOPO
HRM (Human Resource Management)	Manages all processes related to accounting, distribution and calculation with staff and reduces the percentage of staff turnover	The technological side of the issue of automation HR - resources is the most difficult, because the parameters with which to work system is closely related to psychology and difficult transferred to the formal measure	«Kompas:Upravlinnya personalom»; Alfa: Pidsy`stema Upravlinnya personalom; «1C:Zarplatnya ta Upravlinnya personalom 8.0»; «АИТ:Upravlinnya personalom»; Dynamics AX «Upravlinnya personalom»; Parus:«Upravlinnya personalom»; Flagman:Upravlinnya personalom; Dynamics NAV «Personal ta zarplata»; CIS «Trudovy`k»

* Source: developed by author based on monitoring market of corporate information systems

Similarly on the brink of MES and ERP are located the systems of intelligent management of production EMI (Enterprise Manufacturing Intelligence), which is a centralized system of data collection of production processes and their subsequent interpretation in a commercial context. EMI also provides automation of data entry of production and movement of materials in the resource management system (e.g., ERP).

Thus, the corporate system – a combination of hardware and software that implement the ideas and methods of automation of activity the company. The nature, size and features of production structures and of systems themselves stipulate a combination of various corporate systems in the overall structure of enterprise management information system [1]. Systems of this type carry out automation of functions of accounting and management in enterprises and are provide information for management decisions. They are designed to meet the informational transparency of the enterprise, to form a common information space, which will combine information flows, which runs from manufacturing with data of various of financial-business departments, and to issue pertinent message to all levels of enterprise management.

Currently, the traditional representation of the corporate automation system of an industrial enterprise is the so-called automation pyramid, which includes the

following three typical levels (Fig. 1) [4].

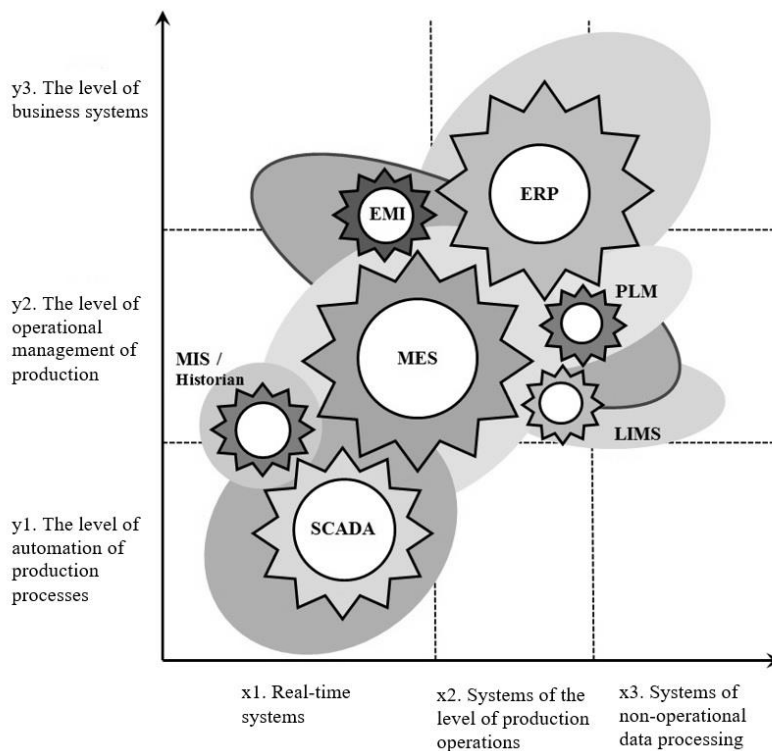


Fig. 1. Structural scheme of automation of industrial enterprises

Lower level of automation of technological processes – automated dispatch control systems SCADA (Supervisory Control And Data Acquisition), controllers and distributed control systems DCS (Distributed Control Systems) and automated process control systems developed on their basis.

The average level of operational management – the system of operational management of production MES (Manufacturing Execution System), which sometimes include management systems of the enterprise funds EAM (Enterprise Asset Management System).

Upper level – enterprise resource management systems, such as ERP (Enterprise Resource Planning System).

The three-level submission of the concept of automation pyramid gives a clear representation of the subsystem's hierarchy. However, for real modern corporate systems, it is not always possible to specify the boundaries of levels in detail. MES class systems located between ERP and SCADA often use both lower and upper level components. In this case, the degree of their integration is directly determined by the peculiarities of the automation object, which implements the system itself [5].

In contrast to the traditional representation, a two-dimensional coordinate system is proposed for a more complete description of the interaction processes of the components. The axis of the ordinate is similar to the vertical of the pyramid of automation and also contains three levels: y1 – automation of production processes (SCADA); y2 – operational management of production (MES); y3 – business systems (ERP). As you know, a description of the functionality of a particular product

necessarily includes a list of issues related to the processing of data. That is why the proposed model introduces the second coordinate axis – the abscissa axis, which directly reflects the following three types of data processing systems: x_1 – real-time system (PB); x_2 – systems of level of production operations; x_3 – systems of non-operational data processing. Based on the definition and list of requirements put forward to each of the systems of a given class, SCADA systems occupy the level x_1 , MES – comprise levels x_1 and x_2 , and the business system ERP – can essentially occupy all three levels of data processing x_1 – x_3 , although in practice, usually only cover the last two.

In addition to the traditional SCADA, MES and ERP, in the structure can be allocated by LIMS, PLM, MIS and EMI systems. In the vast majority of domestic publications, there are two interpretations of the abbreviation LIMS (Laboratory Information Management System): "Laboratory Information Systems" and "Laboratory Information and Managing Systems". According to [6], the modern concept of PLM is an integrated model of business strategies for managing the entire life cycle of a product from its concept, through designing and production, for sale, installation, subsequent operation (maintenance), technical support and dismantling (utilization).

To the classical concept of the information system of industrial automation, at the junction of MES with systems of the lower level are MIS systems. Foreign authors often identify with this abbreviation such concepts as Manufacturing Information System and Management Information System, and rarely Manufacturing Intelligence Systems (Intelligent Production Management System) [5].

MIS is a system for collecting, processing, storing and broadcasting data on internal operations and external events of the technological process of production, which provides timely access and provision of information in the appropriate format necessary for the organization of the control, planning and operational management [7]. On a structural scheme, MIS takes y_1 and y_2 .

Similarly, at the edge of the MES and ERP, there are EMI (Enterprise Manufacturing Intelligence) intelligent manufacturing management systems, which represent a centralized system of data collection of production processes and their further interpretation in a commercial context. EMI also provides automation for inputting data about the production and movement of materials into resource management systems (eg, ERP).

System integration is the process of combining different computing systems and software products physically or functionally in order to achieve maximum efficiency of the system by establishing effective interaction of its subsystems. On the basis of the integration of information systems of various purposes with the help of computer networks in the enterprise created corporate information systems (CIS) or Integrated Enterprise Management Systems (IEMS).

Consider the evolution of logistic conceptual approaches to enterprise management, which form the basis of the relevant information systems of management enterprise (Fig. 2).

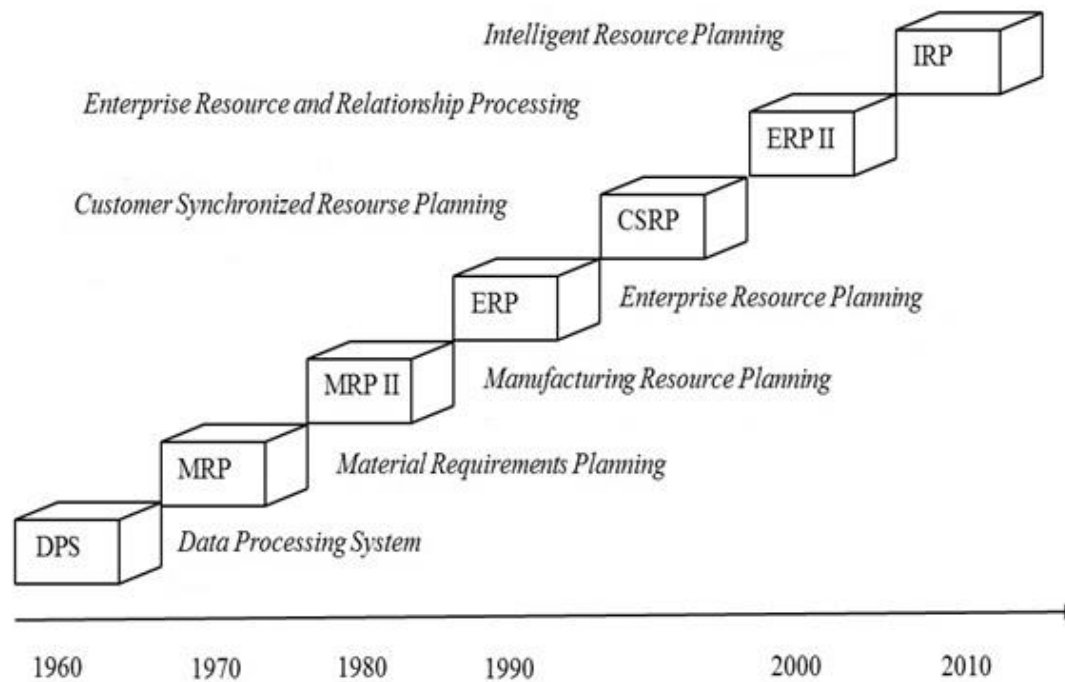


Fig. 2. Evolution of logistic concepts by types of resources
 Source: developed by the author on the basis of [5]

The first three concepts – MRP, MRPP and ERP – are focused exclusively on the internal activities of enterprises and do not take into account the influence of external market factors (suppliers, consumers, competitors). The CSRP concept takes into account the influence of the consumer market, ignoring the influence of the supplier market.

Gartner Group defines ERPII as a business strategy and a suite of application-specific applications, which enable them to carry out internal and external business processes, joint operational and financial initiatives, and optimize them [8]. The purpose of ERPII is not only to optimize resources and process traditional ERP transactions, but also to use information. These features of ERP include in the process of collaboration between enterprises.

In essence, the concept of ERPII – is the result of the development of methodology and technology ERP in the direction of closer interaction between the company and its clients and counterparties. In this case, enterprise management information is not only used for internal purposes, but also serves to develop cooperation with other organizations [9]. ERPII systems are characterized by an Internet-oriented architecture that is significantly different from the architecture of traditional ERP systems. This is due to that fact that management information that was previously stored and used only within the enterprise now must be accessible to information systems of clients and partners. This means that the traditional client-server architecture is starting to give way to web-based clients and to distributed component technologies.

Thus, system integration is to develop integrated solutions, designed to achieve maximum efficiency functioning of system by establishing effective interaction of its subsystems. The results of modernization and systems integration are: simplification

and automation of business processes, the most effective management of enterprises, improve the reliability and safety integrated systems, effective interaction systems based on a common platform, the significant of decrease in expenses for further modification.

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CATEGORICAL SPACE OF RESEARCH OF THE INFORMATIONAL ECONOMY

Kholiavko N.

Socio-economic development of the leading countries of the world takes place in a number of challenges, the key among which one can determine: the high dynamics of the exogenous and endogenous environment; the variability of factors and the specifics of their impact on the national economy; rapid informatisation, automation, robotisation of production processes; an increase in the knowledge content of the complexity of production; penetration of information and communication technologies in various spheres of society life, including in economic relations. These challenges lead to the transformation of the national economic system, its transition to the informational type. Economists-practitioners and scholars note the intensification of processes of formation of the information economy. The development of effective mechanisms and strategic approaches to effective state regulation of the national economy in terms of its transition to functioning on the

basis of informational means the expediency of conducting previous thorough scientific research, the formation of the theoretical and methodological basis for the implementation of relevant processes.

Global trends of economic development confirm the thesis of the significant transformative influence of information and modern technologies on the course of economic processes. Increasing access to information resources and increasing the speed of obtaining information leads to a change in the economic behaviour of actors in making decisions: customers (consumer choice), commodity producers (when defining answers to fundamental economic problems), suppliers (when choosing a logistics strategy), etc. Information technology intensifies production processes, shortens the life cycle of goods. Changes in the structure of factors of production, productive forces, factors of competitiveness of economic entities under the influence of information, the formation of the market for information services – all this justifies the need for scientific research, the study of the theoretical foundations of the functioning of the economy of information type.

The processes of formation and development of the information society are determined by the aspects of the dissemination, the speed of generation and updating of knowledge and information. Key scientific views on the definition of the nature of information are presented in Table. 1.

In the joint monograph S.M. Shkarlet, M.P. Butko and O.I. Volot summarized the scientific approaches to the interpretation of the essence of information, combining the key ones of them into four groups:

- quantitative and informative – the concept of K. Shannon (used, first of all, in modern high-tech communication systems);
- cybernetic – information is considered as an attribute of matter;
- logical-semantic – information is considered as the knowledge used for management;
- functional – information is considered as a function of the studied / analyzed systems [7].

In the conditions of the development of the information society and, especially – the formation of the information economy – is filled with the new content of the very concept of "information". In our opinion, in this context, information should be considered as a strategic resource, an element of productive forces, a new factor of production, a factor of competitiveness, a specific product, the determining properties of which are traditional and modern features:

I) traditional:

- completeness – a measure of the adequacy of the data obtained to reduce the level of uncertainty, decision-making;
- relevance – a measure of compliance with the objectives, subject of the study, analysis, or current request;
- accuracy and reliability – a measure of objectivity, the truth of the data received;
- adequacy – a measure of compliance with the parameters of actual reality;
- unambiguousness - clarity, accuracy, ambiguity, concreteness by reflecting real facts;

Table 1

Interpretation of the essence of the category "information"

Definition	Author
<i>Definition formulated in the Law of Ukraine:</i>	
"Documented or disclosed information about events and events occurring in the state, society and the environment" [1]	
<i>Definitions formulated by some foreign scholars:</i>	
"A message that removes or reduces the uncertainty that existed prior to its receipt" [2]	Shannon K.
"Definition of content received from the surrounding world; interrelation, communication, in the process of which the uncertainty is established; transmission of diversity; any set of signals, actions or information that some system receives from the environment, issues to the environment or, in the end, retains itself" [3]	Blumenau D.
"This is what eliminates (removes) uncertainty, restricts diversity, and measures the information through the amount of diversity that it restricts" [4]	Ashby W.
"Information consists of all objective facts and all proposals that affect the perception of the decision-maker and allow to reduce the degree of uncertainty associated with this problem or opportunities in the management process" [5]	Bazzel R, Koks D., Braun D.
"any message about anything; message, data, value of economic indicators that are objects of storage, processing and transfer and used in the process of analysis and development of economic management decisions; one of the types of resources used in economic processes, the receipt of which requires time and other costs" [6]	Raizberg B., Lozovsky L., Starodubtseva O.
<i>Definitions formulated by some Ukrainian scientists:</i>	
"The property of material systems to reflect their own state, which exists in material form and actualized by intellectual systems" [7]	Shkarlet S., Butko M., Volot O.
"The basis of management, should be optimal, truthful and valid, as required by the practice of management" [8]	Godym V., Korneyev I.
"Information obtained from various sources, which must be found or received, studied or investigated, rejected or accepted, checked and, if necessary, decided on their use and enumerated (predicted) their overall benefit (economic, social, technological, political, etc.)" [10]	Khmil F., Kovaliov V., Sosnin A., Melnichenko L.
«Information about persons, objects, facts, events, phenomena and processes, regardless of the form of their submission; the embodiment of a certain form of information that reflects with any degree of approximation the essence of objects and phenomena of the abstract or real world" [11]	Ros A., Pustovit S.
"Information adequately reproduces the phenomena and laws of the outside world, the spiritual activity of mankind, creates opportunities for prediction and transformation of reality in the interests of the international community" [12]	Makarenko Ye.
"The subject of managerial work, a means of substantiating managerial decisions, without which the process of influencing the management system on the system to be managed, and their interaction becomes impossible and this totality is the basis of the process of management of enterprises" [7; 13]	Dykan V.
"Strategic resource, one of the main resources of productivity growth, which allows to set strategic goals and tasks of the enterprise and use the opportunities opened; to make grounded and timely management decisions; coordinate the actions of various units, direct their efforts to achieve the general objectives of enterprises" [7; 14]	Yermolenko O.

II) modern:

– efficiency, dynamism, updating – a measure of variability as a reaction to active transformational processes at different levels (in the micro and macro environment) and in spheres (scientific, innovative, economic, social, etc.);

– flexibility and adaptability – a measure of the speed of adapting data to changes in the external and internal environment under the influence of scientific and technological progress and the intensification of innovation activities in society (primarily, from the side of economic entities);

– comparability – a measure of the ability to conduct a comparative analysis of data;

– increasing the role and prevalence of technology and technology based on and using information as a basis, data, resource (information and communication technologies);

– variability – the transformation of information from a message that reduces the level of uncertainty of the situation, the resource, the factor of production, the element of productive forces, the product (with the ability to influence the level of competitiveness of the subject) causes the growth of demand and, logically, the cost of information;

– economic efficiency – a measure of the ability to bring economic benefits from use. Taking into account the cost as a sign of information (as a resource, a commodity), it is justified to calculate the ratio of received or predicted effects to the incurred costs of generating, processing, analyzing, acquiring and using information, information technology.

In the conditions of the information society, the spectrum of fields of application of information expands and, accordingly, its classification is significantly reduced (by spheres, functions, managerial levels, degrees of systematization, etc.). Moreover, the first place in terms of importance and intensity of influence on social development and socio-economic processes, scientific and technical information is obtained. It is logical the exclusive role of the sectors capable of generating knowledge, information, providing them with processing, analysis and transformation into the demanded innovative information and communication technologies, information resources (especially the fields of the higher education and science).

The existence of diverse approaches to the interpretation of information is one of the reasons for the pluralism of scientific views on the essence of the information society. The author of the term "information society" was the Japanese scientist Yu. Hayashi, who focused on the value aspects of the transformation of human society.

The economic and technological aspects of the study of the information society were identified by Y. Masuda. The scientist noted the growing role of computer technology and information in the development of society and economy in particular. In general, information resources are defined as a promising source of wealth; and innovation and information technology – as a powerful transformational force [15].

Among the founders of the theory of information society should be noted E. Toffler and D. Bell. In their writings "Future Shock" and "The Third Wave" E. Toffler substantiates the formation of a post-industrial ("super industrial", "industrialist") society. Moreover, the scientist emphasizes the onset of the

information revolution, the driving force of which is knowledge [16; 17].

In the writing "Future Post-Industrial Society. The Experience of Social Forecasting" D. Bell analyses the tendencies in the issues of employment (an increase in the share of employed in the information sphere, in the services sector, the decrease in the number of employees in the industry) and concludes about the transition of society to the understanding of the principles of information [18].

About the formation of a new type of society, in which information, knowledge and information technology play a decisive role, as P. Drucker emphasizes in his research papers [19]. M. Castells calls the information society also an era of "informational capitalism", considering it as a global network society, in which the political factor plays an important role. The scientist believes that in the conditions of a new type of society, the exceptional importance is not so much the availability of information as the methods of information processing [20].

H. Schiller investigated the role of information in social development. In particular, information is considered as an important factor in the historical development of society; as a component of ensuring economic prosperity and stability [21].

Among the Ukrainian scientists, the scientific works of which are devoted to the research of the information society, the following should be named: Yu. Bazhal, A. Galchysky, V. Geits, A. Chukhno. The essence of the information society is considered mainly through the prism of its defining characteristic features. M. Zgurovsky separated three periods according to which the development of the society takes place (knowledge based and information based):

1) communication society (80-90 years of the XX century). Characteristics: digital information, archives of information resources, information transfer, development of the Internet;

2) information society (the end of the twentieth century). Feature – the transformation of information on the product, on the object of sale;

3) a society of knowledge (the beginning of the XXI century). Definitive characteristic – a combination of human capital with information and communication technologies [28].

In our opinion, somewhat controversial is the approach of the scientist to the separation of the knowledge society as a higher stage of social development, given the internal content that the author attaches to this concept. As the information society itself is marked by the transition to a new level of coordination and interaction of modern information technologies and the scientific, intellectual, creative, innovative potential of employees. In addition, the development of an information society is inextricably linked and based on knowledge, including the pace of their generation, the speed of processing and transfer.

Domestic scientists interpret the information society as a new milestone in the historical development of civilization with the prevailing influence of knowledge and information. This concept is much broader as "a progressive society with intensive development in all spheres of activity that are interconnected and intensifying the growth of information and the role of information technology in social and economic relations, preceding the creation of a more global information space that will provide

effective informational interaction of people and satisfaction of their needs for information products and services taking into account the possibility of access to the world information resources" [7]. The advantages of this definition are the completeness, complexity of the object's reflection, as well as the disclosure of the manifestations of its development both at the macro level (due to the interconnections of the subjects of various spheres of society's activity) and on the mega-level (through the statement of the formation of the global information space).

To the key features of the information society, domestic scientists include a significant increase in the role of knowledge and information in all spheres of public life; an increase in the share of informational and knowledgeable products in the GDP structure of the country; the formation of a global information space [7, p. 184]. O.Melnychuk defines the information society, information and communication technologies, and economic activity in the Internet [29].

O.A. Komarova determines the information society by updating a number of interrelated processes that manifest themselves in increasing the pace of scientific and technological progress, changing the role of knowledge of the generating organizations (in particular, higher education institutions), expanding the scope of services, intellectualizing labor, increasing the value of creativity and creativity in work, etc. [30].

Petrukhno Yu.E. interprets the information society as "a qualitatively new stage in the development of mankind, in which any person with the help of information and communication technologies can receive, recycle, distribute information, and the state provides a high level of informatization of all branches" [31]. In this definition, one more important aspect of the development of the information society is disclosed – state support. To deepen the definition of scientists, the grouping of characteristics of the studied type of society is presented: 1) freedom of access to information; 2) the level of development of information and communication technologies; 3) the development of information infrastructure [31].

The active development of the information society is due to the increased interest of representatives of various scientific fields in its study. Accordingly, the disparate approaches of domestic scientists to the definition of this definition are formed – for example:

– "a society of a new type, formed as a result of a new social revolution, generated by the explosive development and convergence of information and communication technologies" [32, p. 22];

– "a new historical phase of the development of civilization, the life and activities of which are primarily associated with the creation, processing and use of information" [33, p. 122];

– "a society of a new type, which is formed as a result of the global social revolution and is generated by the explosive development and convergence of information and communication technologies" [34, p. 56];

– "a society in which the main condition for the well-being of each person and each state is the knowledge gained through unimpeded access to information and the ability to work with it" [35, p. 253];

– "a modern society with a high level of development of information culture

(creation, processing and use of information)" [36, p. 53-60];

– "society represents the information and technological changes of the new millennium and is an essential characteristic of the modern life of mankind" [37, p. 5];

– "a kind of a society in which the value of information is gradually increasing as an important and indispensable resource for the development of its all major areas, namely: social, economic, political and cultural components, within which the technologies of processing, storing and transferring information between the main sub-sectors are actively developing "the objects of such a society" [38].

Thus, in the scientific literature, there are a number of diverse definitions of the essence of the information society, which is explained by the narrow orientation and specialization of research, the peculiarities of the methodology of various scholars, and so on. Despite the versatility of definitions, the overwhelming majority of scholars have consistently noted the extremely important role of information, information and communication technologies and knowledge in the development of a new type of society. The results of systematization of scientific approaches to the definition of the essence of the concept under study can be represented as follows:

– a society of a new type: the cause of formation – the development of information and communication technologies

– a society of knowledge: a condition of well-being – the availability of knowledge, access to information

– global society: the peculiarity of development – barrier-free information exchange.

On the basis of the research we can formulate the author's vision of the essence of the information society. In particular, according to this concept, in our opinion, it is expedient to consider a kind of a new type of society, the development of all spheres of which is determined by knowledge, information and information and communication technologies. The latter affect the level of competitiveness of subjects, the effectiveness of their functioning within the information society. At the same time, it is necessary to take into account the aspects of the speed of obtaining the latest information, the ability to produce knowledge and the pace of analytical processing and transfer using modern information technology. In the conditions of the information economy, information ceases to be simply a message designed to reduce the uncertainty of the situation, turning into a strategically important resource, a special factor of production, a separate element in the structure of the productive forces of society and on specific value goods.

The theory of information economics flows logically and is a component of the theory of information society development [39]. Along with this, there is an approach, in the scientific literature, by which scientists identify the concept of the information society and the information economy. In our opinion, such an approach is not sufficiently balanced, since the term "information society" in its essence is wider than the "information economy". The latter can be considered as an inherent component of the information society, which development is determined by a number of specific factors. In other words, these terms are closely interrelated and they should be investigated in the context of links between them, however, we should not

consider them as synonymous terms. There is no the only consistent interpretation of the term “information economy” in the scientific literature, which is explained by differences in views and research methods of different scholars. Moreover, this is complemented by the high dynamism of the economic component of the information society, which is why new aspects of its study are constantly emerging.

In scientific terms, the concept of information economy was introduced by Mark Porat, an American economist at the Stanford Center for Interdisciplinary Research. In his work, the scientist, having analysed the information-intensive activities and their contribution to the formation of the GNP of the United States of America, comes to the conclusion about the formation of an information economy. M. Porat, characterizing the informational economy, proposed to divide it into the primary and secondary information sectors. In general, the scholar associates the development of the information society with the expansion of the information sector of the economy [62].

F. Machlup follows similar views on the essential aspects of the information economy. In particular, this concept is interpreted as a type of economy, in which activities for the production, processing, storage, and transfer of knowledge and information form the overwhelming share of GDP of the country [59]. By sharing this view on the category under study, along with this, we consider it expedient to note its broad, generalized character, which determines the appropriateness of its concretization.

According to M. Castells, the information economy can be defined as the economy, the competitiveness of which subjects depends on their “ability to generate, process, and effectively use knowledge-based information [58]. The scholar emphasizes the fact that information technologies make a special impact on economic processes. The current trends in scientific and technological and innovative development are demonstrating the increasing influence of dynamically updated information and communication technologies on the economy, which in practice confirms the abovementioned thesis formulated by M. Castells.

Nizhegorodtsev R.M. proposes the interpretation of the information economy, a broad enough in its internal content. In the monograph “Information Economics”, the scientist points out the following definition: “this is an economic sector that studies economic changes that operate in the field of production and reproduction of scientific and technological information, scientific knowledge” [47]. According to the scholar, the subject of the information economy covers economic processes and economic laws, according to which the processes of production, exchange, distribution, and consumption of scientific and technical information are carried out [47]. Analysis of the above demonstrates, firstly, the expediency of expanding the subject – with the inclusion of all types of information (that is, without limitation, only the scientific and technical information). Secondly, the scholar’s position regarding the economic laws included in the research subject requires a specification [48].

In the thesis, Tolstyakov R.R. interprets the informational economy as “a part of the post-industrial economy, which is determined by the progress of science and technology, which makes high technology the basis of technical and economic

development” [52]. The critical analysis of the above definition allows marking its concentration on aspects of factor support for the formation of the information economy. The latter is explained by the subject of research in the thesis of Tolstyakov R.R.

B.V. Korneychuk outlines two aspects of the consideration of the information economy: 1) as a modern stage of development of civilization, the defining feature of which is the prevalence of creative work; 2) as “the economic theory of information society” [43]. We consider this approach justified, taking into account the complexity and high dynamics of the information economy as a research object.

According to Rakitov A.I., that economy can be called as information, in which “the cost of information search goes to zero” [51]. We unequivocally agree on the crucial importance of information and ensuring wide access to information resources of all interested economic entities. However, given this, the formulated by A.I. Rakitov definition seems to us somewhat limited since it does not fully reflect processes of generation, production, analytical processing, and transfer of information, knowledge, information technology.

S. Diatlov considers the information economy from the point of view of the systematic approach. To the subject of study of the specified type of economy, scientists are assigned: economic relations concerning the production, exchange, accumulation, and consumption of information; laws of self-organization of economic systems; aspects of rational search and use of information resources; systematic organization of economic processes and phenomena in the perspective of informatisation [41]. Sharing the idea of the need for a systematic approach to the interpretation of the essence of the information economy, yet we have to note the excessive breadth of the subject of the research object, which greatly complicates and aggravates the process of its study. And accordingly, in our opinion, it needs to be optimally narrowed in order to provide more specificity and purposefulness of the research.

Analysing the experience of foreign scientists in the problem of interpreting the essence of the information economy, we consider the position of Gubaidullina D.M. as appropriate, who examines this concept as “the stage of development of human society, the totality of all relations arising between economic entities on the basis of production, distribution, change, and consumption information” [40]. This definition combines two the most widely used scientific approaches. Moreover, Gubaidullina D.M. defines the informational economy as a factor in promoting the development of a new information technology [40].

Ukrainian scientists have fundamental developments in the study of issues of the formation of the information economy. In particular, Yu.M. Bazhal in this regard emphasizes “the use of knowledgeable information for the production of a new product, competitive in the world market, not necessarily informational, but such that, having mass sales, provides economic wealth and development of producer countries” [50]. In the monograph “Ukraine in the Measurement of the Knowledge Economy” edited by academician V.M. Heiets, it is proposed to consider the economy as “knowledge economy that involves the use of knowledge for economic development” [53; 55]. In the monograph, scholars are able to withdraw from the

consideration of the information economy solely through the prism of aspects of the analysis of information resources and technologies, expanding the research problem to issues of knowledge generation and cost-effective implementation of information technologies.

The authors of the monograph “Priorities of National Economic Development in the Context of Globalization Challenges” call the information economy “a special type of economy, in which information is a decisive productive resource, based on information production and information technologies” [50]. One recognizes the equation of the information economy to the knowledge economy on the internal content of both concepts as quite acceptable. A thorough approach to the interpretation of the essence of the information economy is proposed by S. Shkarlet and M. Dubyna, considering this term as “the type of economic system, within which information plays a key role in the development of the main spheres and industries of national production, is an integral part of the implementation of processes of production, distribution, exchange and consumption, further development of such a system is directly related to the creation and implementation of new information technologies in the activities of various economic entities” [56]. In an article, scientists focus on transforming the essence and structure of economic processes under the influence of innovative information technologies, as well as changing the working process (collection, storage, processing, transfer, use) with economic information itself [56].

Domestic scholar A.O. Maslov devotes a series of his scientific works to the study of scientific and methodological principles of functioning of the information economy in Ukraine and the world. On the basis of conducted researches and thorough study of scientific achievements of foreign scientists, Maslov A.O. proposes to consider the information economy as “an economy that was formed in combination and covers elements of the traditional, network, and knowledge economy, and created its own special content elements based on information and knowledge” [45]. From this definition, it is clear that the scholar manages to combine various scientific approaches, as well as to define clearly the relationship between the concepts of information and knowledge economy (among them, including the elements of the latter in the structure of information economy along with the components that characterize the traditional and network economy). In addition, Maslov A.O. in his publications specifies features and specific structural elements inherent in the information economy itself at the stage of its formation.

According to V.L. Pleskach and T.H. Zatonatska, the informational economy covers “electronic economic activity, where business activities in the field of information services, their production and exchange, where information and knowledge are the main resources, prevail” [49]. We believe that in the context of modern realities regarding the growth of the value and influence of information and communication technologies on economic processes, the above definition should be supplemented with aspects that reflect the specifics of such an influence with the identification of directions of transformation of economic relations in the conditions of informatisation of the national economy and society.

Melnychuk O. adheres to the position that is close to this approach, interpreting

the informational economy as “an innovative type of economic activity, where the main resources are the information and knowledge that ensure the functioning of e-business and the provision of electronic services by the state in terms of minimization of information search costs” [46]. We can note some limitation of this definition by isolating and summarizing the essence of the analysed concept to one structural element – e-commerce, which we consider to be unjustified even in view of the high dynamism and perspective of this element. Chala O.V. states that the information economy “includes the creation and use of information resources in a structured information space, and also provides opportunities for the production of intellectual capital and innovation and thus affects economic processes and socio-economic relations” [55]. On the one hand, this definition is sufficiently complex and broad in its content; however, on the other hand, it deprives it of specifics and does not reflect the specificity of the term.

Table 2

Interpretation of the essence of the information economy in dictionaries

Definition	Source	Reference to the source
Information economy – “an economy in which knowledge, information, and services are more valuable than manufacturing; the technological revolution associated with the computer and the information economy has accelerated the shift of industrialized countries from manufacturing-based economies toward service-based economies” [57]	Cambridge Business English Dictionary, Cambridge University Press	http://dictionary.cambridge.org/dictionary/english/information-economy
Information economy – “an economy based on the effective acquisition, dissemination, and use of information, rather than on the means of production” [61]	Oxford Dictionary	https://en.oxforddictionaries.com/definition/information_economy
Information economy – “an economy in which data and intellectual work are a more important source of wealth than manufacturing” [60]	Macmillan Dictionary	http://www.macmillandictionary.com/dictionary/british/information-economy
Information economy – “a type of modern economy, in which the dissemination of information technology in the field of material and non-material production, the transformation of information to one of the most important factors of socio-economic progress of society and person are taking place” [42]	Economic Glossary	http://subject.com.ua/economic/dict/363.html
Information economy – “an economy, in which most of the gross domestic product is provided with activities in the production, processing, storage, and distribution of information and knowledge, with more than half of the employees involved in this activity” [54]	Financial Dictionary	https://dic.academic.ru/dic.nsf/fin_enc/23440

Ye.B. Nikolaiev rightly notes possibility to consider the essence of the information economy in the broad and narrow sense, respectively, as:

- “economic system where the industries, in which the intellectual product is

created, occupy a central place and have a decisive influence on the operation of all other industries” [48];

– “a separate sector of the national economy, where an intellectual product (science, education, etc.) is created” [48].

To ensure the completeness and comprehensiveness of the analysis of approaches to the interpretation of the essence of the information economy, Table. 2 presents a definition of some dictionaries. The definitions given in the table correspond to the basic scientific views.

The diversified scientific views on this term are generalized and the subject of the study is presented schematically in Fig. 1.

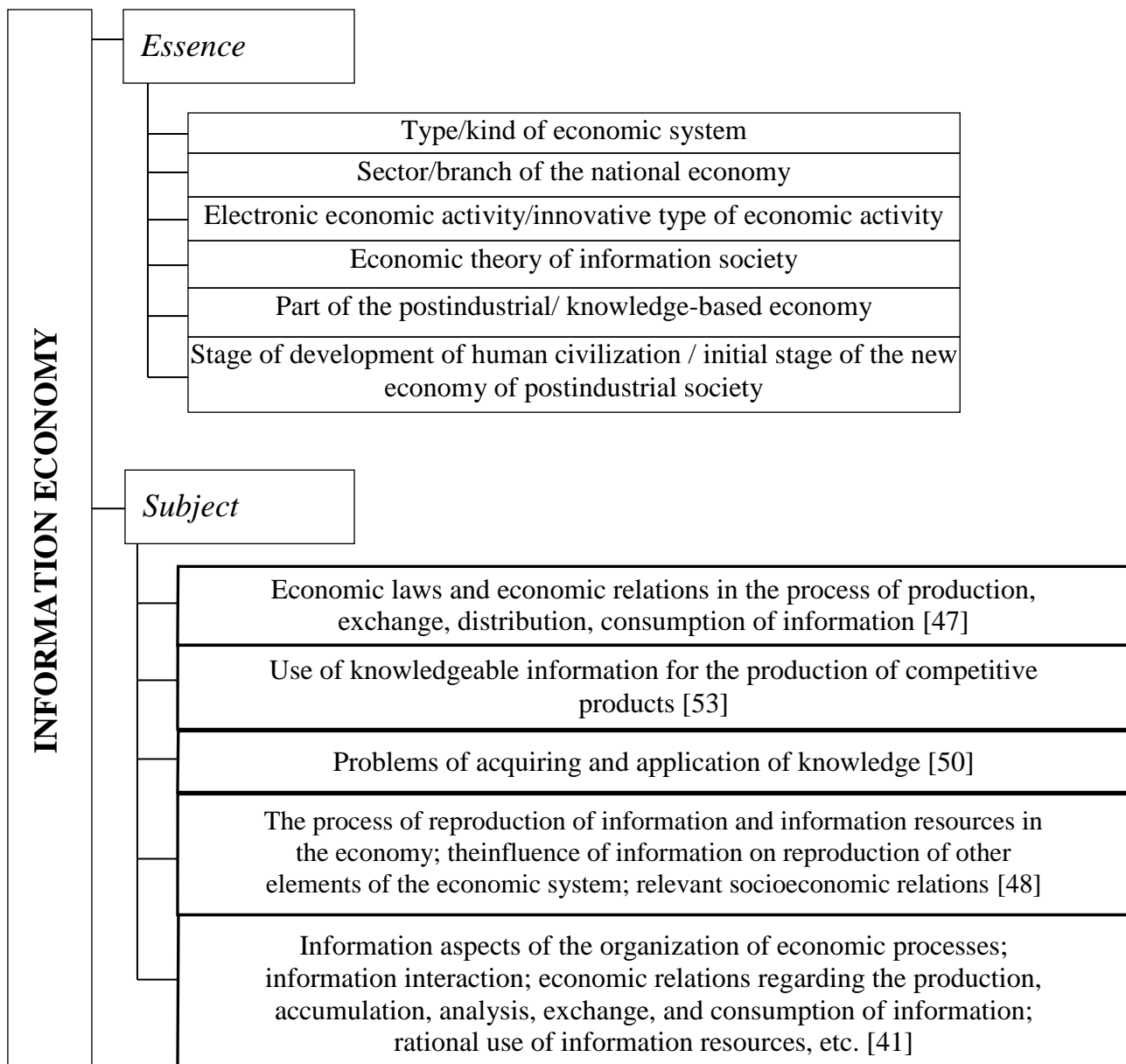


Fig. 1. The main scientific approaches to determining the essence and subject of the information economy

Systematising the definitions formulated by foreign and Ukrainian scholars, we

can note that pluralism is determined by differences in the views of scholars, applied methodology, scientific schools, etc. The analysed definitions are characterized by different levels of concretization, abstraction, scale, complexity, completeness, and systematicity in disclosing the essence of the information economy, including the possibility of identifying the component composition and determinants of its development. On the basis of systematisation of scientific approaches to the interpretation of this concept, it is proposed to consider the information economy as a type of economic system, which is characterized by the decisive role of information and information technologies in the processes of production, exchange, distribution and consumption, as well as development of major industries and the national economy as a whole.

Also we can state that ensuring the competitiveness of economic entities on the micro level (local, branch), meso level (regional), macro (national), and mega level (international) requires the implementation of flexible and highly adaptive generation mechanisms, accumulation, processing, analysis, transfer of information, effective allocation and use of information resources, prompt updating and introduction of innovative information and communication technologies. In terms of the formation of the information economy, a special significance is held by branches, sectors, and spheres capable of producing knowledge and information, first of all – higher education, science.

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