Strategies, models and technologies of economic systems management in the context of international economic integration

Scientific monograph
edited by Dr.oec. Prof. Maksym Bezpartochnyi,
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Strategies, models and technologies of economic systems management in the context of international economic integration: scientific monograph / edited by Dr.oec. Prof. Maksym Bezpartochnyi, Dr.oec. Prof. Viktoriia Riashchenko, Dr.paed. Nina Linde, 2nd edition. – Riga: Institute of Economics of the Latvian Academy of Sciences, 2020. – 413 p.

The authors of the book have come to the conclusion that to improve the efficiency of managing economic systems it is necessary to use modern modern strategies, models and technologies. Basic research focuses on assessment the innovative potential of enterprise, analyzing the competitive environment, higher education and human resources, forming clusters. The research results have been implemented in the different models of environmental-economic management, implementation of financial innovations, mechanism for managing innovative development, digital transformation of the economy, introduction of Internet technologies, development of e-commerce, "business – education – science" triad, legal regulation of state aid and environmental taxation. The results of the study can be used in decision-making at the level of international business, ministries and departments that regulate the processes development of economic systems, ensuring stability and efficiency. The results can also be used by students and young scientists in developing of strategies, models and technologies for economic systems management in the context of international economic integration.

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INTRODUCTION

The formation of international economic integration is significantly affected by modern global changes caused by the COVID-19 pandemic and various changes in the structure of world markets of goods and services, which requires the developing of new strategies, models and technologies for managing of economic systems. Ensuring the effective managing of economic systems in the conditions of modern global challenges is impossible without changing the methodology and the formation of a new concept for managing the activity of economic entities.

To ensure effective managing of economic systems in the context of international economic integration it is necessary to provide resources, introduce modern technologies and innovations in the economic process, formulate a strategy for the activities of economic entities in connection with changes in the external environment, and search of internal reserves for optimizing economic activities aimed at reducing operating costs and to developing directions for the development of economic systems in order to ensure competitiveness.

The purpose of writing this scientific monograph is to justify the theoretical and methodological foundations of managing of economic systems in the context of international economic integration.

The object of the author's research was the process of formation and implementation of strategies, models and technologies for ensuring the effective functioning of economic entities in a turbulent market environment, changes in the conditions of economic activity, a decrease in the level of business activity and solvent demand, and restrictions by the government of countries.

The subject of the study was the organizational-economic mechanisms for ensuring the effective functioning and development of economic systems, increasing the competitiveness of economic entities in world markets for goods and services; the formation of a modern methodology for managing of economic systems; consideration of the practice for managing of economic systems using world experience in various sectors of the economy.

Chapter 1

SCIENTIFIC FOUNDATIONS AND MODELS OF ECONOMIC SYSTEMS MANAGEMENT

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THE SYSTEM OF ECOLOGICAL-ECONOMICAL MANAGEMENT IN AGRARIAN PRODUCTION AND MAIN DIRECTIONS OF ITS IMPLEMENTATION IN UKRAINE

The ecological situation in Ukraine in recent years has deteriorated so much that now both the economic status of business entities and food security of the country depend on it. One of the most important components of the economic security in the agrarian sector is the provision of its ecological and economic components in the agro-food market. In its turn, provision of the economic security of agrarian production cannot be separated from the environmental basics of the production sector.

The output of domestic agricultural products on the European market today acquires a new socio-economic content, and it is necessary to change the priorities in the system of agrarian relations. That is why today there is a process of reconsidering the role of economic and environmental priorities and the obvious advantage is given to the environmentally safe development of the agrarian production. The priority place in the agrarian system should be taken by the environmental quality criterion at the national level, and the need for greening the agrarian production. It is beyond any doubt and requires an immediate search for radical ways for its global implementation.

Nowadays political, economic and social conditions have already

been created for the development of environmentally-directed innovations in agricultural production. In order to benefit from these prerequisites and as a consequence from the results of the introducing this type of innovation, an ecological and economic management system should be implemented. The system is considered by scientists as an integral part of managerial science that takes into account and implements the objectives of environmental protection and rational use of natural resources in the planning, implementation and control of economic actions to ensure the balanced functioning of the ecosystem, as well as its innovative development.

The main way to overcome the environmental crisis that has developed in the agrarian sector of the country is to integrate the interests of the environment and economy in agricultural production. At the same time it is necessary to take into account on the one hand the close correlation of the natural use of agro-systems, the state of the environment and the resource potential of the country, and on the other hand the prospects for the development of the national economy (Volyk N.H., 2006).

Optimizing the use of the environment in agricultural production and minimizing the negative impact on it can be achieved by improving the organizational and economic mechanisms of natural management.

The development of an ecological and economic mechanism for the organization and development of agriculture will provide the formation of human social-ecological and economic values in the agricultural system.

For today agrarian enterprises require sustainably-focused reconstructions in their producing activity, the latter includes:

– rational use of land which is accompanied by conserving and increasing the fertility of the soil;

– provision of the optimal level of land plowing, which makes impossible to appearance water and air erosion of the soil;

– abiding by the regulations on limitation of exceeds in acceptable norms of contamination for produce, provision of environmental friendliness;

– compliance with the set regulations towards transportation, storing and application of mineral fertilizers, means of protecting plants and animals,

– avoidance of environmental and food contamination by chemical substances;

– abiding by ecological norms during projecting, building,

reconstruction and commissioning new structures and buildings, ameliorative systems and so on.

The first ones include preferential crediting of agricultural producers; price stimulation of environmentally friendly products; subsidies (centralized or local); interest-free loans; exemption from taxes, a part of the profit (income) (Danylyshyn B. & Lubchenko O., 2008).

Authors Dubodielova A.V., Yurinets O.V., Fedorov M.M. in addition to these two types of economic mechanisms distinguish the third one – marketing, which includes the following directions, such as creation and provision of development of the market of natural resources and environmentally-friendly goods; expansion of the "marketing chain" structure with the inclusion of the environmental expertise; trade of quotas on harmful emissions; ecological excise tax, environmental insurance and promotion, etc. (Dubodyelova A.V., Yurynets O.V & Fedoriv M.M., 2011).

When there are changes in the relationship between the society and the natural environment, there are changes in the human consciousness, psychology, system of values and behavior toward the environment. The main stimulus for the initiation of this process is the appearance of new needs of the society, which would combine economic, environmental and social components (Vasyutkina N.V., 2014). That is, the transition to the economy which is focused on the principles of ecologically balanced development requires, first of all, the change of human attitude to the environment.

Modern condition of the market transformation in Ukrainian economy should foresee the transition from the extensive economic development to the intensive but ecologically safe, steady economic growth and innovations on the energy and resource-saving base (Vitkov M.S., 2008).

Due to that fact, there has appeared the need for transition of enterprises in agrarian area to new management systems which could provide ecologic-economic balance for the agrarian business. It is worth noting that the transition to the new management system is a complex and time-consuming process, which could be implemented by developing a new innovative model for developing of agrarian enterprises.

The modern economic direction in the business activity of agrarian enterprises in our opinion can be determined through the combination of economic and social problems of the rational use, recovery and protection of natural resources of agri-sphere and on the innovative

base. We consider that ecologization of the production at agrarian enterprises is tightly connected with the innovative activity and should be considered as an integral part of its development with the creation at the government level of the system of ecological-economic management. Therefore the organization of the production relations in agriculture should take place based on the rational application of the natural resources – on the one hand and formation of the system of managing them on the other hand. To achieve this it is necessary to apply innovative technologies – economic models which based on the usage of organic farming and optimization of the production processes will make possible to achieve a high level of management, predictability and efficiency. Unlike traditional technologies they are based on the use of energy- and resource-preserving systems of agricultural production (Sirtseva S.V. 2008).

The innovative model of agricultural development sets a goal to increase competitiveness of agrarian companies in production and distribution-marketing spheres by means of implementing modern technologies, types of products and methods of management.

All economic and environmental tools of this model are interconnected, and its important component is a system of government environmental management, which includes: general management and special management. At that the public authorities of general competence carry out their activities by adopting resolutions and orders on key issues in the agrarian sector; the public authorities of special competence ensure the implementation of the state policy in various areas.

In our opinion, to provide the main principles for the sustainable agricultural development in the region it is necessary to green the agricultural activity; enhance the efficacy of utilization of the resource potential in the field and formation of ecologically-focused system of managing agrarian production.

Understanding the ecological insecurity makes population reconsider their attitude towards foods. More and more attention from consumers is paid to the condition of health however they realize that ratio between the selection of food and the condition of the environment which are the main factors of influencing people's health.

Ecologization is the current direction in the activity of agrarian enterprises and it is based on mastering ecological-economic methods of management, with the purpose of providing extended recovery of natural resources at the expense of forming sustainable ecological-

economic systems, increase in amounts of production of competitive ecologically safe products, creation of agrarian systems using ecological methods of management.

Environmental management tools imply the certification and labeling of environmental products, which proves that the correspondence of the certain object to the specific regulatory document is kept. The process of certification and standardization should be carried out in accordance with the international standards adapted to the conditions of Ukraine.

Ecological and economic tools, in our opinion, are an integral part of environmental marketing, which is to meet the needs of consumers and preserve the environment and they include:

– production of ecologically safe agricultural food products and their ecological positioning;

– price formation taking into account environmental costs;

– formation of a market with environmentally safe products, based on international standards of ecological agricultural production;

– distribution of environmentally safe agricultural products;

– formation of the information and communication system for the promotion of agricultural food products.

Economic stimulation of environmentally-focused agricultural production is directly related to the protection and use of land, conservation, reproduction and increase in soil fertility, as well as the protection of the environment as a whole.

Economic incentive methods should be fixed at the legislative level and included:

a) provision of tax and credit privileges to citizens and legal entities that carry out at their own expense the measures of use and protection of land which are included in the national and regional programs;

b) allocation of funds from the state or local budgets to citizens and legal entities for the restoration of the previous condition of land, caused not by their fault;

c) exemption from payment for land plots in the stage of agricultural development or improvement of their state according to the state and regional programs;

d) compensation from the budget funds to reduce the income loss of land owners and land users as a result of the temporary preservation of the degraded and unfertile land that was caused not by their exploitation.

The principles of the economic stimulation mechanism include: the principle of combining economic stimuli and penalties; the principle of stimulating the final results of the carried out measures; the principle of

independence doing business.

The main directions of organizational and economic management in agrarian production are:

– formation at the state level of measures that can change the format of relations between production and the environment in the direction of the rational use, reproduction of agricultural systems;

– implementation of environmental policy measures at the state and regional levels, the basis of which is the process of implementation and development of environmentally friendly production, the rational use of the possibilities of the state's economy, especially its financial resources, production, scientific, and technical potential;

– determination of social priorities considering the specific ecological situation in the regions, according to which it is planned to eliminate the negative phenomena of nature management and transition to environmentally friendly production;

– combination of state influence with the market forms of management, stimulation of qualitative changes through priority financing, lending, material and technical, information support, introduction and development of environmentally friendly production;

– carrying out economic-ecological monitoring over the process of transition to environmentally friendly production in the analysis of internal strengths and weaknesses of agricultural producers;

– account of changes in the factors of macro- and microenvironment and their impact on the competitiveness of products and enterprises in the agrarian sector of the economy, namely, to detail their actions, to clearly distinguish market opportunities and threats

A promising direction for establishing economic relations between certified agricultural and processing enterprises of the organic sector is the creation of market-based formations based on horizontal and vertical integration and co-operation. Cooperation combines commodity producers into their market activities on the basis of their voluntary involvement in the processes of integration with mutual assistance and economic cooperation. Such unions give them the opportunity to earn profits not only directly from the agricultural production, but also from the subsequent stages of the movement of their products, participate in large-scale business, use professional managers, allocate risks, control the marketing channels of product distribution and material and technical supply, influence prices through the formation of large batches of products and the application of modern marketing methods and technologies, to be equal partners in the competitor market environment.

We are certain that the functionality of agrarian enterprises must take place according to the concept of safe development but it requires the creation of completely new conditions for entrepreneurial activity, the base of whom is the greening of agricultural enterprise, increase in the efficiency of application of the resource potential of the agro-industrial complex, formation of the ecologically focused management system at the global and regional levels and mainly the provision of population with high-quality food products developed in the agrarian sector with the purpose of rejuvenating the nation. Therefore we believe it is necessary to develop the qualitatively new innovative model of the managing business activity by agrarian enterprises which will be different from the traditional system of management by ecologically safe conductance of agrarian business, its greenings, which is an integral part of the safe development strategy.

Functioning of agrarian enterprises according to the concept of steady development requires creation of fundamentally new conditions for entrepreneurial activity, the base of which is ecologization of the agricultural production and increase in efficiency of applying the resource potential of the agro-industrial complex and formation of the ecologically focused system of management.

Nowadays the transition to new agribusiness systems is a complex process and for its implementation it is necessary to change the principles of functioning of agribusiness entities, accelerate their innovative development and provide the possibility for their organizational transformations. Therefore the modern conditions of the management of agrarian enterprises require the formation of a whole scientifically grounded management system that considers the interests of the consumer aimed at balancing the demand and the supply with minimal losses, provides profitability of sales activities and makes possible to respond adequately to changes factors of macro- and microenvironment.

Provision of the efficiency of agrarian enterprises under market conditions is possible by increasing the productivity of crops and livestock, restoring the specialized production, reducing the costs of production and sales of products, improving the system of sales, and, as a result, the level of merchantability and profitability of organic products. Also, for agricultural enterprises, it is important to address such issues as expanding the range and increasing the volume of organic production along with the demand for this type of product on the market, improving the quality and competitiveness of products,

especially in the domestic market, improving the economic relations between processing and marketing enterprises.

For the effective functioning of the mechanism of ecological and economic management, the strategic approach must be combined with the environmental management system. At the same time, it is important to note that the traditional system of environmental management is sufficient for the generally accepted system of economic activity. Whereas it is necessary to rebuild the existing system in accordance with the requirements of international standards to achieve competitive advantages in the world market. Thus, for the transition of agricultural enterprises to an ecologically oriented type of management, it is essential to take into account ecological and economic methods of management. Furthermore the organization of industrial relations in agriculture should be based on the rational use of natural resources and the formation of an ecological and economic management system.

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HUMAN RESOURCE MANAGEMENT IN AN ENTERPRISE MANAGEMENT SYSTEM – THEORETICAL APPROACH

Introduction

A gradual entry of national economies of the developed world into the knowledge-based economy, the development of management theory as well as a focus of special attention on the development and use of knowledge and intellectual capital have all resulted in changes in requirements and roles played by individuals in organizations. In new organizational models (such as learning, intelligent, virtual or knowledge-based), individuals occupy a central position, they constitute a driving force behind the development of an organization (however, they are also able to destroy it), they have personalized knowledge which allows to implement other knowledge-based resources into a conversion process and, finally, they create the human capital of an enterprise.

Thus, the importance of their professional qualifications and the ability to act independently in conditions of high uncertainty, changeability, diversity and complexity of relationships is growing. Organizations assume that knowledge is currently a key competitive resource and they therefore actively look for talented employees, they create systems for acquiring and maintaining them through the development of a network of interpersonal contacts based on trust and mutual obligations and they create conditions for the full use of knowledge possessed by people and its further, ongoing development.

The concept, essence and goals of human resource management

With an enormous pace of the global economy development as well as wide and generally available knowledge, there are different interpretations of the term human resource management, however, the greatest changes that took place in the perception of an individual as an enterprise resource appeared in the 1970s. At that time, expressions such as “personnel management” or “staff management” were used, which meant that a person was perceived only in administrative aspect. The

difference resulting from the change of terminology was to show that human capital is a fundamental and key resource of an enterprise and it does not focus solely on individuals perceived as workforce. The interests of an organization began to be combined with the needs of employees and companies started to invest in the development of employees (Golnau 2007, pp. 11-12).

The changes that have taken place in human resource management over the years have made experts realize that traditional factors of production have lost their position and have been replaced by knowledge and those who have it. It is an individual who creates and uses knowledge, and thus can determine the survival and success of a company. We live in the times of knowledge-based economy and it is the most valuable primary product that determines the role of an employee in an organization (Michalczyk 2010, pp. 18-19).

While studying the development of human capital in an enterprise, some dependencies can be noticed between personnel management and human resource management, however, as economists note, there is a difference between them. A more detailed look at these definitions indicates that personnel management is, in a way, an element of human resource management. Human resource management (HRM) is certainly a broader concept because the scope of tasks it covers goes beyond the scope of strategic management. The task of HRM is not only personnel management but also recruitment and selection of employees, employee relations or even organization of training and employee development so it is obvious that HRM covers all issues regarding employees and their connections with a company (Suchar 2007, pp. 7-8).

The difference that occurred as a result of the change in the approach from personnel management to human resource management is, above all, ceasing to treat people only as workforce and treating them as the most important resource of a company. As a result, individuals began to be perceived as assets of a company, not just costs. Two approaches in the field of philosophy and in the field of management were combined, which made it possible to treat employees not only as personnel, but it also drew attention to their relationship with the enterprise environment and their impact on the company's development.

In the conditions of modern human resource management, a share of intangible assets in generating profit is of major importance. The new approach to the role of human resources in an enterprise has a large impact on shaping a modern model of an employee. Workforce with a high level of knowledge and specialist skills are of great importance for

an enterprise, as it gives a competitive advantage in the market in the era of economy globalization (Urbaniak 2008, pp. 15-17). However, above all, the quality of an employee determines economic and social condition of an enterprise. Not only do the acquired qualifications and experience determine the employee's potential but also aspirations or readiness to take risks, which in turn translates into an increase in the quality of a company (Makowski 2001, p. 88).

Human resource management covers the management of employees employed in a company along with their skills, education and experience which is needed to perform a specific job (Tyrańska 2012, 93-95). This formulation allows for the distinction of resources from two perspectives, as presented in Figure 1.1.

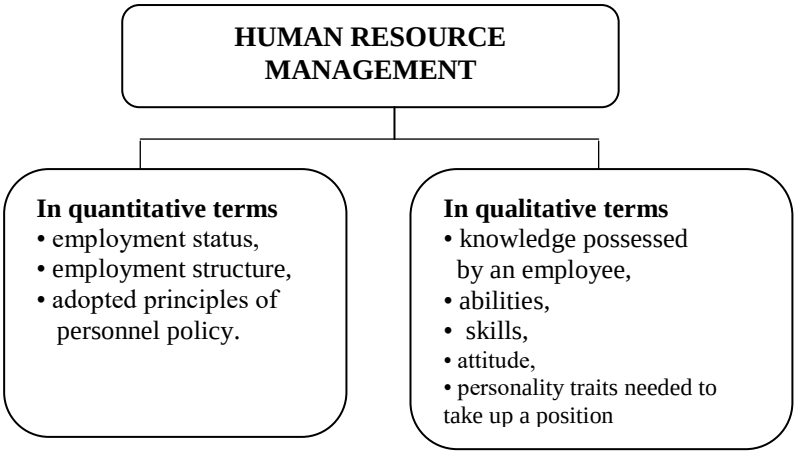

Figure 1.1 Classification of HRM

Source: Tyrańska 2012, p. 11

The modern model of an organization, in which human resource management is focused on making decisions as well as the implementation of activities leading to the company's development, focuses primarily on managing work relations in an enterprise. Its purpose is to support a company in the implementation of its plans, to build a positive employment relationship and confidence in recruiting qualified staff, to develop a culture of performance in an enterprise and to apply an ethical approach to human capital management. The above-mentioned assumptions focus primarily on building the company's

competitiveness through the development of human resources, which are the source of this advantage (Armstrong, Taylor 2016, pp. 28-30).

Despite technological progress, one aspect of an enterprise remains unchanged, it is talent which is the basic and most important asset of any organization. The only thing that changes over the years is its value, which increases with the current changes in the economy (Adler 2006, pp. 7-15).

The complexity of the processes that take place in human resource management requires the use of various techniques and methods derived from the field of psychology, sociology and philosophy. Thanks to this, we can provide an extensive list of tools used in HRM, which include, among others:

- work analysis,
- methods and techniques of employment planning along with recruitment,
- techniques for testing predisposition to work,
- employee evaluation system,
- principles of motivating,
- management processes,
- coaching, menthoring,
- remuneration system,
- training techniques,
- organization of professional careers,
- work regulations,
- organization of working time,
- insurance system and pension programs,
- outsourcing,
- IT systems and the Internet in HRM.

The listed tools are only part of the instruments that at the disposal of an enterprise. They serve to improve the management of human capital and create a certain structure on which this management is based. Thanks to the use of such tools, an enterprise has full control over the employment, dismissal or participation of an employee in the life of the enterprise (Pocztowski 2007, pp. 36-38).

Despite access to new technology and the Internet, it must be admitted that it is a human being that constitutes a core of every organization. No company resources can replace a human factor and the developing HRM tools support better and better targeting of human potential, thus increasing the effective management of a company. The benefits of effective human capital management are enormous, but it is

still a very neglected area in many organizations. As noted by K. Cichy, only by the combination of the effects of technical progress with human capital can a real theory of economic growth be built (Cichy 2008, p. 28).

Human resource management system is a very effective management with the best use of human potential, which translates into sustainable development of an enterprise (Bieniok 2006, pp. 13-22). Due to its multidimensional nature, the management system includes the elements presented in Table 1.1.

Table 1.1

Aspects of human resource management as a synthetic concept of a management system

Human resource management aspects		
Process	**Functional**	**Tool**
• stages • elements • subsystems	• planning • organisation • motivation • control	• shaping the personnel policy • personnel controlling • labor costs

Source: Bieniok 2006, p. 15

None of the above-mentioned aspects can function separately in an enterprise, so they must be treated as a process that should be implemented by the enterprise in order to effectively influence the employee's development and thus to ensure the development of the entire company.

Human resource management is primarily about effective and efficient achievement of the company's goals, which means fully used human resources and wise management of them. On the other hand, the effectiveness of management involves primarily making right decisions, which, when implemented, give the expected results (Griffin 2004, pp. 4-11). Efficient and effective management of an enterprise requires defining activities that take place in the management process, which are presented in Figure 1.2.

The management process defined in this way indicates specific goals of the personnel policy:

• the main goal is effective and efficient achievement of the company's goals through human capital, which is associated with the acquisition of employees, their remuneration, evaluation and development;

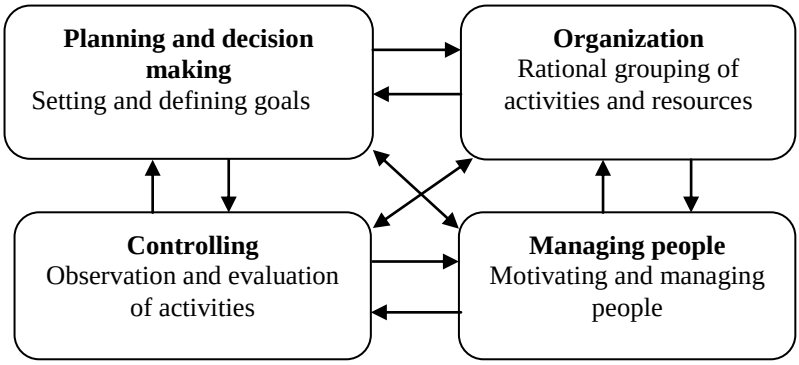

Figure 1.2 The enterprise management process
Source: Griffin 2004, p. 8-11

• technical goal takes into account the perspective of the management, the aim of which is to properly place employees so that they are as efficient as possible;

• humanistic goal is defined from the point of view of an employee who should be provided with the best possible working conditions to enable them to fulfill life needs (Pawlak 2011, pp. 36-37).

Management models and work efficiency

Human resource management is a kind of comprehensive plan for achieving the company's goals, which includes a continuous management process focused on the implementation of effective concepts (Pawlak 2011, pp. 244-245).

Personnel policy is one of many factors that have an impact on human capital management in an enterprise. It defines the company's conduct with the human resources it has. It is a set of principles, rules, tools and methods of human capital management adopted by an enterprise. Basing on such principles, the company's management tries to select an employee, develop and remunerate them. The principles of personnel policy reflect the value system of an enterprise, depending on general norms functioning in a given society (Pawlak 2003, pp. 24-25).

The principles of personnel policy adopted in an enterprise very often determine the model of human resource management. We can distinguish two opposing models of such a policy:

• a sieve model that is based on competition between workers;

• a company recruits as many qualified candidates as possible and

selects an appropriate employee using the selection method;

• a human capital model that is focused on employee development.

In this model, it is assumed that the vast majority of candidates do not have appropriate professional qualifications, therefore the training of future employees is an important element. An important role in recruitment is played by the personality of a person and their willingness to cooperate (Ludwiczyński, Stobińska 2011, pp. 111-112).

The presented models are extreme cases while modern companies most often use mixed models of personnel policy.

The models in question focus on an employee because it is an employee who builds the company's competitive advantage on the market. Thanks to creation of the company's potential through the acquisition of motivated and talented employees, the strategic goals of HRM are implemented (Armstrong, Taylor 2016, pp. 45-47).

Strategic management is the most modern approach to human capital management, related primarily to mobility of human resources in current conditions of the global economy. Strategic management is sometimes referred to as a phenomenon of staff fluctuation or employment liquidity (Sokołowski 2013, p. 25). It is primarily a skilful use of human resources in order to achieve the greatest competitive advantage. In order to achieve the intended goal, a company must acquire talent from the external market, which allows for the creation of a certain type of talent market. Thus, it is possible to define precisely a demand for specific Talents and take actions aimed at a specific group of employees (Nowicka-Mieszała 2012, pp. 91-93).

The basic features of strategic human resource management are the perception of human capital as an asset, the impact of environment on staffing decisions taking place in an enterprise or the identification of all employees with a their company. The most popular models of strategic human resource management are the Michigan model and the Harvard model developed in the mid-1980s. The Michigan model recognizes the human resource management process as a specific cycle consisting of four related personnel functions:

• recruitment of employees,

• job evaluation,

• remuneration,

• staff development.

Proper planning of separate functions favors the achievement of the company's strategic goals. Appropriate organization of specific elements of the cycle makes it possible to influence the behavior of

employees in a company. This model takes into account the company's environment, its mission as well as organizational structure or human resources management, which has an impact on decisions made by the management staff related to the cycle of personnel processes.

The Harvard model, like the model discussed above, also covers four scopes of human resource management, but it does not focus only on aspects of the personnel function. The functions it involves are:

- employee participation in company's processes,
- employee movement,
- remuneration system,
- work system (Golnau 2007, pp. 50-53).

These areas have a significant impact on the role of an employee in a company, which means that not only can shareholders or management shape the development of an enterprise but also trade unions and local government have a huge impact on it. The Harvard model first of all draws attention to the significant relationship between the strategy of human resource management and the strategy of organizations which shape each other completely differently than in the Michigan model (Szałkowski 2000, pp. 22-24).

Along with a change in the structure of an organization, its entire environment changes. Each company operates in a specific environment that determines its social, political, economic, organizational and legal conditions, which obviously has an impact on the company's strategies (Ściborek 2010, p. 15).

Due to the fact that organizations are different, there are also different strategies for managing human resources. As noted by A. Armstrong, general strategies describe the entire HRM system implemented in an enterprise in order to increase the efficiency of the organization (Armstrong, Taylor 2016, pp. 53-55).

The strategic process leads to the formulation of both general and specific HRM strategies that have an impact on areas such as corporate social responsibility, organization development, knowledge management, human resource acquisition, talent management, remuneration, employment relationships or employee well-being (Armstrong, Taylor 2016, p. 56-57).

Effective management of detailed strategies in an organization produces the desired effects at the level of overall management strategies and thus has a huge impact on the effective achievement of the company's performance goals.

Quality management is an example of strategy implementation,

because an effective quality management program can change the structure of the entire organization which will be oriented towards management focused on a high level of employee participation and teamwork. Quality management along with employee's engagement, regardless of their position, completely changes the culture of an organization, thus contributing to a new way of thinking about quality (Stoner, Freeman, Gilbert 2001, pp. 282-283).

An analysis of the strategic processes taking place in an enterprise shows a strong relationship between all areas directly related to human capital and the recruitment and motivation of an employee. Employee recruitment is just the beginning of the process that takes place in a company, while motivation contributes to directing employees so that they become an inseparable part of the company and identify themselves with it.

One of the ways of motivating an employee is rewarding them for the results of work. It all depends on the results achieved at various management levels. There are four basic forms of rewarding for results: individual employee, team, company and corporate results. Each form of rewarding for effects has its advantages and disadvantages, however, companies often use different forms at the same time. It all depends on whether position of a specific employee is focused on rivalry and competition or rather based on teamwork (Rybak 2003, pp. 39-40). The specificity of motivating tools shows that intangible factors have a very large impact on the efficiency of human capital and this group includes tools such as persuasion, coercion or encouragement (Bombiak 2019, p. 73).

One of the models of motivational influences is the traditional model that is based on a system of financial incentives. In this model, a leading role is assigned to the management whose role is to hire and train an appropriate employee and apply such financial incentives to stimulate this employee. Thanks to this course of action, it is possible for an employee to maximize the company's income. However, it is effective only for simple and repetitive tasks, which results in a necessity to exercise direct control over employees. In this model, the most important element is remuneration for work not its form (Sajkiewicz 2004, pp. 206-209). On the other hand, the model of interpersonal relations is based on the employee's sense of usefulness in a company; social contacts contribute to more effective motivation than the repetition and simplicity of the activities performed. The last model is the human resources model which covers the roles of an employee in

a company more broadly. This model assumes in advance that an employee wants to work, likes to do it and contributes to the company through work. In such a model of motivational interactions, managers allow employees to make independent decisions regarding their work, which leads to greater self-satisfaction with work but also to increased efficiency, which is in the best interest of this company (Stoner, Freeman, Gilbert 2001, pp. 429-431).

Summary

The presented directions of human resource management systems are general. More detailed indications are possible only after detailed diagnostic work of a given enterprise, its human resource management system and an assessment of its intellectual capital, taking into account the conditions and shape of the implemented knowledge management system (e.g. knowledge strategy, the level of use of the personalization strategy in relation to the codification strategy) as well as financial situation of this enterprise. These studies should also take into account the determinants of organizational culture of a company in question. In each case, it is possible to apply a large individualization of solutions, which will deepen with an increase in the ability to implement organizational learning and knowledge management and the approach of an enterprise to the model of knowledge-based organizational culture.

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SCIENTIFIC AND METHODOLOGICAL FOUNDATIONS FOR THE FORMATION OF INDUSTRIAL CLUSTERS AND SUBSTANTIATION OF THE CLUSTER CONCEPT FOR THE DEVELOPMENT OF INDUSTRIAL COMPLEXES

Today's problems of industrial clustering are actively discussed by international and domestic experts from various fields of science and industry. The opinion was formed that the achievement of an innovative model of socio-economic development of any territory is impossible without the formation of effective production clusters.

The modern concept of a production cluster as a set of technologically related and geographically concentrated enterprises, is quite capable of uniting and "absorbing" such categories accepted in the Soviet scientific school, as "energy production cycle" and "territorial-production complex" and significantly increase the efficiency indicators of the territorial organization of the productive forces of society.

Today, the most researchers [6; 13; 16] agree that N. Kolosovsky "Economic zoning → territorial production complexes (TPC) → energy production cycles (EPC)" was successful precisely for the industrial era that is leaving. In new the conditions, it is necessary to reconstruct it taking into account the growing role of agglomerations as centers of the new economy (knowledge economy). A. Marshall described the concept of collective knowledge in the manufacturing zone of the term "industrial atmosphere", which can be defined by the phrase "... knowledge [about production] flies in the air" [2]. Actually, the concept of the EPC (the concept of the economic-geographical process, built

using technological factors) remains enough productive for analyzing the economy territorial structure.

The integrated approach to the use of resources inherent in the EPC concept, accordingly, to the introduction of low-waste technologies, is one of the radical methods of improving the ecological situation. However, this concept is not without certain disadvantages. First of all, it should be noted a certain schema, resource orientation and focus on the type of the economy of resource consumption (it was presented in the USSR), lack of connection with social factors of regional development. Perhaps that is why, in a market economy, the concept of the EPC was quickly and easily transformed into the concept of production clusters, as a peculiar of "grape bunches" territorially and technologically related enterprises. Classic EPC by N. Kolosovsky [9] and A. Khrushchev [16] have long gone beyond the economic regions and have largely lost the district-forming functions [7; 8]. EPC ceased to be regional, but became inter-regional and international. This is due to the influence of scientific and technological revolution on production and transport, the development of specialization and cooperation of production, loss of the limiting value of transport (transportation is now relatively cheap and fast) as well as the loss of the leading role of the energy factor (due to the creation of unified energy systems, an effective "transfer" of electricity is sometimes carried out over thousands of kilometers). The formation of economic regions is the result of the process of territorial division of labor (as a variety of geographical division of labor). The economic region is characterized by unconditional objectivity, economic feasibility, optimal combination of specialization and complexity is based on the concept of regional TPCs, provides for the compulsory combination of economic and administrative boundaries.

A territorial production complex (TPC) is an interconnected and interdependent combination of industries in a certain territory (the scale of this territory can be different – from country to economic region, sub district or locality). The economic unity of the TPC is created by the production-territorial communications of enterprises, using common regional natural and social conditions and resources, industrial and social infrastructure, and a unified settlement system.

The term "territorial-production complex" was supposed to emphasize the defining complex-forming role of the territory. However, the experience of using the term TPC demonstrates that it has remained "production" in its content. It did not cover the totality of relations and

connections of the region. By the way, the term itself originally sounded exactly like “production-territorial complex”, thus giving preference to purely production aspects. As you can see, the desired complexity of regional development turned out to be an abstract idealization, practically unattainable as a result of the influence of a number of factors, in particular the subjectivity of managerial decisions [10].

In the context of the introduction of new forms of territorial organization of the economy TPC is gradually being replaced by the concept of “production cluster”, which was initially developed in the western regional economy [15; 17]. Today the boundaries between these concepts remain rather blurred due to the presence of certain common features. At the same time, all researchers note as the main difference between clusters and TPK – obligatory consideration of market mechanisms and initiative “from the bottom”. Clusters are formed within industrial and urban agglomerations and functioning on the principles of knowledge conversion. Cluster principles of organizing production contribute to increasing the competitiveness of economic complexes different hierarchical levels due to the achievement of balanced interaction between business entities. The concept of TPC is also criticized for the fact that the mechanism of their formation is based on state ownership. In a market economy, no one needs “Additional economic effect from the aggregate location of enterprises within the TPC” if this “effect” does not go to the owner of the enterprise in the form of profit, but is picked up the state [10]. On the other hand, people doing business in private property, do not care too much about the objectivity of existence, specialization, and the complexity of the territory to which their enterprise spatially belongs. Expected effect of combining different industries on the same territory as part of TPC small business representatives are not at all interested.

Despite a significant variety of research approaches to the definition, the thoughts of the absolute most scientists agree that an industrial cluster is a collection of technologically related and geographically concentrated enterprises.

The geographic scales of an industrial cluster can vary from one settlement to a large region. This versatility somewhat complicates cluster identification. For example, national innovation clusters should correspond to the strategic directions of the state’s development, regional production clusters should support the economic priorities of the regions (or other meso-level regions) in order to increase their competitiveness. But the task of local clusters is to harmonize the

development of individual settlements and structuring the economic space. In this case, the spatial boundaries of the clusters may not coincide with the administrative-territorial division. In fact, the spatial dimensions of industrial clusters are more dependent on transport and communication conditions, regional (territorial) identity of the population [4] and other factors.

The concept of industrial clusters has a rather long history of development. The classical definitions of clusters and clustering belong to professor Michael E. Porter. In Porter's view, a cluster is a group of closely related, geographically interconnected companies and organizations that operate jointly in a certain type of business and characterized by common areas of activity and complementarity of one another [19].

Clusters allow for a synergistic effect as a result of close interaction of interconnected enterprises, which are geographically close. Production clusters as integrated combinations, allow to consolidate the efforts of not only business entities, but also science and government. And the territorial concentration of vertically and horizontally related enterprises, as a rule, leads to the formation of a joint production and financial group. It can be regarded as the core of the production cluster. Based on the specifics of production, production (industrial) clusters can be formed as highly specialized (*homoclusters*), and as weakly specialized (*heteroclusters*). Homoclusters are more typical for machine-building enterprises, coal specialization, while heteroclusters are for processing industries, associated primarily with agricultural production.

A special type of heterocluster is made up of the so-called regional industrial clusters (RIC) – innovative structures that are formed in the region based on the concentration of networks of manufacturers, suppliers and consumers, connected by general schemes of production and products sales, regional problems from the creation and development of the institutional environment. The main goal of their creation is the need to establish interaction between the subjects of the regional economy for the realization of their own goals and the region competitive advantages [5].

By the character, allocate clusters, which are formed spontaneously (or spontaneously created clusters of enterprises), and artificially created (or deliberately) clusters. By clusters that form spontaneously include "Agricultural engineering" in Melitopol, Zaporizhzhia region. This cluster unites entities not only in the field of agricultural engineering,

but also green rural tourism, beekeeping and etc. According to technological characteristics, clusters are often divided into handicraft, industrial, intellectual (innovative).

The cluster approach to the development of national economies is a powerful tool to stimulate and effectively develop the region due to an integrated (intersectoral) view of the regional development policy, development of dialogue between the main subjects of economic relations (government, business, universities, regional elite, etc.), reduction of contradictions between productivity and employment [12]. Production clusters can play the role of "growth poles" of the domestic market, as a result of which, as already indicated, the region's competitiveness increases. Consolidation with science contributes to the introduction of advanced technologies in production and the development of new types of economic activities, structural and technological modernization of the economy. Intellectual resources are an important source of competitive advantage, so clusters are increasingly concentrated around innovatively active enterprises, which form a peculiar of core and promote the transfer of innovations to other association members.

The creation of favorable conditions for the development of the production cluster provides for the improvement of quality as a basic, and professional education, including for the purpose of training a qualified workforce, capable of introduce innovation. The interaction between educational institutions and business entities involves not only targeted training of specialists in required professions, but also improving the quality of educational services in terms of acquiring practical skills during teaching (practical training and internships), attraction of heads of leading companies to examination commissions, etc.

Additional advantages of the cluster model of the organization of the economy are: access to innovations through the counter-flow of intercompany flows and information; the formation of a local sectoral labor market, which facilitates the exchange of employees and improving their qualifications; cost reduction of services due to the use of resources and infrastructure, competition between suppliers and consumers, development of cooperation and contractual specialization.

The main differences between the concepts of TPC and clusters are as follows: 1) the corresponding concepts were created in different socio-economic systems and have a different genesis – TPCs were designed to optimize industrial production in a planned economy as

clear technical and economic models, clusters are formed as a result of the spatial manifestation of market forces; 2) have different localization – clusters are formed in long mastered densely populated areas (especially within agglomerations), and TPC – in areas of new development with a low population density and difficult natural conditions; 3) have a different structure: a cluster is an aggregate of competing (albeit cooperating) independent firms, who work in one industry or sub-industry, and TPC – intersectoral complex, the development of which is regulated centrally; 4) have different industry specializations – clusters arise in new high-tech industries, the service industry or traditional industries that produce consumer goods, TPC, as a rule, in heavy engineering, mining, metallurgical, chemical industries; 5) different role of information in the formation of their spatial structures – a cluster assumes close information exchange between employees, however, TPC is a vertically integrated structure without information exchange between employees of various enterprises.

Each concept corresponds to the socio-economic system of its time and the stage of development of the state: TPC model – socialist and mostly industrial era, the concept of clusters – market and largely post-industrial era. As can be seen, in the TPC, the connections between the participants were material (commodity, energy flows), but the cluster combines both material and intangible ties between agents of the local economy. An important component of modern regional development is the creation of regional innovation networks. Moreover, their efficiency increases when the region and its intraregional networks are integrated into the global network. Thus, a modern cluster network territorial structure of the economy is formed, which is based on dynamic horizontal and flexible vertical links. At the same time, the production cluster is characterized by geographical localization, industry affiliation, methods of formation, peculiarities of appearance, resources, technologies, state of competitiveness, close enterprises cooperation, which lead to a positive interaction, after all, the development of one production in a cluster is associated with the general development of a production cluster. When building a cluster are used three types of cluster policy: top-down, bottom-up, and mixed.

The initiators of the first type of cluster policy are central or regional authorities. When conducting a cluster policy “bottom-up”, the initiative is mainly from local authorities and associations of local entrepreneurs, and the object of such a policy is usually spatial (regional or local) clusters. In practice, a mixed version is usually used, when both paths

are combined in parallel in time [11].

When creating target clusters, it is worth focusing on the criteria of the Economic Center for Education and Research of the city of Cincinnati, Ohio, according to which: the cluster should provide high average wages, positively affecting local incomes; the cluster must provide a strong employment base (percentage of people employed in a cluster of a certain region) for success (with the exception of the regions, they are trying to reorient themselves to another industry); the cluster should cover areas that are not limited to the development of the local economy, but create or expand an export base, to attract capital to the region from outside, contributing to its economic development on the principle of a multiplier; the cluster should include highly developed enterprises of state and local authorities, indicates its strong presence in the region for the national economy; the cluster should contribute to the growth of employment of the country's population. The interconnection of cluster of development with national processes creates conditions for in order to "catching a wave" which will contribute to the growth of the local economy; the cluster should contribute to significant economic growth, due to the use of local factors (local growth minus national growth).

The cluster structure is a model for building cooperative ties between the entities of the association. Conventionally, can be distinguished 4 groups of interacting subjects:

1. The core of the cluster is industrial enterprises located on the territory grouped by main product or by sub-industry. The characteristics of the group are the total number of enterprises, volume of products shipped, number of employees, assessment of taxes as an economic contribution to the regional budget.

2. Suppliers of cluster enterprises. Divided into local companies and enterprises from other regions. Suppliers are also grouped by type of supply.

3. Cluster enterprises consumers. Segments – domestic consumption, interregional supplies, exports, which allows to directly evaluate the export of the cluster as the main criterion of efficiency and develop measures of state support based on the possibility of increasing export supplies.

4. Supporting infrastructure (service objects). Includes industry and community associations, administrative support, financial, warehousing and transportation services [1].

Summing up, we can say that the theory of industrial clusters is able

to provide interests of balanced spatial development, in particular in terms of determining the locations of localization of "growth poles" and the choice of such spheres of activity that are capable of ensuring the socio-economic growth of the regions (the so-called "smart specialization strategy") [3; 14]. Such "smart specialization" today is an important concept of cluster policy based on the competitive advantages of regions and their opportunities for innovation. Thus, clusters can serve as an important tool for regional development.

The implementation of cluster policy in the regions of the country can contribute to the innovative development of enterprises by: realizing the potential for effective interaction between cluster members associated with their geographically close location; obtaining by the enterprises of the cluster the opportunity to enter highly competitive international markets; establishment of intellectual and technological cooperation between the enterprises of the cluster; cooperation with research, development and educational institutions; greater access to resources, including financial; market integration, in its turn, will contribute to the expansion of international investment flows and increased regional competition in terms of the investment climate; increasing the scientific and innovative potential of the region due to technology transfer [11].

Clustering processes have become an objective feature of the modern world economy. The cluster approach allows us to introduce an innovative and investment model of economic development at the regional level. Production clusters have been successfully operating in the countries of the "golden billion". However, it should be noted that no successful clustering model can be introduced without taking into account the specifics of the national economy.

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STATE POLICY FOR PROMOTING NATIONAL ECONOMY DEVELOPMENT

Introduction. Modern financial and economic science focuses on the issues of increasing the effectiveness of state policy to stimulate the economic development of Ukraine. Methodologically and scientifically practical issues remain insufficiently researched due to the understanding of institutional changes in the economic space, which occur as a result of increasing influence of globalization factors. The dynamic and cyclical nature of economic processes necessitates the adaptation of the components of the economic system to changes in financial and economic conditions. It is important to evaluate the impact of exogenous and endogenous factors on economic growth timely and carefully. State economic development policy should aim at creating the right conditions for deepening the interaction between the state and society, ensuring macroeconomic stability and improving the standard and quality of life of the population. In this regard, the formation and implementation of state policy of economic development of Ukraine in modern conditions remain an urgent task of scientific research.

Literature Review. The issues of state stimulation of economic development and the mechanism of its provision are devoted to the works of such scientists as Coibion, Gorodnichenko, Kamdar (2018); Lebedeva, Shtunder, Scherbakova, Khrustalova (2019); Mazaraki (2015); Makogon (2018); Mocherny (2000); Nazarova (2019); Koval, Diachenko (2019); Schumpeter (2017).

The purpose of this article. The main purpose of the study is to determine the place of the state in the system of stimulating economic development, as well as to identify priority vectors of state policy in this area.

Presenting main material. The formation and implementation of effective economic policies that can influence on social and economic processes should be based on a deep scientific understanding of the category of "economic development".

The problems of state policy of stimulating the development of the national economy are in the focus of attention of many scientists. Thus, in particular, Ukrainian scientists Mazaraki and Volosovich (2016) reserched the issues of institutional modernization of the national economy. The authors rightly point out that the main tasks of such modernization should be improving the investment climate, improving state regulation, expanding the social orientation of economic transformations. Requirements for institutional modernization of the national economy include ensuring its integration into the global space on the basis of unification of national and international institutions, harmonization of national and international legislation, taking into account foreign experience, promoting entrepreneurial initiatives and increasing the competitiveness of the economy etc. There are different approaches to the category of "economic development" in the modern economic literature: the process of functioning and evolution of the economic system in the long term, which is influenced by economic contradictions, needs and interests (Mochernyi, 2000); long-term increase of the country's productive capacity, based on technological progress, instrumental and ideological adaptability, capable of providing the population with a growing diversity of material goods (Kuznets, 1966); quantitative changes in the economy, characterized by an increase in production and consumption of the same goods and services (Schumpeter, 2017). The introduction of a system of active state economic policy measures should also help to ensure innovative economic development, increase the competitiveness of the national producer, standard and quality of life, while laying the foundation for

sustainable economic growth (Bublyk, Koval, Redkva, 2017). The choice of a particular model of economic policy is the result of the implementation of principles and principles that depend on the national peculiarities of each country and correspond to national traditions (Lebedeva, Shtunder, Scherbakova, & Khrustalova, 2019).

On this basis, it should be noted that economic development is a dynamic and multifaceted process. State economic policy cannot focus on a particular sector of the economy, but must be implemented in all directions in order to ensure social development. The basic principles of economic development include: national independence and security; independence; sovereignty; territorial integrity of the state; non-interference in internal state affairs (Nazarova et al., 2019).

The formation and implementation of effective economic policies that can influence on social and economic processes should be based on a deep scientific understanding of the category of "economic development".

Considering contemporary social challenges, the main goals of social and economic development are:

- ensuring economic growth and achieving macroeconomic stability;
- raising the social standards of the population through the formation of an innovative economy;
- increasing output in the real economy;
- reducing unemployment by creating new jobs;
- optimization of structural changes of the national economy;
- development of competition, investment and innovation activity, informatization of the economy;
- ensuring the balance of foreign trade.

At the same time, the important task of the state economic policy in the countries with transformational economy is to develop a market environment favorable for doing business. In the context of economic transformation, achieving certain goals of Ukraine's economic development requires deep socio-economic transformation and development of new approaches to global partnership opportunities.

Within implementation of economic policy, public authorities define economic relations, control the formation, distribution and redistribution of financial resources between different sectors and sectors of the economy, which, in turn, stimulates socio-economic development, ensures the effective functioning of economic entities. Indeed, it is the

effectiveness of approaches to state stimulation of economic development that determines the dynamism of economic processes.

The analysis and evaluation of the strategic tasks set for Ukraine in the process of its establishment as an independent state indicates to their direction on activation of the processes of scientific and technological development, realization of structural transformations, definition of effective mechanisms and tools of formation of innovative model of economic development, strengthening of attention to human potential. Those industries and areas of activity that form the basis for the development of 5 and 6 technological structures were priority.

Continuation of the military conflict in eastern Ukraine, currently, the introduction of trade restrictions by the Russian Federation, unfavorable world prices in commodity markets of domestic exports are major challenges for the development of the domestic economy. At the same time, many strategic tasks have not been implemented to date, including the creation of an effective national innovation system. Also, it is advisable to attribute to the current negative key trends of the development of the domestic economy the expansion of the negative balance of trade in goods; rising oil and natural gas prices; underperformance of the revenue part of the state budget; worsening conditions for attracting funds in foreign markets; increase in expenses on servicing and debt repayment; high inflation and devaluation expectations against the background of the need to repay large amounts of external liabilities; reduction of real consumption of the general government sector; expanding the presence of imported goods in the domestic market; an increase in the share of goods with a low degree of processing in the structure of export of goods (in particular, ferrous metals) etc.

External conditions affecting the development of the national economy include. The continued restriction on steel production at enterprises located in the urban district of Tangshan Hebei Province This contributes to the formation of a high price environment in the ferrous metals market.; Unfavorable weather conditions at the beginning of 2018 for the grain crop in a number of regions of the world are shaping a positive trend in the wheat and corn markets. At the same time the world market for iron ore is experiencing a downward trend amid increasing supply from Australia and Brazil. The decrease in oil production by OPEC countries and increased geopolitical tensions in the Middle East (military conflict in Yemen) are shaping an upward trend in the oil market (from USD 67 per barrel of Brent oil as of 29.12.2017 to

USD 75 as of 13.07.2018).

But despite the upward positive dynamics of the key macroeconomic indicator, the economy will not reach the pre-crisis level of GDP in 2013 this year. Thus, the volume of the domestic economy in 2018 at comparative prices was 91.1% of the domestic economy in 2013. According to the forecasts of the Ministry of Finance of Ukraine, the domestic economy will return to the pre-crisis level of 2013 only in 2021-2022 (Figure 1.3).

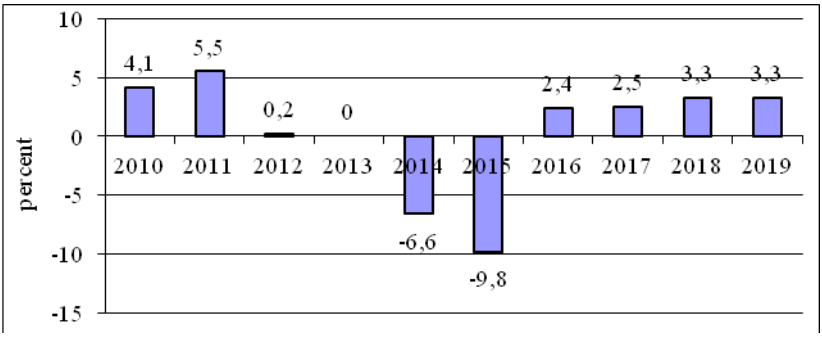

Figure 1.3 Dynamics of real GDP during 2010-2019, %

Source: developed by the authors (State Statistics Service of Ukraine, 2020)

The effective economic policy of the state creates the basis for multiplying the potential of the national market. It is about promoting dynamic development, since such policies lead to higher incomes, accompanied by an increase in domestic demand. In addition, by alleviating the pressure of global competition and providing financial support, the state is stepping up the formation and development of new economic activities. Formation of an active economic policy of the state, responsibility for violation of the established order of its formation and implementation should ensure balanced long-term economic development, which is based on balanced economic growth taking into account the requirements of social nature and environmental protection (Coibion, Gorodnichenko, Kamdar, 2018; Popova, Koval, Antonova, Orel, 2019).

Despite the low level of recovery in productive activity, the labor market is showing signs of recovery. Thus, in 2017 the level of real wages almost reached the pre-crisis level and amounted to 96.9% from the level of 2013 (Figure 1.4).

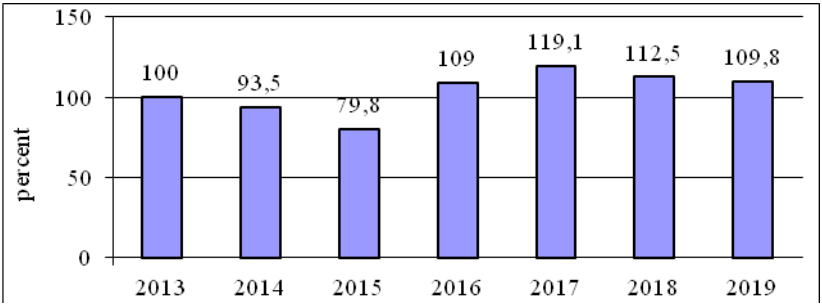

Figure 1.4 Dynamics of real wages during 2013-2019, %
Source: Developed by the authors (State Statistics Service of Ukraine, 2020)

The discrepancy between the dynamics of production and real wages is to a certain extent caused by the processes of shading in the country. Thus, according to experts, in 2017 the level of the shadow economy was 31%, compared to 35% in 2016 (Figure 1.5). However, it is worth noting the positive trend in reducing the level of the shadow economy in Ukraine during 2014-2019.

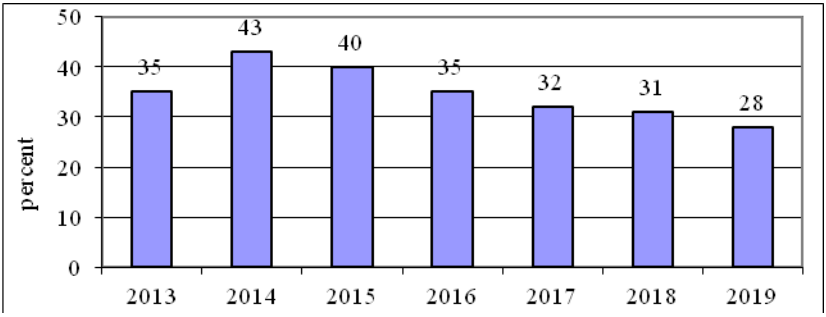

Figure 1.5 Dynamics of the level of the shadow economy in % of GDP during 2013-2019
Source: Developed by the authors (State Statistics Service of Ukraine, 2020)

If there was an increase in capital investment since 2015, then there was a decrease observed during 2017-2019. In particular, in 2019 capital investment decreased and amounted to UAH 623,978 billion (Figure 1.6).

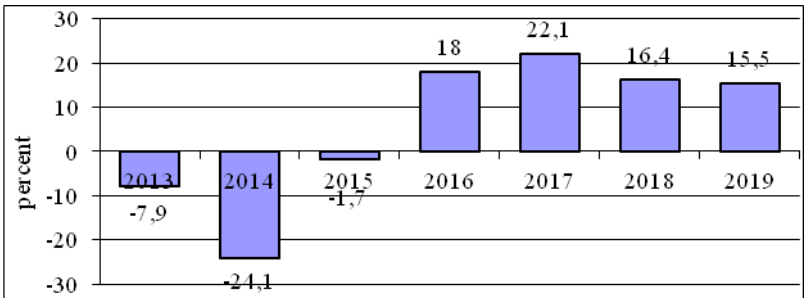

Figure 1.6 Dynamics of the capital investment index in % to the corresponding period of the previous year

Source: Developed by the authors (State Statistics Service of Ukraine, 2020)

It should be noted that the consolidated budget expenditures become important in the functioning of the national economy as a driving tool for stimulating socio-economic development (Figure 1.7). Analyzing the dynamics of consolidated budget expenditures, we note a positive trend, despite inflationary processes.

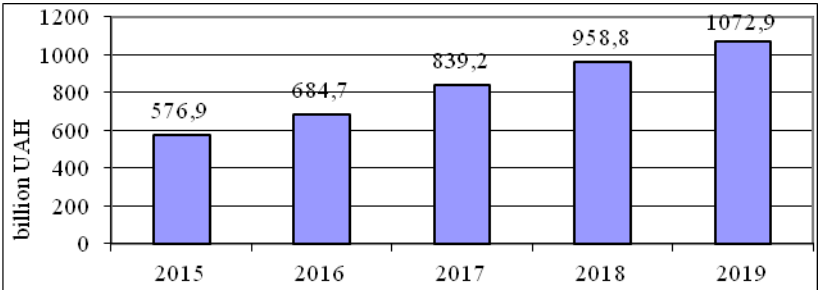

Figure 1.7 Dynamics of the consolidated budget expenditures, billion UAH

Source: Developed by the authors (State Statistics Service of Ukraine, 2020)

In order to counter inflation risks and return to price target, in 2018 the National Bank of Ukraine increased the discount rate three times – from 26 January from 14.5% to 16%, from 2 March to 17%, from 13 July to 17.5% *(State Statistics Service of Ukraine, 2020)*. The tendency growth rate of the discount rate lasted until March 2019 and reached 18%. Thus, based on the operation of monetary transmission channels, a slight effect of the discount rate should be expected at the end of the year. However, since April 2019, the National Bank of Ukraine will

begin easing monetary policy by decreasing the discount rate. At the same time, maintaining a favorable foreign economic environment and seasonally improving devaluation trends have shaped the revaluation dynamics of the hryvnia.

The increase in monetary policy rigidity during 2018 combined with the hryvnia exchange rate trend has slowed consumer inflation to 9.9% in June 2020, against 15.6% in the corresponding period of the previous year. Despite the slowdown in inflation, it remains at a high level and is shaped mainly by non-core inflation (in June, its growth was about 11.1% against 9% increase in core inflation). The largest increase in prices for the aggregate components of the CPI was observed in the group "alcoholic beverages and tobacco" – 19.4%, "restaurants and hotels" – 16.4%, "education" – 15.2%, "food and non-alcoholic beverages" and "transport" by 13.7% (Ministry of Economic Development, Trade and Agriculture of Ukraine, 2018). It should be noted that in the second half of 2019 the discount rate of the National Bank of Ukraine was constantly decreasing. This trend continued in 2020, which, among other things, was aimed at supporting the context of pandemics and quarantine measures, as well as continuing cooperation with the International Monetary Fund.

It is important to note that despite the increase in the volume of deposits in the banking system, more than 81% in the structure of deposits by maturity have deposits on demand and with a term of up to 1 year, which is a short-term resource of commercial banks and impedes the development of long-term lending and development investment activity in the country.

The increase in the minimum wage in 2018, against the background of improving the financial condition of enterprises, led to a 14.1% increase in real wages. The share of employees receiving wages over UAH 6.000 has increased from 36% in 2017 to 48% in 2018. The expansion of manufacturing activity has generated additional demand in the labor market, leading to a decrease in the unemployment rate from 10.1% in 2017 to 9.7% in 2018 (Ministry of Economic Development, Trade and Agriculture of Ukraine, 2018). There is also an increase in gross fixed capital formation. This was due to increased business profits and improved business expectations.

The main source of investment activity in the country is the profit of enterprises. According to the National Bank of Ukraine, the index of business expectations of enterprises for the next 12 months equals 120.6%. Businesses of all types of economic activity expect a revival of

business activity. One in three businesses surveyed expects production to grow and another 50% of companies believe that production in the country will remain at current levels. In addition, there is an increase in estimates of the current financial and economic situation of enterprises.

Nominal growth in both exports and imports of goods and services is driven primarily by an increase in world prices. At the same time, trade indicators were down in real terms (Prystupa, Koval, Kvach, Hrymalyuk, 2019). Thus, according to the system of national accounts, the physical volume of exports of goods and services decreased by 9.9% as of 2018, imports of goods and services decreased by 5.4% against 5.4% growth respectively *(State Statistics Service of Ukraine, 2020)*.

In the first half of 2018, industrial production grew by 2.6%. In particular, production of investment goods grew by 7.3% and consumer goods durable by 4.7%. However, in the second half of 2018 and during 2019 there is a decline in industrial production, (Figure 1.8). After a sharp decline in 2014 against the background of geopolitical, social and foreign economic shocks, there is a partial recovery of industrial production during 2015-2016. However, since 2017 the negative dynamics of industrial production in Ukraine is returning.

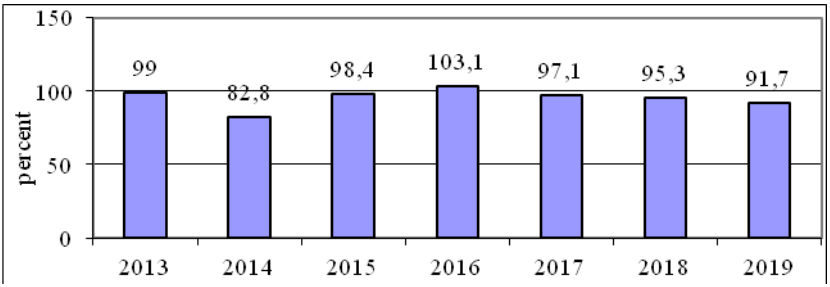

Figure 1.8 Dynamics of industrial production in Ukraine, %
Source: Developed by the author (State Statistics Service of Ukraine, 2020)

Unlike in 2017, since 2018 the mining industry has a positive trend, which was caused solely by economic factors, in particular, growth in metallurgy by 1.6% and electricity production by 5.6% and a statistical factor for the low 2017 benchmark. At the end of the first half of 2018, retail growth was 6.1%. The growth of retail trade against the background of intensification of production activity formed a positive dynamics of wholesale trade at 4.8% (Ministry of Economic Development, Trade and Agriculture of Ukraine, 2018).

The ability of the national economy to develop in a trend outlined by contemporary challenges depends to a large extent on the effectiveness of the economic policy of the state. The experience of developed countries shows that the economy has an important potential for economic growth, which is attracted to it through state influence, properly secured in the institutional aspect (Umantsiv, 2019). Researchers Nwabueze, Mileski (2018) prove with the help of econometric tools that the direction of economic development in the direction of economic growth is in the plane of utilization of the potential of state economic policy.

It should also be noted that the conditions for enhancing European integration processes are of great importance for improving the macroeconomic stability mechanism. This necessitates the development of an effective fiscal strategy aimed at achieving economic stabilization and economic growth. Important tasks are the application of effective methodology for monitoring macroeconomic instability, developing a methodological basis for the concept of macroeconomic stabilization by assessing the possibilities of alternative methodological approaches to solving relevant problems in countries with advanced and transformational economies, assessing the risks that determine the stability of the macroeconomic system in the conditions of globalization (Makogon, 2018).

Conclusions. In the context of economic transformations, the state economic policy should be formed on the basis of fiscal constraints in the sphere of public finances, in particular as regards the share of the redistribution of gross domestic product through the budget system, the level of public debt and the budget deficit, creation of conditions for development of competitive environment and minimization of risks in this sphere; efficient and rational use of public financial resources; creation of effective mechanisms for implementation of strategic programs of socio-economic development of the country.

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Chapter 2

INNOVATION AND MODERN TECHNOLOGIES IN THE ECONOMIC SYSTEMS MANAGEMENT

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IMPROVING COMPETITIVENESS OF THE NATIONAL TOURISM INDUSTRY ON THE BASIS OF INNOVATIVE TYPES OF TOURISM (FESTIVAL, DARK AND BACKPACKER)

Research rationale. The current stage of the tourism industry development in our country has all the signs of the transitional one. The progressive revival and development of the industry that we have observed in recent years, the revitalization of social policies in the regions and at the local level give reason to hope for increase of the life support of the population to the world standards and requirements and effective tourism infrastructure-building.

The profile ministry is convinced of the need to implement the European and international standards as a guarantee of high quality

tourist services and appropriate conditions for the development of the national tourism infrastructure. During 2016-2017, 14 standards were adopted regulating the requirements for various aspects of tourism activity and harmonized with international and European regulatory documents. Current standards refer to profile education, peculiarities of guides' activities, tourist information centers, adventure and ecological tourism.

In order Ukraine could become a competitive partner and to take a rightfull position in the international tourism market, it is necessary not only to provide a solid legislative basis, but also to introduce innovations, including the development of innovative types of tourism, which confirm the relevance of this research.

The purpose of the research. Despite a significant number of scientific papers devoted to the use of innovative types of tourism to improve the competitiveness of the tourism industry in general, some issues still remain outstanding. In particular, due attention was not paid to such innovative types of tourism in Ukraine as festival, dark and backpacker tourism, which could serve as an incentive to increase the competitiveness of the national industry, the unified definition of the term "innovation in tourism", the optimal areas of innovation development just for the Ukrainian tourist product have not been described yet. The study of such important issues is the purpose of this publication.

Research methods. The main method of research is the systemic and structural approach, which involves the analysis of innovation activities aimed at the development of the tourism industry of Ukraine as an open, integrated, structured system, which is simultaneously a part of the national economy and the world market of tourism services. To accomplish the purpose, to solve the problems and to check the hypothesis of the study, a set of other general scientific methods has been used: theoretical (analysis, content analysis, method of system analysis, classification, generalization, modeling, designing – to find out the status of studying the problem in scientific theory and practice; definition of scientific and theoretical foundations of innovations in tourism); empirical (expert assessment, indexing – for the integrated study of the problems of the state of industrial development); field geographic – observations (for the complex perception of the object of research and experience of other countries); handout questionnaire (for conducting survey of the visitors of festival tourism).

The article analyzes in detail the conceptual framework of innovation

activities as a basis for identifying the concept of innovation in tourism and outlines the main problems in order to increase the competitiveness of the tourism industry and to develop the improvements.

Statement of basic materials. The result of innovation processes is the novation; its introduction in tourism practice is defined as innovation, that is, since the adoption of the decision on the introduction the novation acquires a new quality, it becomes an innovation. The Law of Ukraine "On Innovation Activity" No. 40-I dated July 4, 2002 defines the legal and organizational and economic principles of state regulation of the innovation activities, establishes the forms of stimulation by the state of innovative processes. The law defines innovations as newly created (applied) and (or) improved competitive technologies, products or services, as well as organizational and technical decisions of industrial, administrative, commercial or other nature that significantly improve the profile and quality of the production and (or) social aspect, and innovation activities as the activity aimed at solving and commercializing the results of scientific research and development and predetermining the output of new competitive goods and services [7].

Based on the analysis of literary sources, we have identified several approaches to the interpretation of the essence of innovation. According to the Oxford Interpretative Dictionary, innovation is any new approach to the design, manufacture, or sales of the product, which results in the preference of the innovator or his company over competitors. The definition of innovation as a result of the creative process in the form of new products (equipment), technologies, etc., the process of introduction of new products, elements, approaches has become widespread. J. Schumpeter was the first who used the concept of "innovation" (in modern sense), emphasizing that innovation is a significant change in the function of the produced, consisting in the new combination and commercialization of all new combinations based on the use of new materials and components, the introduction of new processes, new organizational forms of opening new markets [8].

Innovations in tourism are systematic measures that have qualitative novelty and contribute to a positive shift, ensuring sustainable operation and development of the industry. At the same time, the most important feature of tourist innovations in the present conditions is the novelty of consumer properties of innovative tourism.

In the analyzed literature we have not found the definition of the term "tourist innovations", therefore, have formulated our own. Innovations in tourism is a process of creation of the newest, modern

consumer attractive tourist product, creation of qualitatively new types of tourism, vehicles and hotel enterprises, introduction of modern technologies, IT programs, formation of conditions conducive to entering new markets and improving the competitiveness of the tourism industry.

According to the State Statistics Committee of Ukraine, in 2017 more than 3,500 companies offered tourism services in Ukraine. In total, they sold almost 1.6 million trip tickets for more than 27 billion UAH. Based on the analysis of flows of tourism industry in Ukraine, the map chart illustrates its dynamics over the past 17 years (Figure 2.1).

Figure 2.1 The map chart of tourist flows by regions of Ukraine during 2000-2017

Source: designed by the authors on the indicators of the State Statistics of Ukraine

As we can see, the leaders in the number of tourists in Ukraine in 2017 were Lviv (175150 people), Dnipropetrovsk (75526), Ivano-Frankivsk (73309), Odessa (72 302 people) region. For comparison, in 2013 77666 people visited Ivano-Frankivsk region, and 188520 people – Lviv. The highest figures for the number of tourists per one resident of the region were in Lviv and Ivano-Frankivsk regions. The three regions-

leaders in terms of the number of tourists during the study period changed, but as of 2017 Lviv region rushed forward rapidly (Figure 2.2). Regarding the Autonomous Republic of Crimea, after the annexation of the peninsula there is no information. With the beginning of hostilities, the number of tourists serviced in Donetsk and Luhansk regions decreased by 34 thousand and 99 thousand, respectively.

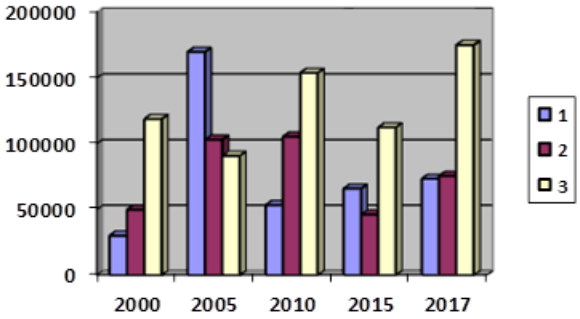

Figure 2.2 Chart of tourists served in Ivano-Frankivsk (1), Dnipropetrovsk (2) and Lviv (3) regions for 2000–2017

Source: prepared by authors on the indicators of the State Statistics of Ukraine

The dynamics of foreign tourist flows shows that the number of foreign citizens who visited Ukraine during 2017, compared to 2011, decreased by more than 65%. Structural changes in the distribution of flows of foreign citizens who entered the territory of Ukraine for tourist purposes in 2006-2017, according to countries of the world (taking into account the countries from which the largest number of tourists came from) is presented in Figure 2.3.

The number of citizens traveling abroad during 2017 compared to 2011 increased by 33.7%, which indicates a steady increase in the demand of tourists in the domestic market, despite the economic situation in Ukraine. The decline observed in recent years in most areas can be explained by the financial and economic crisis, as well as by the annexation of the Autonomous Republic of Crimea and Joint Forces Operation in the territory of Donetsk and Luhansk regions that had a negative impact. All this negatively impacted the inflow of tourism flows, tourism structure and tourism opportunities of the country both in the domestic and foreign tourist markets.

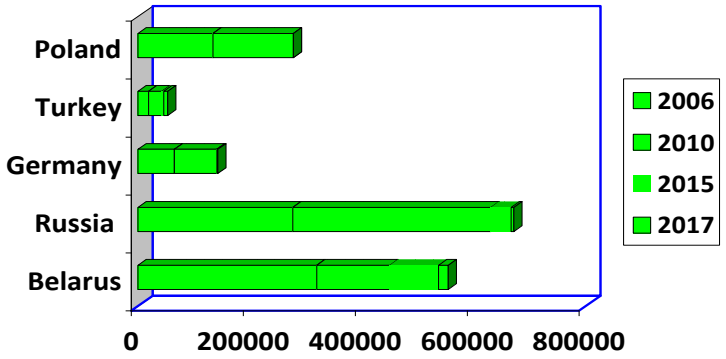

Figure 2.3 Structural changes in the distribution of flows of foreign citizens who entered the territory of Ukraine with a tourist destination for 2006-2017

The tourism industry of the state since 2013 provided 1.6% of GDP, together with inter-related economy sectors – up to 9% of GDP and created 1.3% of working places (up to 9% for all sectors of the tourism sector). In 2017, the share of tourism industry was 1.5% of GDP. In general, from tourism and related industries (services, food, transport), the Ukrainian budget in 2017 received 39.6 billion UAH. Investments in the tourism sector as of year-end 2017 amounted to 7.9 billion UAH, while world practice shows 6-10%. This confirms once again the preliminary conclusions that the level of tourism development in Ukraine is insufficient.

A positive moment for enriching the state budget of Ukraine was the introduction of the tourist tax in 2010, where the most successful was in 2016, in which the state received 54 million UAH.

Implementation of such an effective development tool in the tourism industry as innovation will make it possible to improve the economic situation in the area significantly and to replenish the state budget of Ukraine.

Let's try to distinguish several important factors in stimulating the introduction of innovations in the tourism industry in Ukraine:

– the saturation of tourists with many traditional travel destinations and the search for something new;

– the transition from the supply economy to the demand economy;

– the technological revolution and the expansion of services in the global economy, which, in the conditions of globalization, will also be reflected in the national tourism market;

– training of new generation tourism specialists with innovative vision;

– unexpected events that do not depend on the will of the people: environmental and man-made disasters, military actions in the East of the country, which requires new security measures.

The above factors push the national tourist market to find new ways and methods to increase the level of competition. One of these ways is the development of innovative types of tourism, among which, among other things, there are Tolkien tourism, dark tourism, atomic tourism, military tourism, backpacker tourism, festival tourism. Let's examine in more detail.

Tolkien tourism. Tolkien tourism has emerged as a subtype recently and is associated with the name of the famous science fiction writer, the author of the trilogy "Lord of the Rings" by which the eponymous film was made. According to the number of copies sold – 150 million, the trilogy is the second-largest bestseller in the world, the screen adaptation of the "Lord of the Rings" has raised 3 billion USD. The USA, having won the first place in the rating of the block buster films, received 17 Oscars and hundreds of other awards. Today, millions of people travel around the world to visit places related to the film. The destination of this type of tourism is New Zealand, where the film was made and the scenery remained; Great Britain, namely Oxford and Birmingham, where tourists can chat with like-minded people and get acquainted with the subject of fantasy story.

The decorations for films are usually made from cardboard or drawn on the computer, but for the "Lord of the Rings" everything was created in reality, in natural landscapes. The workers laid out the roads envisaged in the scenario; laid friut and vegetable gardens, built a bridge, a mill and 37 residential hobbit holes. For nine months, 400 workers worked tirelessly each day to turn the chosen location of New Zealand into a famous Hobiton in the Middle-earth. After the release of the second part of the film a real pilgrimage of fans took place at the lot – the farm of Alexanders. Farmers did not really like the intruders, but they resigned when they began to earn significant profits after the tourist route creation. Every day about 300 tourists visit the farm. Ukraine can take this experience and develop its own subtypes of film tourism,

because national cinema has strengthened its position in recent years.

Dark tourism. Another innovative type of tourism is dark tourism (grief tourism), which involves visiting places associated with massive deaths of people, disasters or tragedies. The distribution of this type of tourism after the publication in 2000 of the book «Black Tourism», written by professors at the University of Glasgow, Malcolm Foley and John Lennon.

Among the destinations of the dark tourism are ancient castles with spooky stories, the former death camp in Auschwitz, which is 60 km from Krakow (in 2017 more than 2 million people visited the memorial, and for the period of 2011 this figure amounts to 37 million people); the French ghost town of Oradour-sur-Glane, destroyed during the Second World War; the place of mass executions by Choeung Ek and other fields of death in Cambodia; New Orleans and the Gulf of Mexico, who suffered as a result of Katherine storm; popular excursions to Alcatraz Prison in the USA, where Al Capone was held; in Romania, the dark tourists visit the ruins of Cetatea Poenari: the historians consider just that, not Bran, to be the real castle of Dracula. There are so-called ***"atomic" routes***, the idea of which is owned by Greenpeace, which in such an unusual way is trying to attract the public attention to environmental problems. A guide to cemeteries was issued in France, in New York cemetery tours dedicated to Halloween are organized twice a year, and in Santiago the night excursions to the oldest cemetery are organized.

Ukraine has a large number of unique cemeteries also, where many famous people are buried, and, therefore, they can become objects of tourism for a well-designed marketing policy. Another world-famous object, which opens great prospects for the development of dark tourism, is the Chornobyl Zone. Despite the fact that in Ukraine, due to the conflict in the eastern part of the country, the overall indicators of the tourism industry have decreased, in Chornobyl, at the place of the nuclear disaster, tourism is increasing: in 2017, 50 thousand people examines the area, which is 35% more than in 2016 [6]. That is why it is necessary to popularize and develop dark and atomic tourism strategically in Ukraine.

Military tourism. The main idea of the military tourism is the trip to places of the past military operations, and even places where battles are continuing today and the bullets are flying.

Abroad, the armies have long been earning on tourists. In the USA, an only sale of tickets for visiting military museums yields 45 million

USD annually [2]. The most popular of them is the Museum of Strategic Aviation. The second similar, by the way, is in Ukraine – in Pobuzke village of Holovanivskyi district of Kirovohrad region. The record of the tourists – consumers of this type was registered during the war in Afghanistan.

In Europe, much attention is paid to the monuments of military engineering art. Many countries are experiencing a real boom in the use of fortifications for tourist and educational purposes. For example, in Poland the Osowiec fortresses annually visit 50 thousand tourists [1, p. 14]. The Soviet dots of the Second World War, which after 1945 were in the territory of this country, are restored and used as tourist objects. According to the Reuters agency, flights on MiG-29 fighters were among the ten most popular extreme world accidents.

In Ukraine, there are also objects potentially interesting for military tourism: the bunker at the former rate of Himmler "Hegewald" near Zhytomyr (currently unavailable to tourists since it is located on the territory of the military unit), the Kerch Fortress, the Museum of Strategic Missile Forces, the tunnels under the Dnieper laid out in 1946, the Secret Museum for the repair of submarines, the Odessa catacombs, and many others.

In this regard, adoption of foreign experience is worth studying. For example, in Croatia, according to the decision of the tourism administration, the Prevlaka Peninsula, which has been a relatively recent arena of hostilities, is turning into a tourist center; 560 abandoned facilities are rebuilt into the hotels, and two large hangars – into the congress hall. For tourists, they also plan to open a large fortress, built in the XIX century on the cape of Oshtra. Its interior space and terraces are suitable for cultural events. Since the Second World War, in the mountains of Switzerland, 13 thousand fortifications have been preserved [7], in which several hotels have been opened in bunkers: from expensive ones like "Claustra" in the mountain range of St. Gottar, at an altitude of 2,500 meters, to the Hotel "Zero Stars" in the St. Gallen canton.

Unfortunately, Ukraine, meanwhile, can stumble upon only one military hotel "Greenhof" in the Transcarpathian region, although it has the potential to create such establishments much bigger than Switzerland. I would like to remind that in 2010 Taras Shevchenko National University of Kyiv offered to the Ministry of Defense of Ukraine to develop a scientific program for the development of military tourism, but the response of the Acting Director of the Department of

Economic Activity of the Ministry of Defense was negative.

Backpacker tourism. Foreign experience shows the effectiveness of backpacker tourism, which main goal is to minimize travel costs. The proponents of this type of tourism hitchhike with a backpack and a guide, stay in hostels, tents or use the services of coachsurfing [5]. There are two derivative types: flashpacking (living in somewhat more comfortable conditions with more costs, compared with backpacking) and poshpacking (more stylish and costly travel format). The tourists choosing this type of tourism spend little money and do not bring special benefits to the host country, but when they return home, they tell friends, acquaintances, subscribers in social networks and, in the case of positive reviews, encourage others to visit one or another destination.

Festival tourism. In our opinion, the most promising for Ukraine is the development of festival tourism. Festival tourism is a number of trips to visit festivals or holidays. The notions of "festival tourism", "festival tour" appear more and more frequently in the list of the offered tourist services and gain a wider audience each time. Of all the described innovative types of tourism, today the festival one is better eveloped in Ukraine. The well-planned and well-organized festival tourism is a festive atmosphere, comfortable individual leisure facilities and unforgettable impressions.

Among the most famous festival events, which took place in Ukraine in 2018: jubilee "Zaxidfest"; II ethnofestival of hospitality; festival "Udech-fest"; II festival "Horbo Hory"; International festival of young performers of contemporary Ukrainian music "Young Halychyna"; II Western-Ukrainian festival "Radofest Cookery"; International Festival of Cossack Glory "Kulchytsi-Fest"; Festival of Ukrainian Medieval Culture "Tustan"; Woodstock Ukraine, International Honey Festival "Nadbuzhanski Medobory"; Ukrainian song project "Ukrainian song" and others.

According to the results of survey of tourists visiting some of the festivals that took place during October-December 2018 in Lviv region, the primary motivational-key information about the tourist destination most of those tourists who came from outside Lviv, received a from their friends and relatives (64%), a part of the promotion was made through Internet sources (26%), and only 10% of respondents noted that they learned about a festival in Lviv region due to the travel agency, which is the result of insufficient level of marketing measures.

Also, in the course of the survey, we asked whether the event ("Cheese and Wine Festival", "Lviv Fashion Week", "JazzBez

Festival", "Christmas in Lviv" was justified by the event (80% of respondents answered the question, 15% complained of the shortcomings in the organization of the event, the remaining 5% mentioned other reasons why they did not like the event (Figure 2.4).

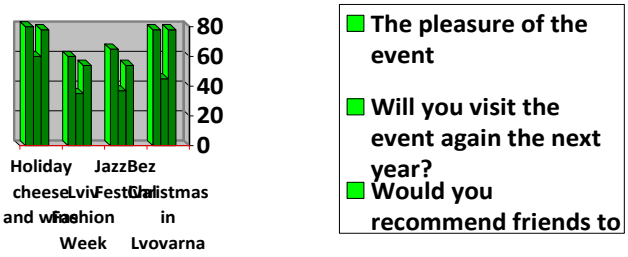

Figure 2.4 Figure of aggregate indicators of the survey of the festival visitors "Cheese and Wine Festival", "Lviv Fashion Week", "JazzBez Festival", "Christmas in Lvivarnia"

Source: developed by the authors

Based on the results of the survey, young people between the ages of 17 and 22 prefer inexpensive travel with low comfort and active leisure; 87% of them noted that festival tourism is considered to be the most promising for development in Ukraine.

In recent decades, festival tourism has become more and more preferrable. In general, this reflects the global trend in tourism: cultural and cognitive, and entertaining forms contribute to the growth of tourist flows in developed countries. In Ukraine, which is steadily moving through European integration, the festival movement should receive an additional impetus for development, thanks to the borrowing of organizational methods and forms that have been tested by the practice of Central European countries.

Conclusions. Thus, the change of economic priorities of the state, the high degree of uncertainty and fluctuations in demand in the tourist market, unpredictability of the effects of the crisis, military actions in the eastern part of the country and other negative factors, as evidenced by the analysis, encourage the tourism industry to find new ways of development. These ways lie in the field of innovative transformations, the development of new forms and directions, the use of foreign experience. The development of the tourism industry on the basis of

innovative types of tourism will increase its competitiveness in the international market. In the rating of competitiveness in the field of travelling and tourism Ukraine ranks 77th among 133 countries for the past two years. The need to increase the competitiveness of tourist products in Ukraine is regulated by a number of regulatory documents, including the Tourism and Resorts Development Strategy for the period up to 2026, the main objective of which is to create conditions favourable for accelerating the development of tourism and resorts in accordance with international quality standards and taking into account European values, transforming it into a highly profitable, integrated into the world market a competitive sphere that provides socio-economic development of regions and of the whole state, promotes improvement of the quality of life of the population, harmonious development and consolidation of society, popularization of Ukraine in the world.

According to the analyzed foreign experience and the results of the tourist questionnaire carried out by the authors, one of the most promising ways of innovative development is the development of the festival tourism. Unfortunately, the festival tourism in Ukraine is not given proper attention; not all potential resources are used for the development of this type of tourism. Such activities are positioned only as cultural, sports or entertainment events, and not as an object of festival tourism. Festival tourism requires more attention from researches and support from the state.

The novelty of research. The author's definition of innovations in tourism as the creation process of the newest, modern, consumer-attractive tourist product, establishment of qualitatively new types of tourism, vehicles and hotel enterprises, introduction of information technologies and programs, formation of favourable conditions for entering new markets and improving the competitiveness of the tourism industry has been proposed for the first time. The list of factors stimulating the introduction of innovations into the tourist industry of Ukraine has been improved and specified; the directions for the development of perspective types of tourism for Ukraine have been grounded on the basis of detailed study of foreign experience.

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PROJECT ACTIVITY AS AN INCLUSIVE ENVIRONMENT FOR INNOVATIVE DEVELOPMENT MANAGEMENT OF ENERGY SERVICE

Within popularization of sustainable development goals in various spheres of life, the trend of transition to resource conservation is monitored. For households, this trend is realized in the context of energy saving and energy efficiency approval. With this in mind, innovations are needed to provide quality energy services.

The organizational structure of energy service companies presupposes a complex of general and special areas of activities (energy audit and certification, project support, risk management, work with investments, management of construction and installation works, etc.). In addition, the range of services provided by energy service companies is determined by the specifics of their creation (consulting companies in the field of engineering and energy efficiency; energy technology suppliers) [1, p. 50-51]. This variety of business areas is the result of growing demand for energy-saving technologies and competition in the energy services market.

Taking into consideration the dynamic development of e-commerce, the Internet of Things and, as a consequence, the increasing role of cyber security, it is proposed to preserve the confidentiality of energy planning for energy service companies based on the energy block chain network. This method also contributes to environmental protection and transparent planning activities of companies in a virtual environment. In addition, such a block chain network may display energy and supply information to improve privacy and security data [2-3].

Projections in [4] indicate that half of the world's energy will be consumed as electricity in 2040. The implementation of the concept of "green" energy in Ukraine until 2050, according to the Ministry of Environmental Protection of Ukraine, envisages the transition to environmentally friendly transport through the use of 70% of renewable energy sources, introduction of smart networks and reducing to 0% coal

thermal power plants in energy [4].

According to the data in [5] for 2019, the volume of electricity production by power plants that are part of the UES of Ukraine reached 153,964.8 million kWh, which is 5,385.8 million kWh or 3,4% less than in 2018. Instead, in 2019, the production of electricity from renewable energy sources (wind power, solar power, biomass) compared to 2018 increased by 2,909.6 million kWh or 110.5% and amounted to 5,542.3 million kWh. Overall, according to State Statistics Service of Ukraine [6] for the period 2014-2018, Ukraine witnessed a positive trend in electricity production from renewable sources (wind, solar, hydropower, biofuels and waste).

At the same time, the innovative development of energy service companies requires the formation of employees' creative thinking, the disclosure of their abilities, the creation of innovators teams, innovation offices. This testifies the need to create an inclusive environment for the disclosure of personnel innovative potential which involves taking into account:

– ensuring gender equality within socio-cultural diversity and synergy of different generations of employees;

– behavior of employees with special needs;

– the level of digital literacy and the development of digital skills of employees;

– the creative potential of employees (employees-artists);

– the threat of employees' labor behavior deformation, etc.

Considering these principles of managing the innovative development of an energy service company, there is a need to diversify methods for developing innovators' teamwork. In particular, in this context, the importance of the employees' project activities and the project organizational structure formation of management of both an energy service company and personnel increase. This type of employees' activities organization serves as an inclusive and creative form of innovative development of energy services.

Scientists note [7, p. 41] that the process of implementing project management at an enterprise is characterized by the following advantages such as increased responsibility for the final results of work; prompt execution of several complex projects; the priority of the general, global goals of the organization on the partial, local ones being of functional nature; the solution of operational tasks is decentralized, which allows to respond flexibly and promptly to external and internal conditional changes; project development time is reduced; solving

current issues efficiency increases; the balance degree of the work program for the project resource provision increases; the objectivity of work results assessing of project participants increases, etc.

In the context of considering the issue of creating an inclusive environment for managing the innovative development of energy services, in our opinion, unlike other forms of work organization, the components of employees' work on a project are:

– defining goals and their consistency with objectives, activities and results;

– clarity of the time frame delineation of implementation (life cycle of the project) and budgeting;

– selection of experts for the project team; at the end, creation of a unique product (service) and assessment of the achievement level of qualitative and quantitative indicators;

– development of a sustainability strategy for the product (service) development after the completion of the project (for the next 2-3 years).

In addition, the labor organization inclusiveness at the enterprise in the form of project activities is based on the formation of corporate creative thinking through joint basis formation of employees' ideas at the enterprise, joint search for sources, technologies for their implementation (project investing), development of a project implementation plan and sustainability indicators of its implementation. In the context of considering this aspect, we believe it should be emphasized that it is precisely the flexibility of the organization of project activities that contributes to the opportunities diversification for disclosing the abilities of employees, including those with disabilities, and their focus on innovative development of enterprises.

Taking this into account in the enterprise management system, it is advisable to introduce into practice a model of an organizational structure – project management (methods: Scrum, Waterfall, Kanban, XP, Lean, Agile, HADI, Sprint, etc.). After all, it is this model, based on the vertical-horizontal integration of activities, a virtual environment that will contribute to the formation of inclusive creative teams (intelligence hubs, project offices, business incubators, innovation offices), in which members work on the implementation of flexible and situationally effective tasks that are characteristic to a competitive environment.

In recent years, there has been a tendency to form teams for the development of a startup as a type of project activity, which is based on the use of information technology, i.e. the technologization of the

product and in the future its transformation into an independent business entity in the market. Taking this into account, a team of startups should be focused not only on the social expediency of their activities, but also at first earning income, and eventually profit from their activities. In addition, the inclusiveness of startup competencies is manifested not only in the ability to delegate authority, flexibility in communication with partners, but also in working in a multi-age (inclusive) team. After all, usually the development of startups is done by people who are already experts in the relevant field and have many years of experience. But another feature of work on a startup development is the presence of young people in the team who have a high level of digital competence and are able to build a value algorithm for digitizing ideas in the future.

This specificity of work on a startup is the environment where inclusive jobs are formed (including for people with special needs), joint creative thinking develops as a result of numerous observations, identifying needs, forming a bank of ideas, developing a prototype, testing a prototype, improving product, benchmarking and bringing the product to market through its implementation.

Considering this, design activity as an inclusive form of innovation management of energy service companies determines the transformation of the labor organization and personnel management. Typically, the implementation of such activities can be caused by a formal decision by the management or chaotically implemented in different departments. As a result, it is important to create a project office at the enterprise as a generator of ideas, inclusiveness in the team formation and a coordinator of project work effectiveness. In small and medium-sized enterprises, an alternative to such an office may be the introduction of a project manager position. The difference between the activities of the project office at the enterprise level and the same office at the project group level is the formation of a corporate portfolio of projects (project portfolio), their systematization by business processes and the focusing of teams work on the most valuable areas of project activities as a result of the development of relevant competencies among employees.

The project coordination group at the enterprise may consist of heads of structural divisions. The main areas of work of such group are the following ones: defining the primary goals of the owner; identification of the main bottlenecks and commercial risk to the project; development of a financing and resource provision strategy; development of the project organization; development of control and administration procedures; election of a project manager; providing project participants

with rights and resources; support of the project implementation process; work with the project external environment and risk factors; resolving conflicts and overcoming crises [7, p. 171-173].

The use of a project approach to organizing a personnel management system for energy service companies, in particular, the formation of project teams, presupposes the presence of a project manager or a coach in the team. For example, this function can be performed by the head of the human resources department, the chief engineer, or the head of the design department. This leads to the development of an algorithm for selecting a project manager. This issue can be solved according to several scenarios [8].

Usually, in typical situations, individual managers of enterprises, after conducting an appropriate financial analysis, can decide to introduce an appropriate position into the staffing table based on external or internal recruiting, which, in turn, requires additional costs (for the search and selection of personnel, for the arrangement of the workplace, for salary, social guarantees and other motivational measures).

Another scenario that we propose has an optimization character by expenditure item. In particular, considering existence of the wide profile of the functional structure of many enterprises, as well as the possibility of having jobs with harmful working conditions, it is advisable to select a project manager (part-time) for specialized areas of the enterprise. The implementation of this project provides the following algorithm of such actions as:

– developing a job description or profile of a project manager;

– choosing a methodological algorithm for selecting a project manager: analysis of information presented in a resume or questionnaires; conducting individual and group interviews; collection of recommendations;

– announcing a competition for filling a vacant position of a project manager within the framework of the relevant specialized areas of enterprise functioning (internal recruiting);

– recruiting a certain personnel;

– making a decision to close a vacant position.

In addition, the digitalization of energy service business processes leads to the digitalization of project activities, which provides for focusing on communication channels of project team members, as well as channels and marketing tools for promoting energy services. As a result, when organizing project activities, great importance is given in

[9-10] to the use of digital marketing of personnel at an energy service company.

In addition, the effectiveness of project activities as an inclusive environment for managing the innovative development of energy services depends on the chosen methods of implementing project management aimed at ensuring the organization's flexibility in structures and communication channels. We propose to set out details of these project management methods [11-12].

Agile involves short, straightforward development cycles that last from 2 weeks to 2 months. At the end, the customer receives a working version of the product. The peculiarities of the application of this method are a high degree of attraction of performers, organizers and customers to the project and the focus of the team on the work product as the main indicator of progress. The disadvantages of Agile are the following ones: stimulation of constant changes to the project; the flexibility of product development (the ability to communicate with the customer) can lead to the fact that it will never reach the final version; increased requirements for the qualifications and experience of the team: in addition to directly creating a product, the team must analyze possible ways to improve the efficiency of its own work, continuously exchange information on the project, be motivated and self-organizing.

A number of other techniques have been developed based on the Agile methodology, in particular:

– Scrum, which is based on "sprints" – time frames from 1 to 4 weeks, after the end of each of them a working version of the product should be received, which is improved when moving to the next "sprints", while the activities of team members can be accompanied by a coach;

– Lean is developed on the basis of the Toyota Production System, i.e. the philosophy of continuous improvement at all levels of the organization, where one of the key concepts is value (what the customer is willing to pay for);

– Kanban helps to avoid situations when one part of the team works around the clock, and the other complains about the lack of new tasks. As a result, there are no separate roles, the whole team is united one, and the process is not divided into "sprints", but at stages of specific tasks. In Kanban, the stages are independent of each other and occur when the team decides to.

Another method of project management is Waterfall, which aims to consistently move from one stage to another without skipping and

returning to previous stages. The advantages of this technique are the following: the structure of the development process is clear and simple – this reduces the entry threshold for teams; convenient reporting – you can easily track resources, risks, spent time and finances thanks to the strict stages of the development process and detailed project documentation; stability of tasks; estimation of the cost and delivery time to the project – the timing of the release of the finished product, as well as its final cost, can be calculated before the start of development.

Summarizing the above mentioned, it should be noted that the introduction of such management methods for projects in the management system for the innovative development of energy services is aimed at creating an inclusive environment for disclosing the innovative potential of employees. In addition, within transformation of the personnel management system based on automation and transition to remote employment, optimization of the development of enterprises, project activities can be implemented for employees of the personnel management service of enterprises, for example, when assessing the effectiveness of employees' activities (accrual of bonuses), search and selection of personnel (creation recruiting project teams), etc.

At the same time, the application of the project approach to the organization of the management system for the innovative development of energy services involves the use of optimization technologies for the personnel formation in the direction of increasing differentiation in labor organization and the consistency of goals of employees and the enterprise. The introduction of personnel design activities at an enterprise actually narrows the scope of classical (full) employment and expands distance (freelance), flexible (virtual) employment, which, as a result, will contribute to the transformation of the organizational and economic mechanism of the energy service company on the basis of inclusive and sustainable development of society.

In total, evolutionary and revolutionary models are distinguished for enterprises change management. Evolutionary changes are changes in the system, and revolutionary ones are cardinal changes in the system itself. Within the evolutionary model, changes in strategy, production processes and culture can be carried out gradually, in the form of small steps, and within the framework of a revolutionary model, radically, in the form of large leaps [13, p. 155-157].

A wide variety of factors has enabled the development of a successful ESCO industry in various countries. Some of these factors such as favorable legislation are generally important; however, many of

them apply more to certain countries or groups of countries than others, in particular:

– general energy market context (energy price levels; liberalization of the energy market; high energy intensity);

– legislative and regulatory measures (general policy instruments to promote energy efficiency; energy efficiency obligations; energy saving targets in public buildings);

– governmental and other programs;

– developing countries and economies in transition: special need for financial instruments;

– standardization of contract procedures and measurement and verification [14, p. 10-15].

Considering the organization variability of the personnel management system of energy service companies in the context of the transformation of the personnel management system of enterprises, the application of process and project approaches to the organizational structure of enterprise management is complementary. After all, the formation of the optimization process of personnel management as a result of horizontal and vertical hierarchical integration provides for its stage-by-stage transformation through the use of technologies (methods) of project management in the field of energy services.

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FINANCIAL INNOVATIONS IMPLEMENTATION AS A DRIVER OF THE ALTERNATIVE FINANCIAL SERVICES EUROPEAN MARKET DEVELOPMENT

Digitization is a common characteristic of modern financial innovation and is due to the growing influence of information and communication technologies in the production and provision of financial services. Innovative financial technology (FinTech) is a complex system that brings together the sectors of new technologies and financial services, start-ups and relevant infrastructure [1].

The development and functioning of the FinTech industry in the global financial services market is the subject of the works of such foreign scientists as: Ziegler T., Shneor R., Wenzlaff K. [2], Derhalli K. [3], Patel M. [4], Giorgio B., Calzolari G., Pozzolo A. [5], Cumming D., Schwienbacher A. [6], Alt R., Beck R., Smits T. [7]. Considerable attention to the innovative financial services development was paid in their works by such Ukrainian scientists as Goncharenko N. [1; 8; 9], Bondarenko M. [8], Dovgal O., Fedulova L., Honcharenko V. [10], and others.

FinTech now includes various sectors and industries such as education, retail banking, fundraising and non-profit activities, and investment management. Globally, financial technology continues to evolve and discover new methods for providing alternative financial services.

Among all types of innovative financial services, a significant place in the world in 2018 was held by P2P/Marketplace Consumer Lending – raising $195.29 billion (Table 2.1), which accounted for 64% of the total volume of alternative financing lending. Further in terms of services rendered: P2P/Marketplace Business Lending ($50.33 billion or 17%), Balance Sheet Business Lending ($21.08 billion or 7%), Balance Sheet Property Lending ($11.02 billion or 4%), Balance Sheet Consumer Lending ($9.78 billion or 3%) P2P/Marketplace Property Lending ($5.72 billion or 2%) and Invoice Trading ($3.22 billion or 1%) [2].

Table 2.1

Global alternative financial services market in 2018

	The total market volume in 2018, bn US dollars	Percentage in the market in 2018	Rating in 2018	Rating in 2017
P2P Consumer Lending	195	64%	1	1
P2P Business Lending	50	17%	2	2
Balance Sheet Business Lending	21	7%	3	4
Balance Sheet Property Lending	11	4%	4	10
Balance Sheet Consumer Lending	10	3%	5	3
P2P Property Lending	6	2%	6	5
Invoice Trading	3.2	1%	7	6
Real Estate Crowdfunding	2.959	1%	8	7
Equity-based Crowdfunding	1.515	0%	9	8
Reward-based Crowdfunding	0.877	0%	10	12
Debt-based Securities	0.852	0%	11	14
Donation-based Crowdfunding	0.639	0%	12	13
Other service	0.414	0%	13	9
Revenue Sharing	0.398	0%	14	11
Minibonds	0.333	0%	15	15

Source: author's based on: [2, p. 39]

The largest participants in the financial services market using these services are precisely the subjects of small and medium-sized businesses. In 2018, global alternative finance for business was $31 billion, up 47% from $21 billion in 2017. China, the United States and the United Kingdom had the highest rates of financing for small and medium-sized businesses using alternative financing instruments – about $16 billion in the US and $5.6 billion in the UK in 2018 [2].

FinTech is the largest investment category in Europe, which represents 20% of global investment, and the sector is more active in Europe than in Asia and the United States. The European FinTech market is thriving as the financial sector must serve today's digital consumer in line with the EU digital strategy. FinTech is increasingly using new technologies such as blockchain and artificial intelligence (AI) and other. In addition, new European legislation offers opportunities in the ancillary areas of FinTech and payment services [11].

According to the results of the analysis, the dominance of the British alternative financing ecosystem can be stated – the volume of the UK in 2018 amounted to $2,5 billion, while Germany – $161 million, France – $148 million and the Netherlands – $147 million, which has approximately 6% of the business volume of the UK P2P company. A similar situation is observed in the P2P consumer lending sector. The UK dominated in 2018 at $2 billion. The volume of German consumer lending on a single platform was $651 million, or 32% of the UK market. The French market had a volume of $346 million (17% of the British market), and the volume of the Polish market was $281 million (14% of the British market) (Figure 2.5) [2].

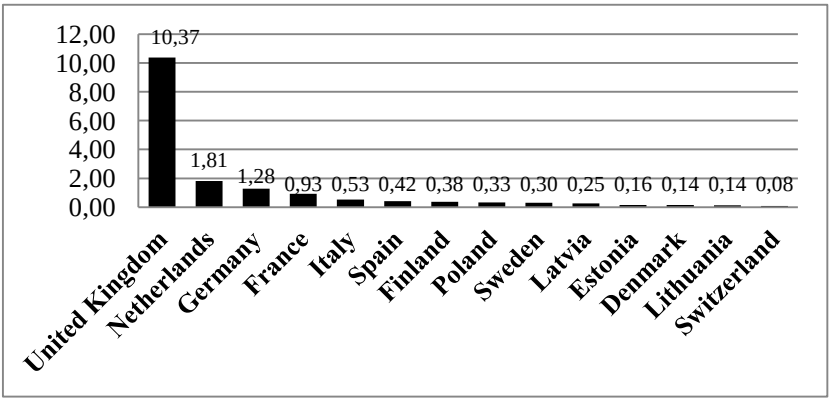

Figure 2.5 Volume of alternative financial services online in European countries in 2018, billion US dollars [12]

The field of innovative financial technologies plays an important role in the recovery of the economy of any country, especially after the crisis

periods, given the COVID-19 pandemic. Countries can use these innovative technologies for further economic growth, in particular, to help consumers and businesses through a joint strategy that brings together investment, professionals and policies to implement it [3].

Many FinTech companies are aimed at modernizing the processes of traditional banking, especially online lending, another area of activity is mobile banking. In addition, programs have been developed that perform the functions of financial consultants, tracking various financial processes of the client and providing control over his accounts from various sources.

During 2018, the transaction value of the European digital payments market grew to over $ 667 million. And continued to grow to over $ 730 million by the end of 2019 (Figure 2.6). Statistics show that the entire European digital payments industry has grown by over 30% in three years over the past year.

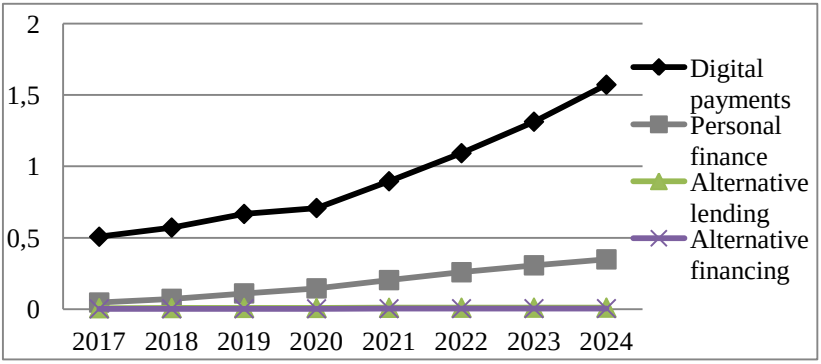

Figure 2.6 Forecast of the volume of online transactions in Europe for 2017-2024, billion US dollars (including COVID-June 19, 2020)

Source: author's based on: [13]

However, according to experts' forecasts, in the coming years the segment of mobile POS payments will tend to grow even more. The transaction value of European mobile payments raised 2.5x over the past three years, growing from $ 17.4 million in 2017 to over $ 48 million in 2020. By the end of 2023, this figure is projected to be more than $ 111.4 million. The average cost of transactions per user in the mobile payments segment has nearly doubled over the past three years, reaching

$ 931 in 2020. Statistics present that this amount will be $ 1,767 by 2023 or three times more than the figures for 2017 [4].

The number of cards in the euro area, with a payment function in 2018 amounted to 544.0 million units, with the total population of the euro area being 341 million people (Figure 2.7). This amounted to about 1.6 payment cards per one resident of the euro area [14].

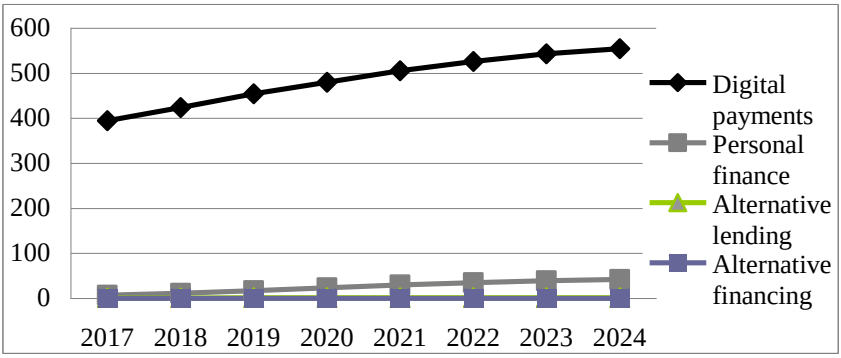

Figure 2.7 The number of users of alternative financial services in Europe in 2017-2024, million people (including COVID-June 2020)

Source: author's based on: [15]

This graph shows the number of participants who will benefit from alternative financial services in Europe. In 2017, there were over 400 million people in Europe using digital payments. Over the past three years, the number has increased to over 500 million people. The number of Europeans who use non-cash payments will reach 600 million by 2023. Analyzing geography, the UK represents Europe's leading digital payments marketplace as a leader in innovative financial technology.

All indicators confirm the growth of the FinTech sector and point to significant investment in innovative financial technologies – starting in 2016 from almost $ 10 billion to $ 60 billion in 2019. The periods 2016-2019, it gave a quick impetus to the improvement of financial technologies, increased the range of alternative financial services and allowed to process and analyze a significant amount of information with a high level of protection, as well as other services (Figure 2.8).

Based on the results of the analysis, it can be noted that there is a tendency for further growth in investments in FinTech in Europe (approximation coefficient R^2=0.6191). The growing maturities of the

FinTech market in Europe and the need for financial institutions to increase their market presence have helped stimulate investor interest in FinTech. Europe has also received significant attention from global investors looking for profit opportunities. The maturity of the Fintech industry has attracted several investors, including banks, insurance and revenue management firms, and non-banking corporations. Companies have begun to recognize the need to adopt FinTech and are making huge investments in startups [17].

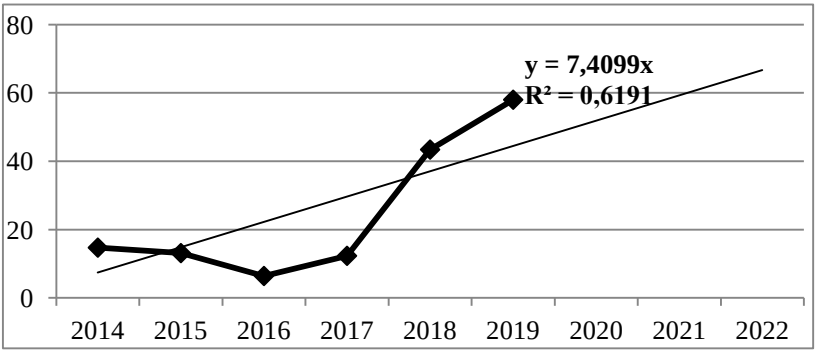

Figure 2.8 Forecast of investments in FinTech in Europe for 2020-2022, billion US dollars

Source: author's based on: [16]

Total investment in Europe grew in 2019, most of which was significant in July 2019 when Fidelity National Information Services (FNIS) acquired Worldpay for $42.5 billion, a payment processing company FIDelity National Information Services (FIS). Thriving innovation ecosystems in numerous European countries, the expansion of FinTech offerings and the growing interest of global investors have also helped spur investment. The best FinTech offerings in Europe in 2019 were diverse both geographically and in terms of solution. The next three largest deals were the acquisition of digital asset sales company AliExchange in Estonia for $2.1 billion, the buyout of eFront alternative investment software company in France for $1.3 billion and the buyout of the platform company SIA (Milan) in Italy for $894 million [5].

In order to identify the close relationship between the volume of the FinTech market in Europe and investments in individual European

countries, we have performed a correlation analysis and calculated the correlation coefficient (Figure 2.9). Based on the results of which, the following conclusions were made: countries such as Germany (0.93), France (0.95), Great Britain (0.81) have a direct relationship between the volume of the market for innovative financial technologies and investments in this area. The following countries have correction retraction: Italy (0.15), Spain (0.22).

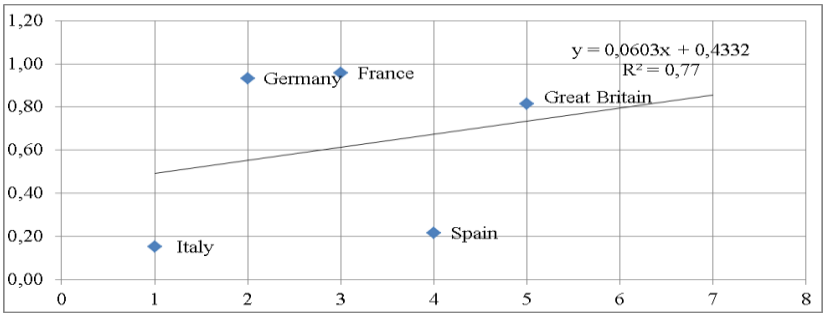

Figure 2.9 Correlation dependence of FinTech market volume in Europe and investments in some European countries, 2014-2018
Source: author's based on: [5; 17; 18]

We have carried out a correlation analysis between indicators of the FinTech market volume and the cryptocurrency market capitalization in Europe, the correlation coefficient was 0.64, which indicates an insignificant relationship between these features. However, the correlation coefficient between the indicators of total investments in Europe in this area and the volume of the FinTech market in Europe was 0.78, which confirms the existence of interdependence (Table 2.2).

The reason for the active development of FinTech in Europe is a largely favorable and stable regulatory environment, determined primarily by the European directive on payments PSD2, which requires banks to be more open and focused on interaction with PSPs (payment service providers).

Another important reason is the large volume of venture capital investments. The amount of FinTech venture capital investments has increased significantly in countries without large financial centers, but has not changed in countries with a large financial center [6].

Table 2.2

Correlation dependence between cryptocurrency market capitalization, FinTech volume and investments in FinTech in the European market of alternative financial services, billion US dollars

	Cryptocurrency market capitalization, billion US dollars	FinTech volumes in Europe, billion US dollars	Total investment in FinTech in Europe, billion US dollars
Cryptocurrency market capitalization, billion US dollars		0.643719638	0.152191065
FinTech volumes in Europe, billion US dollars	0.643719638		0.774424061
Total investment in FinTech in Europe, billion US dollars	0.152191065	0.774424061	

Source: author's based on: [1; 2; 14; 19]

Now it can be argued that banks face many challenges associated with the need to integrate into the new digital ecosystem. At the same time, thanks to the new technologies and potential changes in legislation, many new opportunities are arising [7].

Thus, according to the results of the research, we can conclude that digitalization carries a huge potential for the development of the financial sector, but at the same time it has serious challenges and risks. The main risk, in our opinion, is the risk of loss of digital sovereignty and the emergence of cyber security problems arising on this basis.

Analysis of the activities of leading foreign countries in the field of FinTech regulation allows us to suggest the following main approaches, the implementation of which will allow states to stimulate the introduction and development of innovative financial technologies:

1. Launching the "Regulatory Sandbox".

Blockchain and FinTech startups, which are now significantly limited in their activities due to uncertainty in the legal regulation of FinTech, may enter the "Regulatory Sandbox". The launch of the "Regulatory Sandbox" will allow identifying qualified and promising national FinTech companies and minimizing barriers to market entry; monitor their activities; protect the rights of consumers and investors,

there by contributing to the development of the FinTech segment in the country.

2. Opening of a virtual reception and other contact centers of the regulator in order to advise FinTech companies on the regulation of their activities.

3. Development by the regulator of guidelines, clarifications, publications, other consulting and explanatory documents, research.

4. Preparation and implementation of government programs, initiatives, strategies, including appropriate funding.

5. Formation by the regulator of working groups, committees, councils, centers.

6. Development and adoption of legislative acts aimed at supporting and developing FinTech, including the provision of tax and other benefits.

In recent years, the development of modern financial technologies and digital innovations has been given priority in the industrial policy of the leadership of regional financial and economic unions. The most active development and practical testing of blockchain technology projects in the financial sector with the support of specially created financial institutions are being implemented in the European Union. Thus, the implementation of FinTech projects in the EU is supported by significant financial resources that are allocated from the EFSI, as well as from the EU budget in accordance with the Action Plan for the development and implementation of blockchain technologies in the European Union.

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INNOVATIVE ACTIVITY OF ENTERPRISES OF FOOD INDUSTRY IN UKRAINE: STATE AND TRENDS OF DEVELOPMENT

The current stage of development of the national economy indicates the growing role of scientific developments in ensuring the effective functioning of enterprises, including food products. The introduction of science-intensive technologies leads to the expansion of existing and creation of new markets and increase production, which ensures the competitiveness of innovative enterprises. Given the place of food industry enterprises in the technological chain, the production of innovative food products has a positive impact on the development of food enterprises and other economic activities, stimulating research and investment in related sectors of the economy.

One of the factors of innovative activity of enterprises is the activity of scientific research, which is reflected in the development of science-intensive industries and the introduction of science-intensive products. Given the cyclical process of research, the stage of development of new technology, characterized by a high level of costs for research, is replaced by its introduction into production, accompanied by a restructuring of the production complex with subsequent changes in cost characteristics of products. As a result of the introduction of science-intensive products and the development of science-intensive industries, enterprises gain sustainable competitive advantages and ensure sustainable economic development in the long run.

The purpose of this study is to analyze the innovative activity of food industry enterprises in Ukraine and the factors that determine it. The study is based on the hypothesis of the relationship between the introduction of innovations in the industry and research indicators. The study was conducted in the following sequence:

1. Indicators of innovative activity of food industry enterprises of Ukraine are analyzed.

2. The dynamics of science intensity of GDP, financing of expenditures on research and development in Ukraine is studied.

3. The dependence between the introduction of innovations in the food industry and the results of research and development in Ukraine is checked.

To study the innovative activity of enterprises of the food industry of Ukraine, data on the number of innovatively active enterprises in general and by areas of innovation, as well as the cost of innovation by the source of their income were used. The study period 2015-2019.

As a result of the conducted researches, the conclusion on a slow introduction by the enterprises of Ukraine of innovative developments in the practice of an activity is made. According to the Global Innovation Index 2020, Ukraine ranked 45 out of 131 positions in the ranking of innovative economies of the world [1], and although increased the rating by two positions (47th place in 2019), has low values in terms of JV-strategic alliance deals/bn PPP $ GDP (113 positions), state of cluster development (91 positions), GERD financed by business, % (58 positions).

Innovatively active enterprises in Ukraine account for a small share. During 2015-2019, their share in the total number of industrial enterprises did not exceed 16.6% and tended to decrease in recent years. The analysis in terms of economic activities shows that manufacturing

enterprises belong to the group with the highest share of innovation-active enterprises. During the study period, the share of innovatively active food industry enterprises in the total number of such enterprises was 16.8…24.6%, in the processing industry – 18.9… 25.9% (Table 2.3).

Table 2.3

Dynamics of innovatively active enterprises for food production in Ukraine for 2015-2019, %

Indicator	Year				
	2015	2016	2017	2018	2019
Number of innovatively active industrial enterprises by areas of innovation by type of economic activity, units, total	824	834	759	777	782
including processing industry, units	751	745	680	737	693
food production, units	178	170	167	191	131
The share of innovatively active enterprises for food production in the composition of innovatively active industrial enterprises					
total	21,6	20,4	22,0	24,6	16,8
processing industry	23,7	22,8	24,6	25,9	18,9

Source: compiled independently according to [2-5]

At the same time, there is a general tendency to reduce the number of such enterprises and their share in the innovative enterprises of Ukraine. Against the background of slowing down the innovative activity of enterprises in general, the rate of reduction of innovatively active enterprises in the field of food production significantly exceeds this figure for enterprises in the processing industry. The reduction of innovatively active enterprises in 2015-2019 was noted by economic activities as a whole by 5.1%, in the segment of processing industry – by 7.7%, in the segment of enterprises producing food products – by 26.4%.

Note the peculiarity of the organization of research in the food industry. During 2015-2019, most of the innovative enterprises in this area spent money on the purchase of ready-made solutions in the form of machinery, equipment and software, which is generally in line with trends in the manufacturing industry and the economy of Ukraine as a whole. At the same time, a small share of enterprises is engaged in the organization of internal developments. The share of food industry enterprises that spent money on internal research and development in

2019 was 3.8%, while the cost of purchasing machinery and equipment – 60.3% (Table 2.4).

Table 2.4

The structure of enterprises by areas of innovation for 2015-2019, %

Indicator	Year				
	2015	2016	2017	2018	2019
The number of innovatively active industrial enterprises by areas of innovation by type of economic activity					
total	100	100	100	100	100
including processing industry	100	100	100	100	100
food production	100	100	100	100	100
of them spent money on internal research, total	18,3	27,8	17,1	28,1	15,6
including processing industry	19,3	29,8	18,1	28,9	16,9
food production	7,3	11,2	13,8	6,8	3,8
external research, total	8,5	12,4	8,2	8,5	8,8
including processing industry	7,6	12,5	7,6	8,4	7,6
food production	3,9	6,5	1,8	3,1	4,6
of them spent money on the purchase of machinery, equipment and software, total	56,7	70,7	65,9	41,2	64,7
including processing industry	55,1	68,9	63,8	41,4	63,2
food production	51,7	75,3	65,3	39,8	60,3

Source: compiled independently according to [2-5]

Despite the reduction in the number of innovatively active enterprises of the food industry during 2015-2019, the costs of innovation in this segment increased. Moreover, it is more active than for enterprises in general and enterprises of the processing industry. During the analyzed period, the cost of innovation for food industry enterprises increased 1.9 times from UAH 1.5 billion in 2015 to UAH 2.9 billion in 2019, for enterprises by type of activity – by 2.9%, for manufacturing enterprises decreased by 16.5% (Table 2.5).

Regarding financing, the main source of income for innovation activities for both enterprises by type of economic activity and food industry is the company's own funds. According to calculations for the segment of food production, the share of own funds in the total cost of investment activities is 81.0…95.9% over time. It should also be noted the growing role of credit resources in innovation. During the analyzed period, the share of loans in the total financing of innovations in the

food industry increased from 4.0% in 2015 to 15.5% in 2019.

Table 2.5

Dynamics of costs for innovation of innovatively active enterprises for food production in Ukraine for 2015-2019, %

Indicator	Year				
	2015	2016	2017	2018	2019
Expenditures of innovatively active industrial enterprises by areas of innovation by type of economic activity, UAH billion total	13,8	23,2	9,1	12,2	14,2
including processing industry, UAH billion	13,2	21,2	7,9	11,1	11,0
food production, UAH billion	1,5	2,2	1,4	1,3	2,9
The share of costs of innovatively active enterprises for food production as part of innovatively active industrial enterprises					
total	11,2	9,4	15,4	11,0	20,2
processing industry	11,7	10,3	17,8	12,1	26,1

Surce: compiled independently according to [2-5]

Calculations show significant fluctuations in the specific costs of innovation for food production enterprises during 2015-2019 and their generally upward trend. According to 2019, this indicator is set at UAH 21.9 million per one innovatively active food industry enterprise per year, which is 1.2 times higher than the same indicator for enterprises by type of economic activity in Ukraine, and 1, 4 times higher than the same figure for manufacturing enterprises.

Indicators of the dynamics of science-intensiveness of GDP, as well as the volume and structure of research expenditures in Ukraine, were used to evaluate scientific research.

Research to determine the role of science in the development of the country's economy uses the indicator of the knowledge intensity of GDP, which is calculated as the ratio of research and development costs to total GDP. As noted in publications [6, 7] in the case that this indicator is defined at the level of 0.4-0.5%, science performs a socio-cultural function; 0.6-0.9% – supports the formed technological potential; with a value above 0.9% – provides economic development of society [6, 7].

The combination of information on the number of innovative enterprises and the cost of innovation makes it possible to determine the specific cost of innovation by enterprises in Figure 2.10.

Table 2.6

The structure of costs for innovation of innovatively active enterprises for food production in Ukraine by sources of income for 2015-2019, %

Indicator	Year				
	2015	2016	2017	2018	2019
The structure of costs for innovation of industrial enterprises by sources of funding by type of economic activity					
total	100	100	100	100	100
including the processing industry	100	100	100	100	100
food production	100	100	100	100	100
Including at their own expense, in total	97,2	94,9	84,5	88,2	87,7
including the processing industry	97,4	95,3	83,5	89,2	87,0
food production	95,9	81,0	90,9	89,9	84,0
at the expense of loans, in total	0,8	2,7	6,5	3,9	6,0
including the processing industry	0,9	2,7	7,6	3,3	6,3
food production	4,0	17,1	8,1	8,8	15,5

Source: compiled independently according to [2-5]

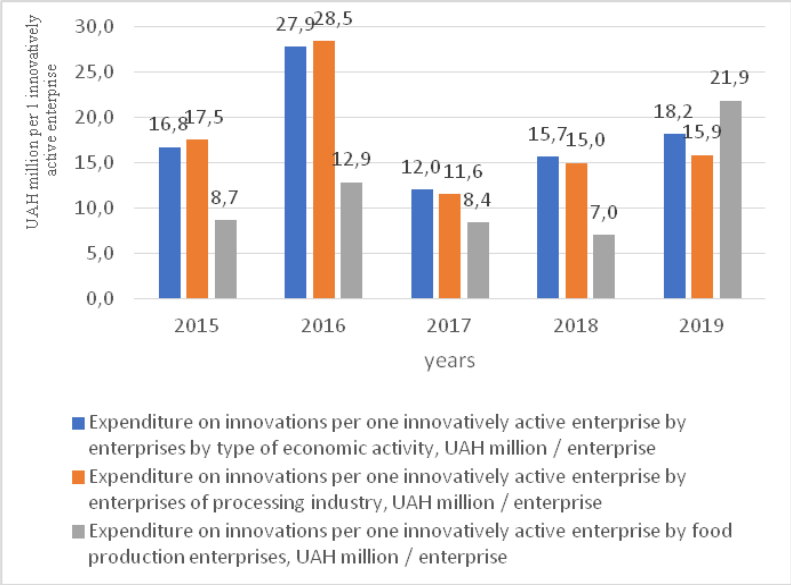

Figure 2.10 Dynamics of innovation costs per one innovatively active enterprise for food production in Ukraine for 2015-2019

Source: compiled independently according to [2-5]

Analysis of the knowledge intensity of Ukraine's GDP shows its low values and decrease over time. The Law of Ukraine "On Scientific and Scientific-Technical Activity" (Article 48 "Financial Support of Scientific and Scientific-Technical Activity" item 2) states that the state provides budget funding for scientific and scientific-technical activity in the amount of not less than 1.7 percent of the gross domestic product of Ukraine [8]. At the same time, the analysis shows that during 2010-2018 the value of science-intensive GDP did not exceed 0.75 and was 0.47 in 2018, which is 3.6 times less than the established norm (Figure 2.11).

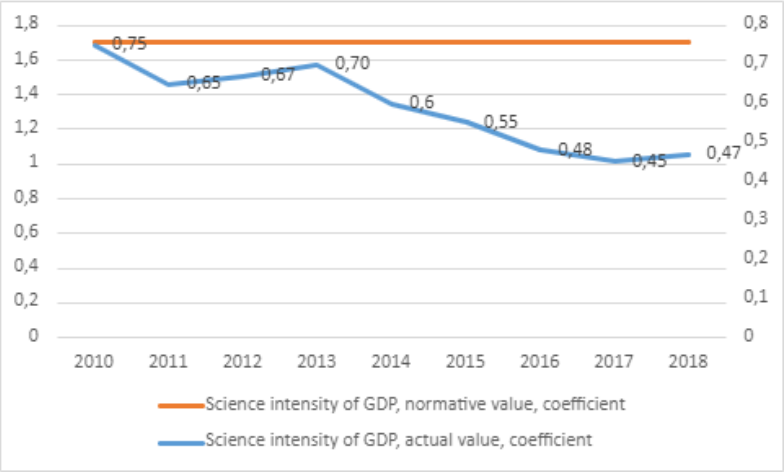

Figure 2.11 Dynamics of knowledge intensity of GDP of Ukraine
Source: compiled according to [5]

The relationship between the introduction of innovations in the food industry and research indicators was tested using the method of pairwise correlation analysis, the essence of which is to study the relationship between factor and performance characteristics. In this study, the factor is the level of expenditure on research and development (science-intensive GDP), the resultant – indicators of innovative activity of food industry – the number of innovatively active food industry, the share of innovatively active food industry, the cost of innovation that account for one enterprise of the food industry.

The author's hypothesis is that the increase in spending on research and development is a stimulus for innovation in the real sector as a whole and the food industry segment in particular. Information for studying the dependence of innovative activity of food industry

enterprises on the activity of financing research and development is given in Table 2.7.

Table 2.7

Information for the study of the correlation between the innovative activity of food industry enterprises and the level of knowledge intensity of GDP

Year	Science intensity of GDP, coefficient	Number of innovatively active enterprises of the food industry, units	Expenditures on innovations of food industry enterprises, UAH billion	Expenditure on innovations per one innovatively active enterprise by food production enterprises, UAH million / enterprise
	X	$У_1$	$У_2$	$У_3$
2010	0,75	352	0,61	1,7
2011	0,65	384	0,93	2,4
2012	0,67	420	1,57	3,7
2013	0,70	398	1,70	4,3
2014	0,60	334	2,17	6,5
2015	0,55	178	1,5	8,7
2016	0,48	170	2,2	12,9
2017	0,45	167	1,4	8,4
2018	0,47	191	1,3	7,0

Source: compiled on the basis of [2-5; 9-11]

The results of the correlation between the innovative activity of the food industry and the level of knowledge intensity of GDP are shown in Table 2.8.

The studies confirmed the hypothesis of the relationship between the innovative activity of food industry enterprises and the level of the knowledge intensity of GDP. There is a high direct relationship between the level of the knowledge intensity of GDP and the number of innovatively active enterprises of the food industry (0.893); high feedback, however, between knowledge intensity and the cost of innovation per one innovation-active enterprise (–0.836); noticeable feedback – between knowledge intensity and the cost of innovation of the food industry (–0.414). The results of the calculations indicate the relevance of further research in this area, namely the study of the impact

of knowledge and innovation on the sustainable development of the food industry.

Table 2.8

The results of the correlation between the innovative activity of the food industry and the level of knowledge intensity of GDP

X_1	X_1	$У_1$	$У_2$	$У_3$
X_1	1,000			
$У_1$	0,893	1,000		
$У_2$	–0,414	–0,239	1,000	
$У_3$	–0,836	–0,834	0,694	1,000

Tags:

X_1 – knowledge intensity of GDP, coefficient;

Y_1 – the number of innovatively active enterprises of the food industry, units;

Y_2 – costs for innovations of food industry enterprises, UAH billion;

Y_3 – costs of innovations per one innovatively active enterprise by food production enterprises, UAH million / enterprise.

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MODERN APPROACHES TO THE ASSESSMENT OF THE INNOVATIVE POTENTIAL OF THE ENTERPRISE

The realities of today indicate the existence of crisis conditions in the country due to lack of working capital of a large number of enterprises, relatively low profitability, lack of effective demand from potential consumers, as well as the inability of the domestic financial system to ensure the development of producers. In this context, it is appropriate to consider the maximization of the innovation component as a condition for sustainable development of the enterprise, which requires businesses to pay attention to their own innovation potential.

Innovative potential characterizes the ability of any enterprise to carry out innovative activities, the recognition of which is an important tool for the effective functioning of the enterprise necessitates the assessment and analysis of innovative potential.

Theoretical and practical aspects of modern methodological approaches to assessing the innovative potential of the enterprise have been studied by many domestic and foreign scientists, such as: Yu. Andrianova, I. Boiko, V. Willow, O. Volkov, O. Vlasenko, E. Galushko, L. Martyusheva, I. Novikov, G. Komar, O. Knyaz, O. Posylkina, N. Solomatina, A. Trifilova, V. Chaban, N. Chukhrai, L. Fedulova and others.

However, it should be noted that most of the works on this issue are mostly contradictory, there are no single systematic approaches to research in this sector of science, which actualizes and determines the choice of topic.

The purpose of the work is to analyze and highlight the methodological approaches to assessing the innovative potential of the enterprise, identifying the advantages and disadvantages of existing ones, as well as proposing a comprehensive approach to assessing the innovative potential of enterprises.

The innovative potential of any enterprise depends on the specifics and scale of its activities and the degree of potential use is determined

by the innovative capabilities and susceptibility of the enterprise to innovation.

The purpose of assessing the innovative potential of the enterprise is to determine the current level of its development, identify sources of deviations in the level of development, the need for management intervention, the choice of innovative development and the formation of innovative strategy in the system of strategic alternatives for development regarding changes in the environment [14, p. 132].

Given the different approaches to the content of the category "innovation potential" and its structure for each organization requires an individual approach to the methodology for assessing the components of innovation potential, which would include the specifics of its activities. However, summarizing the approaches of scientists, we highlight the following components of the structure of innovation potential: personnel, logistics, production and technological, information, scientific, financial and marketing.

One of the most common approaches is structural, when the potential is assessed through the presence and condition of certain components, each of which specifically affects the formation and implementation of the innovative potential of the enterprise.

There are the following approaches: for example, E. Galushko proposes to assess the innovation potential with the help of personnel, logistical, organizational and managerial, generalizing indicators and indicators of the level of development and capabilities of the system of scientific and technical information [2].

Scientist N. Chukhrai, highlighting the two main elements of innovation potential – material resources and intellectual potential – for evaluation proposes to group indicators into two blocks (clusters) on the principle of dividing the innovation process into two stages: "Generating ideas and creating innovation" and "Development and commercialization of innovation". At each stage, both input and output cluster factors are evaluated [7].

A similar approach is followed by scientist A. Grinyov, proposing to divide the indicators for assessing the innovation potential into two groups depending on the stages of creation or implementation of innovations, but the assessment of personnel is limited to assessing the level of education and qualifications of staff [3]. A thorough approach to assessing the innovation potential offers I. Novikov, when among the components of innovation potential are innovation resources and conditions of their use (catalysts), which, however, are considered as

service elements (or “conditions that ensure optimal use of innovation resources”).

We believe that the assessment of innovation potential is derived from its characteristics and structure, depends on the purpose of its implementation, should be based on process, system, situational, target and other scientific approaches and can be carried out using the two most, in our view, practically significant approaches:

1) general diagnostics of innovation potential in order to determine the priorities of innovative activities at the enterprise;

2) targeted assessment of the innovation potential of the enterprise in terms of compliance with the requirements of a specific innovation project.

In the first case, the assessment is reduced to the diagnosis of innovation potential in relation to the fundamental possibility of innovation and, accordingly, to identify areas for its implementation, and in the second – a quantitative and qualitative assessment of innovation potential to a particular innovation. The evaluation of the innovation potential, in particular its sequence, should reflect the specifics of the object under study. Since the goal is to assess the potential (including the implementation of innovative activities), the priority is the question of the fundamental possibility of its implementation.

As a result of the review of empirical and theoretical developments of scientists the set of existing methods of estimation is grouped in various directions:

1) according to the evaluation criterion:

– cost (property) – the assessment is based on the calculation of the amount of costs for the formation and implementation of the object of assessment;

– comparative (cost-effective) – assessment based on comparison with analogues that have been studied;

– result (income) – the assessment is based on the calculation of the flow of results from the use of the object of evaluation;

– by depth of assessment:

– detailed – a detailed analysis of the internal environment under conditions of complete information;

– diagnostic – assessment based on limited and available parameters;

– in the form of presentation of evaluation results:

– assessment on the basis of an integrated indicator – the

conclusion about the level of innovation potential is made on the basis of a summary indicator;

– assessment based on a system of indicators – determining the level of innovation potential on the basis of a comprehensive system of indicators;

2) by the nature of the dominant evaluation parameters:

– financial – based on financial performance of the enterprise;

– non-financial – indicators of tangible and intangible nature are used;

– mixed – a combination of financial and non-financial indicators;

3) by the form of presentation of the evaluation model:

– statistical – on the basis of statistical methods of research, observation, grouping, etc.;

– economic-mathematical – assessment based on descriptive, prognostic, normative and other economic-mathematical models;

– mathematical – is carried out by means of differential, logarithmic, integral analysis, etc.

Given the shortcomings of existing approaches, we outline the basic principles of assessing the innovative potential of enterprises:

– accuracy and certainty of the parameters of the object of assessment;

– simplicity and informativeness of the assessment – the definition of a simplified set of input indicators that determine the final result;

– target orientation of the assessment in accordance with user requests;

– systematic evaluation, evaluation of each of the elements of the innovative potential of the enterprise as a complex economic system;

– availability of input information – focus on the main forms of financial reporting of enterprises;

– complexity of evaluation – the evaluation process includes determining the retrospective, current state of the innovation potential of the enterprise and forecasting its development.

In our opinion, it is expedient to single out the characteristic which would allow to estimate in principle opportunities for success of innovative activity. This characteristic should be universal for each enterprise and not depend on specific innovations available in the organization of resources, and also can be used for comparison with other business entities. This characteristic may be the activity of innovation potential, so the assessment of the innovation potential of the organization should include the assessment of:

– activity of innovation potential, the level of which does not depend on the creation or implementation of a specific innovation, but is a constant necessary characteristic of the ability and propensity of the enterprise to innovate;

– profile of innovative potential of the enterprise;

– synergetic component that can be provided with the capabilities of the enterprise;

– resource component, which reflects the availability of the necessary resources of appropriate quality for the implementation of a particular innovation;

– external component, which can attract the company and thus increase their ability to innovate.

Assessing the innovative potential of the enterprise and forming an approach to its development is difficult, so we propose to use the method of SWOT-analysis – an effective tool for comprehensive assessment of the situation to make strategic decisions about what can be done to improve management through innovation.

SWOT-analysis is a powerful methodological tool that allows you to assess the actual available resources that will be used to solve the problem, assess the negative impact of existing factors, identify obstacles that arise in the process of solving the problem and what external resources can be used. This method should be used to focus on critical issues that have a long-term impact on the situation, so that the desired objectives and results become clearer.

SWOT-analysis makes it possible not only to assess the company's ability to innovate, but also to determine how this ability is affected by the innovative climate formed in the external environment. The standard method of SWOT-analysis is understood in terms of innovative opportunities that can provide the business environment and the potential of the organization itself. In the process of analysis are recorded:

– strengths of the firm's potential, which will ensure its use of opportunities that have emerged in the external environment (this helps to determine the appropriate strategy for their use);

– weaknesses of the firm's potential, which deprive it of the chance to use new opportunities or pose a threat to its existence [18].

The SWOT-analysis takes into account the following external factors: the national innovation system, the processes of global competitiveness and international innovation, as well as the macroeconomic situation, business activity and the effectiveness of anti-

corruption measures in the country.

They are displayed by international analytical ratings and indices: the Global Competitiveness Index, the Global Innovation Index, the Doing Business Rating, the Corruption Perceptions Index, and international macroeconomic comparisons. The analysis of internal factors takes into account the internal goals of innovation in the enterprise, the strategy of innovation development, innovation projects, innovation culture and business model of innovation [18, p. 110].

The purpose of SWOT-analysis assessment of *Strong* and *Weak* properties of the system, *Opportunities* and *Threats* of the environment is as follows:

1. Provide a clear vision of the system of opportunities and threats to the external environment, on the one hand, the strengths and weaknesses of the internal environment of the system, on the other.

2. On the basis of synthesis of SWOT-factors the organization of the corresponding reactions – decisions of the state in the form of effective, resonant influences on formation of innovative potential at qualitatively new level is carried out.

3. SWOT-analysis determines the possibility of identifying trends and patterns for the development of forecast scenarios.

4. Synthesis of SWOT-factors – the basis for harmonization of strategic and tactical goals [9, p. 36].

The SWOT-analysis method first involves identifying strengths and weaknesses, as well as threats and opportunities, and then – establishing chain links between them, which can then be used to form an effective strategy for innovative development of the country [10].

Statistics of recent years show that the innovative activity of domestic enterprises is not increasing, and the national research potential is not fully used [2, p. 761]. Financing of scientific and technical activities in Ukraine from the State Budget in recent years does not exceed 0.2% of GDP at a rate of 1.7%. For comparison, in Japan the cost of scientific and technical work is 2.98% of GDP, in the US – 2.69%, in Germany – 2.52%, France – 2.13%, Great Britain – 1.84% [3].

According to international rankings, the efficiency of innovation of the national economy in 2018-2019 decreased by 4 indices. At the same time, the Global Innovation Index and the Innovation Efficiency Index have improved Ukraine's position due to high indicators of knowledge, patents and utility models in relation to GDP, computer software costs, and export of information and communication technology (ICT) services

as a percentage of total trade [8]. Given this, it is important to assess the dynamics of interest of enterprises in the implementation of innovative activities during 2015-2019 (Figure 2.12).

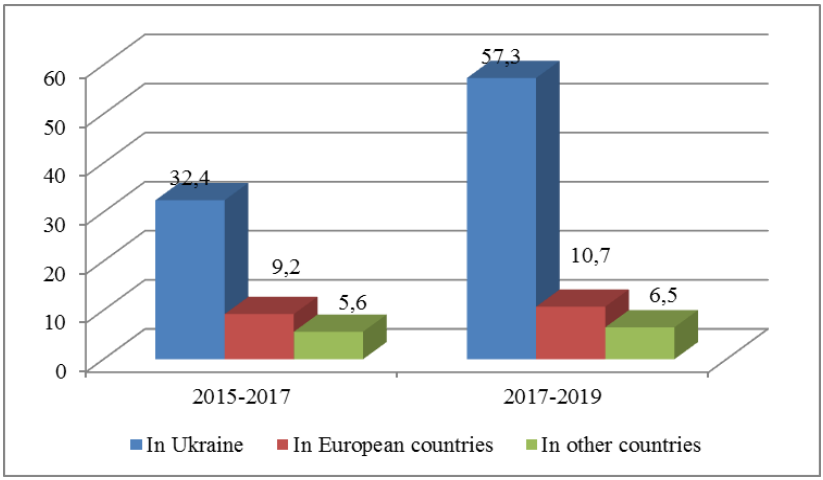

Figure 2.12 Share of innovatively active enterprises in 2015-2019

Along with this, the level of interest of enterprises in the implementation of innovation processes for the period 2015-2018 is growing (Figure 2.13): their share in the total number of surveyed enterprises increased from 14.6% to 28.1%, a positive trend is the increase of partial enterprises, which carry out production innovations that have an owner and determine the innovative development of the national economy.

The growth of the number of innovatively active enterprises is due to scientific and technological progress, the rapid development of information technology. At the same time, there is a decrease in the share of enterprises implementing technological innovations.

The gradual decrease in the share of this type of innovation is due to increasing demand for non-technical innovations, those that will implement new ways to effectively organize the workflow, as well as innovations aimed at developing new ways of relationships between organizations.

Currently, more than 90% of domestic products do not have the appropriate scientific and technological support, as a result, products produced in Ukraine are becoming less competitive.

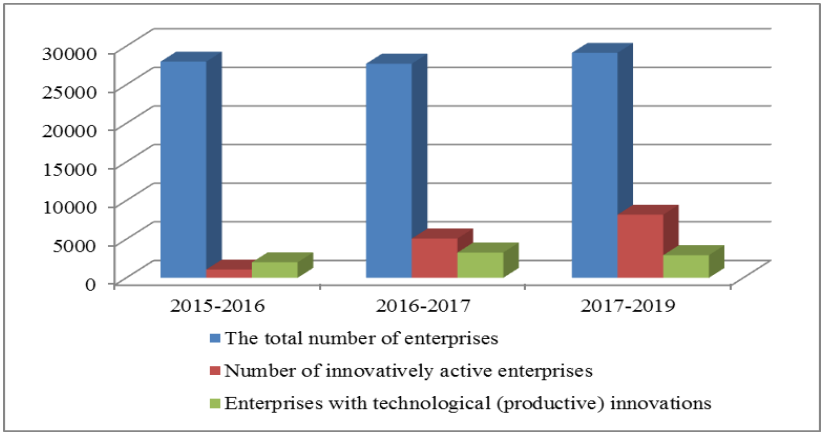

Figure 2.13 Characteristics of innovation activity of enterprises in Ukraine

Analysis of the innovation climate in the country and the factors influencing it allow us to say that the innovation potential today does not provide social and economic growth of the country, it is characterized by insufficient adaptability and strategic flexibility, as well as low propensity to innovate.

To increase the efficiency of creating a favorable innovation climate, it is necessary to implement state measures, including:

– development of a comprehensive system of legal protection and realization of rights to intellectual property, especially in the period of rapid spread and diversification of forms of operation of the global computer network;

– reorganization of the system of selection of priorities of scientific and technological development and the system of formation of state target programs;

– creation of a system of consulting services for innovation-active enterprises, as well as the establishment of a network of training and retraining;

– introduction of an effective mechanism for motivating the activities of employees in the innovation sphere;

– consolidation of the innovation potential of the system-forming and capital-forming role in the context of the state regulatory policy.

The formation of effective management of innovation processes, its strengthening, deployment should begin with a radical improvement of

the innovation climate, with a significant increase in innovation attractiveness (attractiveness) of the territory of Ukraine as a whole.

Conclusions. Thus, it can be stated that the innovation potential is an integral part of the economic potential of the enterprise, which contains a system of resources, opportunities that provide the ability to innovate, implement the achievements of STP, develop and implement innovations and support the innovation process. Diagnosis of the innovation potential of the enterprise should be carried out in the following sequence: to analyze the structure of innovation potential, identify the degree of use of internal innovation capabilities of the enterprise and assess the level of its innovation activity.

The variety of existing approaches complicates the task of choosing the optimal methodology for assessing the innovative potential of the enterprise. There is no single approach, as different specifics, the scale of innovation, industry, size of enterprises and so on. Therefore, the approach to assessing the innovation potential should be individual for a particular enterprise.

Having assessed the existing innovation potential, identifying hidden reserves, identifying strengths and weaknesses in the innovation activities of the enterprise, it is advisable to align internal and external innovation opportunities, existing and potential capabilities of the enterprise, optimize the innovation resource base in accordance with innovation and strategic accents. That is, the innovation potential must become a permanent object of management in the enterprise, which provides a targeted impact on it in order to increase the efficiency of innovation activities of the entity.

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THE NECESSITY OF FORMATION MECHANISM'S FORMATION OF INNOVATIVE DEVELOPMENT MANAGEMENT AT A TRADE ENTERPRISE

The analysis of processes taking place in the world and domestic economy shows that the results of innovation, initiated by the acceleration of scientific and technological progress, significantly affect all aspects of society, contribute to overcoming the difficult economic situation, ensure economic stability, provide new impetus for its growing. Therefore, the innovative model of economic development remains extremely attractive and the most acceptable in Ukraine nowadays.

The main benefit of the innovative way of development is to ensure the economic growth without a proportional increase of raw material consumption, the formation of conditions under which investing in the creative and scientific potential of society becomes extremely profitable. Therefore, the relevant management task is considered to be the formation of a mechanism for managing innovative development in the enterprise.

Problems of formation the mechanism of innovative development management at the enterprise are reflected in scientific works of domestic and foreign scientists, such as: O.A. Belovodskaya, L. Zabrodskaya, S.M. Illyashenko, D.I. Kokurina, I.V. Kolodyazhna, N. Mova, L.V. Oliynyk, I.A. Rybalchenko, P.A. Fatkhutdinova, V. Haustova, I.A. Shovkun. The issue of innovation management is raised in the scientific works by L.V. Balabanova, M.A. Vilensky, L.M. Gatovsky, V.M. Honcharova, F.A. Dronova, A.C. Conson, D.S. L'vov, P.A. Orlova, S.G. Strumilina, S.M. Yampolsky and others.

In particular, L. Zabrodska considers that the modern model of economic growth, based on the innovative development type, requires effective stimulating of innovation, new financial and credit policy, development of knowledge-intensive and reduction of nature-exploiting

industries – at the macro level; changes in the type of entrepreneuring, active involvement in the production of small and medium-sized businesses – at the micro level [1].

Instead, L.V. Oliynyk emphasizes that the general strategic provisions of the innovation activity at the enterprise are specified in the innovative development programs, which provide the development of tactical measures for achievement the goals defined in the innovation strategy of the enterprise [2, p. 53]

The study and analysis of published works on this issue led to the conclusion that the formation of a mechanism for managing innovative development in the enterprise are interpreted ambiguously, insufficiently developed in both scientific and organizational-practical aspects and require further research.

Writing this article, we used the studies of authors who concerned the range of issues, different interpretations of the concepts of "innovating", "innovation" and "innovative activity" were explored, the basic principles of organizational and economic mechanism for managing innovative development at the enterprise and proposed areas of association were identified. We suggested the course of unification of mentioned principles into a single complex in order to form a mechanism for managing innovative development as an open and adaptive system.

The purpose of the study is to develop theoretical, methodological provisions and practical recommendations for determining the content of innovation at the enterprise, substantiation of the basic principles for organizational and economic mechanism of management the innovative development and identifying the course of systematic approach to this mechanism formation.

Innovation is considered to be one of the basic categories of innovation theory. There is lot of "innovation" definitions, suggested by both western and domestic scholars.

However, it should be mentioned, that innovation represents as an object in many scientific areas. According to linguistics, innovation is defined as the process of innovation and the presence of result is expected. Another definition is the process of refreshing, renewing, changing. Philosophical interpretation focuses on new knowledge and resolving contradictions. Psychologists, first of all, consider conflicts to be the ways to resolve them and synergistic effects achieved by teams of innovators. In the technical sciences, attention is paid to the technological problem of changes in fundamentally new

technologies.Not only the process of implementation is fixed in economics, but also large-scale cost-effective usage of innovation.

However, it's necessary to mention the other point of view. Firstly, it would be more appropriate to mention, that the concepts of innovation has more interpretations that we consider.

For instance, the scientist R.A Fatkhutdinov emphasizes, that investing in the development of innovations is only half the battle [3, p. 158]. The most important is to introduce innovations, turn it into innovation, i.e. to complete innovation activities, get a positive result and continue the diffusion of innovations.

It is necessary to carry out marketing researches, R&D, organizational and technological preparation of manufacture, manufacturing and at the end to issue results for innovation development. Secondly, it is inappropriate to include innovation stages ant it's appearing to the concept. It considers innovative activity more, which results innovation. Thus, innovation is the final result of innovations aimed to achieve the appropriate effect and create new or improved competitive commodity (services, technologies, etc.) that will meet the needs of consumers, which can cover all areas of enterprise and boost the development and efficiency.

It's impossible to improve the innovative activity development without modern scientific and technological achievements, which are implemented into modern technologies, commodity, communication means, new ways of technical and organizational management, new kinds of service. We estimate I.V.Kolodyazhna's point of view to be logically-structured, linear and to consist the following stages: product initiation, promotion and commercialization [4, p.53].

We agree with statements of S.M. Illyashenko and O.A.Bilovodska about ideas of innovations that should be based on the following principles [5, p.98]:

1) On the analysis of market needs, that means a real demand of particular product (goods or service). In other words, innovations may happen in response to existing market needs. It's marketing option, which can be called as evolutionary. Different changes in existing commodity also belong to evolutionary ones.

2) On the analysis of own activity of the enterprise (for example, in case of revealing of the reasons of defection and reclamation, etc.);

3) On information from periodicals, attending fairs, exhibitions, conferences, etc.

4) On the intellectual activity of new product creation, which is

aimed to meet the demand, which is absent on the market and may appear with the appearing of new product. In fact, it is the creation of a new market. This is a radical, revolutionary means.

Different definitions of "innovative activity" are found in economical literature. Thus, the scientist I.A Shovkun argues that innovation is defined as a process of strategic marketing, R&D, organizational and technological preparation for production, producing and designing of innovations, their introduction (or transformation into innovation) and dissemination to other areas (diffusion) [6, p. 27]. S.M. Illyashenko and O.A. Bilovodska support the ideas which state, that innovating activity is a process of creation, implementation and spreading innovation [5, p. 112]. We consider the idea of I.A. Rybalchenko to be correct, as innovating activity, as a rule, is directed at practical usage of scientific and technological results and intellectual potential to new or improved product, the way of its producing, and to meet the needs of competitive goods or service, making better the social and information service [7, p. 22].

D.I. Kokurin emphasizes the role of the creativity of work in the interaction of the subject with the outside world in innovation, awareness of the contradictions in this system, which implies the purpose of the activity that can solve them. In other words, the scholar considers the innovation to be a means to solve the contradiction, arose between social subject and environment, which forms new social needs, and during the social production [8, p. 20]. We reckon this statement to be reasonable enough. Generalizing suggested approaches, we emphasize, that innovation, aimed to produce new means of production, which is stable and regards to be the main to develop social wealth, regards to be noticed. Making a conclusion, the innovative activity should be interpreted as a kind of business entities' activity, which aimed to make modern and improved decisions, fixed in innovations. The specificity of innovation is linked with the long-term nature of the results, increased risk, unpredictability of results, potentially high benefit.

As N. Mova and V. Haustov state, the innovating is investigated from different aspect and includes different detailization level [9, p. 31]:

1) as a parallel and consistent implementation of research, scientific and technical, production activities and marketing;

2) as stages of innovation live cycle – from appearing the idea, to developing and spreading;

3) as investing and financing of developing and spreading new kind

of product or service.

It's necessary to mention, that innovating has cyclical nature and consists of many innovation cycles. In general, innovating cycle is limited by the moment of beginning to work on innovation, on the one hand, and commercialization – on the other.

According to classical innovation approaches of management, suggested by R.A. Fathutdinov, the first stage of functional innovating coherence is fundamental study, which awake new scientific knowledge [3, p. 164]. In general, we agree with this statement, but should mention, that according to point of innovative enterprise which works under the market conditions, is considered to be abstract enough. The market gives its own rules, and innovations can occur only under objective conditions. The first condition is the presence of demand-backed demand, actual or potential, or possibility of demand formation (for only new commodity – products or service), i.e. the presence of market potential, which identifies the market capability to accept innovation of particular type and focus, which can be elaborated and suggested by the particular enterprise.

The second condition is a possibility of the achievements of science and technology embodiment in specific products that can meet consumer demand – the innovative potential of the innovation developer.

The third condition is economical possibility and the expediency of the enterprise-innovator to develop (although it is not necessary, because new ideas, technologies, etc. can be purchased), to produce and promote innovations in the market – production and sales potential. It's meant not only production and sales, which is one of the functions of marketing, but its considered production and marketing, which are focused on consumer demand production and sales, including the creation and stimulation of demand.

Thus, innovation has a chance to be successful on condition that there are at least three of these apects (Figure 2.14), as the absence of at least one of them makes it impossible to develop the enterprise in an innovatively.

We should add that under market conditions of activity, in fact, the enterprise is defined defined by external conditions, first of all by needs and inquiries of consumers, activity of competitors and business partners, etc.

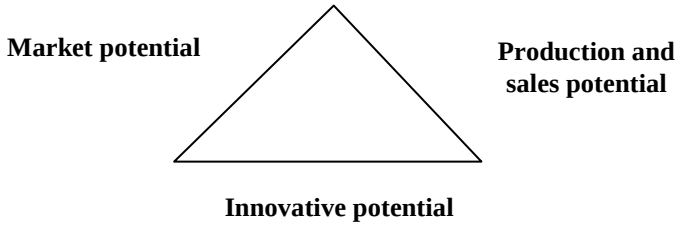

Figure 2.14 The main components of successful innovative activity at enterprise

Source: produced by author based [5]

That's why, the formation of long-term goals system of general economic activity is occured as a result of forecasting possible changes in environmental parameters and comparing them with the strategic potential of the enterprise.

Thus, the beginning of the process formation of the competitive success of the enterprise-innovator is placed at the intersection of many marketing, scientific and technical, production solutions. In condition of consumer demands presence at the particular market segments, intellectual and technological capabilities to use science and technology achievements, which are able to meet these demands by offering new products (products or services), technical and economic capabilities of production and marketing with using affordable which are compatible with purchasing by consumers, the ability to promote at the market and bring new products to consumers in a more efficient way than competitors, creates a foundation for technologically and economically based strategy of innovative development.

Innovations in trade is a process aimed at the development, improvement of modern, latest types of technologies that effect optimization of technological, organizational, functional business processes of the trade enterprise according to particular conditions that appear at the market.

The main structure of wholesale trade, to our mind, includes:

1) creation of a single informative space;
2) stimulation of wholesale enterprise to use innovation;
3) achieving a high level of automation and mechanization of warehousing operations and processes;
4) variation and modernization of warehouse complex;
5) elimination of unnecessary intermediary links in the process of

goods movement;

6) involving the national capital for participation in investment project to create modern wholesale enterprises;

7) effective quality product control, exclusion of counterfit and low-quality goods at market;

8) creation of integrative structure (industrial and trade associations, financial and trade groups);

9) systematic monitoring of efficiency and services quality provided by wholesale trade enterprises [10, p. 72].

It should be admitted, that during the domestic economy transformation, there is a relevant problem for most domestic enterprises linked with radical restructuring of the organizational and economic mechanism in accordance with the new realities. Under market conditions, manufacturers must focus their activities on meeting the needs and demands of consumers, address the search and implementation of existing and promising market opportunities, especially – opportunities for innovative development. Accordingly, the organizational and economic mechanism of the enterprise must function in close cooperation with market and regulatory mechanisms.

The complexity and versatility of such interaction allows us to talk about the necessity of formation the organizational and economic mechanism for managing innovation development (OEMIDME) or at least about the transformation of the organizational and economic mechanism at the enterprise in this direction to adapt to new economic conditions.

Paying attention for the aspects of the formation of organizational and economic mechanism for managing the innovative development of enterprises, recommended by scientists S.M Ilyashenko and O.A Belovodskaya, we suggest a scheme of OEMIDME formation and operation (Figure 2.15).

According to the scheme, the process of forming OEMIDME involves the existence of principles that should be its basis, identifying its functions and the development.

OEMIDME should focus the activities of economic entities on the purposeful search and implementation of market opportunities for innovative development that open up to them, which ensures their long-term survival and development in the unstable environment, according to the chosen mission.

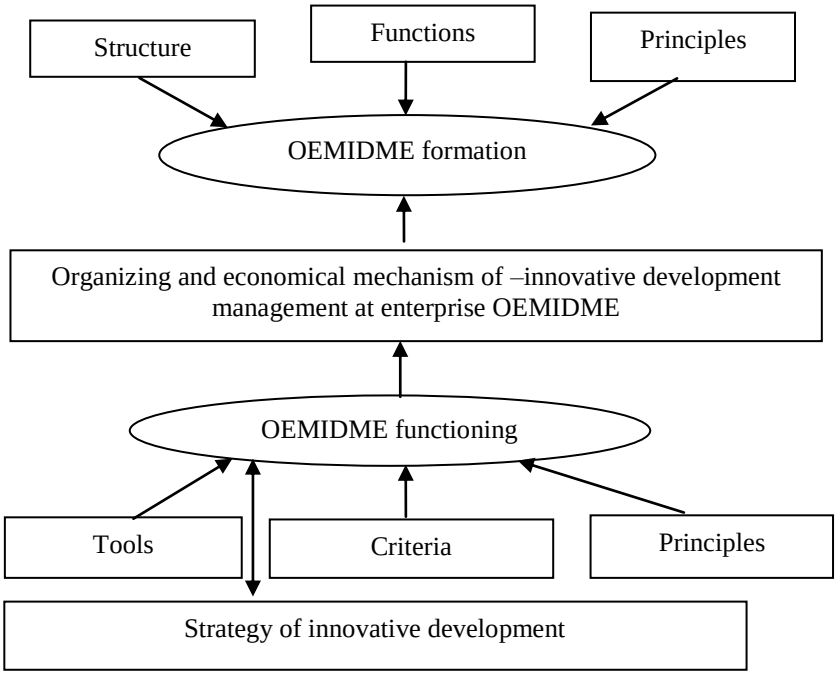

Figure 2.15 The scheme of formation of the organizational and economic mechanism management of innovative development
Source: produced by author based [5]

In other words, OEMIDME represents one of the main elements economic entities system of adaptation to changeable environmental conditions, thus ensuring their long-term survival and sustainable development.

OEMIDME should be based on particular scientific principles. In economical literature, we meet different classifications of functional principles of the organizational and economic mechanism of management of innovative development of the enterprise. However, we consider the most reasonable list of principles proposed by scientists S.M Ilyashenko and O.A Belovodskaya [5, p. 110]. In particular, according to this classification, the organizational and economic mechanism for managing the innovative development of the enterprise should be based on the following principles:

1. The principle of system. OEMIDME should be considered as a complex, open, adaptive (capable for self-organization, self-regulation, self-development), a dynamic system of probabilistic nature. It is characterized by the strucrural complexity, the presence of numerous elements with complex relationships, dynamism and stochastic behavior in general and its individual elements.

2. The principle of complexity. Complexity should be understood as the mutually conditioned and proportionally agreed development of the system as a whole, which ensures the connection of all subsystems and elements. Complexity of consideration organically coordinates all aspects of OEMIDME functioning as a complex of integral management systems: market mechanisms, including regulation and providing mechanisms, the economic mechanism of the enterprise, tools and methods management of innovative development management at the level of separate economical subject.

3. The principle of the main orientation on the innovative path of development. Provides the orientation of the business entity on the continuous search and use of new ways and areas of its potential realization in the changing environment in accordance with the chosen mission and the accepted motivation.

4. The principle of balancing between the subject interests subjects and the innovation process. It assumes the production and implementation of innovations should benefit all (ideally) participants in the innovation process: the investor, the developer of innovations, the supplier, the manufacturer, the retailer, the consumer and society as a whole.

5. The principle of “smart” innovation orientation to meet the needs and demands of consumers. In modern conditions, the manufacturer needs to be succeed in the market, he must focus its production and marketing activities (including innovation) to meet the interests of target groups of consumers. It is a traditional market approach.

6. The principle of equality between consuming and reproduction of nature materials. Limited natural resources, the existence of self-renewal limits determine the need for their artificial reproduction. However, the production aim is achieved through ignoring ecological ones. But, the achievement of ecological goals preserves the production development.

7. The principle of alternative development options. In conditions of permanent instability, constant changes in the political, economic, and ecological environment, the development of future events almost always have alternative nature. There are several possible consequences of the

decision with different options for their development.

8. The principle of maintaining a compromise between the risk degree and the expected results (the principle of justified risk). Multioptional sequence of events deals with risks, caused by disability to predict both the variants of events and the chance of their occurance (unidentity factor). That's why, there is a risk of having an inadequate decision.

9. The principle of flexible reaction. The transformation period in the economy of Ukraine requires high efficiency and flexibility to respond the changes market abilities and threats. Depending on the direction of the changes, a specific enterprise must quickly restructure its activities, choosing those development options that correspond to the new market situation and existing potential.

10. The principle of "reasonable extreme" of market positions. Adherence of this principle means that the company should focus on market niches or work in most market segments (ideally the market as a whole). The middle position is quite dangerous. Therefore, companies that do not have the means of achievement a leading position in the market, should focus their efforts on a niche market (several niches) or the target market segment.

It should be noted that the combination of these principles into a single complex allows us to consider the EMC of the business entity as an open, adaptive, dynamic system of probability (systemic principle), which operates in a market environment within the limits of state and regional regulation (the principle of complexity), which ensures long-term survival and development of the business entity in an unstable environment. Due to continuous search and using of modern means and areas of potential realization (the principle of orientation and innovation).

We are sure, that the main task of organizational and economic mechanism of innovation management at the enterprise is to direct enterprise entities on continuous search and realization of market innovation abilities in changeable environment under limits of chosen mission and accepted motivation. Adherence to the above principles in the construction of OEMIDME requires a systematic approach and, accordingly, its consideration as a complex one, in terms of internal and external environments its operation. The considered OEMIDME is closely connected with the social and economic policy of the state, which through a system of methods of incentives and regulation manages the formation of a socially oriented market economy.

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Chapter 3

DEVELOPMENT AND IMPLEMENTATION OF STRATEGIES FOR THE ECONOMIC SYSTEMS MANAGEMENT

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VECTORS OF GLOBAL ECONOMIC DEVELOPMENT IN THE CONTEXT OF A CHANGING DIGITAL SPACE

At all times, technological innovations have a decisive influence on the formation of trends in the world economy. Today, the primary stimulus for the expansion and reformatting of international economic relations is the so-called digitalization, which is the result of rapid innovative breakthroughs and scientific discoveries in the field of information and digital technologies. In the process of studying the problems of the impact of digital technologies on the world economy, researchers pay special attention to four elements: Internet of Things (IoT); Artificial Intelligence (AI); 3D-printing; Blockchain.

The above innovations have a significant impact on the formation of business models, the structure and content of technological processes, forms and methods of trade relations, and the simplification of trade procedures. The further spread of their use will significantly affect the productivity, items, methods and participants in foreign economic relations, as well as competitiveness.

The changes taking place in the global economy are facilitated by the growth of world trade in information technology goods (IT goods). The market for this category of goods is the most dynamically developing in comparison with other markets. The value of global exports of IT goods

has tripled over 20 years from $ 548.2 billion in 2000 to almost $ 1.7 trillion in 2019.China is the largest exporter of information technology goods today. It accounts for over a third of world exports [13]. It is important to note that in 996, China was only eighth in the list of the world's leading exporters of IT goods. However, over 20 years, the volume of Chinese exports in this segment of the world market has increased more than 48 times (Table 3.1).

Table 3.1

Leading countries – exporters of IT goods

Country	Export volume, USD bln			
	2000	2010	2015	2019
China	11,3	186,8	386,5	545,5
The EU	170,0	333,2	267,4	264,5
USA	108,6	133,3	133,6	148,7
Singapore	38,1	103,9	122,5	115,7
Taiwan	33,4	66,0	100,6	115,7
The Republic of Korea	25,6	78,3	97,9	115,7
Japan	81,9	98,7	84,5	66,1
Malaysia	21,7	56,2	60,5	66,1
Vietnam	0,0	...	...	66,1
Mexico	9,5	25,0	37,5	49,6
The world	548,2	1288,4	1406,4	1653,7

Source: [13]

Vietnam has rapidly burst into the top ten exporters of IT products in the last decade. This country has shown the most impressive average annual growth rate of exports: about 50% per year [13].

The share of IT goods in total world merchandise exports reached 10%, surpassing the share of agricultural goods, automotive products, textiles and clothing, pharmaceuticals, steel and ferrous metals. At the same time, the rapid growth of supply in the information technology market leads to a decrease in their cost. Over the past 10 years, the price of a computer has decreased by more than 2 times [13]. The affordability of information technology allows enterprises to quickly rebuild the technological schemes of economic activity, increase tangible assets at lower financial costs.

Information and technological innovations and inventions made it possible to significantly increase the power of computer technology, increase the speed of information processing and data transmission, and reduce the specific cost of their processing, which led to the active and

effective use of digital information. The ability to combine a variety of types and forms of information, transform them into digital, as well as the ability to classify, sort, store and analyze information, have become a source of rapid technological and economic development. Today, data streams are actively used to develop new economic models, establish relationships and dependencies, and prepare various types of forecasts. Many experts (S. Lund, L. Tyson, D. Weller, L. Im) call this phenomenon digital globalization, within which the paradigm of the organization of production, the configuration and content of international trade are changing. Research by the McKinsey Global Institute indicates that cross-border Internet bandwidth has grown more than 38 times over the past 10 years [8].

According to UNCTAD data, prices for mobile broadband in the world have decreased by almost 2 times over the period from 2009 to 2019. The decline in prices occurred mainly in developing and least developed countries, which allows an increasing number of economically active people to use modern communication methods [11].

Growing cross-border data flows, supported by basic and additional telecommunications services, such as cloud storage, are connecting more and more countries, companies, and users. Experts from the McKinsey Global Institute argue that the ability to rationally use cross-border data flows contributes to the growth of global gross domestic product (GDP) by an average of 3% per year [8].

The digitalization process leads to qualitative shifts in all spheres of production, economic and trade activities around the world. Formation of production technological processes using the Internet of Things, artificial intelligence modules and 3D printing allows you to reduce production costs and increase the competitiveness of products [4].

The Internet of Things is the interaction between information systems, equipment, machines, buildings with built-in devices and technologies for the purpose of exchanging data, as well as with the ability to control and monitor in an automated manner. The Internet of Things is currently a dynamically developing economic model. According to Statista, the number of IoT devices connected in the world in 2019 exceeded 23 billion units, and by 2025 this figure will more than triple and amount to 75.4 billion units. [9].

The dynamic development of IoT is accompanied by active financial investments in this segment of the economy. If in 2015 USD 2.4 billion was invested in the Internet of Things, then in 2019 the volume of investments was already USD 5.1 billion. It is predicted that the global

IoT market, which was estimated in 2015 at USD 157 billion, will increase by 2020 to $ 457 billion, reaching a compound annual growth rate of 28.5% [9]. Globally, the Internet of Things dominates in four subsectors: smart city (26%), industrial IoT (24), healthcare (20), smart home (14%) [7].

The active introduction of digital technologies into industrial production makes it possible to automate the management and monitoring processes. Research from the McKinsey Global Institute shows that the global digitalization of the food industry will achieve cost savings in the range of $ 290 billion to $ 450 billion by 2025. For the pharmaceutical industry, this figure is estimated at $ 67-105 billion.

Table 3.2 shows the figures for the projected cost reductions by 2025 in the food production industry, as well as in the pharmaceutical industry in some countries of the world.

Table 3.2

Forecasted cost reductions in food production and the pharmaceutical industry in selected countries, USD bln

Country	Food	Pharmaceuticals
China	93,3–132,5	0,01–0,014
USA	42,8–66,5	10,2–19,7
India	17,3–32,5	0,003–0,004
France	11,3–17,5	0,001–0,002
Germany	10,6–16,4	0,002–0,003
Russia	7,2–11,1	0,3–0,6
Spain	5,7–8,9	0,8–1,5
United Kingdom	7,4–11,5	0,9–1,8
Turkey	3,3–6,1	0,3–0,4
Poland	3,0–4,7	0,1–0,3

Source: [8]

The integration of advances in artificial intelligence in industrial robots and technological processes helps to increase production productivity, add new functions to the equipment used, and optimize work. At the same time, the processes of robotization on a global scale are heterogeneous. Thus, Japan, the USA, the Republic of Korea and Germany accounted for the largest number of industrial robots in 2019 (about 70% of the total number of operating robots). In other words, 2/3 of industrial robots are concentrated in economically developed countries. In the group of developing countries, China is the most robotic, where about 90 thousand industrial robots are operated, which is

3 times less compared to Japan and 1.7 times less than the United States. Robots are concentrated in several industrial sectors. The transport equipment sector accounts for 44% of the total number of robots, the electronic optical equipment sector accounts for 27% of industrial robots, and the rubber and plastics sector accounts for 8% [2].

This concentration is explained by the fact that production in these sectors is characterized by a high level of technological content of standardized products. 3D printing technology is the process of creating a three-dimensional object of almost any shape using digital models and special equipment. This technology allows you to effectively transform production, optimize and localize supply chains, reduce the number of production stages, as well as provide energy savings and reduce CO emissions. The potential of 3D printing technology lies primarily in the ability to produce parts that are complex in configuration and the rapid integration of equipment into production flowsheets. According to the forecasts of IDC (International Data Corporation) experts, in the coming years, sales in this segment of the world market will grow by an average of 18.4% per year and will reach $ 23 billion by 2022. Research shows that 3D printers are the most active are used in the following sectors of the world economy: aerospace industry; industry (including construction); healthcare; automotive industry; production of jewelry; energy [10]. Measures applied at the state level to stimulate the use of 3D printing have a beneficial effect on the introduction of this technology in countries such as China, the Republic of Korea, and India.

Digital technologies are positively affecting the international fragmentation of production. Thus, the use of 3D printing technology allows improving global value chains and changing their configuration. Now they can be based on cross-border exchange of data in the form of projects, drawings, software, rather than on cross-border exchange of goods [13].

It is obvious that the process of digitalization of economic relations increases the importance of human capital and makes adjustments to the structure of the global labor market. According to surveys conducted by the OECD, in recent years, IT personnel ranked second in the ranking of demand, behind only skilled workers in the field of trade [2]. In 2005-2019 the proportion of professionals employed in the IT sector consistently increased from 4.0% to 4.7% in Canada, from 3.2% to 4.1% in the United States, and from 3.6% to 3.8% in Australia. In 2019, IT professionals accounted for 4.8% of all employees in OECD countries. Active research and development work in the field of information and

communication technologies allows faster and better creation of new products, processes, methods and systems that are an integral part of digital technologies. In economically developed countries, IT researchers make up more than 30% of the total number of researchers, and this share has remained stable over the past ten years.

New models of economic interaction are emerging on the basis of information technologies, for example, digital platforms, which, according to a number of researchers, are used as an accelerator of a new era of globalization [6].

A digital platform is a business model that creates new value by facilitating exchanges between two or more interdependent groups. P. Evans and A. Gawer distinguish four types of digital platforms in their works: operational, innovative, integrated and investment. Operating platforms facilitate transactions between the manufacturer, seller, buyer. The innovation platform creates conditions for the unification of interested companies in an ecosystem in order to develop new technologies, goods or services. The integrated platform combines the features of both operating and innovation platforms. The investment platform consists of companies that intend to invest in projects aimed at the development of digital platforms as well [5].

In the world, the most widespread are operational digital platforms that unite end users and manufacturers, allow a potential buyer to study a product, compare prices, and get acquainted with reviews of those who have purchased such a product earlier. The ecosystem of a digital platform connects two or more parties, and the market power of digital platforms is largely determined by the network effect of connecting end users: a large number of customers attract more manufacturers of goods and services, and a large number of goods and services attract more potential buyers [5].

In recent years, the world's largest corporations have created their own digital platforms for managing suppliers, working with clients, and providing intra-corporate contacts for employees around the world. At the same time, a pool of publicly available Internet platforms has formed: these are operating systems, social networks, digital media platforms, and various trading platforms (Table 3.3).

The main advantage of digital platforms is the reach of an audience interested in making trade transactions. The use of digital platforms increases the transparency of transactions, expands the audience of potential buyers through an online presence through interactive sites, applications and social networks, eliminates the information asymmetry

of the market. In 2019, the market value of the ten largest Internet platforms reached $ 3.3 trillion, which is comparable to the size of Germany's GDP and is higher than the traditionally strong sectors of the world economy, such as oil and gas production, aviation and automobile manufacturing [11]. The largest digital platforms have user bases comparable in number For example, the number of Facebook users exceeds the population of China or India, Alibaba and Instagram – the population of the United States, Twitter, Skype, Amazon – the population of Indonesia.

Table 3.3

The largest internet platforms in the world

Platform	Country	Year of creation	Capitalization, USD bln
Apple	USA	1976	800
Google-Alphabet	USA	1998	650
Amazon	USA	1994	480
Facebook	USA	2004	430
Tencent	China	1998	340
Alibaba	China	1999	320
Priceline	USA	1997	90
Uber	USA	2009	80
Netflix	USA	1997	60
Baidu	China	2000	50

Source: [12]

The rapid development of digital platforms is facilitated by active investment activities in this segment of economic relations. According to research by Accenture Research, the volume of financial injections into the development of digital platforms increased from $ 0.5 billion in 2010 to $ 11.5 billion in 2019, or 23 times [3]. The widespread use of digital technology has had a significant impact on global trade, including the way of trading. The nature of competition in digital markets is significantly different from competition in traditional markets. In the first case, as a rule, innovations compete, and in the second, prices for similar goods. The UNCTAD report on the information economy notes that the total volume of global e-commerce in 2015 amounted to $ 25.3 trillion. However, statistics differ significantly by country, as well as in the way and methodology of their processing. Therefore, the availability of official e-commerce statistics is poor.

According to research by Statista, the global B2C (business to consumer) e-commerce market is developing quite dynamically and exceeded the $ 2.3 trillion mark in 2019.The B2B (business to business) segment shows even more impressive statistics. The volume of trade in this market segment in 2019, according to experts, reached $ 8.0 trillion. Thus, global e-commerce volumes demonstrate an annual growth of 12.1% on average in the B2C segment and 6.2% in the segment. B2B, which is a convincing indicator and is seen as a steady trend [9]. Digital technologies in world trade make it possible to reduce trade costs and minimize the impact on trade of factors such as distance, language barrier, and regulatory rules. Logistics and storage costs account for the bulk of total trade costs and, therefore, reducing them through the use of digital technologies has a potential impact on trade flows. Artificial intelligence helps to optimize delivery routes, and the use of robots can improve the quality of storage and accounting of goods.

Among other promising areas for reducing the transaction costs of cross-border trade, experts call blockchain technology. In recent years, the market for this technology has become the focus of investors' attention. According to the McKinsey Global Institute, in 2019 large corporations, venture capital funds and individuals invested $ 21.4 billion in the development of this technology. Experts predict that the global blockchain technology market will grow to $ 7.59 billion by 2024. In 2019, its volume doubled compared to 2018 and amounted to $ 1.5 billion. The growing demand for this technology is observed in the field of financial services, trade in consumer and industrial goods, telecommunications, healthcare, and transport [8].

The emerging global trends in the digitalization of economic relations require certain actions both at the multilateral level and on the part of national governments. Within the global trading system, more work is needed to multilaterally agree on principles related to aspects of digital commerce. It is also important to ensure, through the adoption of binding legal documents for the WTO member states, on the freedom of exchange of information aimed at stimulating innovative development, helping to eliminate barriers in the e-commerce segment, encouraging investment in digital infrastructure and human capital.

To benefit from digitalization at the national level, a long-term development strategy for the country should be approved, which should include a set of measures aimed at creating and (or) improving the infrastructure for digital development. In this regard, the state industrial policy requires reforming to eliminate the existing imbalances.

Improving the legal framework and promoting human capital development are important elements of the reform. It is necessary to promote and encourage digital education, improve the qualifications of personnel in the field of digital technologies, and implement special training programs for a wide range of people. The issues of protection of intellectual property rights, cybersecurity, data confidentiality are also very important and need to be addressed at the state level.

So, the global digitalization process creates the potential for the dynamic development of new economic models, stimulates productivity and increases competitiveness. At the same time, it must be remembered that the benefits from the use of digital technologies decrease over time due to the manifestation of the so-called commoditization effect, the essence of which is that as access to digital technologies expands, the ability of digital technologies to be a source of competitive advantages decreases [1].

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PERSPECTIVE DIRECTIONS OF DIGITAL TRANSFORMATION OF THE ECONOMY

The basic principles of economics are believed to have undergone a gradual evolution up to the present day. The first stage of the evolution accounts for mercantilism, an economic doctrine that dominated Europe from the 16th to the 18th century. Mercantilism is an economic policy to maximize exports and minimize imports. It aims to reduce a current account deficit and achieve surplus. Mercantilism promotes imperialism, subsidies, tariffs and restrictions on foreign imports. Consequently, the aforementioned mode of economic thought gives an incentive to colonialism, triggers conflicts and wars for political and economic dominance.

Emphasizing the need of specialization and division of labor Adam Smith vigorously opposed mercantilism. In 1776 the Wealth of Nations by Adam Smith was published. According to the core idea of the Wealth of Nations specialization should not be restricted by the size of the market as countries with access to other markets can divide labor more efficiently and become more productive. Therefore, the concept of Absolute Advantage, or in other words an ability of a country to produce more of a good or service than competitors, using the same amount of resources, was developed. Deeply convinced that mercantilism weakens a country, David Ricardo continued developing the aforesaid concept and showed that free trade would benefit both industrially weak and strong countries, in the theory of Comparative Advantage.

At the current stage of economic evolution we should be consistent with the main economic principles we have learnt over the centuries. The theory of Comparative Advantage, keeping markets open and treating industrially weak and strong countries equally can bring economic prosperity. To make business environment stable as well as to keep fair and open competition, the World Trade Organization (WTO) was established. The main principles of the WTO are to prevent countries from pursuing a policy of economic protectionism, to keep markets open and to lower trade barriers. Lowering trade barriers leads to creating fair completion between countries and encourages globalization.

Taking into account the titanic gains globalization has produced in overall prosperity, we can make a conclusion that due to globalization the latest technologies spread globally, increasing production efficiency.

In the current economic conditions particular relevance has been ascribed to the interconnection between the aforementioned latest technologies and an economy as well as to their impact on it. It is believed that the economy has entered the stage of digitalization as it has become inseparable from the functioning of the information and communications technologies (ICTs). The digitalization can be defined as the transition of businesses through the use of digital technologies, products and services (Brennen, S., Kreiss, D. 2014, 8).

Nevertheless, the digital economy concept lacks clarity. Therefore, its definition has undergone a gradual evolution, since it first coined in mid – 1990s. Table 3.4 reflects evolving definitions of the digital economy concept.

Table 3.4

Definitions of the digital economy

Source	Definition	Focus
Tappscott, 1996	"Age of Networked Intelligence… that combine intelligence, knowledge, and creativity for breakthroughs in the creation of wealth and social development"	It may be concluded, that in 1990s – 2000s the research of the digital economy was concerned with the adoption of the Internet and its possible impact on the economy
Brynjolfsson & Kahin, 2002	"...the recent and still largely unrealized transformation of all sectors of the economy by the computer-enabled digitization of information"	
European Commission, 2013 British Computer Society, 2014	"...an economy based on digital technologies (sometimes called the internet economy)". "The digital economy refers to an economy based on digital technologies, although we increasingly perceive this as conducting business through markets based on the internet and the World Wide Web"	It can be concluded that in 2000s – 2010s the concern regarding the digital economy concept has shifted, focusing primarily on the way new technologies affect the economy
House of Commons, 2016	"The digital economy refers to both the digital access of goods and services, and the use of digital technology to help businesses"	In 2010s – 2020s the questions of the digitalization measurement and policies for regulation and support of the digital economy are covered
Elmasry et al., 2016	No direct definition but three attributes of the digital economy are defined, "…creating value at the new frontiers of the business world, optimizing the processes that execute a vision of customer experiences, and building foundational capabilities that support the entire structure"	

Source: Bukht and Heeks, 2017, 6.

It must be admitted that due to the rapidly changing nature of the aforesaid technologies as well as to the lack of the widely-accepted definition of the digital economy, the sufficient understanding regarding the digital economy concept is limited. The only way to overcome the limitation is to assess the digital economy through its main components. Figure 3.1 represents three broad components of the digital economy.

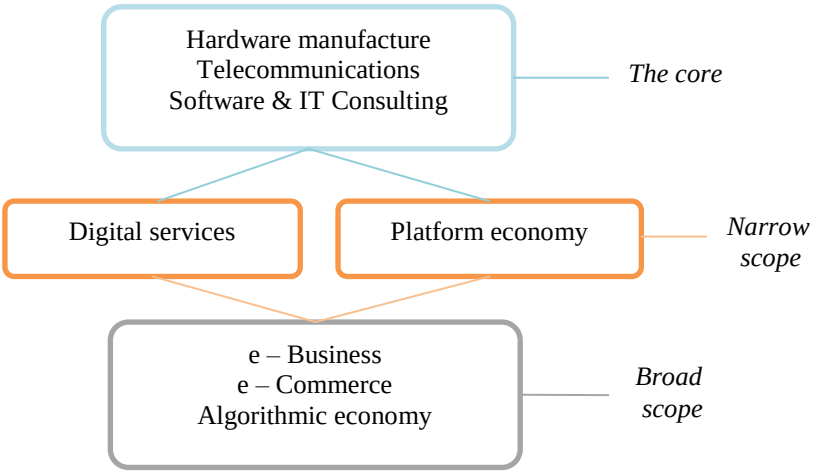

Figure 3.1 Main components of the digital economy
Source: Bukht and Heeks, 2017, 13.

The digital economy is believed to have its core. The core aspects of the digital economy include fundamental innovations (hardware manufacture), new technologies (computers and telecommunication devices) and the last but not least, enabling systems (Internet and telecommunication networks). Both narrow and broad scopes of the digital economy are dependent on the core. The narrow scope of the Internet economy represents digital services, mobile applications and payment services. The digital services of the narrow scope contribute greatly to the Internet economy, creating wealth. Once digital data is transformed into an application, it can be monetized. The broad scope includes already digitalized sectors of the economy where the aforesaid applications and services are being increasingly used.

The digital economy itself is often associated with the abovementioned applications, digital platforms and services of the

narrow scope. Therefore, it is essential to pay attention to the latest innovations that are of the greatest relevance for creating wealth.

These include digital infrastructure technologies, such as 5G mobile broadband, as well as machine-oriented technologies, such as Internet of things (IoT), cloud computing and the last but not least artificial intelligence.

Fifth generation mobile network (5G) is believed to be critical for the aforesaid machine-oriented technologies due to its high rate up to 10 Gbps, massive connectivity up to 1 million connections per square kilometer and ultra-low latency of 1ms. Table 3.5 represents mobile technology mix, by generation and region, forecast by 2025.

Table 3.5

Mobile technology mix, by generation and region, 2025 (per cent)

	2025			
	2G	3G	4G	5G
Asia Pacific	5	13	67	15
Latin America	5	21	65	8
Middle East and North Africa	10	32	52	6
Sub – Saharan Africa	14	59	24	3
Europe	1	7	63	29
North America	2	7	44	47
World	5	20	59	15

Source: UNCTAD, 2019.

It is believed that North America, Europe and Asia Pacific will be holding a leading position in 5G adoption. By 2025, the share of 5G in total wireless networks is estimated to reach 47 per cent in North America, in comparison with only 8 per cent in Latin America, 6 per cent in Middle East and 3 per cent in Sub-Saharan Africa (Table 3.5). Therefore, it can be concluded that vast investments in 5G infrastructure are required for developing countries to enable above-mentioned machine-oriented technologies and to maximize their positive impact on the economy.

Internet of things (IoT) is considered to be an indispensible part of the machine-oriented technologies. It refers to the growing array of Internet-connected devices such as sensors, meters, radio frequency identification (RFID) chips and other gadgets that are embedded in various everyday objects enabling them to send and receive various kinds of data (UNCTAD, 2019, 7). The IoT is widely applicable in energy meters, in manufacturing for RFID goods tagging, in agriculture

for soil and weather conditions observation, in retail and even in healthcare. Figure 3.2 represents the distribution of global spending on IoT.

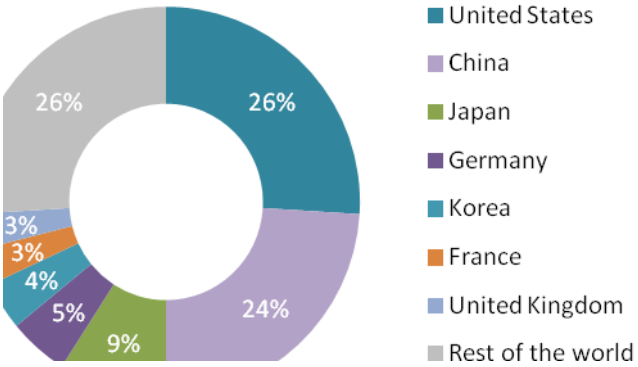

Figure 3.2 Distribution of spending on IoT by countries, 2019
Source: UNCTAD, 2019.

The United States and China represent 50 per cent of global spending on IoT technology. However, it is estimated that the global IoT market will skyrocket from $151 billion in 2018 to $1,567 billion by 2025 (IoT Analytics, 2018).

Cloud computing is another digital technology derived by 5G. It transforms businesses due to its ability to reduce costs for in-house IT departments as well as to maintain applications and services remotely in case in-house server crashes. Furthermore, an ability of the cloud services to provide free office – like applications for enterprises make them a great alternative to the licensed software whose cost might be sometimes an obstacle for small enterprises to conducting business. Nevertheless, it must be admitted that in many developing countries the cost of international bandwidth is too high to reach remote servers and data centers for the majority of local enterprises.

Large amounts of data that can be transferred via 5G contribute greatly to the artificial intelligence (AI) development. AI is already in use in such areas as machine translation, voice recognition, user assistance software and self-driving vehicles. The technology of AI is estimated to generate additional global economic output of around $13

trillion by 2030, contributing an additional 1.2 per cent to annual GDP growth (ITU, 2018b). China and the United States are believed to be leaders in AI development as these countries account for 75 per cent of the cloud computing market.

Therefore, it can be concluded that the abovementioned digital technologies can greatly contribute to the economy. However, at the same time these technologies may create a significant gap between those countries which have and those which do not have capabilities to adopt the aforesaid technologies. Consequently, both digital infrastructure and machine-oriented technologies are believed to be linked to two countries, the United States and China. For instance, the United States and China are considered to be the leaders in 5G adoption as well as in AI development. Furthermore, the aforesaid countries account for 50 per cent of global spending on IoT as well as 75 per cent of the cloud computing market. It is believed that developing countries do not have a capability to take advantage of the aforesaid technologies. Consequently, inter-governmental organization should be created to make business environment stable and predictable. Its principles and rules should cover intellectual property as well as digital technologies patents and usage. Furthermore, special treatments for developing countries should be created as digital technologies should contribute to all economies equally and open, fair and undistorted competition should be kept.

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CLUSTER IS THE MODERN FORM OF OPEN INNOVATIONS MODEL REALIZATION

Everything in the world is interconnected: both in nature and in human society. From the time of the primitive communal system, man sought to unite: first – to meet primary needs; and with the complication of relationships and the increase of their participants – to maximize profits and gain additional benefits. The complication of connections and the emergence of different types of associations have actualized the study of the patterns of their formation, development and classification according to the characteristics on the basis of which the interaction takes place.

The experience of development of human society accumulated over the centuries and the defining scientific discoveries and achievements allow singling out the most common and effective forms of interaction of economic entities.

M. Porter [6] was one of the first to focus on the competitiveness of both individual enterprises and national economies in general. It is by studying the nature of competition and its impact on economic performance, the scientist raises the question of the feasibility of

combining economic entities, in particular by territorial (geographical) and industry characteristics.

Analyzing the scientific literature, we can note a certain evolution of economic entities' interaction forms to increase their efficiency and minimize costs. One of the leading factors determining the choice of one form or another is the economic development level of the country in general and the science-technical sphere, in particular. First of all, it is a question of world science and technology achievements' introduction degree, about the technological way, dominating in national economy branches, and entities relation to innovations, ways of their origin and distribution. For example, regional aspect of science-technical development and its results manufacturing application in the 1990-s beginning are considered in [9]. Here the key forms of interaction between science and industry are research and production associations, concerns, financial and industrial groups. Implementation and development peculiarities of such organizational form as innovative entrepreneurship are researched in [1] and [3]. Its appearance is due to the time requirements and the peculiarities of enterprises' development at the end of XX – the beginning of XXI century. One of the leading domestic experts in the field of globalization problems' research and implementation of new forms of entities interaction, in particular clusters, is S.I.Sokolenko [10].

The research of entities interaction forms and its combinations is gaining momentum with innovation theory development and proof of availability of technological changes influence on enterprises' activity productivity and results (the middle of the XX-th century). This question is still being actual and in modern scientific research. The authors point out changes in the relationships of enterprises, organizations and scientific institutions during the transition from the closed innovations paradigm to the open innovations paradigm in such scientific works, as [2; 4].

This research aim is justification of expediency of clusters' using in the open innovations society.

The innovation theory founder and the category "innovation" author J.Shumpeter noted that it is necessary to remember the innovation's cluster nature. New knowledge, products, technologies, new approaches to raw materials sources and products sales channels can not appear and implement into economic practice separated from each other. They are interdependent. That is cluster approach makes the base of economic development innovation model effective implementation and realization.

"Cluster" as the scientific category and economic phenomenon is not new today. Industrial clusters form the basis of many world developed economics, in particular European. Cluster analysis occupies a prominent place among the methods of research and comparison of economic systems development level.

However, clusters, as the economic activity organizational form, adapting to the variable environmental conditions and new scientific concepts formation, are modified. One of the forms, which have recently become widespread in the developed countries, is innovation clusters.

To form innovation clusters features and separate them from the innovation activity organizational forms population let's turn to clusters' common characteristics. In summary, they are presented in Table 3.6.

Table 3.6

The Main Clusters' Characteristics as the Economic Activity Organizational Form

The Main Clusters' Characteristic	The Characteristic's Content
Geographical	Economic activity is done in the way "from local to global": for example, milk processing cluster at the regional level and engineering cluster at the national economy level.
Horizontal	Consolidation of several national economy branches within one cluster: agriculture engineering.
Vertical	The presence in the cluster of the production process adjacent stages, which form the core of the cluster: the chain "supply – production – distribution – consumption".
Lateral	The cluster includes different economic sectors, combining which provides economies of scale: multimedia cluster.
Technological	It is the population of branches, which use one technology: biotechnological cluster, nanotechnology cluster.
Focal	Cluster which is formed by firms that are concentrated around the single center – enterprise, scientific institution etc.
Qualitatively	The important thing is not cluster forming but efficiency and productivity using of relationships which are appearing among its components.

Source: compiled by the authors by [7, p. 17]

Analyzing clusters' characteristics from Table 3.6 it is need to separate the feature which is inherent in everyone characteristic and also each cluster type. It is the value chain. It is the base of cluster forming. There are the factors which influence the value chain structure and must be taken into account when creating the cluster [11, p. 27]:

– The region's residents specialized skills.

– Availability and possibility of the scientific research results using.

– Convenient geographical location.

– Developed infrastructure.

– Unusual local demand.

– Adjacent clusters presence – demand generators.

– The presence of organizations-leaders, which should become cluster's core.

– The structure of final product's price структура for consumer.

– The costs structure for product conversion and value creation.

– Supporting institutions' structure.

– The quantity and structure of organizations that are on different stages of value chain.

– Correlation of main and supporting activity of value chain members.

– Innovations and traditional institutions influence on value chain structure.

First innovation cluster as scientific category was defined in 2015. Clusters of Innovation (COI) are global economic "hot spots" where new technologies germinate at an astounding rate and where pools of capital, expertise, and talent foster the development of new industries and new ways of doing business [5, p. 37]. In this work the author distinguishes innovation cluster key components [5, p. 38]: Large Pools of Private Capital; Public Stock Markets; Major Corporations, Strategic Investors, R&D Centers, Potential Acquires; Venture Capital Investors; Entrepreneur; Government; Universities; Professions; Management.

In authors' opinion innovation cluster is the population of institutions and relationships among them. The association aim is: practical use of science and science-technical results, active implementation and popularization of innovation activity, creation of new markets and increase the level of access to modern technologies as entities, also individual consumers. Innovation cluster's defining feature is focal.

Taking into consideration the peculiarities of innovation activity realization by entities in American development model it is worth saying that the key institutions of innovation clusters activity are Venture

Capital Investors, Major Corporations, Strategic Investors, R&D Centers, Potential Acquires, Entrepreneur.

As for European countries, innovation clusters have not yet become defining form of innovation activity activation. But cluster approach is widely used in their economic common development. Technological platforms remain one of the widespread forms of innovation activity organization in European countries. This form's main feature is the initiative of its creation develops from bottom to top – from business to state institutions.

Another integral part of innovation activity activation is the innovation infrastructure objects. They are techno park (scientific park), techno polis, innovation business incubators, innovation centers, venture firms etc. Their particularity is that the creative initiative belongs to state institutions or state property organizations and enterprises.

Innovation clusters are the mix of existing management and innovation activity organization forms:

– The core of innovation cluster must be knowledge-intensive subject: scientific institution, university, techno park, innovation center etc. That is the structure the main activity of which are research and development (R&D) or technologies transfer. It is the confirmation of focal feature.

– The main task of entities which belong to innovation cluster must be the organization of innovation products production for R&D results. Therefore technological feature takes place.

– Because innovations in practice do not exist one by one and cause other innovations then we can talk about the inherent nature of the horizontal feature.

– Innovation creation process – innovation process – has three stages in its structure. They are science-technical activity, innovation activity, consumption. Within one innovation process each stage can be presented by different institutions. It is reminiscent the chain "supply – production – distribution – consumption". And gives reason to argue, that innovation cluster is inherent of the vertical feature.

– Because as science-technical also innovation activity require significant financial costs so distribution of work types within innovation process gives the opportunity to reduce the riskiness level and to increase its effectiveness and productivity. It provides qualitatively feature existence.

– Innovation diffusion which is definitely coming at the consumption stage causes not only its producers and consumers increasing but

spreading to another activities and economic sectors. It is the lateral feature.

– Innovation cluster is the effective form for activation of important activity or branch development in a certain region. That's why according to geographical feature innovation clusters development must start from local scale. And only after achieving planned results it is possible to move to the level of national economy branch and macro level.

The above justifications indicate that cluster as the form of economic activity organization can be used in innovation sphere, and the category "innovation cluster" is science correct.

If we speak about practical aspects of innovation clusters forming it is worth to begin from definition of scientific development centers.

The main feature of such territories is the presence of research universities, science-research institutes which realize research within priority directions of science and technique development distinguished by state legal acts.

Among other necessary conditions we must single out the presence in the certain science developed region of industrial enterprises which are able to organize the production for science-research works results. It is about both experimental production and launch of technological lines for innovation and knowledge-intensive production output.

Innovation infrastructure objects play significant role in the process of innovation cluster forming. They bring the novelty to the state of novation and innovation. There are the main activities of innovation infrastructure objects there: technology transfer, innovation management consulting services, innovation marketing, innovation firms' growth (innovation business incubators), innovation projects financing, innovation lending and insurance. These services development level will determine the quality of innovation cluster functioning.

The consumer is also important part of innovation cluster development. It is about the innovation products' distribution market. The innovation cluster task in contradistinction to industrial is the activation of science-technical and innovation activity development. And as the result it is branch and/or region development. The question which must be answered is innovation products realization. First of all it is demand forming. We must remember the consumers' attitude to innovations and their classification by this feature. One of the first consumers' typology by their attitude to innovations suggested E.Rogers in his work "Diffusion of innovatios" [8, c. 313]. It was published in

1962. The author singles out six stages of innovation diffusion process: attention, interest, estimate, audit, adaptation, recognition. He divides all consumers into five categories depending on their behavior [12, c. 86]:

1. Innovators (2.5 %) – highly educated, use different information sources, prone to risk.

2. Early adapters (13.5 %) – respectable group, the opinion of its representatives is leading in society, and their status is above average.

3. Early majority (34 %) – people category, who, although they have significant information contacts, hesitate and accept new ideas just before the average individual does.

4. Late majority (34 %) – skeptics who are influenced by others and make decisions after the average citizen does.

5. Late adapters (16 %) – traditionalists, who are suspicious of everything new and are the last to make decisions.

From this typology we can conclude that the main propellers of innovation activity results and simultaneously stimulus for its realization are innovators and early adapters. It is only 16 % from all consumers.

Thus, another task of the innovation cluster is to reduce the time lag between the intensification of demand by different categories of consumers. Thereby accelerating the process of innovation diffusion, and hence the moment of its departure from this innovation cluster and use in other regions and branches of the national economy.

The structure of the innovation cluster is summarized in Figure 3.3. The authors propose one of the possible approaches. Instead techno park you can use any other innovation infrastructure object depending on existent branch possibilities and market needs. Structures of financial and consulting support are included in the cluster in the absence or inexpediency of maintaining or organizing the relevant units at the enterprise. That’s why they are also flexible. Production bloc of innovation cluster provides not only existing branch enterprises which will be attracted to innovation implementation and innovation products production but also if necessary experimental production organization. This can be both at existing enterprises and newly created facilities. Innovation enterprises in such case can be created in several ways:

– From firms spin-off which are separated from the university (science institution).

– As the result of innovation business incubator activity. Business incubator can be the part of techno park structure.

– Through venture entrepreneurship development.

– As the entity.

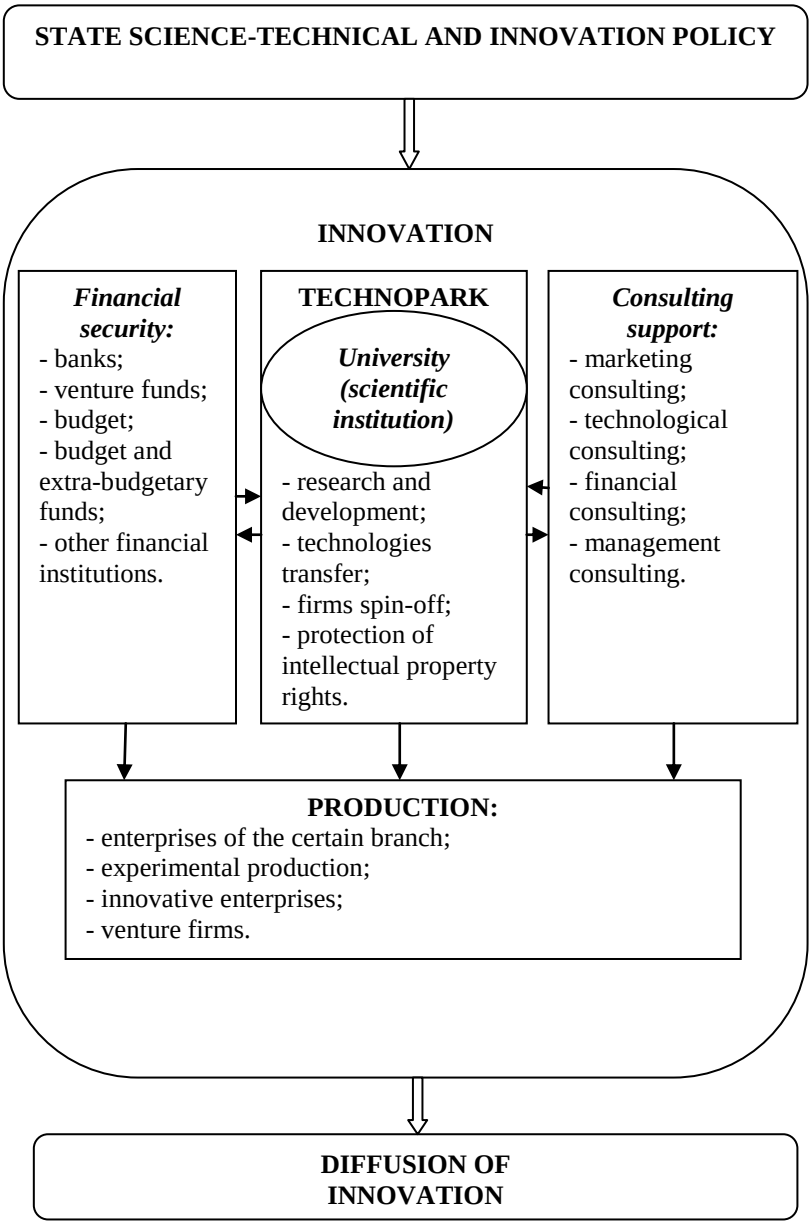

Figure 3.3 Structure of the Innovation Cluster

Source: compiled by the authors

Undoubtedly, the state has a significant influence on the possibility of forming clusters in general and innovation clusters in particular through the state scientific, technical and innovation policy. This is the regulatory framework, and financial participation, and a system of incentives, including tax. In the proposed figure, state influence acts as an external force.

Another external structural component of the innovation cluster in Figure 3.3 is the process of diffusion of innovation. In fact, this is the impact of the innovation cluster on the industry in which it is created and on the national economy as a whole.

So innovation cluster is the modern form of innovation process organization. It provides the involvement at each stage of highly specialized specialists from different organizations and combining their financial and economic relations to reduce business risks, reduces the cost of the final product and the possibility of its further use for their own needs. Innovation clusters development becomes possible after spreading the open innovation model. Because it provides joining forces of entities in science-technical and innovation activity to avoid parallel research and development, new products release accompanied by a trade secret.

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THEORETICAL ASPECTS OF INTRODUCING INTERNET TECHNOLOGIES IN BUSINESS PROCESSES

Widespread introduction of information technology and computer communications in all spheres of activity is inherent to contemporary society. Together with the globalization processes, they form a new economic space, radically changing the management strategy not only for the enterprise but also for the economy as a whole. This is due to the removal of barriers associated with the distance between producers and suppliers of goods and services through the Internet.

Under these conditions, the role of Internet technologies is significantly increasing. Their introduction into the economic activity of enterprises allows the latter to adapt to modern market conditions, increase competitiveness and efficiency. Today, the Internet is a tool for doing business that meets information needs, and creates an effective system of business relationships with consumers, and all elements of the external business environment. In view of this comprehensive research of the role of the Internet in business processes, the use of its tools for promoting goods and services is of great scientific and practical importance.

Problems of consumer goods' promotion in the Internet were studied

in the scientific works of Berezin O.V. [1], Belovodskaya O.A. [2], Ilyashenko S.M. [3], Pavlova V.A. [4], Shovkova O.A. [5; 6], D. Chefi [7], G. Schneider [8] and others.

Scientific and practical developments of foreign authors, despite their importance, need to be adapted to the conditions of national economy, but in the works of domestic scientists, many practical issues regarding the introduction of Internet technologies in the economic activities of national enterprises are ignored. Thus, today a number of theoretical and methodological issues of assessing the specifics of implementing Internet technologies in business processes, in particular in promoting products on the market and effectiveness of their application.

Insufficient elaboration of these aspects determines the relevance and feasibility of deepening research to further improvement of the forms and methods for consumer goods' promotion through Internet technologies to meet consumer needs and ensure competitiveness of domestic enterprises.

The purpose of the article is to develop a methodology adapted to the needs of enterprises operating in the B2C market based on the generalization of the results of literature sources analysis, systematization of the existing approaches to the assessment of the effectiveness of consumer goods' promotion via the Internet.

A characteristic feature of modern society is the emergence of the Internet – a virtual economic environment and a powerful tool for doing business – as a system. The Internet is forming new economic forces and at the current period, it is the most attractive area for venture capital investment.

The Internet economy (e-economy) has become the culmination of the development of information and communication technologies. The concepts of network, or Internet economy, considered in many scientific papers, are productive for defining and realizing modern potential of the Internet as an environment for business operations.

In Wikipedia, the Internet economy is interpreted as "the own business development on the Internet: opening of the site and virtual stores, use of electronic advertising and marketing, e-document management" [9]. In other words, the Internet economy is the application of modern information technologies in business and entrepreneurship.

Today, dynamic development of the Internet economy has a global impact on business companies, is strategically important for their

survival and future competitiveness.

There are the following areas in the Internet economy:

– Internet business (e-business);

– Internet commerce;

– Internet marketing.

Most of the scientific papers state that “Internet business” and “e-commerce” denote different, but equally necessary components in the organization of e-commerce.

The materials of the European Commission on the ESPRIT project consider such electronic business models as e-shop, e-directory, e-auction, e-shopping center, virtual community, virtual development center, information broker, business operations provider, business operations integrator.

On September 30, 2015, the Law of Ukraine “On Electronic Commerce” No 675-VIII came into force. According to paragraph 1 of part 1 of Article 3 of this law, e-commerce is “a relationship aimed at making a profit, arising from transactions for the acquisition, modification or termination of civil rights and obligations, carried out remotely using information and telecommunication systems. Due to this, the participants of such relations have rights and obligations of a property nature” [10, p. 2].

It should be noted that there is no definition of the concept of “commerce” in Ukraine legislation. Practically, everyday business reflects its application but not regulations. In the scientific literature, there are many interpretations of this term, which is often identified with trade.

Zubatenko O.M. says that taking into account the fact that, according to the mentioned Law of Ukraine, the purpose of e-commerce is to make a profit, it is possible to affirm that e-commerce is an economic activity carried out for profit [11, p. 5]. We share the author’s opinion, who advises to replace the term “e-commerce” in the text of the law with “electronic commercial activity” [12, p. 34].

Analysis of statistical information shows that the growth rate of e-commerce annually equals 25-30% on the average. The year 2014 was the most difficult period for the development of e-commerce, when the growth rate compared to the previous year was 21.6%. This decline was caused by socio-political events in Ukraine.

However, this figure is higher than the growth rates of e-commerce in the EU (Germany and France) and the United Kingdom given the turnover of e-commerce B2C.

The volumes of Internet trade in Ukraine increased from UAH 12.3 billion in 2014 to UAH 48 billion in 2017 [13]. The share of e-commerce in total turnover in 2017 was 3.9%. For comparison, in the EU countries it was 7-10%, in the UK 12%, the world average 6.5%, in the US 10.1%, which indicates great prospects for the development of e-commerce.

The subjects of e-commerce are households, enterprises (business), and public sector.

A number of specific features characterize the domestic e-commerce market:

– high growth potential;

– insaturation of the market with goods and services.

The level of business activity in the Internet economy and the degree of its impact on the traditional economy depend on the number of Internet users. Already in the mid-2012, Ukraine entered the top ten countries in Europe in terms of the number of Internet users: more than 15 million Ukrainians had access to the World Wide Web. According to the Internet Association of Ukraine, the number of Internet users in 2017 was 21.6 million people [14]. At the same time, the dynamics of Internet penetration is steadily growing: according to the International Telecommunication Union (ITU), the amount of data in the Internet will increase to 44 trillion gigabytes in 2020 [15].

Conditions for the functioning of modern enterprises require constant modernization of business processes, the use of innovative technologies.

The main advantages of using Internet technologies in the promotion of goods include the following:

– reduction of organizational costs for office rent, staff work, payment for goods transportation;

– expanding the range of potential buyers: communication with consumers, regardless of the geography of their location, time zone;

– the ability to select the distribution channel;

– the ability to choose the payment method;

– reduction of time for money transfer;

– the possibility of the product completion or its other modification.

The Internet is fundamentally superior to any other industry in terms of frequency and speed of change. New tools appear every year: social networks, targeting, mobile applications, viral marketing, etc.

Systematization of the existing methods and approaches to assessing their effectiveness is necessary for understanding the feasibility of using certain means for Internet promotion.

The process of developing an Internet project involves its marketing substantiation.

First, it is necessary to determine the interest of Internet users in certain goods or services. To do this, you should analyze the market capacity:

$$\text{Market capacity} = TA / SS, \quad (3.1)$$

where: TA is the transactions amount according to the statistics of search service; SS is a share of this search service among all others.

Data for the specification of the transactions amount of certain words can be found in Google. Thus, we can calculate the words popularity throughout the Internet and the number of potential customers for a given month.

CTR – Click-Through Rate determines the effectiveness of any advertising message. The click-through rate determines ratio between the number of an advertisement or banner impressions, and the number of conversions to this Internet address. Some online services, such as Google AdWords, consider this parameter during the determination of an advertisement position in the result of a search query.

The click-through rate is determined by the formula:

$$CTR = NCL / NSH, \quad (3.2)$$

where: CTR is the clickability; NCL – the number of clicks per one advertisement; NSH – the number of times the advertisement was shown.

Once the click-through rate is calculated, it is necessary to determine effectiveness of the website, online store or other online tool through which a visitor purchases certain goods and services.

This efficiency can be measured by the conversion rate CR – Conversion Rate.

$$CR = NC / NV, \quad (3.3)$$

where: CR is the conversion rate; NC – the number of buyers who made a purchase through an online tool (online store, website, online catalog or online storefront); NV – the number of site visitors.

The number of orders received through the website is determined by counting pre-orders through online forms on the website and telephone

orders received by the numbers listed on the website.

The actual number of orders is calculated by formula (3.4) and is approximate, because the market capacity is determined inaccurately, with some error.

$$\text{Number of orders} = MC \times AC \times CTR \times CR, \quad (3.4)$$

where: MC – market capacity; AC – audience coverage; CTR – clickability; CR – conversion rate.

The cost of attracting one order is determined by the following formula:

$$COA = AC / NO, \quad (3.5)$$

where: COA – the cost of one order attraction; AC – advertising costs; NO – number of orders.

Therefore, to increase the number of orders, it is necessary to optimize advertising costs and increase the conversion rate.

The following positions assess the expediency of the company's actions concerning placing information on the third-party Internet resources (or sites of information intermediaries):

1. If the company has its own site, the number of conversions to it is estimated (the company's actions on attracting users to the site are called General Leads) by placing links on the sites of information Internet intermediaries.

2. Conversion rate of personal page visitors to consumers, suppliers, etc.

3. Evaluation of the resource as a communicative page based on data concerning the number of visitors and their actions (downloading information, feedback).

It is worth noting that in scientific works insufficient attention is paid to determining the effectiveness of using information Internet intermediaries as a tool to reach the target audience. We have proposed the ways to determine the coverage of the target audience in the case of enterprises using the sites of information intermediaries.

When choosing third-party resources, it is advisable to take into account the following factors:

1. Intersection of audiences of intermediary sites: depending on the results of the calculation, the resource characterized by the highest degree of intersection has almost no effect on the overall coverage of the

target audience.

2. The ability to review statistics on the site traffic.

In our opinion, if the statistics of visits to the pages of the information intermediary resource are open to third-party access, the coverage of the target audience should be determined by the formula:

$$IM = \frac{Qpp}{\sum_{i=1}^{n} Qk} \times 100\%, \quad (3.6)$$

where: *IM* is coverage of the target audience on the intermediary resource; *Qpp* – the number of visitors to the personal page of the enterprise on the site of the information intermediary; *Qk* – the number of visitors to the page of the considered competitor.

It is proposed to assess the possible degree of the target audience coverage, placing marketing information on the intermediary resource by the formula:

$$IMp = \frac{U}{Qz} \times 100\%, \quad (3.7)$$

where: *IMp* is the expected degree of the target audience coverage; *U* – the average number of visitors to the pages on which the target audience is concentrated; *Qz* – the total number of visitors to the pages of the competing sites.

It is proposed to calculate the average number of unique visitors to the pages concentrating the target audience according to the formula:

$$U = \frac{\sum_{i=1}^{n} Qk}{n+1}, \quad (3.8)$$

where: *Qk* is the number of visitors on page *n* of the competitor enterprise.

Calculating the indicator U, we take into account transition of the part of audience from the competitors' pages to the page of the studied enterprise: the total number of pages considered is *n* +1.

The estimated cost of reaching one representative of the target

audience is determined by the ratio of the cost of placing marketing information on the site of the information intermediary to the estimated number of visitors to the personally generated page of the advertiser.

Some sites do not allow third-party users to access statistical information, providing it only to potential advertisers upon request. If the resource is not specialized, to determine the representative indicators of the degree of coverage, it is advisable to request data for individual sections, which focus on the target audience.

It should be noted that this methodological approach to assessing the effectiveness of promoting the company's products in the Internet environment allows comparing goals with the company's capabilities, thus avoiding investment losses.

Research of the Internet environment as a powerful tool for conduct of business, current state, the processes of functioning and development of Internet technologies and e-commerce system allowed to identify trends in the Internet economy, taking into account the increasing number of Internet users, the volume of Internet commerce in Ukraine and the world.

The main advantages of using Internet technologies in terms of promoting goods and services on the Internet are identified. Generalization of literature sources concerning the problems of network economy development allowed to systematize the components of the process of e-commerce organization.

Methodical background of estimating efficiency of promoting the enterprise production on the Internet is developed, and the author's methodical approach is offered. In particular, based on the conducted research, the expediency of inclusion to the method of indicators for determining the share of target audience coverage by the sites of marketing Internet intermediaries is substantiated.

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PRESERVING VALUE OF ORGANIZATION IN CHANGING BUSINESS ENVIRONMENT: TRADE OFFS MANAGING PUBLIC INVESTMENTS

INTRODUCTION

With the Europe 2030 strategy (EC, 2019), smart, sustainable and inclusive growth got a more prominent place as it became its main pillars. Its objectives are developing an economy based on knowledge and innovation, promoting a more resource efficient, climate friendly and competitive as well as a high-employment economy delivering social and territorial cohesion. Actions under these priorities aim at modernizing and strengthening society and business with focus on creativity and effectiveness for "greener", knowledge and innovations-based economy. The latter also encompass solutions for employment, education, social protection systems incl. labour participation and reducing structural unemployment, as well as increasing social responsibility among the market participants including public governance organizations.

In order to contribute to the EU strategy on smart, sustainable and inclusive growth the business organisations must focus on the promotion of sustainable and quality economic development with effective employment, labour mobility, health and social security (and inclusion). Consequently, every market player related directly or indirectly to EU market needs inevitably take into account as per concrete areas, measures indicators for the results to be achieved and measured accordingly to the requirements of the Europe 2030 strategy targets. Consequently, scientific researches concerning vale preservation for business organisations acting under circumstances concerned are not sufficient and fragmentary. There has been no research made in order to form the robust basis for preparation and effective implementation of economically proven solutions in concert with requirements for management of business organizations aiming at objectives of smart, sustainable and inclusive growth. In this respect the paper synthesizes a vast spectrum of literature and empirical data in an attempt to

systematically approach this issue. The specific focus is on public and private investments and dynamically changing business externalities when finding solutions for value preservation (however in compliance the Europe 2030 strategy goals (EC, 2019)).

MANAGING VALUE FOR COMPETETIVE ADVANTAGE

Traditionally, business success is determined by the ability to compete effectively. Today, however, in the changing business and its environment, only organizations that are able to compete but actively participate in shaping their business environment, its structure and nature (identify, classify and shape (influence, change) economic entities, their relationships), can expect the long-term success of their business. In this respect when considering value creation, its preservation, as to empirical findings of different sectors of the economy as well as various scientific sources (Bel, 2018; Bengtsson *et al*., 2016; Brandenburger & Nalebuff, 2011), it is found to be proved, to a large extent, that co-operation and competition in business are equivalent necessary and desirable processes, namely:

– co-operation between market participants is needed to create value - meaning strategic efforts focus on market development;

– competition – efforts towards sharing value generated between market participants – hereby we have strategic efforts focused on market sharing.

In order to exploit and properly manage the benefits of cooperation and competition the insights subject to development of a value network could be used with respect to the management of target business environment. In this respect aspects of gambling aspects (as to the theory of games) are useful to consider to ensure practical benefits (for analysing, investigating and appropriately acting on market participants seeking to achieve firstly the objectives of investments and (or) the organisation concerned (and its ecosystem). There has to be noted that the theory of games provides the necessary economic basis for identifying the business circumstances in which a cooperation can be considered a priority strategy of the organization. Subsequently the latter investigates how the interaction between various market participants and the decisions they make leads to different performance results of the latter business activities. The purpose hereof is to develop competitive solutions, providing as well insights for strategic management. In this context considering possible value of investments and for market participants (and for their ecosystem, if any) the following four strategic

roles are specific to each organization and accordingly to be taken into account when acting on value creation, its preservation, also for long term horizon, and sharing the latter aiming at, for instance, strengthening strategic influence over market participants, increasing the market share as well as building, for instance, fundamentals for the demand for its services and goods:

1. The entities and other market participants to whom the organisation in question sells its goods and services in exchange for cash or other contractual remuneration. Acting as the main partner and (or) customer under particular circumstances could be, for instance, the case to consider.

2. Acting as the distribution channel and (or) developing one as well as seeking for cooperation with such networks.

3. If there were the case that consumers value less the organisation's product in comparison to the product from another entity (even if they had purchased only the organisation's product) the business case, when competing on the same dimensions take place, could be considered. Definitely, the latter approach is not perspective however if an organization's product is used as a substitute for a competitor's product, it is likely that the market for a competitor product will decline as the product market increases. The latter case will also applicable if the supplier supplying the resources to an entity becomes less profitable namely when supplying the organization (even if it were merely supplying the organization with the resources). In principle, business entities compete with each other for the quantity, quality, cost.

4. Complementing roles, for instance, as following:

– An entity is a complementor to an organization if consumers, when owning the entity's product, value the product of the organization more than if they had only the product of the organization. Definitely as demand for complement products increases, as does the demand for the organization's products.

– An entity is a complementor to an organization if it is more profitable for the supplier supplying the resource to the entity to supply resources to the organization (than if the supplier were to supply resources only to the organization). In a relatively small market, it is often difficult or (and) thus expensive (due to requirements of critical mass for both demand and supply sides) to obtain resources for the required characteristics. As the market expands, suppliers may as the result to adjust their supply conditions, creating more reasons for

positive demand dynamics.

It is important to note that an entity can play many roles: being a competitor and a complementor and even substitute at the same time. For example, rivals Toyota and Subaru (both from Japan), automakers, used their factories for manufacturing together some models while using different names when selling assembled vehicles. Another example is subject to home appliance manufacturers – rivals Sony (Japan) and Philips (Netherlands) – acted as complementors, creating a standard for optical data media (also called compact discs or disks) some decade ago. As the result the whole industry have had to face changing externalities of business environment and respectively reconsider perspectives of competitiveness of value it delivers.

Aiming at value creation, in terms organisation's relationships with complementors and substitutes, it is also important to note that the organization have to maintain (build, enhance, develop) such value network members, if that is inevitable, but does not enter into any monetized transactions. For the practical application of it is necessary to know the parameters determining the nature of the value network. An organization capable of regulating value network parameters could model the business environment. In this respect the theory of games, empirical findings of different economy sectors as well as various scientific sources let us to identify respective parameters, namely market participants, added value and rules used, tactics and scale of business operations. The latter are needed in order to characterize and determine the interaction of the market participants of target environment related to enterprise (and (or) its business ecosystem) subject to value creation, its preservation constituting respective ecosystem. Namely, it is critical to characterise the interaction of the market participants in the following terms:

– determining the structure of the value network, as well as the scale and scope of the value generated by the ecosystem;

– defining business strategy alternatives (their combinations) respectively influencing the structure of the value in the desired direction.

In this context Brandenburger & Nalebuf (2011) suggest that an organization must change at least one of the following parameters in order to modify the value structure, value size, and weight of the value-creating element in the value network:

- Organisations forming a value network – the value network can be used to identify and categorize existing economic entities and other

market participants. Involving more market participants – consumers, suppliers, complementors and competitors (substitutes) in a value network (and (or) business ecosystem) can positively impact an organization, for example: increasing number of vendors can lower supply costs; increasing number of complementors may increase the value of the organization's product (and potential benefits offered), and there might be an increase in consumer choice with more competitors. In this respect the following questions must be answered to describe this parameter:

– What is the structure of the organization's value network (s)?

– Is the list of participants in the value network comprehensive, detailed, up-to-date?

– What are the opportunities for the organization to collaborate and compete with value network participants: suppliers, consumers, complementors and substitutes (competitors)?

– Does it make sense for the organization to change the structure of its value network members?

– What new members does it make sense for the organization to have value in the network?

– Who is at a loss and who can benefit from being part of a value network?

• Managing added value – an organization can compare the value added it generates with value added of other economic entities in the value network, and take appropriate action to increase its value added (of course to increase operating profitability), for example: An entity in a dominant position may restrict and otherwise manipulate the supply scale, while in a competitive market an entity might be interested in developing a closer relationship with both suppliers, users and complementors, and possibly with competitors and possible substitutes. Number of practical examples can be without particular efforts found as among free market economies as among developing countries as well as among newcomers and mature market participants. In this respect the following questions must be answered to describe this parameter:

– What is the added value of an organisation?

– How can an organisation increase its added value?

– Can the organization create, increase the number of loyal customers, vendors?

– What is the added value of other value network participants?

– Is it appropriate for an organisation to limit the added value of other value network participants?

- Setting and managing rules – written and unwritten rules applied in any economic activity as it is well known. Many of the rules are laid down by legislation, which can be amended by legislative, executive power. However, business contracts between market participants make it possible to change these rules or their scope in the interests of the parties to the contract. In this respect, for instance, let us consider product competitiveness. The latter is a comparative indicator that shows the level of the specific demand satisfaction. This indicator is determined by comparison of competing products. A buyer prefers a product only if it has an advantage over other competitive products and ensures better satisfaction of customer demands.

The value of a product to a customer is determined by the complex of qualitative parameters, which are often grouped into "hard" and "soft" parameters:

✓ "hard" parameters define how a product functions, describe the main characteristics and their conformity to national and international standards and norms including, for example, mandatory requirements for reduction of carbon emissions and increased use of renewable energy resources in manufacturing. In addition to respective regulatory sanctions for failure to comply with climate change objectives, noncompliance with these legally determined parameters can cause a loss of a market share;

✓ "soft" parameters characterise the aesthetic features such as design, colour and packaging.

As each "hard" parameter is determined by a specific value, no sophisticated evaluation is required. In order to evaluate the conformity of "hard" parameters to the requirements of the standards and norms, the following competitiveness indicator can be used (see Eq. (3.9)):

$$\gamma_1 = \prod_{k=1}^{m} g_k \; ; (k=1,\ldots, m), \tag{3.9}$$

where: g_k – evaluation of the conformity of the "hard" parameter k to requirements of standards and norms; m – the number of "hard" parameters subject to analysis; γ_1 – the competitiveness indicator that shows the conformity of product parameters to requirements of standards and norms.

"Soft" parameters have no physical measure; thus, their evaluation is subjective and based on product characteristics.

For example, in the interest of the consumer, the consumer may be allowed to purchase the product on particularly advantageous terms, which would mean that market participants (as those of competing or substituting as well as complementing) have the right to offer such terms. In this respect the following questions must be answered to describe this parameter:

– Which rules are useful and harmful to the organization?
– What business rules would the organization want to have?
– What business contracts would the organization want to have with consumers, suppliers?
– Does the organization have the power to define business rules?
– Who has the power and (or) influence to change business rules?

• Setting and managing tactics for particular business operations hereby could be understood as the actions of the economic entities (participants of business ecosystem (and even several could be the case as well as to business circumstances) subject to the value network), which the economic entities carry out in order to shape, change or otherwise manage the perception of the environment of other participants and their insights. The actions of the value network participant are always rational in terms of understanding the participant's own reality. The organisation may influence the perception and actions of the environment of other participants, deliberately sending certain signals to the environment, for example, in terms of information of some kind, using subjectively and/or disproportionately marketing measures. Another example could be subject to engaging experts in evaluation of "soft" product parameters mentioned above. Hereby in terms of qualitative parameters, product competitiveness cannot be expressed using absolute values. It is reasonable to use determined comparative values having compared analogous products. An analogous product has to belong to the same group of products as the considered product. The analogue has to be well-known in the market and its main parameters have to be investigated taking into account the specifics of the changing environment of the market. However, if data is hardly comparable, fuzzy the normalization techniques related to multicriteria analysis need to be applied.

• In this respect when managing value, the enterprise in questions as well as related value network participants need to be aware of such impact measures and be able to identify, neutralize and apply countermeasures of an operational, tactical and strategic nature. In this

respect the following questions must be answered to describe this parameter:

– How do other participants in the value network understand the business environment?

– How do the value network participants' perceptions and insights about the business environment affect the relationships among value network participants?

– What concept, insights about the state of the business environment in a value network does it make sense for an organization to maintain?

– What concept, insights about the state of the business environment in the value network does it make sense for the organization to change?

– Does it make sense for the organization to have a transparent or less transparent business relationship?

• Managing scale and scope of business operations. Of course, nowadays, most types of business and management models related thereto are not isolated but, on the contrary, open and, where appropriate, interconnected (albeit being a completely different) systems. Accordingly, the organization can develop its activities on various value networks, increasing their value and profitability. On the other hand, an organization that avoids competition between its activities may deliberately seek to manage its activities without linking them (and, accordingly, the value networks of the activities in operation). The need to link or distinguish the activities (their value networks) is determined by the extent of the organizations' complementors in its ecosystems as well as the markets (and value networks). The extent of the business interface (segregated) can be regulated by an organization through normal business contracts (thus regulating the nature of the business relationship) or by influencing the understanding of the business (value network (s) participants), insights about the target business environment. In this respect the following questions must be answered to describe this parameter:

– What is the current scale of economic activity in the context of the value network?

Would it be beneficial for the organization to change the scale of its business?

– Does it make sense for the organization to link the value network to the other (s)?

– Does it make sense for the organization to separate (or keep disconnected) the value network from other networks?

In conclusion, the insights provided above in the chapter let to identify, explain and shape (influence and change) relationships between value network participants and the participants themselves, utilizing cooperative (and competitive) tools to strengthen and expand strategic positions for the benefit of the organization. This is valuable when considering the strategic context of target environment when dealing with value creation, its preservation, and sharing the latter aiming at, for instance, strengthening strategic influence over market participants, increasing market share, creating fundamentals for the demand in long term horizon. Of course, the organization can apply cooperation (and competition) measures at any time, if necessary. Thus, the set of parameters reviewed is undoubtedly valuable for strategic planning and, essentially, for the strategic management of the organization. On the other hand, in terms of tactical, operational management, the set of the checklists per parameter discussed could be even further specified. But this gap will be filled with examples of concrete strategy-making and implementation measures that are addressed in the next chapter.

FORMING COMPETETIVE STRATEGY FOR PRESERVING VALUE

In order to achieve the purposefulness, exclusivity, persuasiveness of the strategy, the whole of the components that make up the strategy must not only harmoniously combine the necessary actions and means to achieve the intended goals subject to value creation, its preservation. This entirety must also dynamically (according to changing business environment conditions) adjust and direct the organization's capabilities and processes and their combinations to achieve the selected priority objectives.

Let's look at the essence of the strategy aiming at value creation, its preservation in relation to an example of the principle set of measures subject to formation of the strategy of an organisation.

Having in mind variety of concepts, theories, related models dealing with corporate strategies suggested and analysed in diverse scientific sources the author proposes to consider so called strategy "diamond" model (Hambrick & Crossland, 2018; Hambrick & Fredrickson, 2005; the insights of the model are also supported to significant extent by authors of Blue Ocean Strategy and Blue Ocean Shift (Kim & Mauborgne, 2017, 2005)) The latter is deserved to be treated as one of

the most significant instruments of nowadays scientific literature. The parameters of the latter model allow to systematically analyze the strategy of an organization (as in strategic context as in tactical and operational levels) perfectly fitting when solving the tasks subject to value creation, its preservation in the long run. The parameters therein provide an accurate, fast, concise but clear analysis, integration, and generalization of a wide range of business strategies (from a specific good and (or) service to functional, strategic business units, and overall business strategy of organization).

In principle, the model can be used to formulate a strategy in terms of the development of an existing organization's position and perspective. It must also be emphasized that perceiving strategy as a choice – choosing between what an organization needs to do and what not to do – the model in question also helps identify potential alternatives to management decisions and management gaps in the strategy (both present and future). Authors of the model, professors Donald C Hambrick and James W Fredrickson, sought to create a model that would allow managers of organizations to accumulate and examine all policy parameters as a combination rather than a single element (suppose the ratio of product price and product design cost or the ratio of product development capacity and design cost and etc.).

The "diamond" model of the strategy is, in practical application, a checklist (rather than a model) of issues in terms of the organization's target markets, development measures, strategic changes, financial (and other economic) outcomes.

Let's discuss the structure of the model in more detail.

1. Arenas – which areas will the organisation operate and expand? The arenas are defined as the geographic and other aspects of the services, goods or various markets, or sectors of the economy (production, supply, distribution, chains, their stages, etc.) where the organization decides to operate, strengthen and develop its activities. The business arena also determines the nature of the value created by the organization, the design of the development process, the nature and sources of resources and other capabilities used, such as IT, home appliance software, marketing tools, and the increasing use of other relevant IT entities. To describe this element, you need to decide what organizations are:

- target markets;
- geographic and other points of view of the target market;

– target categories of goods and services;
– basic technologies;
– areas, stages of production, supply or distribution, etc.

2. Measures – how will the organization enter and operate in the targeted arenas? These are the internal resources, strengths and externalities of the organization (various types of cooperation (franchising, licensing) between entities, acquisitions, mergers, joint ventures, etc. (Hein *et al*., 2019; Sonenshine, 2019)) necessary for the effective implementation of the organization's strategy – for successful development in selected arenas.

3. Distinctive parameters – how does an organization expect to defeat in selected performance arenas? These parameters are the characteristics of the organization that determine the competitive advantage of the organization in the chosen operating arenas. It is not only the reputation of the organization, the appearance or the price, reliability of the goods or the speed at which the goods are placed on the market or the characteristics of their operation that can determine distinctiveness. Distinctiveness can also be due to the nature of resources and processes and their combination, and the ability of managers to create and properly manage a combination of resources and processes that maximize and effectively exploit the competitive advantage of an organization in changing business and environment environments.

4. Sequence and speed of strategic decisions – what decisions, in what order and speed should be executed? Since it is difficult to define and measure the strategic decision trajectory, its possible developments, this parameter is useful for setting the decision reference point. For example, regional dairy producers are developing and strengthening their brands by expanding their existing and new product target markets and then using them to strengthen their strategic positioning and for geographic expansion. Meanwhile, other business entities are building factories in Ukraine in order to consolidate and expand in the eastern region, planning to use the created capacities to strengthen its brands and to manage its product range not only in Ukraine but also in western Russia and Belarus. In this respect one may need to decide regarding the following:

– the speed with which the organization can expand into new markets;

– the speed at which the organization will be able to reduce its size, scale or otherwise exit the market;

– the sequence of strategic decisions such as developing, expanding the range of goods, services, organizing production, developing activities in existing and / or new target markets, developing business relationships with various entities, etc.

5. Economic logic – how and in what way will the organization benefit from the strategy (combination of parameters discussed above)? The economic logic parameter demonstrates how all the strategy parameters discussed must be mutually compatible so that the strategy becomes acceptable to the owners, other stakeholders, investors and other interested parties in the organization, for example:

– the economic logic of profit-making entities can be expressed in terms of economies of scale, advanced technologies, standardization of the various production, supply, realization processes, advantages of exploiting their combinations;

– the economic logic of a non-profit entity can take the form of providing high-quality public services to all entities quickly and free of charge;

– the economic logic for the development of business models based on renewable energy solutions will depend on dynamics of prices of energy resources, regulatory regimes of the market in question;

– the economic logic towards efficient use of public investment funds, EU financing facilities will be based on compliance with the concrete objectives set for particular economy sector by, for example, respective financial organization (i.e.: European Investment Bank, World Bank, European Bank for Reconstruction and Development and others alike) or EU member state or authorities in question in various levels of public governance.

Ideally, the practical application of the diamond model of strategy should begin with the choice of arenas and means of exclusivity of value parameters. The element of measures will determine the potential (and its sources) of the organization needed to realize the strategy. Accordingly, via sequence and the speed of execution of the strategy there are designed the necessary strategy changes (content, scale, consequences) in the organization and its activities. From the point of view of economic logic, it is necessary to decide clearly and unambiguously, on the basis of quantitative indicators, how the combination of the four elements of the strategy must work in the most beneficial and profitable manner in materializing the strategy. Of course, in the context of holistic strategic management of an organization, all

five elements of an organization's strategy must be involved, and the success of the strategy will depend on the effectiveness of the interaction between these elements when creating, delivering value and in principle managing the whole value chain.

Definitely, the "resources" needed to combine all five elements discussed above are well known, namely: the organization's mission, vision, goals, objectives, results of the analysis of the organization and its environment. Only by clearly and in detail describing the above five elements of strategy the managers of the organization can form and implement the functional level strategies, tactical and operational plans necessary for the implementation of the strategy, and accordingly set the management structure and other work processes.

Thus, in the context of the diamond model discussed, the following conclusions must be drawn when considering value creation, its preservation:

– the strategy must be divergent, focused and compelling;

– from the point of view of the five elements discussed, it is also easier to transform an organization's strategy into functional strategies, tactical, operational work plans, processes, operations, which provides real opportunities for successful strategy implementation through concretely defined acts, actions, operations and functions as per investment project as per execution of business tasks at strategic, tactical and operational levels;

– the diamond model of the strategy is inherently universal and can be applied to different sectors of the economy;

– the model can also be used to analyze competitors, for example, to determine the determinants of their strategies.

– it is necessary to pay attention to the dynamics of the parameters of the strategy model: the change of any parameter can lead to the change of the remaining parameters, which will definitely influence the efficiency of the strategy. Of course, the dynamics of a strategy model can be determined not only by internal factors within the organization, but also by its environment (influencing the relevant elements of the strategy);

– and, surely, the strategy should not be limited only to the planning activities when managing competitiveness of concerned value chain and (or) business model.

THE INSIGHTS ON INVESTMENTS AS THE SOURCE FOR VALUE GENERATION

Traditionally the project is understood as a measure for seeking an advancement (as quantitative as qualitative) when transforming available inputs into particular outcomes. The alternative approach is that the project is seen as a temporary formal (or even informal) structure where a group of individuals temporarily enacts a common cause. Another perception on investment project management suggests that project work needs to take into account a complexity of actions, social processes also value creation. There is important to understand that the project as an open system is interacting with its business environment and respectively stimulate the development of any form of organization acting as a project owner or (and) maker. As a part of this approach, four different perspectives on business projects could be considered:

- projects as value creation,
- organizational change,
- intervention,
- service delivery.

In addition, when making sense of the complex investments, the following aspects have to be taken into account: social, political, intervention driven, value creation, development focused, temporary activity, and change driven.

Furthermore, another, rather complementary approach on project management could be found (Svejvig & Andersen, 2015) with following factors proposed for consideration: the project concept encompassing environment and organizational strategy, social and political aspects, alternative management methods, complexity and uncertainty, rationality of implementations.

Positions given above have one criterion in common – the purpose of the project. In this respect two project management perspectives can be seen:

– the task-oriented (the project is aimed at making a unique product with main focus on compliance with delivery, a budget and requested quality requirements), or

– the organization-oriented (the project is rather a temporary project entity of particular legal form acting in close interaction with a permanent (mother) organization (a founder of a project organization) with main focus on creating value to the mother organization (Andersen,

2016).

As to conventional wisdom a project is regarded as a non-repetitive task, a temporary activity undertaken to create unique goods, services as well as combination of both. It is a traditionally used a task-oriented approach. In this regard, specifying task-oriented project management approach the objectives of the project are to be set at the beginning of the project, respecting the following three key attributes, namely: the completion date, the budget of the project, the quality specifics of project deliverables.

Consequently, detailed planning is needed at the start of the project. The task is split into subtasks and put together into a concrete action plan. Experts of different categories can be contracted, and the project entity is formed. Responsibilities for the subtasks are assigned among the members of the project entity. Leadership is often dynamic with the mix of liberal, democratic and autocratic reflecting respectively the compliance of the progress with the action plan. The project manager oversees the tasks stimulating the performance by rewards and punishments accordingly.

The project manager will follow up as well with the project risk analysis to reveal potential threats to project success. On the basis of the analysis, the latter decides on mitigation action to secure the project against the risks. Respectively, stakeholder analysis is to be done as to understand which stakeholders represent threats to the project and who will contribute to execution of the project.

The task-oriented approach shows that the task of the project is in focus. The task is defined at the beginning of the project. The project manager with experts' team is expected to focus on execution of the task taking care of any challenges faced. The comprehensive plan is prepared and all project team members act according to the plan. Reporting is continuous and in case of any deviations of estimations of deadline, budget and quality of results the corrective measures are applied. Targeted control will secure that objectives are reached as planned. The unique result is achieved at the end of the project implying the end of the project.

In comparison to the context above the organizational perspective is the alternative to task-oriented project management approach. Under this approach project is seen as a temporary organization (respective form of legal entity), established by its mother organization to carry out an assignment on its behalf (Andersen, 2016).

Considering an organization-oriented, project management focus on

the relationship between the permanent and temporary organization. The temporary organization execute an assignment received from the mother organization. Under the organization-oriented approach the project's goal is to add value to the mother organization having consequently all the project stakeholders working together. This is the prerequisite for progress. Whereas the project should contribute as demanded by the mother organization there have to be established rationally functioning ecosystem with all relevant attributes (resources, processes, outputs). The latter is a living organism thus lifetime of project entity can be adjusted (extended or shortened) according to the specifics of the needs of the mother organization.

Creating value to the mother organization may require significant changes to the latter and thus stipulate a complex of deliveries over the project life time which can be changing according to the mother organization development needs. In this respect, it can be challenging for the project team to make a complete plan at the beginning of the project, however the importance of planning function should not be overlooked. Therefore, the project may have a generalized plan during the start-up with relevant detailed plans developed during implementation process. A project entity has to consist of the team with the knowledge as of the project objectives as of the needs of mother organization and of specifics of its business model. Attention is paid to the tradeoff of the possible changes in strategy, tactics and operations of the mother organization in terms of arising opportunities and challenges. Hence, in contrast to the task-oriented approach the organization-oriented perspective defines the project as an open (temporary) organization dynamically interacting with the mother organization, its business environment.

While having the second perspective rather justified in comparison to the task-oriented one, the synergy driven combination of both could be considered as even more perspective especially with regard to the Europe 2030 strategy (EC, 2019) objectives. Whereas such junction has greater potential for effectiveness in terms of strategic, tactical and operations management levels as at project as at organization levels relevant challenges and possible solutions for public investments shall be discussed in following chapters.

VALUE GENERATION PREREQUISITES FOR PUBLIC INVESTMENTS

Transformational change resulting of implementation of the Europe

2030 strategy will need more focus, clear goals and transparent benchmarks for assessing progress. This will require a rational management framework providing relevant instruments (and (or) revealing possibilities how to find and use particular solutions (Bonatti & Fracasso, 2019; Kunz *et al.* 2016)) as to business as to public governance to ensure timely and effective implementation. It has to be explained for the purpose of this paper that the term effectiveness concerns whether the objectives formulated (it applies to every party context) are being achieved – what are the actual results? What have been the successes and difficulties, and how appropriate have the solutions chosen been and what is the influence of external factors (Haque, 2016). Reasonably, on the other hand, the term efficiency is about comparing the actual outputs and the inputs. In this respect cost minimization is subject to efficiency (and not to the effectiveness if objectives were not achieved).

Working in several (often interrelated) investment programs, projects of different size, duration, budget and complexity, and sharing in principle the same resources (as systemic as individual, business or public based), results in the challenges of balancing multiple and heterogeneous demands, rapid adjustments to changing prerequisites and prioritizing ability whereas an organization (whether private or public) as well as an economy (its part, or sector, or its other attribute) is constantly changing. Previous research on management of various spectrum of investments has shown how fragmentation, disruption and inefficiency caused by switching between commitments to parallel and sometimes conflicting programs, projects may result in a waste of tangible (incl. public funds) and intangible resources. Consequently, investments in question must be considered in the context of complexity of the environment (internal and external) in which they are executed and treated as respective socio-economic accomplishments, for instance, per particular Europe 2030 strategy objectives (EC, 2019). Therefore, for this purpose, it could be reasonable to consider, for example, the respective strategic management framework already transformed into specific prerequisite objectives, measures and actions for all EU members, namely as following (Figure 3.4):

- policy formulation, delivery and review;
- program design, implementation and conclusions;
- ex-ante, on-going and ex-post evaluation of investments.

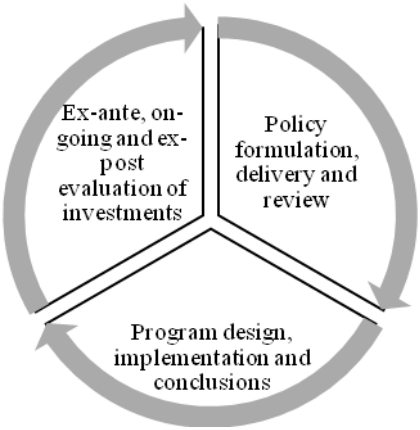

Figure 3.4 Strategic management framework

Source: author

While, having in the mind the context author considers, as the outcome of the research made, EU funds management system as satisfactorily rational (although that can be argued as well as if changing the context of the subject) in terms of its regulatory scope and scale, the country wise management systems, in comparison to EU financing facilities, is subject to the following concerns per as strategic, tactical and operational contexts, e.g. as following:

– there is the need for clearly defined criteria, concrete lists of result indicators to be used as for evaluation, selection of the investments to be financed as for the implementation progress control as for monitoring sustainability of the utility of investment results;

– investment planning and reporting system has to be specific if considering role in the management of investments of particular sector ministries;

– networking system among ministries for sector interrelated investments need to be determined as well;

– there has to be standardized, and (or) otherwise explicitly made instructions for project makers (as well for sector ministries in charge) in order to have clearly defined prerequisites for the use of cost-benefit analysis and (or) cost effectiveness (either other more complex multi-criteria analysis methods) for any of interested parties;

– there have to be explicit instructions for investments compliance with Europe 2030 strategy (EC, 2019) which is, as to the comparison, is

fundamental for utilization EU funds, for instance.

Findings of the investigation let to notice a few regularities on management of public investment projects, namely as following:

– the complexed projects have significantly greater risk exposure as well are more intensively consuming resources in comparison to the average levels of similar (in terms of inputs and deliverables) projects as to acknowledged business practices,

– the complexed projects are significantly more risk exposed to missing deadlines, budget limits and quality requirements for the project results;

– the complexed projects require well-functioning management systems,

– non-effective (as to the findings provided above) supervision of public investments may be even stipulating ineffective use of public funds (Villena & Reus, 2016) at least due to a lack or improper application of the risk mitigation measures.

– non-effective supervision of public investment does negatively affect the implementation of well-prepared investment projects.

In order to improve regulatory system as well as to contribute to value creation of investments and the effectiveness of investments management as of project making or project results consuming party as of any other stakeholder possibilities of application of multi criteria analysis (MCA) measures deserve a consideration.

OPPORTUNITIES FOR MCA WHEN MANAGING VALUE IN PUBLIC INVESTMENTS

The crucial function of the MCA measures is used for is to cope with the difficulties that decision makers as well as other related professionals have been in most cases experiencing when dealing large amounts of complex and dynamic data when seeking for sustainable added value. Following the progress on investments subject to EU, country wise financing facilities as well as their management challenges and regularities investments discussed in the previous chapter would confirm the latter statement.

All the decisions rely on weighting (Korhonen *et al.*, 2021; Tamošiūnas, 2020; Podinovski. 2016), though perhaps implicit, and not necessarily consistent. In this regard MCA techniques can be used for identification of a most preferred solution, for ranking the options, as well as prioritizing a limited number of alternatives for subsequent

detailed appraisal, or just in order to distinguish the eligible from not qualified alternatives.

There are many MCA techniques (eg.: MACBETH, SMART, PROMETHEE, REMBRANT, ELECTRE, AHP, COPRAS, TOPSIS, VIKOR (e.g., Norese, 2016; Scholten *et al.*, 2015; Bana e Costa *et al.*, 2012; Opricovic, 2011) and their number seem to be growing. The reasons for that could be as following:

– level of analyzability of the objective (in terms of needed input, their transformation and expected output);
– level of variability of the objective;
– level of complexity of the objective;
– timing of analysis needed for the decision making;
– skills needed for the decision making;
– management specifics and requirements.

With respect to these reasons listed above when selecting MCA techniques, the following criteria have to be considered:

– consistency and reasonability;
– transparency;
– simplicity of use in terms of time and other resources;
– data requirements not inconsistent with the importance of the issue being considered;
– ability to provide an audit trail, and software availability, where needed.

Even choosing MCA technique can be an exercise of decision-making requiring MCA as well. For example, there are a number of criteria, the performance of each technique could be prepared and scored against each criterion with the criteria weighted in order to build up an overall order of preferences of MCA techniques and decided on the most suited one.

A minimum requirement for any multi-criteria analysis, considering the specifics of any MCA technique, is building a performance matrix, where every row describes an option and every column represents the performance of the options against each criterion. The individual performance assessments are often numerical, but may also be expressed in various qualitative terms as well as using mix of them (where due to the compatibility challenges various normalization methods have to be used). Nevertheless, as to the simplest example of MCA, the performance matrix may be the final product of the analysis. For example, there is a performance matrix, consisting of some number of

data (which could be as the quantitative as qualitative or mixed and hardly compatible (Fayek & Omar, 2016; e.g., a lot of crisp and (or) fuzzy information; Table 3.7).

Table 3.7

Performance matrix

	C_1	C_2	…	C_n
A_1	$\tilde{n}_{11}$	$\tilde{n}_{12}$	…	$\tilde{n}_{1n}$
A_2	$\tilde{n}_{21}$	$\tilde{n}_{22}$	…	$\tilde{n}_{2n}$
…	…	…	…	…
A_m	$\tilde{n}_{m1}$	$\tilde{n}_{m2}$	…	$\tilde{n}_{mn}$

Source: author

As per performance matrix of the Table 3.7 (where $A=\{A_1, A_2, \cdots, A_m\}$ is, for instance, a set of m investment alternatives, $C=\{C_1, C_2, \cdots, C_m\}$ is a set of n criteria, whose weights satisfying $w_j \in [0,1], \sum_{j=1}^{n} w_j = 1$), the decision makers are then left with the task of assessing the extent to which their objectives are met by the entries in the matrix. Such intuitive processing of the data can be quick and effective, but it may also lead to the use of unjustified assumptions, causing incorrect ranking of options. Hence even relying on cognitive heuristics (this seems to be the case often for public investment management system as per expressed insights in the previous chapter) may require considering a risk mitigation measures for possible miss-ranking and related consequences.

Consequently, taking into account Euclidean distance, the L_p – metric (see Eq. (3.10)) as an aggregating function have been proposed by Zeleny (2010, 2011):

$$L_{pi} = \left\{ \sum_{j=1}^{n} \left[(f_j^* - f_{ij}) / (f_j^* - f_j^-) \right]^p \right\}^{1/p} \quad 1 \le p \le \infty; i = 1,2,3,..., m. \quad (3.10)$$

The latter became one of keystones for such well known multi criteria decision making methods like VIKOR, TOPSIS (Opricovic, Tzeng, 2004, 2007).

For example, in the VIKOR method $L_{1,i}$ (as S_i) and $L_{\infty,i}$ (as R_i) are used to formulate order of preferences. The solution obtained by $\min S_i$ is with a maximum group utility (''majority" rule), and the solution obtained by $\min R_i$ is with a minimum individual regret of the "opponent". Assuming that each alternative is evaluated by each criterion function, the compromise ranking could be performed by comparing the measure of closeness to the ideal alternative. The various m alternatives are denoted as $A_1, A_2, A_3, ..., A_m$. For alternative A_i, the rating of the j th aspect is denoted by f_{ij}, i.e. f_{ij} is the value of j th criterion function for the alternative A_i; n is the number of criteria.

Considering the variety of MCDA methods listed above and motives for their selection for the assessment of investments in terms of value generation, the author recommends to use VIKOR MCDA method (Opricovic & Tzeng 2007, Opricovic 2011) due to the following reasons:

– the latter allows selecting feasible compromise (with possible mutual concessions) solution (even with conflicting criteria) the closest to the ideal one.

– VIKOR application algorithm also tolerates further discussions, negotiations (e.g., reconsidering criteria weights), if needed, among evaluation unit members and (or) final decision makers (if the latter is the case).

The VIKOR method exercised by the following steps (Opricovic & Tzeng, 2007, Opricovic 2011):

1) defining the best f_j^* and the worst f_j^- values of all criterion functions $j = 1,2,...,n$. If the j-th function represents a benefit then:

$$f_j^* = \max_i f_{ij}, \; f_j^- = \min_i f_{ij}, \tag{3.11}$$

Executing first step (Eq. 3.11), for instance per example (of the municipality of the seaside region used) of evaluation of power generation solutions, firstly, on the basis of identified technologies, the performance matrix was formed. In order to ensure transparency and reasonability of the process, performance matrixes are prepared for onshore and offshore cases defining accordingly the best and worst values for both cases.

2) calculating the values S_i (utility measure) and R_i (regret measure), $i = 1,2,..., m$, by these relations:

$$S_i = \sum_{j=1}^{n} w_j (f_j^* - f_{ij}) / (f_j^* - f_j^-),$$

$$R_i = \max_j w_j (f_j^* - f_{ij}) / (f_j^* - f_j^-), \qquad (3.12)$$

Executing second step, as per considered example, comparison criteria are determined and then values ae weighted and normalized calculating the values S_i (utility measure) and R_i (regret measure) respectively for onshore and offshore cases.

3) calculating the values Q_i (maximum group benefits): $i = 1,2,..., m$, by the following relation:

$$Q_i = v(S_i - S^*)/(S^- - S^*) + (1-v)(R_i - R^*)/(R^- - R^*), \quad (3.13)$$

where: $S^* = \min_i S_i, S^- = \max_i S_i$, $R^* = \min_i R_i, R^- = \max_i R_i$, v is a weight of the strategy of "the majority of criteria" (or "the maximum utility of the group"), assuming $v = 0.5$ (voting by consensus; voting "by majority rule" let $v > 0.5$, or voting "with veto" means $v < 0.5$).

4) ranking the options, sorting by values S, R and Q (S, R and Q are three ranking lists accordingly calculated) in decreasing order;

5) recommending the option O' as a compromise solution, which is ranked the best by Q if the following two conditions are satisfied, namely: i) of acceptable advantage when $Q(O'') - Q(O') \geq DQ$ (O'' is the second option in the ranking list by Q; and $DQ=1/(m-1)$; m is the number of options); ii) of acceptable stability in decision making given that option O' is also the best ranked by S or (and) R.

Having in mind the above context considering situation analysis it is reasonable in principle to use collective the cognitive mapping approach (Ackermann & Eden, 2001). In this respect, for the example, in the selection process of wind power generation technologies in the municipality of seaside region in the context of implementation of its strategic development plan for local economies (with pivotal focus on

regional electricity market liberalization, diversification of energy resources) the following classification of technologies needs to be at least taken into consideration:

- high speed permanent magnets (HS-PMG),
- medium speed permanent magnets (MS-PMG),
- low speed permanent magnets (LS-PMG),
- hydraulic transmission (HT),
- high speed doubly-fed induction generator (HS-DFIG),
- high speed squirrel cage induction generator (HS-SCIG),
- low speed electromagnets (LS-EMG).

Respectively, the analysis of the application of the above technologies in practice let to identify the criteria to be used for assessment, comparison of options in order to ensure the rationality of the choice. As per given example, 17 criteria are determined as helpful when comparing and selecting the technologies stated above. Regarding capacity factor (CF), for maximum CF author considers Albert Betz' Limit of 59,3% of kinetic energy. Every of 17 criteria weighted equally. With regard to sustained (Marková *et al*., 2017) and inclusive strategic development, such a distribution order is accepted as reasonable by the evaluation unit.

Whereas list of criteria consists of quantitative and qualitative ones and the data, in principle, per each of the criterion is dynamic, analysing the technologies by very criterion listed above it is reasonable to measure attractiveness of the characteristics (as per each criterion) of the technology (as to the list provided above) using the qualitative category-based approach (Table 3.8).

The latter decision (Table 3.8) can also be reasoned by exercising, for instance, with MACBETH (the Measuring Attractiveness by a Categorical Based Evaluation Technique (Bana e Costa *et al*., 2012) multiple criteria decision analysis method, which is, in principle, based on flexible use of qualitative indicators and (or) combination with quantitative ones accordingly (aspects of crispiness and fuzziness of data have also been under investigation by the scientists mentioned in this chapter.

Consequently, calculations made as per example considered under steps 3, 4 and 5 allow to determine the values S_i (utility measure), R_i (regret measure) and the values Q_i (maximum group benefits) for onshore and offshore case (Table 3.9) and, as the result, rank options.

Table 3.8

Justifying values of option assessment per criterion set by the member of the evaluation unit

Qualitative value	Quantitative value	Example of value (maximizing and minimizing) justification
Low	1	Data confirms only possibly the minor positive impact of offshore facilities on other local industries
Below average	3	Number of operations interruption events confirms the below-average reliability of components
Average	5	Data confirms investments are of average level
Good	7	Data confirms capacity used above average level but below the higher one found
High	9	Data confirms sufficient technical possibilities and flexibility for grid connection
Extreme	10	Data confirms a great number of curtailment facts

Considering the onshore case, the best option is HS-PMG with the LS-PMG, as the second best, while MS-PMG (Table 3.10) is accepted as the third one according to calculations (Table 3.9).

With regard to offshore solutions evaluation unit (as per considered example) has, as per calculations (Table 3.9), determined similar hierarchy of three best options (Table 3.9), however with significantly closer distances to the ideal scenario of S_i (utility measure), R_i (regret measure) and the values Q_i (maximum group benefits) in principle per all options analyzed (Table 3.9).

Whereas according to the details of calculations the values for offshore solutions are reasonably better than the ones of onshore case (Table 3.9) it can be (as per considered example) reasonable to compare, using the same VIKOR methodology, the three best options of each case. Accordingly, the calculated values S_i (utility measure), R_i (regret measure) and the values Q_i (maximum group benefits) can be ranked (Table 3.10).

Table 3.9

Evaluation results

Type of magnetic field	S_i utility measure	R_i regret measure	S_i utility measure normalized	R_i regret measure normalized	Q_i – maximum group benefits	Rank
Onshore wind power generation solutions						
HS-PMG	0.039	0.039	0.000	0.000	0.000	1
MS-PMG	0.439	0.059	0.237	0.500	0.737	3
LS-PMG	0.085	0.059	0.027	0.500	0.527	2
HT	0.882	0.059	0.500	0.500	1.000	7
HS-DFIG	0.745	0.059	0.419	0.500	0.919	6
HS-SCIG	0.719	0.059	0.403	0.500	0.903	4
LS-EMG	0.732	0.059	0.411	0.500	0.911	5
Offshore wind power generation solutions						
HS-PMG	0.000	0.000	0.000	0.000	0.000	1
MS-PMG	0.226	0.059	0.115	0.300	0.415	3
LS-PMG	0.085	0.059	0.043	0.300	0.343	2
HT	0.980	0.098	0.500	0.500	1.000	7
HS-DFIG	0.784	0.059	0.400	0.300	0.700	4
HS-SCIG	0.797	0.059	0.407	0.300	0.707	5
LS-EMG	0.810	0.059	0.413	0.300	0.713	6

Table 3.10

Results of comparison of the three best onshore and offshore wind power generation solutions

Type of magnetic field	S_i utility measure	R_i regret measure	S_i utility measure normalized	R_i regret measure normalized	Q_i – maximum group benefits	Rank
Onshore HS-PMG	0.419	0.059	0.395	0.500	0.895	4
Onshore MS-PMG	0.807	0.059	0.863	0.500	1.363	6
Onshore LS-PMG	0.506	0.059	0.500	0.500	1.000	5
Offshore HS-PMG	0.091	0.049	0.000	0.000	0.000	1
Offshore MS-PMG	0.363	0.059	0.328	0.500	0.828	3
Offshore LS-PMG	0.186	0.059	0.115	0.500	0.615	2

In this respect on the basis of the calculated values S_i (utility measure), R_i (regret measure) and the values Q_i (maximum group benefits) for best three onshore and offshore wind power generation technology options (Table 3.10) it can be concluded (as per considered example) that the offshore options are to be more favorable than onshore ones with the following hierarchy: offshore HS-PMG is the best choice, offshore LS-PMG is the second best solution and offshore MS-PMG is the third best.

Nevertheless, having in the mind the context of those challenges of public investment management as stated in the previous chapter, the application of MCA techniques is an ambitious endeavor if investments management systems are not set respecting the above discussed measures and actions. Consequently, it has to be ensuring that the following steps of multicriteria decision analysis are respected for all the interested parties directly and indirectly involved:

- setting up evaluation criteria;
- generating alternatives;
- evaluating possible alternative solutions in terms of criteria;
- applying a normative multicriteria analysis method;
- accepting “the best” alternative as an “optimal” (preferred);
- if the final solution is not accepted, decision makers may need to update the data and iterate all the steps from very beginning.

As the result, MCA may provide a framework in which all the interested parties can take part in decision-making while seeking the particular objectives. Therefore, MCA may in a quantitative way allow the individual opinions of various counterparties to be taken into consideration, as well as the processing of interactions within complex networks especially when dealing with vast spectrum of heterogeneous investments. Furthermore, the MCA techniques may be helpful in reaching a compromise (as to VIKOR, TOPSIS, for instance) or defining a coalition of views. Despite these factors, due to scoring and weighting challenges as well as fuzziness of the criteria a rationality of multicriteria analysis could be limited to the ex-ante evaluation tasks of public investments. The latter as well can be useful for formulation of policies, their programs. Hence, respectively basing upon MCA findings, one may argue that possible improvements discussed can be less rational exercise than just extending the application of the strategic management framework over projects pipeline. If that were the case, inevitably, measures of restructuring management system affecting all

the authorities in charge would have to be considered.

CONCLUSIONS

In the context of dynamically evolving and challenging business environment organizations can expect the long-term success only when actively participating in shaping their business environment, its structure, its scope and scale (identifying, classifying and shaping (influencing, changing) economic entities, their relationships). In this respect strategic efforts of market participants need to be combined, when aiming at creating value and preserving its sustainability, in order to develop and share the markets. As the result, organizations have to reconcile priorities in terms of target markets and core measures, distinctive parameters and specifics of strategic decisions as well as economic logic the latter decide to rely on. In relation to this there has to be noticed that an organization-oriented project management perspective is the one which is justified due to its scope especially in the context of Europe 2030 strategy, however the latter is not effective enough when considering deliverables in terms of sustainability of value created of public and private investments subject to public financing (i.e., EU funds, investment programs at state levels). Furthermore, even if there is a variety of MCA techniques (with some limitations of application), it is challenging to use them if there are systemic challenges as revealed. Nevertheless, as to solutions proposed, application of MCA methods can be an attempt to improve planning, formulation, evaluation tasks of project management cycle not only for performance but also for the effectiveness of management of private and public organizations. Respectively the insights presented can be useful for further studies on creation of value subject to public and private interests with pivotal focus on utilization of MCA measures for more sustainable solutions. Due to their variety, the latter potential (and weaknesses) may need more comprehensive analysis especially investigating possibilities of application of specific MCA technique under the particular investment circumstances and its coherence with relevant country development policies. In this respect the paper could also contribute when challenging the convergence of economic development.

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SOCIAL MEDIA MARKETING: A CONCEPT AND INSTRUMENTS

Social media represent modern worldwide-popular communication processes. It goes today with little doubt that Internet as global means of communication takes a leading role in the majority of the areas of people's life. Social media infiltrate our life so quick that the practice and the consequences of assimilation of these new means of

communication stay to be insufficiently studied.

Social media marketing (SMM), or marketing in social networks is a relatively new scope of business actively introduced irrespective of companies' size and specificity of niches.

There still exists no unanimous definition as to the concept of social media marketing. However, the analysis of publications makes us come to formulation that it is a special instrument of Internet-marketing that presupposes the company or brand's commodity or service promotion with the use of social media, where the relationship between the company/brand and the customer is being formed and continuously updated by the efforts of company supporters. Starting the mechanisms of virus marketing, the companies do not only enlarge the scope of information in their sites but raise their ratings in search systems.

A good deal of marketing managers fails to promote a brand via Internet erroneously believing that social media marketing simply aims at stimulation of growth of commodity sales. In fact, the goals of advertising lie in arising the customer's interest, formation of brand's positive image, positioning of the company who does not so much seek for the profit but for satisfaction of customer's needs, earning his confidence and devotion.

Social media are unique for giving opportunity to directly communicate with customers applying none traditionally compulsive marketing technologies. For example, the company creates a page of its product (service) in social media, and the customers may leave their comments, opinions, recommendations, reviews, put questions and discuss the brand, product or service. Any customer's opinion or comment (both positive and negative) may catalyze the other visitor and push him to choose this or that company, brand, commodity, or service.

For better characterization of the spheres of SMM application it seems reasonable to define the types of already existing social media.

Social media were specially created for people's interaction As a rule, social media is understood as some resource allowing its users for organization of communities based on common kind of activity (according to *Encyclopedia of Useful Info* [1], 80% of companies around the world choose social media to select their staff, 95% of which make use of the LinkedIn), common interests (ВКонтакте), common places of residence, education, work (Одноклассники), etc.

Blogs are sites where the content is presented in the form of magazine articles, notes, or links to content of public interest.

Microblogs. Here we have instantly updated pieces of size-limited

content.

Photo- and video services. These sites allow for sharing the author's photo- and video content to users all around the world. Besides, unlike common file storages, such services function in close contact with social media.

Social tabs. The sites of social tabs suggest the opportunity of saving links to interesting sites, sharing them with friends and having access to them from shared computers.

Social news. The sites of social news aggregate links to events in the form of articles and images published in Internet. All news is assessed by the users and the most popular is promoted to the resource's top.

Podcasts. This way of sharing audio and video content via Internet appeared only in the last years. It allows everyone for the creation of their content. The podcast subscribers are given opportunity to receive new media files as they appear.

Web-forums. These represent the oldest form of social media on the resource where the users discuss thematic questions.

Geosocial networks are social media that allow the owners of mobile telephones, smart phones or communicators to mark places they are currently visiting, or those visited some time in the past [1].

The statistical data available with the StatCounter and Statistica [8] prove that Facebook, Pinterest, Youtube, Instagram, "ВКонтакте", etc., are the most popular present-day global social media [2].

Social media are now presented by over 6 milliard individual profiles all round the world, and the most popular of said profiles are found in the Facebook, YouTube and WhatsApp (Figure 3.5).

Popularity and audience of the aforementioned social media grow with each passing year so quick that disregard of this overwhelming stream of communication is detrimental to any kind of business, while making use of SMM instruments leads to more efficient reaching of business tasks and goals.

Despite the fact that social media are so multi-faceted, the marketing practitioners predominantly take advantage of social networks, since they now represent a peculiar combination of multiple services existing in the Internet. According to Social Media Marketing Industry Report, 94% out of 3800 responding experts in marketing from all over the world believed social networks to be the efficient platform for dissemination of marketing messages to commercial users. It is now no wonder that practicing marketing specialists successfully use said platforms for the promotion of their businesses. It was also 83% of the

respondents who regarded social media to be an important instrument for popularization of their brands, and 77% of marketing practitioners with no less that 3-year experience of work in social networks weekly devoted nearly 6 hours to social media marketing, while 15% of the respondents weekly spent there 20 hours and more [3].

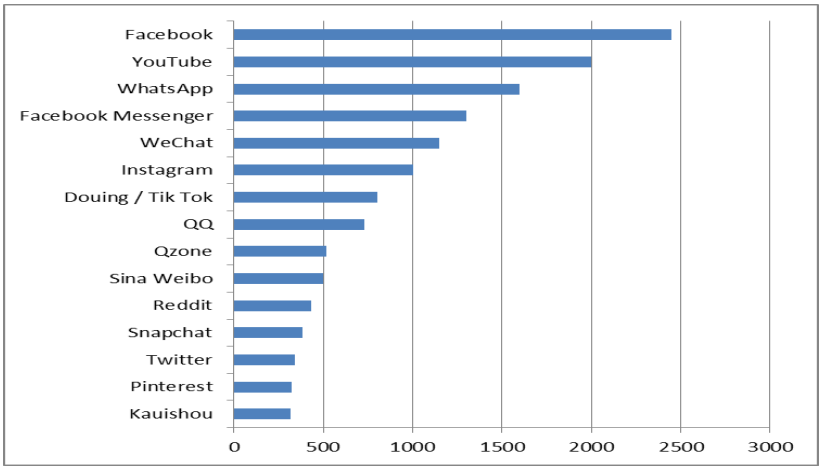

Figure 3.5 Global social media audience (million people) as of 2020 [8]

The 2010 Millward Brown research where the participants of the World Federation of Advertisers were questioned showed that 96% of advertisers planned to increase their investments of time and capital into social media. However, 50% of these were not sure as to what they will receive as a result. As we now see, it was as far as 2010 that the question of influence of social media marketing on the development and functioning of companies clearly agitated respective specialists, and the question still stays topical today.

According to data in possession of O. Hryshchenko and A. Nesheva, the advantages of social media marketing are distributed is as follows (Figure 3.6).

As follows from the research, the majority of questioned specialists in marketing were sure that even with minimal time expenses, social media marketing favored their businesses, increased the number of site or product page regular visitors via search systems. References or URLs

from other sites were helpful in collecting useful information on business rivals, partners, and potential consumers, as well as in monitoring of the trends of their preferences.

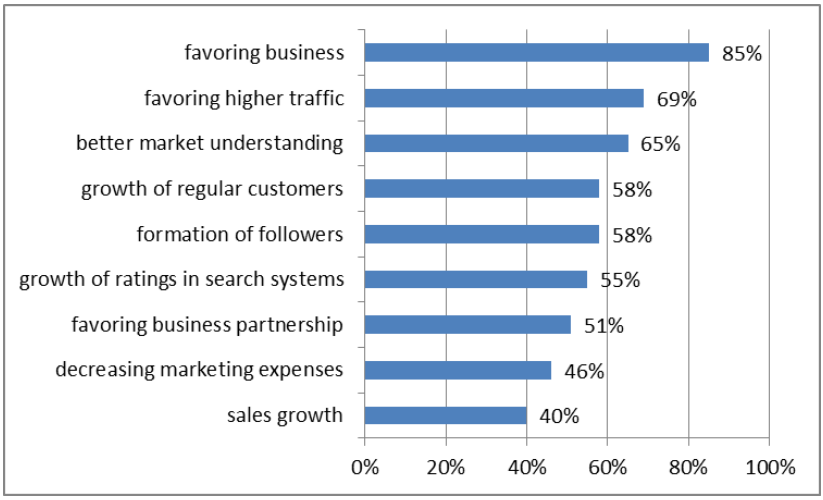

Figure 3.6 The advantages of social media marketing [1]

Creative application of marketing in social media may positively effect on brand image, though the lack of experience and awareness on the early stages of activity may also make it all the harder to the company or even lead to opposite effects.

According to the research by the Razorfish marketing agency, the social network users are not afraid of the advertisements or company presence in their channels. On the contrary, they buy products following the advertisements and recommendations found in social networks. It was almost 76% of the respondents who confirmed that they are not against the advertising found in social sites they usually visit; 49% stated that they bought products proceeding from recommendations found in social sites, and 40% of the questioned users bought the products inspired by the advertisements in the site. The Razorfish experts are sure that people seek for the information, and, respectively, the companies should give it [4].

Internet technologies stand out to be the important communication channels between the demand and the offer in the present-day tourism. Using Internet, tour operators may successfully promote and sell their

services and products, and satisfy the wishes and the needs of modern customers. Internet has in the present-day tourism industry proved to be an efficient means in promotion of tourism and sales. Tourism goods and services are now sold irrespective of the number of printed catalogues and brochures; information may be received by millions of Internet-users; ticket re-booking has now become practically impossible due to elimination of all communication problems. It can be today concluded that modern Internet technologies favor the touring agencies' creation of unique identity, improvement of their services, increase of efficiency and competitiveness.

People see a great lot of information every day, and this significantly lessens the perception of advertisements in conditions of visual overload. SMM helps in solution of this problem at the expense of unique actual content whose generation is called to arise interest and involve audience. Realization of SMM-strategy requires application of a number of the most popular instruments of promotion used by brands in their activity:

1. Content-marketing is the most important instrument of promotion. Among other meanings, *content* is understood as *satisfaction*, and *being content with* means *to be satisfied with*, or *filled with matter*. The word is today interpreted as the *matter consumed by the audience*, or as *filling the audience's attention with something*. There exist four types of content: **images** are one of the simplest types of content easily perceived by the audience. Images include interesting photos, diagrams, funny pictures; unlike texts, **video** is among the most popular contents with respect to easiness of perception. Though easily perceived due to absence of the need of visualization, the production of this type of content is complex expensive; **texts** are with more difficulty perceived by the audience since require to be visualized, and their better perception will need the combination of the text and, e.g., interesting image or video; **audio** content is represented by music files, audio-books, audio-lessons, etc.

2. Competitions represent another type of instruments used in SMM. Held to take still greater consumers' attention, competitions are called to express creative ideas, or motivate brand supporters to new activity. This instrument is gainful to companies, for competitions may explode an endless arsenal of new ideas suggested by the consumers themselves.

In return of their participation, the competitors may win some prizes provided that they observe the terms suggested by organizers. For example, reposting a message (to *repost* means to *copy a message to own*

page in the network), the user may win the prize, while the community or page administrator – to have free advertisement and high traffic.

3. Work with opinion leaders (trendsetters), that is, with those who are leaders in popularizing any thoughts, ideas, or trends. The so-called influencers (influence – the power to have an effect on people or things) are engaged by the companies to popularize their brands and grow the product sales activity in the net. These may be represented by movie or show business stars, well-known people, popular bloggers loved and trusted by certain audience.

The system's mechanism is rather simple. The opinion leader, for example, posts his comment on the product (commodity) on his page in the network, with accompanying photos or video where the process of product's use is shown.

4. Personal pages in social media – updates of content on the page or in the community, answers to users' questions, holding competitions.

5. Hashtags (hash – pound sign + tag – mark) is a word or phrase referred to the text, image or video, marked by the pound sign (#) [30]. Hashtags simplify the search for relevant information.

All the aforementioned are the most popular and widely used instruments of promotion used by SMM-specialists. However, it should be added that there exists a big number of combinations and variations in the use of these instruments depending on the goals and the stages of SMM-campaigns.

To guide marketing specialists in the sea of social media, Susan Gunelius, President & CEO, KeySplash Creative, Inc. [7], presented her 10 laws for successful SMM (Figure 3.7).

The present-day companies' major SMM instruments can be classified as follows: monitoring of social media; aggregation of social media (content collection from different media services); social tabs; social analytics (dynamics study); tools; social networks; software.

Unavailability of clear method to assess SMM efficiency is now among the problems which require urgent solution by the community of marketing experts. In this connection, the researchers suggest some measurements expected to be helpful in assessing the efficiency of SMM events [3]:

– level of achievability. This parameter is assessed by the number of web-page supporters or subscribers. The counter will show whether or not the network page adds in value if compared to total social web-pace. The higher is the parameter, the bigger is the potential of content spreading;

“More listen than talk”	It is highly important to continuously browse the content of the whole focus audience, discuss and apprehend criticism and customer expectations
“Focus on major things”	Strict specialization, concentration on the company’s strategy towards strong brand
“Quality is better than quantity”	A thousand of on-line supporters who read and discuss the content are more valuable than a million audience waiting for new campaign
“Publish qualitative content”	It is highly important to publish only a qualitative, up-to-date and original content
“Work hardly”	Internet-activity should be regular and systemic
“Engage opinion leaders”	Opinion leaders are personalities or brands that may have effect on the market, possess qualitative audience and may be interested in cooperation
“Appreciate the audience”	A dialogue with consumers and opinion leaders is highly important, for they may later become powerful effectors of the “viral radio”
“Be grateful”	You should remember every user and pay attention to everyone who addresses you via Internet
“Be accessible”	Content should be published on a regular basis with subsequent undoubted participation in discussions and communication
“Share the content”	Content should be exchanged and discussed

Figure 3.7 Ten laws of successful SMM [7]

– directional traffic. Monitoring the traffic directed to web-page from different social media accounts, one may conclude which media channels are of greater value;

– users’ opinion. The success of the strategy of social media marketing depends on opinions, and it is therefore important to attentively monitor users’ comments dividing them into positive and negative;

– users’ involvement (interaction). This parameter is critical to the success of the SMM strategy, since the number of comments, re-tweets, references, and shares is a quantitative characterization of the level of interaction and users’ involvement;

– opinions’ level. As a rule, companies concentrate on publication of content but forget to communicate with the users. This is why it seems necessary to measure the frequency of comments to messages or other users’ comments.

Specialists wonder today as to the place of the strategy of social media marketing in the marketing strategy of the company.

Josh Bernoff, Senior Vice-President of the Research Group suggests his POST-method which he believes to be highly necessary in developing a complex of SMM actions [6]:

P: People – analysis of focus audience. Development of SMM strategy should begin with the study of the existing or the potential consumers and the analysis of social media platforms used by the same. This stage of analysis is called to identify the consumers' online activity preferences.

O: Objectives – clear goaling. The company should have clearly determined goals of its future online activity (e.g., online management of company's credibility, raise of brand recognition, winning the consumers' attention, etc.). One should not also forget that company's presence in social media is the SMM general goal.

S: Strategy – development of strategy of interaction with consumers. Realization of this stage of SMM strategy requires, in the first place, the answer to the question: "How specifically do you want to change your relationship with the clients?" There exist five important strategies most frequently applied by the majority of modern companies when they interact with their customers: 1. Listening: this is the study of what customers tell about the company products or services; 2. Speaking: dissemination among customers of company's announcements, ideas and thoughts; 3. Stimulation: customer search and development of cooperation relations; 4. Company/customer mutual support; 5. Customer involvement to business in questions of product design, etc.

T: Technology – selection of social media instruments. Development of social media apparatus should base on the deep analysis of existing social media and their purpose, consumer preferences in the choice of this or that social network.

Efficient SMM is an important factor for the brand/commodity/company successful market promotion held to get a lot of supporters, broaden the focus audience, develop, improve and support the company's esteem through formation of customer's loyalty to the brand. The aforesaid theoretical aspects of efficient marketing activity would allow progressive companies for successful promotion of their product in domestic and foreign markets at the expense of competent use of the resources of social media such as information on customers' expectations, their recommendations and preferences; on competitors and partners, in the process of development, production and

realization of new product or brand.

It goes without saying that SMM-based promotion will only expand. Growing capability of different Internet media will undoubtedly bring new methods of promotion. To have as much supporters as possible, brands are expected to seize all social networks, instead of one or two. For example, messengers are already far ahead of social networks with respect to hours spent there by the audience. SMM thus plays an essential role in still quicker communication and gaining more opportunities for situational marketing, brands' response to world events and forming trends. It is a close perspective that interactive instruments shall be engaged to sell goods or services. One still won't convince mass consumer to buy things on the basis of information on the commodity or the photo of it. This is why the use of the technologies of virtual reality shall be gaining popularity. Thus, the measurements of the efficiency of SMM-campaigns shall be the theme of further studies.

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Chapter 4

MECHANISMS FOR DEVELOPMENT OF ECONOMIC SYSTEMS AND ENSURING COMPETITIVENESS IN WORLD MARKETS OF GOODS AND SERVICES

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GLOBAL INTEGRATION TRENDS IN THE NATIONAL LABOR MARKET DEVELOPMENT

The asymmetry of processes of settlement and production systems' territorial organization, that for a long time has been studied by world science on a national and cross-border scale, affects the functioning of labor markets, determining its vectors, stimulating or limiting the potential and parameters of workforce movement (individuals and groups of formal and informal employment' searchers). As a result, these asymmetries are constantly in the process of settlement, creating both factors for their strengthening (in particular, on the basis of dynamics in the skilled and unskilled workers' concentration in the labor market and asymmetries of their mobility), as well as conditions for these disparities' productive use by economic competition' objects (separate enterprises, economic activity' sectors and types, countries and their groups) within the competitive fields of micro-, meso-, macro-levels respectively, each of which has a national and international scale.

Scientific and technological progress as a phenomenon of human civilization gradually intensifies and increases the density of a wide range of interpersonal and inter-community communications (information, cultural, spiritual and ideological; technological and product; transport and transit ones), which results in:

– the rapid expansion and consolidation of transnational structures focused on drastic reduction in production costs and increase of the

profit rate through diversification of production capacities in regions of concentration of relatively cheap raw materials and skilled labor, as well as on decrease in the time of transit both the range of production resources, semi-finished and finished products to consumers;

– the specialization of growing range of countries on offer in foreign markets a limited list of raw materials, semi-finished products, finished goods and services in quantities capable to meet the needs of macro-regions and the world as a whole;

– the tendency to establish macro-regional and global standards of management, lifestyle and consumption in all its spheres;

– the reduction of material and time costs for emigration and pendulum labor migrations (in particular, interstate ones), as well as leveling the aggregate of socio-cultural factors that determine the pace and possibilities of migrants' integration and assimilation in territorial and functional communities regardless of their location and state affiliation (the socium' functional communities include, in particular: labor collectives; the workforce of various associations of enterprises, economy' sectors, branches and their clusters; range of employers' associations and trade unions).

Wide interdisciplinary issues of national labor markets' asymmetries under the influence of economic and socio-forming processes' globalization are covered in a range of professional studies, among which it is appropriate to note the approaches developed in the works on:

– subjectively and functionally oriented mechanism for ensuring the balance of the territorial labor market with an aggregate of influence levers (economic, administrative, legal, information) [1-5];

– socio-economic factors, manifestations and consequences of the formation and implementation of labor market asymmetries in conditions the network society formation in Ukraine as a country with contradictory trends of modernization of the economy, social protection sphere and civil society [6-8];

– specifically business and general economic aspects of the natural asymmetries' impact on the labor market (in particular, gender, age ones) [9-11];

– assessment of the framework, scale and pace of formation of the national labor market disparities in the context of European integration processes on the macroeconomic turbulence background [12; 13];

– modern domestic problems of the labor market and employment

in the context of implementing the priorities of rapid economic growth policy [14];

– overcoming the asymmetry of specialized and territorial labor markets (particularly rural) in a set of measures on reproduction and realization of the labor potential of industrial regions, transport complex, rural areas [15-17].

Substantiation of the national labor market asymmetries' classification under the influence of globalized economic, normalized consumer, worldview and communication factors (intra- and inter-community) will ultimately contribute to the systematization of state policy priorities on mitigation and preventive response to relevant issues, distortions and disparities in the labor market and international rating assessments of the domestic economy in general, including in the direction of productive use of the asymmetries' potential, which (with the intensification of Ukraine's integration into global socio-economic structures) are always formed in the areas of a workforce' professional potential reproduction and realization.

The global phenomena mentioned above, continuing to form dynamically under the influence of scientific and technological progress, coexist with the need of the countries in the world to reproduce the principles of their own identity and sovereignty (including by ensuring proper filling and deficit control of budget, as well as a range of budgetary and non-budgetary funds to meet common public and socially necessary needs that determine the key parameters of states and sociums' sustainable development). This purpose is achieved by protecting and promoting the national producer, diversifying the economy through increasing the share of closed production cycles and sectors of innovative activities, raising productive employment through incentives of wages' and social protection parameters that can provide decent living standards to workers and their families.

Interaction of interests of powerful macro-regional and transnational economic actors, national subjects of economic competition and state formation within the framework of the highlighted trends establishes numerous asymmetries of the national labor markets which face, in particular, with:

– a narrowing of employment in traditional spheres;

– narrowing traditional areas of employment;

– an imbalance of supply and demand for consumer goods and services of traditional and innovative assortment in domestic and foreign

markets (and in the latter case – a reduction of absolute figures and share of domestic producers' relevant export);

– mismatch between domestic educational, organizational, technological standards of the life spheres spectrum and modern macro-regional and world practice, and hence, as a derivative, inconsistency of available professional and qualification potential with requirements of rapidly growing specialized (including innovative) activities with foreign capital substantive share;

– cross-border outflow of qualified personnel and the population of older pre-working age to countries with higher living standards (wages, level and quality of life, social protection and inclusion);

– threats of marginalization of less competitive population, involved in economic activities in specialization' traditional areas and service sector of territorial economic complexes (especially mono-specialized), due to the establishment and deepening of unproductive and temporary (including seasonal) employment.

Thus, under the asymmetry of the national labor market, which arises under the influence of global factors' range (both general ones – in the areas of the population' natural reproduction, technological support of domestic and industrial life activities, certain cultural and ideological phenomena' spread, relevant targeted interactions' development, as well as factors caused by globalization of economic management forms and mechanisms), it is advisable to understand the imbalances and structural distortions in supplement, movement, quantitative and qualitative results of using workforce, which are temporary (acute during the planning and forecasting periods adopted in society at certain historical stage) or stagnant (up to the establishment of depressive forms of functional and territorial communities' life organization).

Many domestic and foreign researchers consider labor market asymmetries as an inherent characteristic of this territorially localized socium institution in the globalization context, appealing to the asymmetry' definition as a ratio of exchange, mutual on the one hand, whose conditions, on the other hand, create benefits for some participants [13].

Therefore, the urgent task of a long-term state strategy for the socio-economic situation' stabilization and sustainable development of Ukraine during its consistent integration into common civilization and global economic processes is to develop mechanisms for monitoring, mitigating and preventing problems, distortions and imbalances arising

in areas of workforce, its professional and qualification potential' reproduction, productive use, decent wages, social protection (in particular, health care, pension provision) of hired labor and self-employed' economic activity, territorial economic complexes' specialization and diversification, efficiency' increase (among other, legalization) of internal and cross-border labor migrations under the influence of unstable processes of foreign and domestic capital (investments') movement, economic sectors and activities' transnational corporatization, modernization of technical and technological base of economic management and other life spheres, standards' unification of economic management, labor activity, vocational education and competences, intercultural interactions and international cooperation' cardinal revival.

The range of global preconditions that can provoke the country labor market asymmetries at different stages of its integration into global civilization processes and structures can be aggregated into several groups, including factors: purely economic; technological and innovative; way and quality of life in its spheres' spectrum; practices and features of labor reproduction and use in foreign countries and world regions; interethnic and other intercultural interactions, international cohesion and cooperation.

The classification of the national labor market asymmetries that covers their market, structural, informational, gender, territorial and socio-demographic types is quite common among domestic theorists and practitioners.

At the same time, the need for systematic problems' awareness, development of comprehensive program measures to mitigate and prevent imbalances and distortions in the formation and realization of workforce' supply and demand, the effectiveness of its reproduction and use in the labor market of country, which is integrating into a globalized socio-economic environment, determines the allocation of asymmetries of provision, productivity, motivation, mobility that are stimulated by such factors as institutional, purely financial and economic, organizational and technological, socio-cultural and behavioral (including information components of these factors – generators' groups).

In general, the highlighted asymmetries' classifications are characterized by interpenetration of selected groups, given the role of their qualitative characteristics for pass-through coverage of the mechanisms and results of global backgrounds' impact as potential

competitive advantages of the certain civilization phenomenon and business entity that in some way functions in national socium and labor market (as one of its basic institutes).

In this context, provision asymmetries have technical, both organizational and technological, workforce (demographic), professional and qualification aspects.

The backgrounds for the formation of the first of them are the lag of the aggregate of Ukrainian economy' current technological modes from the technical and technological economic base of the world's leading countries, as well as decades-long shortcomings of domestic investment policy, which in favor of resource', raw materials' and semi-finished export orientation continues to ignore the full-value capitalization of national innovation potential, that makes further complications to the innovation process both at its start (at the stage of innovations' development) and at the final stage (commercial mastering, production replication, market promotion of innovative goods and services). Such situation, in particular, is manifested in:

– an imbalance in the structure, as well as the level of knowledge-intensive and service diversification of the national economy and its territorial complexes, which reduces the competitiveness of relevant business with domestic capital compared to the respective companies with a foreign investment' significant or dominant share;

– asymmetries of workplaces' quality of the same or close specialization of various ownership, including at the enterprises of various capacity (large, medium, small).

Workforce asymmetry (as a segment of provision asymmetry), in turn, is the result of:

– negative trends in the population' and the workforce itself reproduction in the countries of Ukrainian citizens' potential labor migration (especially neighboring countries), the demand in labor markets of which stimulates emigration, as well as cross-border legal and illegal labor migration;

– the combination of the highlighted above trend with the common civilization phenomenon of human rights' awareness and the human life value' increase, which is reflected in a significant decrease in the birth rate and the total workforce' physical reproduction;

– the structural and institutional unemployment, which ultimately lead to the economically active population' unproductive employment, unsatisfactory parameters and deterioration of the whole national

economic system' competitiveness and diversification on the background of standards and management technologies (including resource provision) of foreign markets' middle-successful and leading players, in particular with the transnational organization.

It is common to consider structural unemployment as a socio-economic phenomenon caused by unbalanced structural and technological changes in the economy, accompanied by inadequate response of the educational system (particularly in aspects of imperfect forecasting of personnel training' optimal parameters by state, regional, general economic orders), whereupon of which the workforce supply' structure does not meet the needs of the country's economy by occupational groups and economic activities' types. A substantive factor of structural unemployment is the information component, reflected in the disparity of scales of common public, territorial and community, group and individual priorities and preferences on the issues of vocational guidance of the elder pre-working and working ages' population.

An explicit factor in the information flows' asymmetry (especially at the national level, on the one hand, macro-territorial, functional and community level – on the other) also causes the institutional unemployment phenomenon, which is manifested in the mismatch of quantitative and qualitative characteristics of supply and demand for training, retraining, skills development, job placement of the workforce due to insufficient development (or lack thereof) and unsatisfactory performance of functions of relevant state administration institutions and other tripartite system' components, including in aspects of limited public coverage and access to such information of the ordinary consumer and applicant in the markets of educational services and labor, respectively.

The effectiveness of mechanisms for overcoming structural and institutional unemployment in Ukraine has significantly deteriorated as a result of the decline of the system of personnel' training, skills development and retraining directly in the workplace, as well as of delays in settling non-standard (split) labor relations. The revival of the system of personnel' training, skills development, retraining in the workplace in recent years is contributed by the implementation of standards and mechanisms of non-formal education, closely related to the spread of tariff-free pay systems based on professional standards (qualification descriptions), which outline the requirements for employees' qualifications and special knowledge, their tasks,

responsibilities and specialization, agreed both by the employer and union representatives.

The aggregate segment of professional and qualification asymmetry has educational and competence, professional and qualification aspects, manifested respectively by the imbalance between labor market demand (primarily from competitive enterprises with a decent social package) and: the level and quality of economically active population' education (including skills, abilities, professional experience gained during internships at the place of study); the structure of graduates with higher and vocational education by specialties; work experience, qualification characteristics of the workforce (in particular, with documental confirmation).

The above mentioned shortcomings of logistical, investment and innovative support of a number of domestic enterprises, economic activity types, territorial economies stimulate the deepening of other kinds of the labor market asymmetries, mainly concentrated in the parameters of the workforce' development and use. Among them are asymmetries of:

– productivity (in the measurements of labor productivity properly, the level of productive employment of the economically active population, the level of employees' wages, including in comparison with the role of certain production, type of economic activity, branch in shaping the specialization of Ukrainian economy and its territorial subsystems, as well as in providing population' common public and socially necessary needs);

– motivation (along with the considered above problems of remuneration and productive employment, it covers the issues of: social protection of workers at enterprises of ownership' various forms and with employees' different number, in particular in economic activities with medium-normal and low levels of added value and rent, budget financing sectors; imbalance of the society and territorial communities' actual needs, on the one hand, well-established individual and group preferences in the career guidance of the population of older pre-working and working age, on the other hand);

– mobility (aggregated in territorial and socio-status aspects (and in the latter case – in economic, professional and qualification, socio-political types), that in a market economy are largely based on the properly economic, as well as broad community and personal factors and incentives of security, including regions' and settlement systems'

economic potential, wage levels, households' cumulative financial capacity, improvement or limitation of which – more or less long-term – eventually leads to: multi-vector trends of domestic and cross-border, legal and shadow migration; dynamic changes in the competitiveness and living standards of the formal and informal employment seekers (individuals, functional and territorial groups of population) – from improving the set of their social status characteristics, increasing the level of social inclusion, level and quality of life in general till to the vulnerable groups' and territorial communities' marginalization, numerous intra- and intersectoral, branch, professional and qualification disproportions; economic growth, economic entities' and economic systems' sustainable development or stagnation and depression of settlement systems and regions, primarily mono-specialized).

Each of the highlighted types of the labor market asymmetries has a powerful informational factor and component, the content of which is generally manifested in the quality and access of labor market actors (employers, employees, self-employed, including population groups who undergoing career guidance) to formal and informal information on the jobs availability, prospects for their creation and appropriate management mechanisms within local and regional economic complexes. As a result, the asymmetry of information flows narrows the alternatives to both work search and supply, profoundly affecting the professional and qualification, territorial, and hence social mobility of the workforce, level of the economically active population' income and life.

In general, the range of types and segments of labor market asymmetries is the result of a gradual more or less long-term increase in intersectoral, professional and qualification, consumer disparities that arise and consolidate due to the mismatch of the social production' reproducible structure to macro-regional and global conditions of resource use' efficiency, which vary throughout the innovation cycles and under the influence of acquiring macro-regional and trans-national recognition by certain management standards and economic products.

Simultaneously with the investment processes optimization (in particular, territorial and sectoral investment flows) and the national economy diversification, as well as improvement of state lobbying mechanisms of national producer interests in foreign markets, there are a number of important factors in adjusting the asymmetries spectrum in national and regional labor markets, such as: optimization of social and territorial mobility' basic factors (based on a socially sufficient income

level, implementation of state policy measures for regional disparities' self-regulation through the development of areas with special management regimes and innovation infrastructure, targeted job creation, promotion of local programs of recruitment and everyday life arrangement of the necessary workforce); the population "activation" (by means of stimulating entrepreneurship, self-employment and economic entities' innovation activity, legalization of cross-border and interregional labor migrations, improvement of labor resources' professional and qualification potential in accordance with the needs of implementation of the economy' modern technological mode).

In addition to the above, among the current priorities for regulating the labor market asymmetries in Ukraine we should mention:

– the substantiation of proposals for optimization of social dialogue, as well as labor relations' collective and contractual regulation;

– strengthening of the protection mechanisms of employees' rights to work decent conditions, regime and remuneration in case of actual entry into labor relations, formalized by a fixed-term employment contract or a civil law commercial contract;

– the control on limiting the employers' opportunities (both domestic and foreign companies) to evade the provision of employees' social and labor guarantees, including in enterprises that change ownership, owner, organizational approaches to the main and ancillary economy activities;

– the substantiation of proposals on equalization of the legal status of employees – citizens of Ukraine (including those who enter into labor relations with business entities of other states) and foreigners who enter into labor relations on the Ukraine' territory;

– strengthening the control over the ban on "salaries in envelopes", the implementation of effective administrative mechanisms to overcome the practice of including the requirements for wages' non-disclosure in employment contracts and fixed-term contracts;

– raising the status, ensuring the objective filling of the state labor inspectors' powers (including the staff expansion and their workload optimization);

– the implementation of methods for tracking the practice of formal reduction of the economic entities' taxation level due to the withdrawal of the employees' part out off staff (including through small business' simplified schemes), monitoring and prevention of such illegal activities;

– the implementation of the State Classifier of Social Standards in legal and resource (financial, logistical, personnel) provision of processes of providing territorial community with socially necessary services of general and professional education, vocational guidance, retraining and advanced training in the network of state and non-state institutions of education and employment;

– the development and realization of content and time indicators and guidelines for the implementation of these social standards (indicators of life level and quality, territorial and interregional differences, adverse socio-economic trends' early warning), justified by the possibility of their budgetary, public solidarity and private financing;

– the improvement of the procedure for forming a regional segment of the personnel training order, taking into account the results of needs' forecasting and indicative planning by priorities of increasing the economic complex competitiveness (including in the process of expanding the presence of local businesses in foreign markets of goods and services); the optimization of mechanisms to increase the availability of free and paid educational services for socially vulnerable groups;

– strengthening the education system' innovative activity, increasing its role in solving territorial problems (primarily on the basis of: the formation of national and regional technology parks on the basis of leading universities; development of educational, research and production clusters in priority brunches of regional economic specialization; stimulation of non-state support for startups);

– the stimulation of regional subsystems of general secondary, vocational and higher education for implementation of dual education programs in cooperation with employers' and local businesses' representative organizations;

– the promotion of dissemination of formal and non-formal education programs in the workplace, as well as the development of systems and criteria for its certification, agreed with the employers' representatives;

– stimulation of the non-profit organizations' activities that provide career guidance, vocational training, counseling and employment services for population categories of various age and social status (including abroad), involving them in the realization of such territorial projects.

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GLOBAL UNCERTAINTY AND ITS EFFECTS TO STRATEGIES OF TOUR OPERATORS

1. INTRODUCTION

Research into the changing roles of tour operators and travel agencies is rare and should be more frequent as an input to researchers in better understanding the challenges of the environment through the time dimension. They are especially important within the countries that are significantly related to tourism and at a time of global crisis (such as a pandemic) have a risk of negative economic externalities. Despite the fact that Croatia uses resource potentials for tourism purposes, the arrival of tourists is often the result of numerous external influences

(proximity of emitting markets, preference for arrival by car, fewer infected during high season, etc.), and less internal. Comparative analysis in this paper (Croatia and Switzerland) and proposals for action indicate the need to improve destination management through dynamic crisis management. This research represents a regional approach to planning and it is a reference point for the researchers and tourism professionals of smaller and highly tourism dependent countries.

2. CHALLENGES FOR INTERMEDIARIES IN GLOBAL TOURISM

Turbulent changes in distribution chains of tourism products and services have created conditions for intensive activities and have triggered the new role of incoming travel agencies (DMC) (Spasić, Pavlović, 2015). On the other hand, crises that occur in one single place of the world can affect tourism activities around the broader area or worldwide (Maditinos, Vassiliadis, 2008). International tourist arrivals could decline by 60% to 80% in 2020 (UNWTO). For example, in the Maldives travel and tourism contributes more than 60% of national GDP (Oxford, 2020). Global pandemia increases our vulnerability to future pandemics, climate change and other global public problems (OECD, 2020). Croatia has the largest share of tourism in GDP in Europe, which will have long-term consequences for the Croatian economy (Republic of Croatia, Ministry of Tourism and Sport, 2020). Numerous travel agencies have gone out of business due to competition from online travel service and/or effects of global pandemics. The number of users of online agency services globally (Figure 4.1) is growing significantly.

Aguiar-Quintana, Gil, Picazo-Peral (2016) point to the fact that a number of clients continue to commit to classic-type agencies because of the security provided, staff skills and closeness in approaching the client. Today, we have witnessed failure of online travel agencies to deliver and respond in the midsts od pandemic crisis over security, proper support to the customers or cash return of the non-consumed bookings in real time, which may have influence in the future rise of direct bookings where consumers feel more secure, properly treated and supported in the case of unexpected events. This may actually cause much more focus on either direct bookings with services providers or better establishment of real travel agencies and only those who will adopt, understand client’s needs and expectations will be able to increase business and survive.

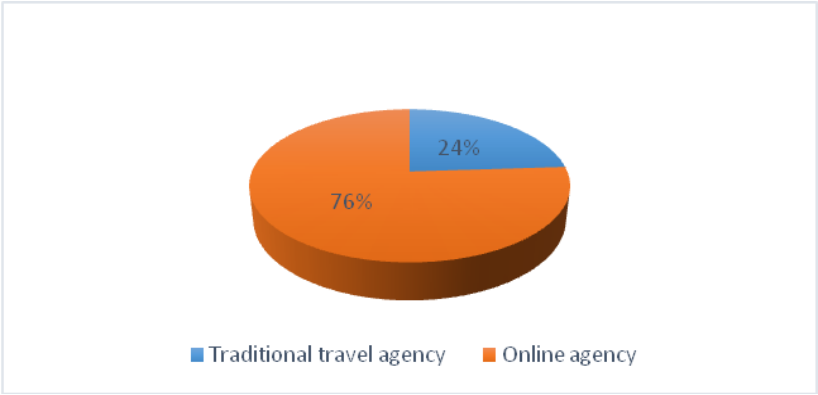


Figure 4.1 Realised online portal bookings *vs* traditional agencies (in %)

Source: Innovation tactics, https://innovationtactics.com/micro-moments-and-the-customer-journey, (18.06.2020)

Perl and Israeli (2011) points to the need for future adjustment of crisis management through four categories: marketing, maintenance, human resources and state aid. Generally, the key to success is creating a problem-solving action plan including prevention measures that combine all stakeholders' interests and activities (Martens, Feldes, Merten, 2016). If one of them is absent the agency will be in a situation of a market disintermediation (exclusion). If intermediaries do not perform their tasks with a harmony and a proper planning they will cause travellers and tourists not to trust in travel agencies, but also decrease in economical benefits and other profits, n the case of global crisis (Kavousy, Royaei, Ebrahimpour, 2009).

Numerous scientific regional results show that travel agencies e-tourism information are complex and advertising messages either confuse or are ignored by most users, where for highly specialized travel agencies the location is less important than before the "age of e-tourism" (Bandara, Silva, 2016, Goertz, 2014). The market had to go through major processes of re-engineering (Loudan, 2007).

Latest trends show that meta search migth join the world of OTA (online travel agencies) by introducing direct bookings on their websites. One of the examples is Skyscanner which, after it got aquired by the Chinese C-Trip, introduced portions of direct bookings in their offering (*Skyscanner*, 2020).

The market is undergoing transformations. We need to be aware of tourism's power to transform society towards more healthy state of being and discuss how travellers shape tourism development (Dwyer, Ateljević, Tomljenović, 2016).

Transformation of travel agencies will be possible only through public-private partnerships. Therefore roles and responsibilities for development areas need to be defined.

Raising the level of partnerships is significantly helped by informing where destination stakeholders create tourism products, while the state and lower levels of government contribute by developing strategic marketing plans in the field of tourism. The final model of this cooperation should present a strong and competitive synergy in regional European destinations and enable successful positioning.

3. THE ROLE OF TOUR OPERATORS IN CROATIAN TOURISM

Today's tourist offer becomes specialized instead of generalized, transport infrastructure is affiliated with partners. Travel agents are excellent reference for advice and provide a variety of unique options they can personalize to your interests (School, 2010). Tourists in the case of saturation with existing offer, replace the location with new tourist pleasures (spectacularity, fantasy, familiarity, warmth, sense of comfort, acceptance, welcome). Therefore, residents develop an awareness of the value of the space they reside in.

Tour operators cannot make Croatia a unique and recognizable brand on their own. They desperately depend on the support of state institutions, primarily of the Ministry of Tourism, Croatian Tourist Board, local and regional authorities and other tourism institutions. Only this way can the unfavorable role of tour operators in Croatian tourist market be changed. If there were no tour operators in Croatian market travel agencies would not be able to operate profitably. Namely, they sell tourist services created by tour operators ("wholesalers") and on that basis charge a commission for performing intermediary activities between the tour operator and the buyer, the final tourist consumer. Although crises and disasters cannot be stopped, their impacts can be limited by both public and private sector managers (Ritchie, 2004). COVID-19 crises brought new tourism. A large number of tourists now choose holiday homes in the rural part of the country, ie villas where they will stay secluded and where they will not have contact with other

people. In that sense, tour operators can stand out as leaders in quality and safety. Furthermore, the increased interest in nautical and camping tourism represents a development opportunity due to possibility of isolation in nature and greater safety than staying in hotels. Although travel will be realized on a smaller scale, there will be destinations that will meet the needs for security and quality of offer, which represents the potential for development of mediation. Agencies should be the country's ambassadors through type promotion; a route map, full travel guide, etc. As mediators between destination and interested demand, they represent a key role in presenting and raising the importance of the content and atmosphere of the place and thus experience for visitors.

4. LEVEL OF PUBLIC – PRIVATE PARTNERSHIP IN SELECTED COUNTRIES

All stakeholder should be active part of the design where an integrated round table discussions must take place. Knowledge, expertise and industry are dominant values, but it must be inclusive of strong support of public institutions and supporting industries (IT especially). The table below compares two countries with different tourism policies (Switzerland and Croatia). Countries were selected because of the diversity of geographical location and degree of economic development.

The comparison of the two approaches of the countries to the development of tourism shows differences in the market approach (proactive management, crisis management). Switzerland gives priority to development in raising the level of tourism modernisation, digitalisation, simplification. Many companies will go completely digital offering services online. There is also a difference in the speed of action and adjustment. Croatia does not yet have a tourism development strategy after 2020. Switzerland pays more attention to retaining the client for future travel. Many destinations in Switzerland will lure the potential visitors with many online content, brining live experiences to wider audience by using technologies much more then before. There will be online destination sight seeing provided, feel and touch experience offerings combined, but most importantly due to health and safety focus change, even physical offering will have a heavy impact of digital support during service providing.

Table 4.1

Diversity of approachs – European countries

Tourism policy	Switzerland	Croatia
Safe and security	Clean and safe, in all the markets with no quarantine restrictions	*Enter Croatia* https://entercroatia.mup.hr
Long haul markets	Improving framework conditions Starting up with campaigns	Tourism agencies, vouchers and problems with the customer rights
Attractions	Enhancing the attractiveness of tourism offerings and market presence	Attraction marketing mix in coastal and rural places
Cooperation	Promoting tourism entrepreneurship	Promoting destination management
Future experiences	To keep Switzerland at a top of mind, the first choice once travel will be possible again	New promotion campaign Go vibrant!
Promotion	Priority markets, market situation, zoom webinar with travel agencies, Media trips and contacts, E- marketing	Orientation dominantly to traditional markets
Slogan under Corona	„We need Switzerland" Exploiting the opportunities presented by the digital economy	„Discover the Colours of Croatia", „Discover Your story"
Tourism strategy	Principles of future subsidiarity and sustainability	Till 2020
Tourism statistics	Digital in one place containing arrivals, overnights, regions, zones, municipalities, month, markets, future acitvities	Different documents (not all digital and concentrated in shared platform)
*Government strategy**	Contribution of travel & tourism in GDP (2019) – 8.5 %	Contribution of travel & tourism in GDP (2019) – 25.1%

Source: Croatian tourism board, https://croatia.hr/en-GB, Ministry of tourism, Republic of Croatia, www.mint.hr.

Market Updates Editorial July/August 2020, Switzerland Tourism. MySwitzerland.com, Tourism Strategy of the Swiss Confederation, https://www.seco.admin.ch/seco/en/home/Standortfoerderung/Tourismuspolitik/Tourismusstrategie_des_Bundes.html

**https://knoema.com/atlas/Switzerland, https://knoema.com/atlas/Croatia.*

General tourism trends of the past will return, but with different postulates and it is important for destinations to monitor market developments and recognise trend since their early stage to be able to adopt their development strategies. Informing stakeholders in terms of transparency and inclusiveness of the state is a priority of the Swiss model in tourism.

In Croatia it is a prime time to create, boost and adjust while designing the new Tourism development strategy. The only possible strategic approach is to divide planning into short term, mid term and long term strategies. International industry experts believe though, that trend towards more secluded areas, outdoor activities or a national tourism exchange will be of a short term life cycle. Croatian policy is yet to be oriented in this part of solution.

5. SUGGESTIONS FOR FUTURE TOURISM DEVELOPMENT

Long term is to believe that tourism will continue and slowly, once the main part of the crisis is resolved, will go back to trends we have seen before, but short and mid term there will be lots of changes that all tourism stakeholder will need to recongise and apply in a much more integrated way.

Globaly new platforms are being created, such as Meetings on Air where whole congress and meeting industry will shift towards. There will be new models of events organised, partially online and digitilised. Suggestions for future action are:

- **Unification of approach**

Public and private partnerhip is essential to achieve optimal development results and potential. Streaming to simplifing processes on public level should be one of the priorities of authorities in the desinations while continuoulsy connecting to private sector for input and support. Private sector on the other hand must have trust in the agility of the public institutions and be a pillar in demonstrating development potentials.

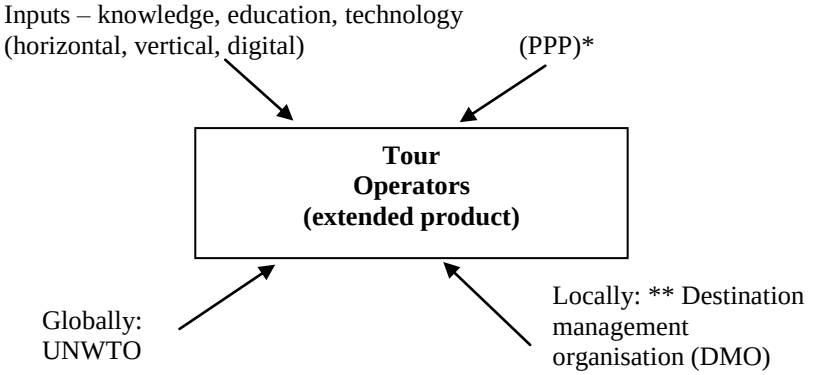
- **Digitalisation in all forms**

Modern technologies as support to tourism industry will become vital. From information level (fast, accurate, updated and accessible full view on the destination for tourist, but also locals and industry professionals) to whole digital product portfolio (such as online sight seeing tours, welcome experiences etc) will shift how destinations

position themselves and how quickly they adopt to market expectations.

- **Strengthening the role of touroperators**

It will be important to develop and strengthen the role of tour operators who will enable market approach for new supply and offering in the destination. From stand alone positions, new products and services will become integrated part of destination DNA through activities and inclusiveness of Tour operation (Figure 4.2).



**Public-private partnership*

*** Influence factors (socio-cultural, technological, ecological, ethical, political, legislative, economic).*

Figure 4.2 Roles of touroperators in international tourism

- **Offering unique value propositions**

USP or the unique selling points as an everlasting development activity. To recognise uniquness of the destination and to transform the offering into viable, modern and atractive tourism products.

6. CONCLUSION

This paper examines the situation on the tourist market of the two countries Croatia and Switzerland. Tourism trends have changed significantly over the last two years. Products such as “visit like a local” will play a big role in the market where there is an increase in true experiences demand. This also opens up for the inclusivity of not only direct tourism stakeholders but also local communities. Raising

awareness of the overall comunity, opening to ideas of potential benefits (material and social) will be important responsibility of public sector and local authorities. This is extremely important especially in unpredictable situations tourism faced recently during global pandemic.

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METHODOLOGY FOR ASSESSING THE POTENTIAL OF NATIONAL ECONOMY SECTORS (ON THE EXAMPLE OF UKRAINE)

The importance of assessing the current and prospective level of industry potential is an important strategic issue, whose implementation involves analysing the current state of business entities in the context of economic sectors and allows identifying the most promising industries to ensure priority financial and resource support for the innovative development of such industries.

The need to identify the most promising sectors of the economy is due to such factors as: a) limited opportunities of financing sectoral development from budget funds; b) the need to obtain a significant economic effect from public investment to ensure the cyclical nature of the investment and innovation process and increase the efficiency of the long term investment.

A large number of scientists, both foreign and domestic, were engaged in potential assessment, evaluation selection criteria and search for basic approaches. These include: V. M. Babaev [1], I. Sh. Dzakhmisheva [3], M. O. Zelenska [4], O. Ye. Kuzmin [5], V. A. Pavlova [7], V. A. Sidun [9] and others. However, the analysis of research confirms the lack of a unified approach in domestic economics

to the choice of criteria for assessing the potential of branches of the national economy: each researcher identifies own groups of criteria, which can sometimes complement each other, which determined the relevance of the investigation.

The purpose of the investigation is to formulate scientific recommendations in the field of assessing the sectoral potential of the national economy on the example of the Ukrainian economy.

Based on the analysis and generalization of primary data describing the activities of Ukrainian enterprises by types of economic activity, it is proposed to distinguish the following types of potential:

- *Economic* – reflects investment processes, features of the fixed assets, as well as the financial condition and efficiency of enterprises by type of economic activity.
- *HR department* – describes the cost of attracting staff, the number of employees, and opportunities for personnel changes.
- *Innovative* – characterizes the use of intellectual products in the activities of business entities.

At the same time, to assess the potential of each species, it is necessary to implement the following stages [8, 10]:

1. Selection of indicators that reflect a certain type of potential.
2. Determination of indicators by types of potential.
3. Normalization of calculation results.
4. Integral assessment of the current industry potential by type based on generalization of normalization results.
5. Constructing a rating based on the results of an integral assessment of industry potential and using the corresponding integral indicator as a criterion for allocating public funds allocated to ensure innovative development of sectors of the national economy.

Let us consider each stage of assessing the sectoral potential of the national economy.

The choice of indicators that reflect a certain type of potential is explained by the economic content of the indicators, as well as the availability of official statistical information that is publicly available. Similarly, one can explain the logic of forming groups of indicators by type of potential. In our opinion, it is the combination of economic (resource), personnel and innovation components that allows fully revealing and assessing the potential of the national economy.

Indicators that were used in the paper to assess the potential by types (Table 4.2) have different units of measurement that is why in order to

generalize and correctly display the results, it is obligatory to normalize them.

Table 4.2

Indicators for assessing the potential of Ukrainian economic sectors

Potential type	Indicator's name	Units of measurement
Economic	Profitability (E1)	part. units
	Net profit (E2)	million UAH
	Specific yield (E3)	part. units
	Capital investment (E4)	million UAH
	Capital investments in progress (E5)	million UAH
	Current financial investments (E6)	million UAH
	Coefficient of autonomy (E7)	part. units
	Absolute liquidity ratio (E8)	part. units
	Depreciation of fixed assets (E9)	million UAH
HR department	Staff costs (K1)	million UAH
	Expenses per employee (K2)	million UAH
	Number of employees employed (K3)	thousand people
	Number of vacancies (K4)	thousand units
	Employment of registered unemployed people (K5)	thousand people
	Labour productivity (K6)	thousand UAH / person
Innovation	Applications for inventions from applicants legal entities (I1)	unit
	Utility model applications from legal entity applicants (I2)	unit
	Performance coefficient (inventions) (I3)	part. units
	Performance factor (utility models) (I4)	part. units

Some of the presented indicators are absolute values, while others are coefficients. Therefore, one should provide formulas for their calculation (Table 4.3). In this case, instead of naming indicators, one uses their designations.

To illustrate the methodology for industry potential assessing, its value will be indicated for year 2017 according to the State statistics service of Ukraine [6], owing to the specifics of the data contained in the public domain on official electronic pages.

Table 4.3

Calculation formula for indicators by type of potential

Potential type	Designation	Calculation formula
Economic	E1	Financial result / expenses
	E3	Net income / expenses
	E7	Equity / total equity
	E8	Most liquid assets / current liabilities
HR department	K6	Net income / average number of employees
Innovation	I3	Received patents / applications for inventions
	I4	Utility model applications / obtained patents

However, if such a need arises, the composition of indicators can be revised and supplemented, which is not significantly affecting the content of the stages of assessing industry potential [2].

It is also worth noting that the sectors of the economy are grouped by type of economic activity (which is explained by the policy of the State statistics service of Ukraine).

Indicators systematization on the basis of information from official sources is the next stage of the investigation (Tables 4.4-4.5) [8, 10].

Table 4.4

Identification of components of innovation potential

Types of activities	Indicators				
	E1	E2	E3	E4	E5
1	2	3	4	5	6
Agriculture, Forestry and Fisheries	0,224	68858,5	1,021	64243,3	15540,7
Industry	0,068	56124	1,16	143300	160078,5
Construction	0,016	-5014,3	1,019	52176,2	50484,15
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,188	25874,2	0,98	33664,8	19441,25
Transport, warehousing, postal and courier services	-0,01	-16796,7	1,008	37943,5	27905,7

Table 4.4 (continued)

1	2	3	4	5	6
Temporary accommodation and catering services	0,078	1773,5	0,965	2133,5	3035,5
Information and telecommunications	0,138	12029,3	1,05	18395,2	8216,4
Financial and insurance activities	0,028	16806,6	1,083	8055,3	4241,8
Real estate transactions	0,062	-17551,2	1,143	22505,6	31221,15
Professional, scientific and technical activities	0,194	32356,1	0,899	7965,3	24367,8
Administrative services activities	0,026	-3624,2	1,094	12747,3	5918,6
Education	0,037	96,1	0,96	32843,9	88,3
Health and social assistance	0,033	145	1,032	3492,5	1143,15
Arts, sports, entertainment and recreation	-0,155	-2300,4	1,008	6708,3	2751,3
Other activities	-0,004	-23,7	0,836	1649,2	1804,5

Table 4.5

Identification of components of innovation potential

Types of activities	Indicators			
	E6	E7	E8	E9
1	2	3	4	5
Agriculture, Forestry and Fisheries	2093,55	0,511	0,052	101864,4
Industry	12172,1	0,182	0,045	1387509,8
Construction	13555,1	-0,058	0,044	37631,65
Wholesale and retail trade; repair of motor vehicles and motorcycles	38708,15	0,009	0,07	86065,8
Transport, warehousing, postal and courier services	1127,15	0,571	0,147	575600,3
Temporary accommodation and catering services	108,5	-0,108	0,102	8624,9

Table 4.5 (continued)

1	2	3	4	5
Information and telecommunications	1992,45	0,148	0,219	83858,55
Financial and insurance activities	46778,05	0,359	0,176	3042,75
Real estate transactions	20398,4	-0,035	0,039	203952,4
Professional, scientific and technical activities	19383,45	0,529	0,099	22474,7
Administrative services activities	8424,45	0,723	0,039	1141324,6
Education	34,55	0,68	0,444	1122,35
Health and social assistance	231,45	0,327	0,137	6336
Arts, sports, entertainment and recreation	815,85	0,231	0,055	72903,95
Other activities	156	0,359	0,102	951,2

One will define indicators for other types of potential as well (Tables 4.6-4.7).

Table 4.6

Identification of components of innovation potential

Types of activities	Indicators					
	K1	K2	K3	K4	K5	K6
1	2	3	4	5	6	7
Agriculture, Forestry and Fisheries	44266,8	69,6	635,7	2,5	103,6	735,6
Industry	233514,3	100,0	2334,2	17,5	92,7	1226,2
Construction	18543,9	63,1	293,7	2,4	11,3	805,2
Wholesale and retail trade; repair of motor vehicles and motorcycles	108272,8	48,7	2223,1	9,2	64,7	1507,4
Transport, warehousing, postal and courier services	84169,3	93,4	900,7	6,3	17,1	531,8
Temporary accommodation and catering services	8028,6	35,8	224,2	1,7	11,7	218,4
Information and telecommunications	22570,5	74,5	303,1	0,6	2,8	715,3

Table 4.6 (continued)

1	2	3	4	5	6	7
Financial and insurance activities	31637,8	157,3	201,1	0,6	3,7	1106,5
Real estate transactions	11325,6	48,7	232,7	0,8	3,2	520,8
Professional, scientific and technical activities	25647,9	84,0	305,3	1,2	6,0	1068,8
Administrative services activities	17999,1	64,1	280,8	1,9	7,4	288,7
Education	1364,1	42,6	32,0	4,2	25,5	156,7
Health and social assistance	6351,9	54,1	117,4	3,7	17,0	183,4
Arts, sports, entertainment and recreation	4679,9	103,8	45,1	4,6	2,5	234,0
Other activities	1984,8	14,0	142,2	0,6	4,3	115,7

Table 4.7

Identification of components of innovation potential

Types of activities	Indicators			
	I1	I2	I3	I4
1	2	3	4	5
Agriculture, Forestry and Fisheries	1	10	1	0,9
Industry	44	236	0,727	1,097
Construction	2	7	0,5	0,857
Wholesale and retail trade; repair of motor vehicles and motorcycles	6	43	0,5	1,07
Transport, warehousing, postal and courier services	-	11	-	0,909
Temporary accommodation and catering services	-	-	-	-
Information and telecommunications	12	27	0,333	0,741
Financial and insurance activities	1	1	-	1
Real estate transactions	-	3	-	2,333
Professional, scientific and technical activities	356	1562	0,64	1,07
Administrative services activities	-	14	-	0,929
Education	753	3810	0,6	1,056

Table 4.7 (continued)

1	2	3	4	5
Health and social assistance	21	132	0,429	1,174
Arts, sports, entertainment and recreation	-	-	-	-
Other activities	4	104	0,5	1,038

The next stage of calculations is *normalization* (4.1):

$$x_i = \frac{x_n - x_{min}}{x_{max} - x_{min}}, \tag{4.1}$$

where: x_i – standardized value of the i-th indicator; x_n – actual value of the statistical indicator for the enterprise (industry); x_{min} and x_{max} – accordingly, the minimum and maximum values of the indicator.

The results of normalization of indicators are presented below (Tables 4.8 (a) – 4.8 (b)).

Table 4.8 (a)

Normalization of components of economic potential

Types of activities	Indicators				
	E1	E2	E3	E4	E5
1	2	3	4	5	6
Agriculture, Forestry and Fisheries	1	1	0,57	0,446	0,097
Industry	0,588	0,853	1	1	1
Construction	0,451	0,145	0,566	0,361	0,315
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,905	0,503	0,446	0,232	0,121
Transport, warehousing, postal and courier services	0,383	0,009	0,532	0,261	0,174
Temporary accommodation and catering services	0,615	0,224	0,399	0,01	0,018
Information and telecommunications	0,773	0,342	0,66	0,124	0,051
Financial and insurance activities	0,483	0,398	0,763	0,052	0,026
Real estate transactions	0,573	0	0,947	0,153	0,195
Professional, scientific and technical activities	0,921	0,578	0,196	0,051	0,152
Administrative services activities	0,478	0,161	0,798	0,085	0,036
Education	0,507	0,204	0,384	0,02	0
Health and social assistance	0,496	0,205	0,605	0,043	0,007

Table 4.8 (a) (continued)

1	2	3	4	5	6
Arts, sports, entertainment and recreation	0	0,176	0,531	0,007	0,017
Other activities	0,398	0,203	0	0	0,011

Table 4.8 (b)

Normalization of components of economic potential

Types of activities	Indicators			
	E6	E7	E8	E9
Agriculture, Forestry and Fisheries	0,044	0,745	0,034	0,073
Industry	0,26	0,349	0,016	1
Construction	0,289	0,06	0,013	0,026
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,827	0,141	0,078	0,061
Transport, warehousing, postal and courier services	0,023	0,818	0,267	0,414
Temporary accommodation and catering services	0,002	0	0,156	0,006
Information and telecommunications	0,042	0,309	0,445	0,06
Financial and insurance activities	1	0,563	0,339	0,002
Real estate transactions	0,436	0,088	0	0,146
Professional, scientific and technical activities	0,414	0,767	0,149	0,016
Administrative services activities	0,179	1	0	0,822
Education	0	0,948	1	0
Health and social assistance	0,004	0,523	0,242	0,004
Arts, sports, entertainment and recreation	0,017	0,409	0,041	0,052
Other activities	0,003	0,562	0,156	0

Similarly, we carry out normalization for indicators that are part of other types of potential (Tables 4.9-4.10).

Table 4.9

Normalization of the components of human resources

Types of activities	Indicators					
	K1	K2	K3	K4	K5	K6
1	2	3	4	5	6	7
Agriculture, Forestry and Fisheries	0,185	0,339	0,262	0,112	1	0,445
Industry	1	0,583	1	1	0,892	0,798

Table 4.9 (continued)

1	2	3	4	5	6	7
Construction	0,074	0,294	0,114	0,107	0,087	0,495
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,461	0,213	0,952	0,509	0,615	1
Transport, warehousing, postal and courier services	0,357	0,509	0,377	0,337	0,144	0,299
Temporary accommodation and catering services	0,029	0,129	0,084	0,065	0,091	0,074
Information and telecommunications	0,091	0,436	0,118	0	0,003	0,431
Financial and insurance activities	0,13	1	0,074	0	0,012	0,712
Real estate transactions	0,043	0,219	0,087	0,012	0,007	0,291
Professional, scientific and technical activities	0,105	0,48	0,119	0,036	0,035	0,685
Administrative services activities	0,072	0,294	0,108	0,077	0,049	0,124
Education	0	0,189	0	0,183	0,228	0,029
Health and social assistance	0,022	0,257	0,037	0,237	0,143	0,049
Arts, sports, entertainment and recreation	0,014	0,678	0,006	0	0	0,085
Other activities	0,003	0	0,048	0	0,018	0

Table 4.10

Normalization of the components of innovation potential

Types of activities	Indicators			
	I1	I2	I3	I4
1	2	3	4	5
Agriculture, Forestry and Fisheries	0,001	0,002	1	0,1
Industry	0,058	0,062	0,727	0,224
Construction	0,003	0,002	0,5	0,073
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,008	0,011	0,5	0,207
Transport, warehousing, postal and courier services	0	0,003	0	0,106

Table 4.10 (continued)

1	2	3	4	5
Temporary accommodation and catering services	-	-	-	-
Information and telecommunications	0,016	0,007	0,333	0
Financial and insurance activities	0,001	0	0	0,163
Real estate transactions	0	0,001	0	1
Professional, scientific and technical activities	0,473	0,41	0,64	0,207
Administrative services activities	0	0,003	0	0,118
Education	1	1	0,6	0,198
Health and social assistance	0,028	0,034	0,429	0,272
Arts, sports, entertainment and recreation	-	-	-	-
Other activities	0,005	0,027	0,5	0,187

To summarize the results of the potential assessment by tipes, we use the arithmetic average, (4.2):

$$IP_k = \frac{1}{m} \sum_{k=1}^{m} n_k, \tag{4.2}$$

where: IP_k – an integral indicator for assessing the potential of type k, unit share; m – the number of indicators in the group that characterizes the potential of the type k, unit share; n_k – a normalized indicator belonging to the potential group of the type k, the fraction of the unit.

The results of the calculations are presented below (Table 4.11).

Table 4.11

Integrated assessment of potential by type

Types of activities	Integral indicators by types of potential		
	IP_E	IP_K	IP_I
1	2	3	4
Agriculture, Forestry and Fisheries	0,445	0,391	0,276
Industry	0,674	0,879	0,268
Construction	0,247	0,195	0,145
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,368	0,625	0,182

Table 4.11 (continued)

1	2	3	4
Transport, warehousing, postal and courier services	0,32	0,337	0,027
Temporary accommodation and catering services	0,159	0,079	0
Information and telecommunications	0,312	0,18	0,089
Financial and insurance activities	0,403	0,321	0,041
Real estate transactions	0,282	0,11	0,25
Professional, scientific and technical activities	0,36	0,243	0,433
Administrative services activities	0,395	0,121	0,03
Education	0,34	0,105	0,7
Health and social assistance	0,237	0,124	0,191
Arts, sports, entertainment and recreation	0,139	0,131	0
Other activities	0,148	0,012	0,18

For further generalization of the results as using the arithmetic average for this choice are several reasons:

Firstly, the presence of zero values of innovation potential for certain types of economic activity precludes the use of the geometric average.

Secondly, arbitrary determination of the significance of the results of the pitch assessment increases the subjectivity of the results obtained. In this case, the number of indicators in the group also can not be considered the basis for determining the weight, because the number of indicators depends on the information that is publicly available.

Thus, the potential by tipes and its total value are determined similarly to (4.3):

$$IP = \frac{1}{k} \sum^{k} IP_k, \tag{4.3}$$

where: k – number of types of potential; IP_k – an integrated indicator for assessing the potential of the form k, unit share, IP – an integrated indicator of the industry potential, unit share.

The last stage of the assessment of the sectoral potential is the ranking of the final results of the assessment (Figure 4.3).

Based on the results of determining the sectoral potential of the national economy, the following conclusions should be made:

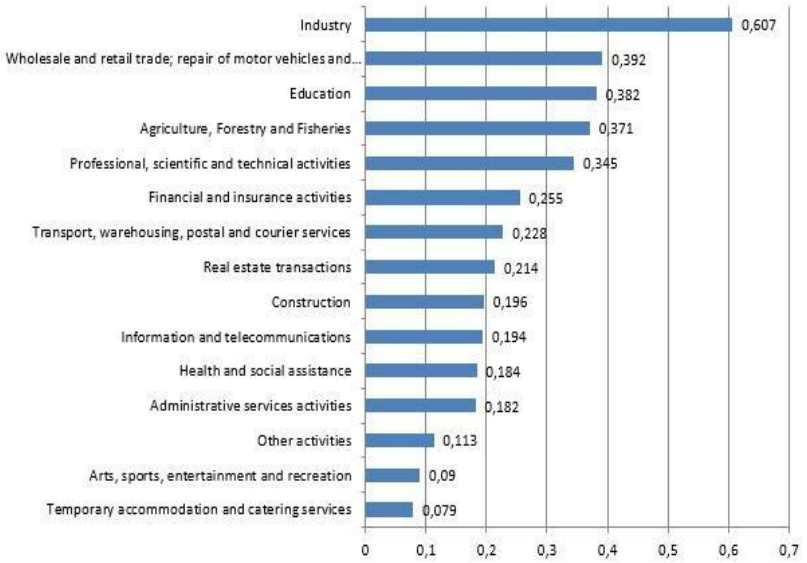

Figure 4.3 The results of ranking the integrated indicator of the sectoral potential of the national economy

Firstly, the results are quite logical, because industry, trade, education, agriculture, as well as professional, technical and scientific activities are really the basis for the development of the national economy.

Secondly, the relatively low results of other industries are explained either by the need to invest significant capital (construction; information and telecommunications; arts, sports, entertainment and recreation) or by the social nature of activities that do not guarantee a quick return on investment (health care, temporary accommodation and catering).

Thirdly, the simplicity of the application of the methodology for assessing the industry potential opens wide opportunities for forecasting its value in the presence of the required amount of actual data.

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DECISION-MAKING PROCESS QUALITY OF TOP MANAGERS IN SLOVENIA

Introduction

We conducted a study on the relationship between the quality of the decision-making process of top managers in Slovenia and company performance. The companies were located in Slovenia and the focus was placed on the time when managers made important decisions.

The true essence of management is reflected in the true success of managers' decisions over time (Harrison, 1999, 2000). Guillemette et al. (2014) pointed out that an important distinction must be made between the performance of the decision-making process and the quality of the decision itself; or between the results of the process and the results of the decision. In the business world, decision-making process performance is an important prerequisite (required as a prior condition) for a quality decision. A relationship appears to exist between these two distinct constructs (Van Bruggen et al., 1998; Lilien et al., 2004; Bernd-Mathias et al., 2011). The Guillemette et al. (2014) study concentrated on evaluating the decision-making process, rather than on the consequences of the dimensions. Meissner and Wulf (2014) also confirm that an increasingly dominant school of thought in the strategy process literature argues that decision-making processes should be evaluated on the basis of the quality of the process itself, rather than on the basis of the decision-making outcomes (e.g., financial performance) (Amason, 1996; Keren & de Bruin, 2005).

The decision-making process consists of five phases: intelligence phase (i.e., information search, problem identification), design phase (i.e., criteria choice, search for alternatives, predicting and measuring outcomes), choice phase (i.e., final solution, implementation

planning), implementation phase and a monitoring phase (i.e., feedback and correction) (Simon, 1977; Turban et al., 2011).

Performance is influenced by several factors that may mask the effect of the decision-making process (Dean & Sharfman, 1996; Meissner & Wulf, 2014). These factors can include organizational and environmental influence factors that are unrelated to the decision-making process itself (Hansen & Wernerfelt, 1989; Meissner & Wulf, 2014). In contrast, the process based measures of the quality of the decision-making process are less likely to be influenced by exogenous factors and are more likely to be linked to the decision-making process (Hough & White, 2003; Meissner & Wulf, 2014). Several studies have also stressed that the quality of the strategic decision-making process is one of the most important determinants of organizational performance (Eisenhardt, 1989; Meissner & Wulf, 2014).

Empirical studies have found that a high quality decision-making process can increase total shareholder returns (TSR) and the return on investment (ROI) by six to seven percentage points (Blenko et al., 2010; Lovallo & Sibony, 2010). Decision-making quality is based on the thoroughness with which all relevant leadership and technical issues are considered (Rausch, 2007). Chen et al. (2012) identified seven key principles of decision-making quality: 1) immediate and rich information, 2) including complete data from the past; 3) a precise forecasting model; 4) key forecasting parameters and random factors; 5) the distance between the forecasting point and the current time point, where the closer they are, the more precise the forecasting value is; 6) an immediate and multi-frequency feedback rate in a decision-making process missile control model; and 7) overall system thinking and rational decision-making evaluations.

The quality of the decision-making process and the company's success is considerably influenced by who makes the decisions, what skills and capabilities they have, what managerial style they apply, and the techniques and methods they apply in the course of the decision-making process. Consequently, it is not only an applied decision-making approach and a managerial style that leaves their mark on the decision-making process. It is also the level of professional ability, education and experience that the manager possesses (Zoltay-Paprika et al., 2008).

Shetach (2010) determined that qualitative values were only important to consider if it is practical (in terms of its applicability) and suitable. When it comes to good quality intuitive decisions, there is a

close relationship between a natural ability to sense the essential elements of a sound decision and nurturing the ability to do so (Patton, 2003). A high-quality decision is one in which the action chosen is consistent with the goals of the organization. Potentially available information about the probabilities of the actions lead to the attainment of these goals. Hence, the implementation of the decision is influenced by the degree to which group members understand and support the decision (Vroom & Searle, 2003).

An effective decision-making process is not merely a matter of decision-making quality. It also ensures that the decision will have the necessary support and commitment for its effective implementation (Nutt, 2002; Vroom & Searle, 2003). Stakeholder management is an important tool which allows for the identification of the stakeholders that might have the most influence over the success or failure of the company. These people are the most important supporters and opponents to consider when implementing a decision. Based on this analysis, managers can adjust their decisions and make plans for dealing with stakeholders with different interests and different levels of influence (Florea & Florea, 2013). The stakeholders of a typical modern organization include: stockholders/owners of the organization, suppliers of materials, banks and other lenders, government agencies, employees and unions, consumers, competitors, local communities and the society at large (Certo & Certo, 2012).

We carried out an analysis on the available scientific articles on research models that focused on the quality of the decision-making process. Meissner and Wulf (2014) developed a decision-making comprehensiveness model. The decision-making quality was measured using the process perspective. The independent variable was comprehensiveness-performance, the mediation variable was decision-making quality and the dependent variable was organizational performance. The model included perceived uncertainty. The organizational performance was measured according to the size of five financial indicators, in comparison with the same indicators for their main competitors (e.g., profit before tax, dividend, growth, equity value growth, return on assets). Their results revealed that comprehensiveness had a positive and significant influence on organizational performance. The relationship between decision-making quality and the organizational performance was positive and highly significant.

Guillemette et al. (2014) developed a construct model of the decision-making performance. This multidimensional construct is composed of four reflective dimensions (which are also used in our study). The decision-making quality construct was measured via formative measures of the decision-making quality and the satisfaction measures of the effectiveness of the user's decision-making process. All formative and reflective variables were measured through a user's perception. The study focused on high-impact decisions. These decisions are mostly ill-structured, relatively complex, and important for the organization (tactical or strategic decisions). Such decisions are not made in total isolation and are influenced by other stakeholders. The study proved that the relationship between the decision-making performance and the decision-making quality was significant. The study also calculated the size of the weights of the dimensions of the decision-making performance. All four dimensions of the decision-making performance were found to positively contribute to the perceived decision-making quality.

Survey

In March of 2015, we distributed an anonymous survey to the top managers of the 500 largest companies in Slovenia (see also Grušovnik et. al. (2015), Grušovnik et. al. (2017) and Grušovnik et al. (2020)). Annual review in the fiscal year of 2013 was used to determine which companies were the largest (Javornik, 2014). We developed two versions of the questionnaire; one was written in Slovenian and the other in English. The survey was an internet survey. Respondents received a link to the survey through a personalized e-mail. Of the 500 e-mails that were sent out, 255 managers clicked on the survey and 112 of those managers fully completed the questionnaire. Hence, the data collected represents 22,4% of the target audience. 210 of the managers accessed the survey through a personal computer, 25 through a smart phone and 20 through a tablet computer. 86 managers out of 112 were working in companies that participated in foreign markets.

The questionnaire consisted of 26 questions, of which 22 questions related to the quality of the decision-making process. The other 4 questions referred to the company's employees and the company's performance measures. The managers were answering questions for the 2014 fiscal year. Two company performance measures were

chosen, namely the growth of value added (measured by annual growth per employee for 2014) and the extent of company's orientation towards foreign markets (measured by the proportion of revenues generated in foreign markets as a percentage of total revenues, for 2014, in percent).

Dimensions of decision-making process quality

The first 22 questions in our survey were related to the dimensions of the quality of the decision-making process. These questions are identical to the questions in the Guillemette-Laroche-Caudieux survey on the reflective measures of decision-making performance (Guillemette et al., 2014). Each individual dimension of the quality of the decision-making process included several 7 point Likert-scale questions (items) where: 1 – strongly disagree, 2 – disagree, 3 – partly disagree, 4 – neither disagree nor agree, 5 – partly agree, 6 – agree, and 7 – completely agree. The scale of the 22nd question was reversed. Since the range of the scale was not evident from the content of the scientific article, we established contact with the main author of the paper and obtained this information.

The research model comprised the following four dimensions. Each question or dimension was weighted according to the importance of the quality of the decision-making process (Figure 4.4):

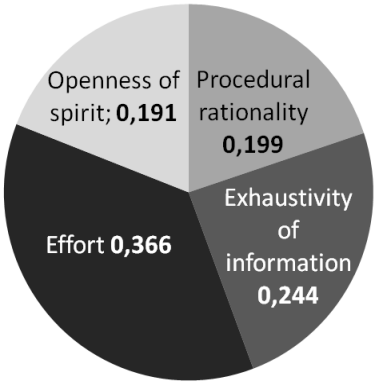

Figure 4.4 Weights of importance of the dimensions for the quality of the decision-making process

Source: Guillemette et al. (2014)

- *Procedural rationality (7 questions – No.: 1, 5, 9, 10, 16, 17, 18);*
- *Exhaustivity of information (5 questions – No.: 3, 12, 14, 19, 22);*
- *Effort (5 questions - No.: 2, 4, 6, 8, 20);*
- *Openness of spirit (5 questions – No.: 7, 11, 13, 15, 21).*

The values of the original weights were: 0,208 + 0,255 + 0,382 + 0,2 = 1,045. For a more logical display, we converted the values so the sum was the following: 0,199 + 0,244 + 0,366 + 0,191 = 1 or 100%. The sums of the answers of the individual dimensions for each manager were entered into Equation (4.4). This allowed us to calculate a comparable value for the quality of the decision-making process for each individual manager.

The equation for an individual manager's quality in terms of their decision-making process (abbreviated as D.M.P.) is as follows:

$$Q(m)_{D.M.P.} = \left(\frac{D1_{act}}{D1_{max} \square w_{D1}}\right) + \left(\frac{D2_{act}}{D2_{max} \square w_{D2}}\right) + \left(\frac{D3_{act}}{D3_{max} \square w_{D3}}\right) + \left(\frac{D4_{act}}{D4_{max} \square w_{D4}}\right) \quad (4.4)$$

$D\,(1, 2, 3, 4)_{act}$ – actual sum of manager's achieved points from the answers for each dimension;

$D1_{max}$ – (7 × 7 = 49) sum of maximum possible points from the dimension of procedural rationality;

$D2_{max}$ – (5 × 7 = 35) sum of maximum possible points from the dimension of information exhaustivity;

$D3_{max}$ – (5 × 7 = 35) sum of maximum possible points from the dimension of effort;

$D4_{max}$ – (5 × 7 = 35) sum of maximum possible points from the dimension of openness of spirit;

w_{D1} = 0,199 – weight of the dimension of procedural rationality;

w_{D2} = 0,244 – weight of the dimension of the exhaustivity of the information;

w_{D3} = 0,366 – weight of the dimension of effort;

w_{D4} = 0,191 – weight of the dimension of the openness of spirit.

A practical example explaining Equation (4.4):

If, in the dimension of procedural rationality, there is a maximum of 49 possible points, these 49 points represent 0.199, or 19.9%, of the manager's quality of the decision-making process. The results of the answers will rarely reach the maximum value. If we assume that the manager, in the dimension of procedural rationality, scores 40 points, then this is $\frac{40}{49}$ = 0.816, or 81.6%, of 0.199 (0.816 x 0.199 = 0.162). In this case, the value 0.162 represents the actual comparable value of the manager's dimension of procedural rationality against the other managers' (the weight of the dimension is still 0.199, only in relation to the other managers' the actual comparable value is 0.162).

We calculated the mean of all values of the decision-making quality of each manager (Equation 1). All companies above the mean value belonged to the group in which the managers are above-average in the quality of the decision-making process. Other companies that were below or equal to the mean were in the group where managers are below-average in the quality of the decision-making process.

Empirical analysis

Figure 4.5 illustrates the quality of the decision-making process for 112 top managers in Slovenia and the growth of their company's value added (measured by annual growth per employee for 2014). The managers are ranked in ascending order according to the quality of the decision-making process. The curve of the quality of the decision-making process is flat. At the beginning and end of the curve we have seen a slightly steeper increase. We have multiplied the curve by the value 50, so that the differences are more obvious to the eye. As the quality of the decision-making process steadily increased, the growth in value added per employee varied considerably. Very high growth rates in value added per employee are somewhat more pronounced on the left-hand side, where managers with below-average quality in the decision-making process can be found.

Table 4.12 shows descending differences in the mean values of the questions (items) for measuring the quality in the decision-making process of managers between companies with above-average and below-average growth in value added per employee. In 15 out of the 22 questions, managers of companies with below-average growth in

value added per employee performed better (higher), on average. The biggest difference in favor of managers of below-average companies in terms of value added growth can be found in the 8th question, which measures eagerness in addressing problems. The second largest difference, also in favor of managers of the below-average companies in terms of value added growth, is found in the fifth question ("I identified entire problems and their implications"). Of the questions with the four biggest differences in favor of managers of companies with above-average value added growth, three measure the dimension of Openness of spirit, namely question 11 ("I was creative to a high extent in my decision-making"), question 15 ("Novelty had great importance in my decision-making") and question 13 ("New possibilities were taken into account in my decision-making"). On average, managers of companies with above-average growth in value added per employee appear to have a greater openness of spirit, on average, than managers with below-average growth in value added per employee.

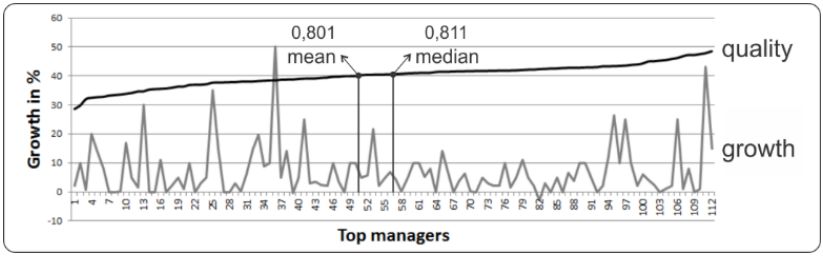

Figure 4.5 Quality of the decision-making process and growth in value added per employee (group size: 112 managers)
Source: Own survey (2015)

We also analyzed the differences in the mean values of the individual questions (items) from our survey on the quality of managers' decision-making process, between managers of companies with above-average and below-average orientation towards foreign markets (measured by the share of revenues generated on foreign markets). 86 managers out of 112 in our sample worked in companies that were active in foreign markets. In almost all questions, the managers of the companies with above-average orientation towards foreign markets performed better (i.e. higher) on average than the

managers of the companies with below-average orientation (ratio 19:3 in favor of the above-average). Only the last three smallest differences spoke for the below-average in terms of orientation towards foreign markets. The five biggest differences concerned the following questions: question 20 ("I was completely immersed in solving my problems"), question 16 ("I considered the risks associated with each alternative"), question 8 ("I have shown my eagerness to address the problems"), question 4 ("I made the required effort to solve the problems"), and question 2 ("I put a great deal of effort into achieving my tasks"). Four of these five questions (with the exception of question 16) measure the dimension of Effort. On average, managers of companies with an above-average orientation towards foreign markets seem to make more effort than managers of companies with a below-average orientation towards foreign markets. The average differences between these two groups of managers are more pronounced for the Effort dimension than for the other three dimensions.

Table 4.12

Descending differences in the mean values of the questions (items) of the quality in the decision-making process of managers between companies with above-average and below-average growth in value added (VA) per employee (112 managers)

How were things developing in the phase of the decision-making process when you had the goal of making important decisions? (question)		**DQ**	**Size of differences in favor of:**	
No.	**Question (item)**		**Below average growth in value added**	**Above average growth in value added**
1	2	3	4	5
8.	I have shown my eagerness to address the problems.	EF	1,89	/
5.	I identified entire problems and their implications.	PR	1,50	/

Table 4.12 (continued)

1	2	3	4	5
12.	The information available was sufficient to solve the problems.	EI	/	1,32
3.	I had enough information to analyze the alternatives.	EI	1,23	/
9.	I analyzed each choice.	PR	1,19	/
11.	I was creative to a high extent in my decision-making.	OS	/	0,86
22.	I didn't have enough information to reach my decisions.	EI	0,81	/
4.	I made the required effort to solve the problems.	EF	0,80	/
15.	Novelty had great importance in my decision-making.	OS	/	0,77
17.	I considered the challenges associated with implementing my final decisions.	PR	0,57	/
6.	I was focused on decision-making.	EF	0,55	/
13.	New possibilities were taken into account in my decision-making.	OS	/	0,52
2.	I put a great deal of effort into achieving my tasks.	EF	0,36	/
7.	Innovative ideas were considered as alternatives to a great extent.	OS	0,34	/
10.	I used enough decision-making criteria to arrive at the final solutions.	PR	0,30	/
19.	I had enough sources of information to make the best possible choice.	EI	0,19	/
18.	I have considered the objective related to each choice.	PR	0,13	/
1.	I evaluated all possible solutions before making my final choices.	PR	/	0,11

Table 4.12 (continued)

16.	I considered the risks associated with each alternative.	PR	/	0,08
20.	I was completely immersed in solving my problems.	EF	0,07	/
14.	I had enough information to understand the problems.	EI	0,02	/
21.	I used unusual approaches to a great extent when making my final decisions.	OS	/	0,01

Note: DQ – dimensions of the decision-making quality (PR – procedural rationality, OS – openness of spirit, EI – exhaustivity of information, EF – effort); The figures do not represent percentages, but rather comparable ratios, as explained above.

Source: own survey (2015)

In the second step of our analysis, we conducted a cluster analysis on the variables quality of decision-making, extent of orientation towards foreign markets and number of employees in a company. We measured the number of employees in a company as an ordinal variable with 6 categories (ranks), namely 50 or fewer employees, 51-100, 101-250, 251-500, 501-1000 and more than 1000 employees. The frequencies of categories for all companies and for companies present in foreign markets are shown in Figure 4.6. Almost all companies (except one) with 501 or more employees are present in more than one market.

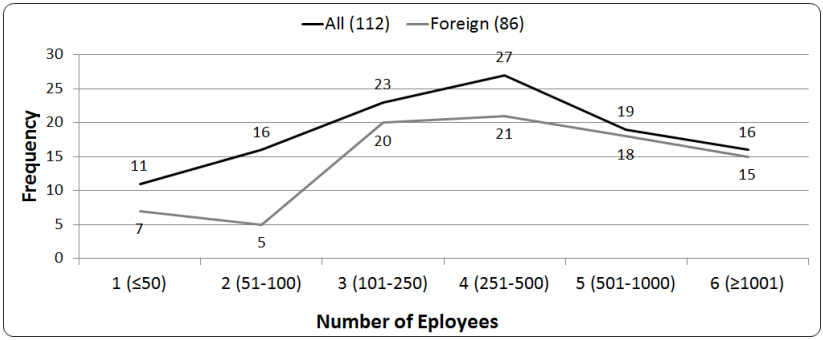

Figure 4.6 Frequency of the number of employees in a company

Source: own survey (2015)

Table 4.13 shows the results of the cluster analysis for the group of 86 managers of companies operating in foreign markets. The two clusters obtained are of similar size, the first cluster containing 46 (53,55%) managers and the second 40 (46,5%) managers. The average variable values are all higher in the second cluster: 0,82 – quality of decision-making; 4,80 – number of employees in a company (average rank); and 87,75% – extent of orientation towards foreign markets. The differences in the averages between the two groups (clusters) are as follows: 0,03 – quality of decision-making; 1,56 – number of employees (difference in average ranks); and 63,9% – extent of orientation towards foreign markets. The average difference between the quality of decision-making is small. For the other two variables, the differences are significant.

Table 4.13

Results of the cluster analysis

Variables: Decision-making quality, extent of orientation towards foreign markets and number of employees in a company. **Group size:** 86 managers			
Cluster	1	2	Input importance
Size	53,5% (46)	46,5% (40)	
Input averages	Foreign markets 23,85	Foreign markets 87,75	1,00
	Employee number 3,24	Employee number 4,80	0,26
	Quality of decision-making 0,79	Quality of decision-making 0,82	0,04

Source: own survey (2015)

It can be concluded from this that companies in the cluster which, on average, have a higher extent of orientation towards foreign markets and a higher number of employees also have a higher average quality of decision-making of managers.

Findings and recommendations

In order to investigate the relationship between the quality of the decision-making process of top managers in Slovenia and the company's performance, we have divided managers into above-average and below-average groups according to the two measures of

company performance, namely the growth of value added per employee and the extent of orientation towards foreign markets (measured by the share of revenues generated on foreign markets). On average, managers of companies with above-average growth in value added per employee show greater Openness of spirit than managers of companies with below-average growth in value added growth per employee. In contrast, managers of companies with an above-average extent of orientation towards foreign markets appear to make more Effort, on average, than managers in companies with a below-average orientation towards foreign markets.

The two-step cluster analysis resulted in a cluster of 40 (46,5%) managers in a group of 86 managers running companies present in foreign markets. In this cluster, all average values of the variables were higher than in the other cluster, including the decision-making quality variable. The other two variables used include the extent of orientation towards foreign markets and the number of persons employed in the company. Companies in the cluster that on average had a higher extent of orientation towards foreign markets and a higher number of employees also had a higher average quality of decision-making of managers. Therefore, the top managers in our constructed cluster lead on average larger and more internationally oriented companies in Slovenia with a higher average quality of decision-making than managers in the remaining cluster of smaller and less internationally oriented companies.

To improve the results for future surveys, we recommend the following:

- *Increase the size of the Likert scale from 7 to 9-steps. The managers were very focused on the range of values between 4 and 7. They want to give you answers that are positioned above the middle. If you make the correction that focuses on a larger range of values (5-9), the values are more scattered. Managers try to give answers in the higher half of the value range.*
- *Consider another performance indicator (e.g., return on investment (ROI)) and see if the results will fluctuate less as the quality of the decision-making process improves. One of the approaches of other authors was that managers rate several performance indicators on a 7-point scale relative to their main competitors. One of the performance indicators with excellent results is the Balanced Scorecard (Ling Sim & Chie Koh, 2001),*

which measures company performance across four dimensions (i.e., finance, internal business processes, innovation and learning). The disadvantage of this approach is that the questionnaire becomes quite long.

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ANALYSIS OF THE COMPETITIVE ENVIRONMENT OF THE HOTEL ECONOMY IVANO-FRANKIVSK REGION

Ivano-Frankivsk region is included in the list of the most attractive and popular tourist regions of Ukraine. The existing base of recreational facilities of various forms of ownership (362 units for 17.6 thousand places) provides an opportunity to increase health, tourism, sports services, including for foreign tourists. Today, almost 800 farmers receive tourists in their homes. Travel services are provided by more

than 100 tour operators and travel agents; there is a network of 14 tourist information centers. Nature reserves and objects. The network of the nature reserve fund of the region includes 474 territories and objects with a total area of 218.8 thousand hectares, which is 15.7% of the total area of the region, including: 32 objects of national importance with an area of 131.6 thousand. Ha; 442 objects of local significance with an area of 87.2 thousand hectares. Under the protection of the state in the area dates back to ancient times (XII century.) Until the XX century. including 1423 architectural monuments, of which 513 religious buildings – 482 churches , 24 churches and 7 synagogues.

The region has good communication links with the external environment. The location of Ivano-Frankivsk region indicates the difficult accessibility of residents from Eastern Ukraine and easy accessibility for visitors from Poland, Romania, Slovakia, Moldova and Hungary, who cross the western borders by road and rail. Within the mountain zone of Ivano-Frankivsk region there are three different tourist areas of tourism, attractiveness, specifics of the proposed tourist product, in particular Osmolod-Bolekhiv, Vorokhta-Yaremche and Verkhovyna-Kosiv districts [1].

Yaremche region is the most popular tourist center of both winter and summer recreation of Prykarpattia. In 2016, he provided 85% of the tourist tax of Ivano-Frankivsk region. Yaremche region accounts for 60-70% of visitors who come to rest in the region. It has many possibilities for tourism because tourism potential due natures them, historical, cultural, ethnographic peculiarities. The region includes the city of Yaremche, the ski resort of Bukovel in the village of Polyanytsya and a number of centers of green tourism, namely: the village of Vorokhta and the villages of Mykulychyn, Tatariv, Yablunytsia, Voronenko.

The tourism sector of Yaremche region is a strategic direction of the region's development, an important factor in the dynamic increase of budget revenues, a significant positive impact on the state of affairs in many sectors of the economy (transport, trade, communications, construction, etc.). Tourism in the Yaremche region contributes to increasing employment, developing market relations, international cooperation, involving citizens in learning about the rich natural and historical and cultural heritage of the region, preserving the ecological balance. Yaremche region has all the prerequisites for the intensive development of domestic and inbound tourism.

The village of Yablunytsia is a small Carpathian village with a population of just over 2,000 people located on the Yablunytsya Pass,

crowded with tourists in winter. Yablunytsia is a ski resort within easy reach of Bukovel. The village is home to one of the most important transport arteries of the Carpathians – the route Lviv-Rakhiv, and the spectacular Yablunytsky Pass separates the Transcarpathian region from Ivano-Frankivsk. Here – perhaps the best species sites from which you can see Petros, Hoverla and Svydovetsky, on the slopes of the pass (mostly on the southwest side) grow spruce forests, in places with a mixture of fir and cedar pine and post-forest meadows.

Within the village is one of the main passes of the Ukrainian Carpathians – Yablunytsky (960 m above sea level). Located between the high peaks of the Carpathians: Hoverla, Dovbushanka, Hamster, Bruise and Petros. This alpine village connects the two largest tourist centers in the Carpathians – Yaremche and Bukovel. To Yaremche from Yablunytsia – 30 km, to Bukovel – 13 km. The highest peaks surrounding Yablunytsia are the mountains: Dil (1045 m), Dovhy Grun (971 m), Perekhrestya (1091 m), Shcherbaniv Verkh (1067 m). Yablunytsia is one of the most important transport arteries of the Carpathians – the route Lviv-Rakhiv, and the spectacular Yablunytsya Pass divides the Transcarpathian region with Ivano-Frankivsk. Here – perhaps the best views from which you can see Petros, Hoverla and Svydovets ridge, without departing far from the route. Yablunytsia has its own descents where you can ride: 6 ski slopes with a total length of about 4 km, altitude difference – 280 m. In the village there are 8 ski lifts. In the 2016-2017 season, three worked: “Goat” (600 m), “Cow” (300 m), “Apple” (800 m). Here it is convenient to learn to skate if the queues and congestion of trails in Bukovel are frightening. Experienced skiers and snowboarders will probably not have enough of Yablunytsia - it is better to go on the slopes of Bukovel or Dragobrat. Snow cover, suitable for skiing, is stored here from December to March. The undeniable advantage of Yablunytsia is its height and, consequently, the incredible beauty of the panorama. Interesting facts: Church of the Assumption of the Blessed Virgin in the XVIII century and the Church of St. Vasyl Velyky, Yablunytsky Pass, National Nature Park and the Yablunetsky Vidnokolo bicycle route.

The village of Yablunytsia is located in the highlands of the Carpathians, within the Verkhovyna National Nature Park, and this location determines the principles of construction and organization of socio-economic life. The development of the village consists mainly of one-storey manor houses. The main transport “highway” is Heroes of the Maidan Street.

The basis of the economy of the village of Yablunytsia is and remains the tourist and recreational industry, which causes the almost complete absence of large industrial enterprises.

On the territory of the village of Yablunytsia there are 108 hotel establishments, from them: hotels in – 15; private estates – 93.

The development of the tourism industry is positively influenced by the fact that every year the level of accommodation services increases and the range of related services expands, namely:

- development and expansion of tourist services;
- modernization of facilities that provide ski equipment rental services;
- creation of a network of rental points for household items;
- creation of facilities for the provision of household services, namely: shoe repair; individual tailoring of shoes, clothes, etc.; repair of household appliances and appliances; repair and maintenance of vehicles; dry cleaning and painting; repair and construction of housing; bath and shower services; hairdressing services; transportation of goods for the population; ritual services, etc.;
- provision of tourist and excursion services: tourist trips, excursions, tourist trips, advertising and information, transport, household services, accommodation services, cultural and sports services. [4]

A land plot in the village of Yablunytsia was chosen for the design of the hotel, at the address: Dovhy Grun 414, at coordinates 48.3109868, 24.4853953. The adjacent territory chosen for the institution is undeveloped. This area can be described as the most comfortable place to relax, as there is a forest nearby, and the number of buildings nearby is not high.

The site offered for the hotel meets the requirements of sanitary and epidemiological rules and hygiene standards for the levels of natural and artificial radionuclides, the content of potentially dangerous to humans chemicals and biological substances in the air, soil, adverse physical factors and others.

To determine the feasibility and design of the hotel in the area, you need to analyze the existing market of hotel services, identify strengths and weaknesses of competitors.

An analysis of the main and additional services of existing competitors within a radius of 2 km, which is one of the important factors for planning the activities of the services of the projected hotel.

The results of the study are shown in Table 4.14.

Table 4.14

Characteristics of the main and additional services of competitors of the designed hotel business

No.	Hotel	Benefits	Disadvantages
1	2	3	4
1	Royal Hotel	- heating: autonomous water; - Ukrainian cuisine and European dishes; - possibility to use the safe; - water supply: hot and cold water constantly.	- there is no proper parking; - towel change occurs once every 5 days; - no transfer.
2	Manhattan Hotel	- a large number of seats; - heating: autonomous water; - satellite TV; - water supply: cold and hot water constantly; - uninterruptible power supply.	- paid Wi-Fi; - lack of own territory for rest on the street.
3	Brooklyn Hotel	- possibility to use the safe; - optimal prices; - presence of transfer; - rental equipment rental. - aviability of a place for drying skis.	- there is no Lifecell mobile coverage in the hotel; - paid pool.
4	Recreation complex “Small Odessa”	- availability of a place for drying skis and things; - grilll; - Wi-Fi; - large area for outdoor recreation; - excursions by arrangement.	- old furniture and lack of interior style; - the restaurant works only by prior arrangement.
5	Hotel “Kisva”	- large parking; - sauna; - availability of Wi-Fi.	- bright green exterior; - lack of one style of room design.
6	Hotel “Alpine”	- large area; - cafe; - arbors; - playground on the territory; - presence of own kitchen in the apartment.	- small parking; - high price level.

Table 4.14 (continued)

1	2	3	4
7	Hotel “Keptarik”	- sauna; - scenic views of the mountains from each window; - picturesque location; - playground.	- complex entrance; - old furniture.
8	Hotel “Gorgani”	- availability of the pool; - a large number of rooms of different categories; - in arbors there is an opportunity to prepare food independently; - transfer; - billiards; - karaoke; - organization of walking tours.	- no mobile coverage Lifecell; - high price level.
9	Guest House “Goryanka”	- opportunity to cook in the kitchen; - bicycle and sled rental; - sauna; - transport services by jeep.	- small number of rooms; - lack of interior style; old furniture; - lack of cafe.

Taking into account all the facts and results of research, which are given in Table 4.14, we can conclude that the projected institution should provide a number of basic and additional services; be equipped with modern equipment and computer systems for better organization of work; have their own corporate identity and provide quality service and, most importantly, sell high quality products.

So, having analyzed the provision of Yablunytsia village with hotels, we can conclude that only one hotel has a category of 3 *, all other accommodation has a category of 2 *, or correspond to other types, such as recreation complex or guest house, which indicates that the hotel market The village of Yablunytsia is moderately developed and, despite this, has great potential for development compared to most cities in Ukraine. Everyone who visited the village of Yablunytsia and looked for good temporary living conditions will witness a catastrophic lack of quality hotels with neat, solid and clean rooms and service of the proper level, in other words – there is unmet demand for quality hotel services,

and hence the obvious conclusion opportunities for investors with professional knowledge of the hotel business to implement profitable hotel projects.

That is why it would be advisable to build a 3 * hotel to ensure minimal competition among accommodation establishments in the village of Yablunytsia.

The purpose of this hotel is not only a combination of price and quality of services, but also the maximum provision of the necessary conditions for the rest of the clients and wellness, thus it is planned to build vats, spa and gym. The hotel also offers ski and snowboard rental, toboggan rental and snowmobiling services. There are many places near the hotel where guests can spend unforgettable free time.

The flow of tourists in the village of Yablunytsia depends on the season, because the holiday season is winter, so it receives the largest number of guests at this time.

In addition to the fact that Yablunytsia is a high-altitude resort, it is also climatic, so there is something to see, both in summer and autumn-spring. The proximity of the mountains, clean air, amazing scenery – the necessary conditions to relax body and soul, restore psychological balance and strengthen the immune system.

The high flow of tourists in winter contributes to the development of the infrastructure of both the Yablunytsia ski resort and the village as a whole.

In recent years, the tourism industry in the region is developing dynamically. The interest of the local population in carrying out tourist activities is growing. If in 2016 the number of licensed tourist enterprises in the region was 50 (36 – travel agents, 14 – tour operators), then on October 1, 2017 the figures were: 80 (61 + 19). In 2014, licensed tourist enterprises of the region provided services to 147,581 tourists, which is 3.5 times more than in 2013. In the last five years (before the pandemic) the number of "domestic" and "external" tourists has been growing in the region. "Internal" predominate (90%: 6%).

In five years, the total number of tourists has increased fivefold, the number of "domestic" tourists as well; "foreign" – three times, and the departure of Ukrainians abroad – 2.5 times. However, these data do not give a complete picture of reporting, as they relate only to the results of licensed tourism enterprises. Since 2004, the introduction of the Law of Ukraine "On Amendments to the Law of Ukraine" On Tourism has begun, which is associated with the beginning of the licensing of tour

operators and travel agents. As a result, the base of statistical accounting on the form No. 1 – Tour "Report on the activities of the tourist organization" has changed. It is since 2004 that statistical reporting on the form No. 1 – TOUR is not provided by sanatoriums, accommodation establishments, entities specializing only in excursion activities [2]

There are dynamic growth rates of the number of vacationers in the Yaremche region, which are presented in Figure 4.7.

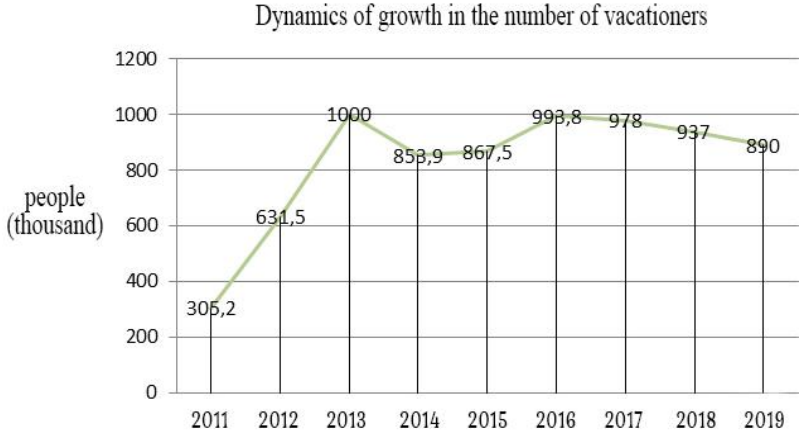

Figure 4.7 Dynamics of growth in the number of vacationers

According to the data shown in Figure 4.7, you can see that the largest number of vacationers visit Yaremche region in the winter, but in 2019 the weather conditions did not contribute to skiing, so there is a decrease in the number of vacationers. [3]

According to statistical studies, most of the tourist contingent of the village of Yablunytsia is tourists from Ukraine – 78% and 22%, respectively, foreign tourists, but given the global pandemic in connection with Covid-19, the situation with domestic and foreign tourism has changed dramatically. Every week the rules of quarantine restrictions in different regions of Ukraine change, which significantly affects the flow of vacationers. After the end of the pandemic, these findings will be relevant again.

Thus, the advantages of building a hotel in the village of Yablunytsia are obvious. This is a wonderful cultural and historical base that attracts tourists, good transport links, favorable environmental situation, the availability of tourist routes, ski resorts nearby.

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E-COMMERCE IN THE CONDITIONS OF DIGITALIZATION OF BUSINESS PROCESSES

At present, e-commerce as an effective form of organization of logistics activities of companies and a tool for promoting products on the market is becoming a modern challenge to enhance the development of the global economy. This requires the introduction of qualitatively new approaches to strategic management of marketing activities using information technology. This is especially true in the context of digitalization of business processes in the context of the concept of Industry 4.0 [1-7].

According to eMarketer, in 2018 in the e-commerce market, retail sales amounted to 2860 billion dollars USA or 11.5% of total retail sales (Table 4.15). According to Netpeak Group experts, the increase in the share of e-commerce in total world trade in 2008-2018 was more than 10%. According to the portal Statista, the world's total revenue of e-commerce-retail reached 3.5 trillion dollars USA.

The UN Conference on Trade and Development, in turn, states that about 90% of transactions take place in the B2B segment. According to eMarketer analysts, the use of online tools is a priority for this category. More than 94% of top executives of American B2B companies call them key drivers of business growth. And according to the BigCommerce platform, about 80% of companies place orders through the site, 77% –

e-mail, and 30% use the services of marketplaces.

Table 4.15

Dynamics of changes in world volume of Internet trade

Years	The total volume of e-commerce in the world, *billion dollars USA*	Growth rates (up to the previous year), *%*	Share in the total retail volume of world trade, *%*
2015	1548	25,5	7,4
2016	1915	23,7	8,7
2017	2352	22,9	10,0
2018	2860	21,6	11,5
2019	3418	19,5	13,0
2020	4058	18,7	14,6

Source: compiled on the basis [9]

The leader in the e-commerce market in 2018 remains China, with sales of 900 billion dollars USA or 47% of total e-commerce in the Asia-Pacific region. According to expert estimates [8], the volume of the e-commerce market in this region will reach 2.4-2.8 trillion dollars USA in 2020. The second place is occupied by North America, whose total sales are about 423 billion dollars USA, and the growth by countries in this region in 2018 is 15.6%. Also, the dynamic development of e-commerce is observed in the UK, Germany, France, Canada, Japan, Korea and Brazil. The total sales of these countries on the Internet reach 2 trillion dollars USA, i.e. the increase in 2018 is 6%.

According to Eurostat, in the European Union, the online commerce segment accounts for more than 15% of all retail sales in the B2C segment. The centre of e-commerce in Europe is the United Kingdom, where the volume of online sales in the B2C sector is 3 times higher than in the second largest market – Germany. The leading platform is Amazon, which accounts for 54% of all sales. 81.5% of all online sales in Europe account for only three countries – the UK, Germany and France. And every year on this indicator they show stable growth. According to Twenga Solutions, 29% of European retailers use two or three channels to sell their products, while half of sellers attract buyers through three or more channels. Multichannel is becoming a necessary measure for the effective development of e-business.

Growth in European e-commerce sales reached € 636 billion in 2019, up by 14.2% from the previous year. European e-commerce turnover is forecast to grow at around 12.7% and to hit € 717 billion in 2020 [10].

The full impact of the COVID-19 pandemic on the sector will, however, only show next year [11].

At a time of uncertainty all over the world, the COVID-19 outbreak, and the restrictions it has led to, have had a major impact on business and consumer confidence. While physical shops have maintained supplies of essentials, e-commerce has played a crucial role in maintaining economic activity in Europe. Retailers of all sizes have accelerated their digital transformation, further developing existing and new omnichannel commerce solutions.

Europe not only offers expansion opportunities but also, in regions and countries where e-commerce is at its most sophisticated, the chance to witness best practice in action. Meanwhile, those countries whose e-commerce landscape is still maturing offer potential for businesses willing to take greater risks to get ahead in less established but faster-growing markets.

E-commerce in Europe, across 34 countries and five geographical regions within the EuroCommerce analysis, has thrived as the continent's population has looked to shop more and more online. Nearly nine in 10 (87%) of Europe's 578 million inhabitants access the internet. Of these, more than two-thirds (67%) shopped online in 2019, a figure that continues to grow. Europe's population has plenty of money to spend, with Europe's overall GDP totalling more than €13 trillion in 2019. Of this, B2C e-commerce accounted for 4.78% in 2019 (Figure 4.8).

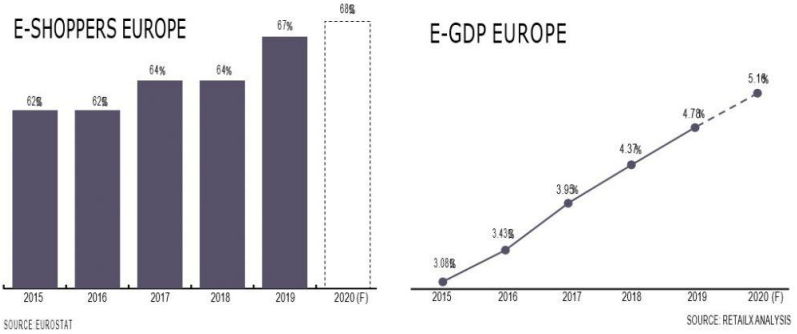

Figure 4.8 Dynamics of e-commerce indicators in Europe
Source: [11]

Business-to- consumer (B2C) e-commerce spend is growing, with consistent double-digit figure rises year on year. It's predicted to rise 12.72% to hit €717 billion in 2020 but the reality is that COVID-19, which has pushed offline spend online as well as encouraging new consumers, will mean those are figures likely to rise significantly over the coming months.

The 2020 report shows that Western Europe is still the most developed e-commerce market in Europe with 70% market share of the total B2C online turnover and the highest number of e-shoppers (83%), followed by Southern Europe with a 15% market share of the total B2C online turnover and the highest e-GDP (7.69%). Northern Europe (7%), Central Europe (6%) and Eastern Europe (1%) have the lowest market shares (Figure 4.9).

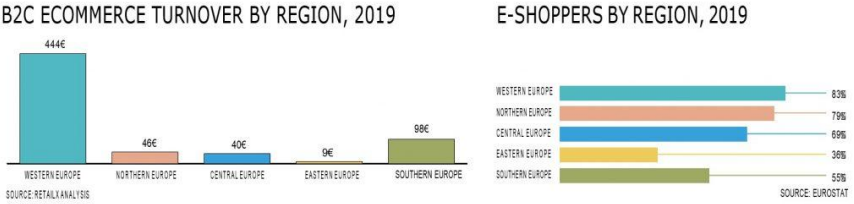

Figure 4.9 Regional structure of e-commerce development in Europe

Source: [11]

It is worth noting that 2020 is expected to be a breakthrough for global e-commerce. The growth rate of this promotion channel will be 22%. This is due to the massive transition from offline to online during the pandemic and the development of delivery services. The trends in the development of e-commerce in 2020 include:

– the share of e-commerce is 14.1% of all global retail sales;

– there are about 1.92 billion digital buyers in the world;

– one person annually performs an average of 19 transactions; Generation X (people aged 38-53) is the largest demographic group among online shoppers;

– the world's largest e-commerce market is worth 740 billion USA.

Alibaba is recognized as the world's largest online retailer with a gross value of goods of 768 billion dollars USA.

A few years ago, manufacturers had only a few online sales channels. In addition to Amazon, eBay and Walmart, more than 100

channels are now available to online shoppers, and their number will grow worldwide. About 80% of retailers agree that their cross-border trade increases profits. However, the huge selection creates new problems. It is no longer enough to try to place your product on as many trading platforms as possible. It is much more important to determine the correct relationship between marketplaces and product catalogs. At the same time, digital platforms themselves recognize this trend and are beginning to become more specialized.

However, according to global e-commerce statistics compiled by Hubspot, the main reason people are abandoning business is poor customer service. 80% of respondents stated that various aspects of imperfect customer service, such as lack of knowledge on the part of staff, delays in responding to messages and poor communication about products, forced them to abandon the company and its products. This is especially important for e-commerce companies – companies that have the highest sales of products on the Internet. They know that constant communication with customers through several digital channels is the key not only to their satisfaction, but also their interest and readiness to return for new purchases. When using simple multi-channel or more advanced sales funnel strategies, such as multi-channel marketing, it is important to remember the importance of quality communication with customers.

The results of a survey of 500 online shoppers and 200 e-commerce marketers conducted by GroupM and Kantar in March-May 2020 are presented in the report "The state of e-commerce in 2021: the transition to a new world of omnichannel commerce and retail media" [12]. It is established that:

✓ online accounts for 66% of retailers' points of contact with customers. About 37% of consumers browsed the sites and applications of stores before proceeding to purchase goods. The second most popular touchpoint was search delivery (28%), and the third – e-mail advertising (21%);

✓ offline plays a smaller role in contact with the consumer: 18% decide to buy directly in the store, and 17% – after seeing advertising on TV, in the press and on external media. However, the study emphasizes that the strategy of retailers, which will continue to thrive after the end of the pandemic, will take into account, among other things, non-digital channels of promotion;

✓ 2/3 of online users (66%) choose a retailer based on its convenience, while 47% take into account primarily the cost of

production. However, the most important criteria for the audience were the range (52%) and purchasing power (57%);

✓ digital advertising is useful for consumers: about 54% of respondents admitted that online ads reminded of the necessary or suggested the idea to purchase a product. And 20% of respondents said that advertising was useful only in the shopping process;

✓ the majority (72%) of e-commerce representatives consider Facebook to be the best digital marketing channel. This social network is followed by Google (67%), Instagram (61%), Twitter (50%) and the retailer platform Amazon (49%);

✓ marketers in e-commerce have increased spending on social media (19%), email (15%), advertising on YouTube (13%) and search engines (12%). More than 90% of experts reported increasing their budgets in at least one media channel;

✓ the main opportunities for retailers in the future will be the advanced user experience (42%); more accurate targeting of consumers (35%); expanded range of options for advertising creativity (30%) and growth of social commerce (30%). In the longer term (five years), respondents noted an improvement in product delivery logistics.

Experts from the American company Channel Advisor, which specializes in cloud software for e-commerce, in their report "20/20 E-Commerce Vision for the Year 2020" [13] identified key trends in global online commerce, which were divided into three unequal groups: driving forces of change; trends of influence; basic strategies, tools and technologies. Including:

– the desire to remove barriers to shopping – in this case, sellers and buyers are helped by mobile applications, social networks, voice assistants and augmented reality. For example, 83% of consumers in the United States use messengers to learn about products from companies, and two-thirds turn to smartphones, even when they are in the store;

– growth of subscription trade – one of the most popular types of e-commerce – subscription shopping, or purchase of sets by subscription. This type of e-commerce allows customers not to waste time ordering the right products on a regular basis. Subscription offers have grown by 40% in one year, and now Amazon alone has more than 150 shopping box options. By 2023, 75% of vendors working directly with consumers will offer such subscription kits using personalization capabilities;

– one-button purchase – as the number of barriers to purchase decreases in 2020, consumers are increasingly using mobile applications. Already, 96% of smartphone time is spent on only ten

applications, but mobile commerce will consolidate even further. The future is for universal baskets, and a “click to buy” button. This will allow buyers to quickly make purchasing decisions when navigating apps for one-handed purchases. Google Shopping, Facebook Marketplace, and Instagram Checkout are already accelerating this process;

– direct sales from the manufacturer – it is expected that in 2020 direct sales to the consumer will become an important trend that is important to track. Either consumers will continue to switch to branded programs and brand websites, or the need for one-click purchases will drag them into evolving online retail platforms;

– demographic shifts – in 2019, only six out of ten baby boomers in the United States bought products online. But the younger the buyers, the higher the percentage. For example, among millennials such almost 85%. And every year these buyers increase their purchasing power and influence. For example, 60% of Generation Z consumers choose a brand that offers online shopping and in-store (BOPIS). Their benefits will influence changes in sales strategies;

– fulfilment of the future – fast, free delivery is an outdated norm. The future of automated home delivery, BOPIS and other multi-channel data-based options that will allow you to fulfil orders much faster than waiting in line or scrolling sites.

Experts identify several important actions that will help adapt to new realities: comparison of categories; new measures of efficiency; personalization; reasonable price regulation system; hint where to buy; advertising optimization; fulfilment automation; data flow management.

At the same time, experts predict that the share of retail sales in the e-commerce market in 2021 will reach 17.5%, or 4878 billion dollars USA. According to a report by The Fashion and Apparel Industry, global e-commerce revenue will grow by 48.2% in 2018-2022, or from 481.2 billion to 712.9 billion USA. The total global revenue from e-commerce in 2022 may reach 6.5 trillion dollars USA.

E-commerce trends in 2021 [14]:

1) Premium private label brands – over the past few years, direct to consumer (D2C) commerce has exploded – giving brands direct access to customers and profits, and giving customers direct access to brands and lower prices;

2) Offline ecommerce – let’s take this blog offline for a minute. We all know that ecommerce is booming and rapidly catching up with traditional retail sales and depleting the high street;

3) Shoppable TV – it will finally connect viewing and shopping into a seamless experience that benefits both shoppers and retailers;

4) AI customer sourcing – Artificial intelligence is already used in ecommerce to make intelligent product recommendations, help customers visualise products better and assist you with customer queries. In 2021, AI is going to help find your customer for you too. Intelligent algorithms will analyse current trends alongside your products, sales channels, customers and buyer behaviour to identify the best channels, time and price to list your products. This will save hours of number crunching, graph creating and report writing, and will help brands to accelerate sales and boost profits immediately;

5) ReCommerce – also known as second-hand commerce will see a renewed revival next year. Recent research predicts the second-hand market to double within the next five years, but if you're thinking we've already been there and done that with eBay and Gumtree, think again. With consumers becoming increasingly motivated by sustainability, rather than price, second-hand sales of luxury items will shake up the reCommerce industry. This presents an interesting opportunity for brands to open up their own reCommerce marketplace and turn second-hand shopping into an exciting shopping experience;

6) P2P and rentals – it's no secret that the ecommerce industry is grappling with a significant returns problem. Dishonest customers are using returns windows to dress up for their latest Instagram story or satisfy their need for fast fashion, while honest consumers are returning items out of conscious consumerism. Following the significant growth in P2P (peer-to-peer) platforms, many retailers are looking to expanding into rental ecommerce next year. By offering consumers the opportunity to rent clothing, furniture or electronics, you can increase audience reach while reducing returns;

7) Advanced customisation – product customisation isn't new, but your ability to provide last-minute personalisation at an affordable cost is. 3D printing is changing manufacturing and fulfilment processes to enable quick customisations towards the end of the product journey. Plus, with 3D printers becoming more affordable and available, it's only a matter of time before customisation becomes the norm;

8) Fulfilment – of course, we couldn't write a blog on the future trends of ecommerce without touching upon the emerging tech in ecommerce logistics. 2021 will see increased use of autonomous deliveries, smart sensors, blockchain tracking, and digital twinning to increase delivery speeds, efficiencies and cost savings;

9) Smart home assistants – around 20% of smart speaker owners use them for shopping-related activities, whether that's ordering products, creating a reminder, conducting research or tracking deliveries. This figure is expected to jump to 52% within the next four years.

As a result of research [15-21], the priority areas for the development of e-commerce in the global digital environment include the following:

– growth of mobile traffic;

– intensification of the development of mobile payment systems and ensuring the appropriate level of their security – according to the NBU, the popularity of non-cash transactions contributes to the expansion of contactless infrastructure;

– investing in personalization (due to the fact that 59% of customers emphasize the significant impact of personalization on their purchasing decisions, and 79% of customers agree to pay more for products or services of a brand that offers individual experience. On average, personalized display ads are 5 times more effective than regular;

– constant increase in advertising costs on social networks;

– development of the Internet of Things (the market value of which will be 150 billion dollars USA by 2020);

– focusing on improving cybersecurity (45% of all attacks on e-commerce stores manifest as denial of service, which can lead to an average online store loss of 172 dollars);

– development of voice purchasing technology (according to ComScore, Google voice search will be used in 2020 in half of all search queries);

– rapid spread of artificial intelligence systems (global revenue from the use of artificial intelligence systems will increase by 2030 by 15.7 trillion dollars USA);

– an increase in the value of Big Data (according to IDC, the annual growth rate of the market for "big" data technology, the global volume of which in 2017 was 54.1 billion dollars USA, over the next five years will be 11.2%);

– development of Internet marketing as an effective tool to increase sales of online stores;

– investing in the development of logistics, fast delivery of products and services in the segment of regional customer service (for example, the Internet holding Alibaba plans to invest in this segment more than 100 million dollars USA) – users have become quite demanding on methods and speed of delivery. Supply chain optimization plays a special role. The customer would rather buy the goods where he will be

given the opportunity to pick up the goods on the same day in the store, post office, the nearest post office, than to wait two or three days for delivery from a similar site;

– formation and development of digital platforms as intermediaries in the field of e-commerce in the context of digitalization of the economy in order to harmonize the work of platforms to prevent competition in the single information market and strengthen confidence in e-commerce;

– development of cross-border Internet trade.

Thus, in modern conditions of digitalization of business processes the development of e-commerce as a tool for organizing logistics activities in the system of strategic management of enterprises is relevant.

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Chapter 5

INTEGRATION OF BUSINESS, EDUCATION, SCIENCE AND FORMATION OF MODERN ECONOMIC SYSTEMS

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ADULT EDUCATION AND FINANCIAL LITERACY IN THE PROCESS OF LIFELONG LEARNING IN THE EUROPEAN UNION AND SLOVAKIA

Introduction

The task of defining the concept of education is relatively complex, but especially the mission is quite comprehensive. Many surveys in the field of education show that each Member State has its definition of the term. Many times, however, these are more or less different constructions and concepts to capture the same activities.

Each country naturally defines education differently. The challenge and goal of the European Union are to formulate and declare definitions that are broad enough to include national or regional specificities. At the same time, however, they must be sufficiently concise and specific in the conceptual apparatus, so relevant information, knowledge, and experience in the field of education could be exchange on the territory of all Member States.

For the above reasons, the so-called key competences covering eight fundamental areas of education and training. Key competencies represent a goal and a way to achieve the desired results in the quality, complexity, and effectiveness of education of individuals throughout life. The paper aims to examine the process of further education of adults in the framework of lifelong learning. It analyzes the state and development of adult education in the European Union, focusing on competence in entrepreneurship, business, and financial literacy in the EU and Slovakia.

The paper is an output within the project VEGA 1/0090/19: “Research into the financial situation and financial literacy of low-income population groups in context of socio-economic problems of Eastern Slovakia”.

Theoretical background

The Global Report on Adult Learning and Education (GRALE), published by UNESCO Institute for Lifelong Learning (UIL), is an exquisite publication in the field of adult education and formal adult education for the international community of education policies. It aims to map progress in adult education in UNESCO member countries, with an emphasis on formal education. The last report makes some of the following statements (UNESCO 2019):

- between 2015 and 2018, there was an increase in the number of formal adult education participants in more than half of the Member States;
- however, participation in this type of education is still low, and the progress is unsatisfactory, especially in disadvantaged groups;
- investment in further education is insufficient;
- one-third of countries spend less than 1% of their education budgets on formal adult education.

However, the latest report has shown that, despite these positives, inequalities in participation in education between regions and countries are still present. An important finding is that by continuing to neglect this part of lifelong learning, we are also reducing our chances of making progress in several other areas that are critical to the future of our societies, and indeed, of the entire planet. The need to respond to the trends of recent years in the field of education, economic development, globalization tendencies, or information explosion requires constant progress of individuals and groups in the acquisition of additional and new knowledge, skills, and knowledge. A significant role in this process is played by further education adult education as part of lifelong learning.

The basis of the lifelong learning system is high-quality elementary education accessible to all. Vocational education and training should give young people the skills needed for a knowledge-based economy. It is also desirable to acquire a positive attitude towards education. Therefore, children learning experiences should not be associated with failure and negative personal experiences (Lukáčová 2016). The time, as well as the effort spent on providing quality education and building a positive attitude towards education, will ultimately be reflected in the form of personal need for further education throughout an individual’s life. Therefore,

education systems should adapt to the needs and requirements of individuals, not the other way around.

There are several lifelong learning concepts. The simple definition is that lifelong learning is "development after formal education: the continuing development of knowledge and skills that people experience after formal education and throughout their lives" (Encarta 2008, London 2012).

A traditional definition of lifelong learning is "all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective" (European Commission [EC] 2001, p. 9)

One of the strategies of the European Union in the field of lifelong learning is the concept of so-called "Key competences". The European Commission (2019) takes the view that everyone has the right to quality and inclusive education, training, and lifelong learning that develops essential skills. All need those skills for personal fulfillment and development, employability, social inclusion, and active citizenship.

In November 2019, the European Commission organized a Conference on educational approaches and environments in school education to support the development of the competencies. One of the results of the negotiations was a recommendation setting out eight key competences. The competences we all need for personal satisfaction and development, employability, active citizenship, and social inclusion are as follows: Multilingual competence; Mathematical competence and competence in science; Technology and engineering; Digital competence; Personal, social and learning to learn competence; Citizenship competence; Entrepreneurship competence; Cultural awareness and expression competence.

European cooperation in education and training supports the achievement of the following benchmarks at European level by 2020 (EC 2020):

- At least 40% of people aged 30-34 should have completed some form of higher education;
- At least 15% of adults should participate in learning;
- At least 20% of higher education graduates and 6% of 18-34-year-olds with an initial vocational qualification should have spent some time studying or training abroad;
- The share of employed graduates (aged 20-34 with at least upper secondary education attainment and having left education 1-3 years ago) should be at least 82%.

The education system does not sufficiently contribute to socio-economic development at all levels. Urgent problems include the low level of educational attainment, the involvement of Roma in inclusive mainstream education from childhood, and the effective integration of pupils from socio-economically disadvantaged backgrounds into education and training. In terms of international standards, learning outcomes and basic skills levels remain significantly influenced by pupils' socio-economic conditions. Despite the progressive increase in salaries until 2020, the teaching profession remains unattractive and faces an increasing shortage of teachers (Official Journal of the EU 2019/C, Valentini, A. 2020).

Cooperation between the Member States and non-EU countries also increases the quality of education and training inside and outside the EU through peer education and benchmarking of national education systems around the world. It supports innovation or job creation through mobility and offers employees and students opportunities to broaden their horizons. On the positive side, European universities have a stable and extensive experience of internationalization. They facilitate the development of international study programs, support international research and innovation projects, the exchange of students, staff, and thus knowledge (EC 2020, OECD 2020a).

Analysis of selected adults learning indicators in the EU

Adult learning means the participation of adults in lifelong learning. It usually refers to other educational activities after the completion of initial (formal) education. Adult learning, as mentioned in previous chapters, is an essential part of the European Union's lifelong learning policy. The general indicator for measuring adult education is the level of participation in education and training, which includes participation in formal and non-formal education and training. The target population of the European Statistical Office (Eurostat) statistics on adult education is the population aged 25-64.

In the ranking of countries with the highest participation rates of adults in further education in recent years, the states of northern Europe have traditionally dominated. Within the Member States, significantly more adults are continuing their education in Sweden. At the bottom of the ranking are Bulgaria and Romania, where the participation rate of adults in further education does not exceed 2%. Slovakia is significantly below the average of the European Union, which is at the level of 11.8%. The EU median in 2019 was 9.4%.

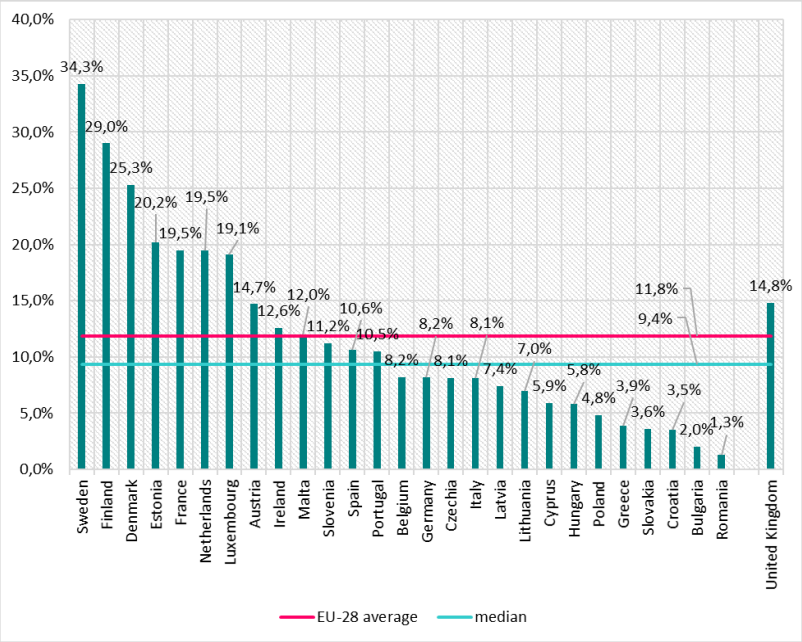

Figure 5.1 Participation rate of adults in education and training in 2019 (in % of persons aged 25-64)

Source: authors according Eurostat (2020)

The latest available statistics from 2016 on participation in education and training show that a substantial part of adult education and training in the European Union takes place through non-formal and informal education, it means outside formal institutions such as schools, colleges, or universities. However, this fact is due to the age criterion of the monitored indicator. People in the productive age of 25-64 have mostly already completed formal studies. In 2016, more than 42% of the working-age adult population in the EU-28 surveyed participated in non-formal education and training. Adults in the European Union prefer non-formal education over formal education. In all cases, non-formal learning dominates, accounting for more than 80% of total continuing education in all Member States. For this reason, we have further examined the state and development of non-formal and informal learning in the Union.

Table 5.1

Participation rate of employed adults (aged 25-64) in non-formal education in the EU-28 (%)

Country	2007	2011	2016	Change 2007-2011	Change 2011-2016
Denmark	82,9	89,3	81,1	6,4	-8,2
Bulgaria	94,8	93,6	97,5	-1,2	3,9
Czechia	92,2	82,5	85,6	-9,7	3,1
Country	**2007**	**2011**	**2016**	**Change 2007-2011**	**Change 2011-2016**
Denmark	94,1	83,0	85,5	-11,1	2,5
Germany	83,7	82,9	82,1	-0,8	-0,8
Estonia	90,0	83,6	87,6	-6,4	4,0
Ireland	na	86,6	87,4	na	0,8
Greece	81,9	71,2	81,5	-10,7	***10,3***
Spain	73,1	82,5	79,5	9,4	-3,0
France	90,6	74,9	73,5	***-15,7***	-1,4
Croatia	75,1	na	87,3	na	na
Italy	71,0	69,9	75,4	-1,1	5,5
Cyprus	76,0	77,5	72,4	1,5	-5,1
Latvia	81,3	81,1	76,4	-0,2	-4,7
Lithuania	91,2	87,8	94,5	-3,4	6,7
Luxembourg	na	75,9	76,1	na	0,2
Hungary	82,1	83,4	55,6	1,3	***-27,8***
Malta	70,9	94,4	82,9	***23,5***	-11,5
Netherlands	81,7	87,0	79,0	5,3	-8,0
Austria	76,4	76,7	79,3	0,3	2,6
Poland	85,6	85,2	84,7	-0,4	-0,5
Portugal	83,3	82,3	88,7	-1,0	6,4
Romania	82,1	81,7	71,8	-0,4	-9,9
Slovenia	68,6	69,1	78,9	0,5	9,8
Slovakia	89,9	90,5	91,7	0,6	1,2
Finland	79,8	78,7	79,9	-1,1	1,2
Sweden	81,6	80,1	81,6	-1,5	1,5
United Kingdom	76,0	81,6	83,6	5,6	2,0

Source: authors according Eurostat (2020)

Table 5.1 shows the development of the participation rate of employed adults in various forms of non-formal education. The latest survey shows that in 2016, the most employed adults continued to receive non-formal education in Bulgaria, Lithuania, and Slovakia. In the observed participation rate between 2011 and 2016, the highest increase was recorded in Greece (+ 10.3%). On the contrary, the largest drop was recorded in Hungary in the same period (-27.8%).

The trend in the development of the participation rate of employed adults in the Member States has proved to be quite different. In many countries, the indicator fluctuates significantly. An exception is, for example, Slovakia, where the participation rate over the observed decade was relatively stable, or it grew slightly over time. The sponsorship of non-formal education by employers in the years 2007-2016 has always been close to 70%.

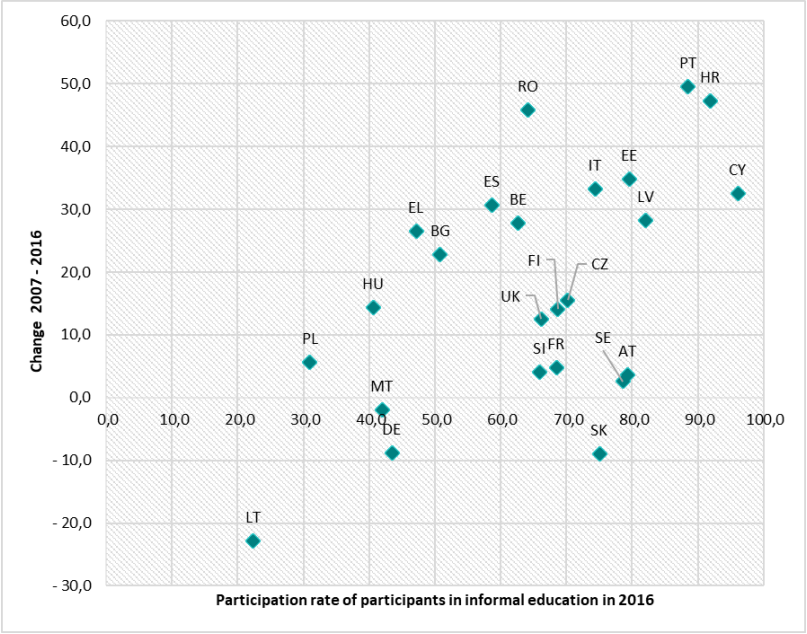

Figure 5.2 Participation rate of adults (aged 25-64) in informal education in 2007 and 2016 (%)

Source: authors according Eurostat (2020)

Figure 5.2 shows the participation of adults in informal learning in 2016 and the change in this indicator for the last decade. We can see that in 2016, most adults involved in this type of education were in Cyprus (96.1%), Croatia (91.9%), and Portugal (88.5%). Lithuania (22.4%) and Poland (31%) were at the opposite end of the scale. The "y" axis in the chart represents the change in the indicator between 2007 and 2016. The values confirmed there was an increase in adult participation in informal learning in most Member States over the last

ten years (all countries above the "x" axis). The most significant increase has been recorded in Portugal (from 38.9% to 88.5%). The chart lacks 4 Member States due to the unavailability of data for 2007. Denmark had a ratio of 70.8% in 2016, Ireland 62.1%, Luxembourg 68.7%, and the Netherlands 73.2%.

Table 5.2 shows the reasons that prevent adults from participating in further formal or non-formal education. The values in the table confirm that the biggest obstacle in further education is excessive workload. Despite sufficient preconditions for continuing the educational process, many other barriers hinder this process.

It is here that the idea of formulated key competencies comes to the fore. These are a suitable tool and the first step to improve the level and quality of professional and personal knowledge and prerequisites. The key competences say what knowledge needs to be acquired, what abilities and skills to obtain, what attitudes to hold, and what values to respect. They are a substantial factor in further education because they provide individuals with goals and paths to further professional and personal growth.

Table 5.2

Reasons for non-participationin formal and/or non-formal adult education in selected EU countries in 2015 (%)

Country	Insufficient own preconditions	Too expensive education	Lack of support from the employer	Too much workload	The course or program offered at an inappropriate time or place	Childcare or family responsibilities	Something unexpected that stopped me from education or training	Other reasons
Austria	1	11	2	35	14	15	7	13
Czechia	3	14	10	36	7	13	6	12
Denmark	2	14	15	27	9	5	5	22
Estonia	4	19	7	29	15	10	3	13
Finland	3	7	10	29	21	9	3	18
France	3	17	18	23	4	8	4	24
Germany	1	9	10	33	14	15	3	15
Greece	4	29	3	18	11	19	5	11
Ireland	3	21	5	22	10	20	4	17
Italy	3	15	3	40	5	19	4	12
Lithuania	2	24	8	31	13	9	4	8
Netherlands	1	14	9	30	8	12	7	18
Poland	5	20	9	16	13	14	7	16
Slovakia	2	14	14	33	8	10	4	14
Slovenia	9	25	8	16	14	13	5	9
Spain	5	10	3	29	8	22	2	20
Sweden	4	12	8	26	11	13	4	21
United Kingdom	1	20	8	30	9	14	4	14

Source: authors according OECD (2020b)

Entrepreneurship competence, financial knowledge, and skills

Knowledge, skills, and attitudes are associated with each key competence. Knowledge consists of already created concepts, facts and

figures, ideas, and theories and supports the understanding of a selected area or subject. Skill is the ability to carry out processes and use existing knowledge to achieve results. Finally, attitudes describe the disposition and way of thinking to act or respond to ideas, people, or situations. Essential knowledge, skills and attitudes related to entrepreneurship competence are as follows (EC, 2019):

Knowledge – Entrepreneurship competence requires knowing that there are different contexts and opportunities for turning ideas into action in personal, social, and professional activities, and an understanding of how these arise. **Skills** – Entrepreneurial skills are based on creativity. It involves imagination, strategic thinking and problem-solving, and critical and constructive reflection within evolving creative processes and innovation. It is the ability to make financial decisions relating to cost and value. **Attitudes** – An entrepreneurial attitude is described by a sense of initiative and agency, pro-activity, being forward-looking, courage, and perseverance in achieving objectives.

We examined the situation in terms of this competence by analyzing selected indicators in selected EU countries and Slovakia. Sufficient basic knowledge of business, personal finance, insurance, taxation, or banking is the starting point for making the right financial decisions of individuals or groups of the population. Motivation to develop the financial knowledge of citizens is always relevant, especially at a time when many people are losing their jobs and have to make the right decisions about their savings and make the right financial decisions. Improving financial literacy levels in all European regions is a substantial societal need that requires contributions from a wide range of stakeholders. Governments of the Member states, public authorities, as well as the private sector, and schools should play their part when addressing knowledge among citizens about the broad range of financial products and services, which play an important role in their daily lives.

Research by the OECD on financial literacy shows that over 80% of Europeans had chosen financial products without shopping around and without using independent information or advice. Over 40% of respondents in selected Member countries had not even gathered information before choosing financial products, except for those in Austria, France, and Portugal (Figure 5.3). The large population of the European countries surveyed does not consider it relevant to make long-term financial plans. The citizens of Austria and Belgium were the best in the ranking.

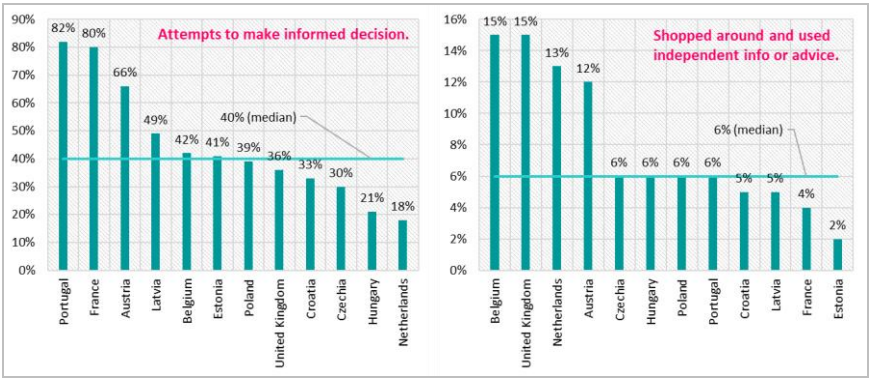

Figure 5.3 Financial behavior of citizens in selected EU countries (2015)

Source: authors according INSURANCE EUROPE (2017)

Analysis of financial education and financial literacy of Slovak population

Quality financial education and a high level of financial literacy are a very important part of the smooth functioning of not only individual households, but the entire national economy. Lifelong financial education of the population and adequate financial literacy of various groups of the population are necessary preconditions for solving various financial problems of households, management of personal finances and management of personal and family property. The financial literacy of the population is not an absolute and ultimate state, but must be improved in terms of time; it is a continuum of knowledge, skills and experience, which are conditioned by variables such as age, family, personality, education, general outlook, culture or intuition.

Financial literacy is the ability to use knowledge, skills and experience to effectively manage your own financial resources in order to ensure lifelong financial security for yourself and your household. Financial literacy is not an absolute state; it is a continuum of skills that are conditioned by variables such as age, family, employment, culture or place of residence. It is a sign for a state of continuous development that allows each individual to respond effectively to new personal events and a constantly changing economic environment. In connection with the increase of knowledge in the field of financial

literacy, an essential component is the focus on the external environment in the labor market, where employment is possible in the form of employment or employment itself (NŠFG, 2017).

The National Financial Literacy Standard (NFLS), specifically its version 1.2, valid since 2017, defines the breadth of knowledge, skills and experience in the field of financial education and personal finance management, which implies that, for example, a graduate of upper secondary education should be able (NŠFG, 2017):

- find, evaluate and use financial information,
- know the basic rules of financial management,
- recognize risks in financial management,
- set financial goals and plan to achieve them,
- develop the potential to generate one's own income and the ability to save,
- use financial services effectively,
- fulfill its financial obligations,
- to increase and protect one's own and entrusted property,
- understand and orientate in providing basic human and economic needs of the individual and family, company,
- evaluate the success of one's own self-realization, be inspired by successful personalities,
- understand the basic concepts in individual topics,
- be familiar with the financial market (National Bank of Slovakia, commercial banks, insurance companies, financial intermediaries and other financial institutions),
- be familiar with the issues of consumer protection and be able to exercise these rights,
- control the rights, obligations, benefits and risks of a person acting as an entrepreneur,
- compile and present your own business plan, think strategically, analyze and solve problems.

Questionnaire survey of financial literacy of Slovak population

From time immemorial, households in society have performed very important and specific economic and financial functions. In modern history, they also include the management of personal finances and property, which determines the real economic life of households, i. all inhabitants of the country. The essence is that residents and households are financially literate enough to effectively manage their finances and assets in accordance with all long-term and short-term

goals and expectations, so that they can ensure a dignified and quality life, even with varying levels of disposable income. The aim of the questionnaire survey was to identify the level of financial situation and financial literacy of Slovak households. The presented questionnaire survey was conducted in February and March in 2019 on a sample of 125 households, which were included in the survey on the basis of occasional selection. The questionnaire contained 35 closed questions aimed at assessing the level of the overall financial situation of households, financial planning of households, especially planning of financial income and expenditure, the level of efficient financial management, the level and efficiency of household debt, the creation of financial reserves. Respondents answered the questions in writing.

Table 5.3

Results of the financial literacy questionnaire survey in 2019

	Financial situation and financial literacy of Slovak population
1	2
Evaluation of the current financial situation	Only 21% of Slovak households evaluate their financial situation very well and well. 24% of households perceive their financial situation as neutral, but up to 55% of households perceive their situation badly and very badly.
Financial planning and family budgets	As many as 75% of respondents do not plan finances in their household. Only 25% of respondents plan finances in the long term, which means that they are ready to meet short-term goals, through medium-term goals to preparing to ensure a good standard of retirement. Slovaks have a relatively poor approach to managing and maintaining the family budget. The budget is either completely absent or in a very imperfect form.
Financial knowledge and financial skills	According to the survey, up to 70% of Slovaks are convinced of their very good resp. good knowledge of financial literacy. But very good resp. only less than 20% of Slovaks demonstrated a good level of financial literacy. Only a quarter of respondents can correctly calculate interest or income from a deposit. Only 12% of respondents correctly deciphered the abbreviation RPMN. When asked who they consult about financial issues, 25% of respondents answered that they rely only on themselves, 55% of respondents consult with their family, only less than 10% address experts, e.g. bankers or financial advisers.

Table 5.3 (continued)

1	2
Overview of household income and expenditure	As many as half of the respondents have very inaccurate or no idea at all about their monthly disposable income and what their monthly expenses are. Women have a slightly better overview of household expenditure than men. With increasing age, the overview of household income and expenditure also increases. University-educated people in particular have an accurate overview of expenditures. The rule is that the larger the number of household members, the smaller the realistic overview of household income and expenditure.
Indebtedness and the ability to repay debts	Too often, Slovak households are in debt very recklessly and irresponsibly. In more than one in ten households (12%), monthly expenditures regularly or occasionally exceed disposable income. As many as 30% of respondents use overdrafts to cover higher expenses, which in the case of quick default is one of the most expensive forms of bank loan.
Creating a financial reserve	The optimal financial reserve of the household ranges from 3 to 6 available monthly incomes. The financial reserve is used to overcome critical situations, such as decrease in income due to illness, injury or loss of employment. However, only 15% of Slovak households create a sufficient financial reserve. Other households have an insufficient financial reserve, a third of households have absolutely no reserve.

Source: authors

Since October 2018, in Slovakia the volume of loans provided has exceeded bank deposits. The growth of personal financial assets of Slovaks in the period from 2016 to 2018 reached 10.7%, but it is much lower than in the case of Czechs and Hungarians. While the average Slovak in the period of from 2016 to 2018, it increased its financial assets by an average of € 1,300, the Hungarian by € 2,100 and the Czech Republic by up to € 2,200. At the end of 2018, Slovaks have average personal financial assets of € 13,400, Czechs € 23,100, Hungarians € 17,100, while the EU average is almost € 70,000 (Finreport, 2019). The results of the survey pointed to several negative phenomena. More than half of households assessed their financial situation rather negatively. One of the reasons for the negative assessment is the fact that Slovaks are the most indebted in the region of Central and Eastern Europe after the Estonians. That is why the

financial situation of Slovaks in comparison with other countries in this region is significantly the worst. In the past, Slovak households have long had a larger volume of savings in financial institutions than the volume of loans and borrowings they had to repay. Excessive indebtedness of Slovak households may have a negative effect on the financial situation of households in the coming years, especially if interest rates rise. The bad financial situation of Slovak households is not a question of feeling, but of real economic fundamentals.

Conclusion

Naturally, each education system is more or less different. Each country has gone through its own historical, political, economic, and social changes, which have also affected the development of education. And changes are happening all the time to this day. Teachers and students adapt so that they can continue their professional and personal growth smoothly. However, education does not stop by attending school. On the contrary, analyzes have shown that further education within the concept of lifelong learning takes place through adult education, especially in a non-formal and informal way. Without quality financial knowledge and skills, without an adequate level of financial literacy, the population of Slovakia cannot achieve financial and economic independence, satisfaction and an adequate quality of life. The population can be divided into two basic groups, those who have achieved at least a basic level of financial literacy in their lives and those who have no idea how to manage their finances and assets.

Raising the level of financial literacy of different groups of the population must be a priority for the government, ministries and the entire education system at all levels. Slovakia must continuously increase the level of financial literacy of its inhabitants; the system of financial education must be comprehensive and functional. The main objectives and processes in the field of financial education and financial literacy for the population should be the following:

1. Continuous and quality education of the population of Slovakia in the field of finance and increasing their financial literacy. Underestimating the importance of education and the importance of the financial literacy of the population would be an unforgivable mistake.

2. Preferring the financial health of households as a significant value so that the population is able to analyze their financial situation

and make the right decisions in financial matters.

3. To support the education and outlook of the population in financial market issues, especially in the field of banking, insurance, financial intermediaries and other financial institutions.

4. To support the dissemination of basic information and knowledge in the field of consumer protection and to teach citizens to actively apply their consumer rights in practice.

5. Strive to increase assets, create a financial reserve, spend prudently and control expenses of households. As consumers, it is necessary to behave very responsibly and buy only what is really needed.

6. Borrow very carefully, only if necessary, analyze in detail the consequences of indebtedness, use loans effectively and pay due attention to their repayment.

7. Eliminate the transfer of financial responsibility and financial problems to other entities, such as the state, municipalities, family, etc.

8. To support the financial responsibility of the population for their future, to support their retirement savings and to secure their family for the future.

9. Tightening legislation and regulations in the area of lending and various loans, as households often end up in a debt spiral that ends in foreclosures and loss of housing.

10. Present the positives of business development among the population, draw attention to the positives and negatives of a person operating as an entrepreneur. Compile and present your own business plan, think strategically, analyze and solve problems.

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DEVELOPMENT OF HIGHER EDUCATION IN UKRAINE IN THE CONTEXT OF INTEGRATION INTO THE EUROPEAN HIGHER EDUCATION AREA

Introduction

Ukraine formally declared its intention to reform its higher education in line with European education trends in 2003 and applied to join the process of the European Higher Education Area (EHEA) reforming on the basis of the Bologna Declaration, signed in June 1999 by representatives of 29 European countries.

In 2005, Ukraine signed the Bologna Declaration and undertook to reform the education system in accordance with the EHEA standards and recommendations, which set out the following main objectives of the reforming process: to adopt a system of easily understandable and comparable degrees; to introduce a system of higher education, which is based on two main cycles (bachelor, master); to introduce a credit transfer system similar to ECTS; to promote the mobility of students, teachers and scientists; to promote European cooperation in quality assurance; to promote the European dimension in higher education (in the context of curriculum development and inter-institutional cooperation), and the key objectives were to ensure the clarity of educational qualifications and to improve the quality of higher

education.For the domestic education, the task was reduced to 3 main areas of reforming:

– change and improvement of legislation in the field of education;
– improvement of the educational process organization;
– ensuring the quality of specialists training.

New trends in higher education, caused by the internationalization strategies development, include additional assistance providing in the teaching process. Nowadays, mentoring is highly used at foreign universities for the creation of comfortable study conditions and better learning results among students. This is a helpful instrument in the inclusive education and in the academic mobility realization [1].

Literature Review

The understanding of the need for changes in the education system caused initially insignificant (2003-2006) changes in legislation, and later the Laws of Ukraine "On Higher Education" (2014), "On Education" (2017) and "General Secondary Education" (2019) brought higher education in Ukraine closer to the requirements of the EHEA. The EHEA requirements, in turn, have been created for the internationalization strategies development and broader perspectives for students and staffs of Higher Educational Establishments [2, 3]. But their implementation requires a longer time and is associated with inertia in the training system at all levels, the need to improve educational technologies, which, in addition to time, requires significant material costs. Approaches to the organization of the educational process and the quality of educational services have also changed significantly. Quality assurances in higher education as well as student-centered approach were among the key elements of the Bologna Declaration [4, 5]. Various aspects of national education and its compliance with the EHEA course were studied by V. Osetskyi and U. Tytomyr [15], Yu. Rashkevych [7], Z. Shatska and V. Pryma, A. Sayun, L. Antoniuk and D. Ulshytskyi, S. Nevmerzhytska and T. Tsalko, T. Hordiyenko and S. Volosovych, M. Storchak and N. Chorna [21] and other domestic researchers. We understand that European integration foresee the transformations and changes at the level of HEIs and in accordance with the national strategy of higher education development [6].

The above entioned requires a comprehensive study of the reasons for dissatisfaction with the current situation in the market of educational services and the confidence return in domestic education at all levels, although, as a rule, it all comes down to problems at its highest level –

higher education. It is necessary to establish a degree of compliance with modern requirements of the entire system of a state conscious citizen formation, starting from preschool age. But this is especially true of higher education, the transformation process of which should be based on the national idea with the preservation and increase of national educational traditions. As A. Sayun notes, "Higher education should educate a citizen of Ukraine, a harmoniously developed personality, for whom the need for fundamental knowledge and raising the general and professional level is associated with patriotism" [21, p. 259]. A systematic approach should be used in the study of higher education, when at the entrance of the system one should consider and analyze not only the quality of a trained person from the previous level of education (secondary school graduate, vocational education or each level separately), but also the regulatory framework, employers' and civil society requirements, etc. In general, as a system it is advisable to consider education in general, covering preschool, secondary, higher and post-educational levels.

It should be noted that the need to reform domestic higher education (as well as the education system in general) came during a systemic crisis that covered all spheres of society, including science and education. Problems of the existence of once powerful research institutions of the National Academy of Sciences of Ukraine and scientific units of the higher education system, the outflow of scientific personnel and applicants to study abroad created the preconditions for the deterioration of the domestic economy innovative development. The objectively valid economic law has come true, meaning that the development of economics and science determines the progress of society. A highly educated society through a system of various mechanisms contributes to the economic development of the state, but the state of economic development and scientific achievements are largely determined by the level of educational development. Science and education are the most cost-effective and interconnected fields and are the intellectual raw materials of the economy.

Domestic enterprises are interested in reforming the higher education system and improvement of the specialists training. The objective need for the integration of Ukraine's economy into the European and world economic space makes their activity inevitable in a specific environment based on high technologies, approaches and methods of activity corresponding to the requirements of the post-industrial level. And one of the five features of the "post-industrialism" system in D. Bell (one of

the developers of the theory of post-industrial society) is the leading role of theoretical knowledge as the basis of innovation in economics, politics and social structure of society. In today's information society, knowledge is a major factor in economic growth.

Despite the difficult economic situation, the understanding of the need and implementation of the Bologna Declaration in 2003-2006 led to steps to modernize the domestic higher education system by making some changes in legislation and regulations [14].

The Law of Ukraine "On Higher Education", adopted on September 6, 2014, approved the course for the integration of domestic higher education into the European Higher Education Area. Article 3 of this law states that the state policy in the field of higher education is based on the principles of international integration of the higher education system of Ukraine into the European Higher Education Area, provided that the achievements and progressive traditions of national higher education are preserved and developed.

Results and Discussion

Current education has so far largely continued the traditions of Soviet higher education, the main positive features of which were considered to be deep fundamental training and relatively broad specialization of graduates based on established educational standards with certain compulsory subjects. However, such a rigidly centralized and authoritarian system is increasingly giving way to a more practical and democratic European higher education system focused on labor market needs and universal human values. Providing higher education for the vast majority of secondary school graduates (according to some data about 70%), the domestic system is significantly inferior to the European quality of specialists training. Thus, in the world ranking of the education system quality according to the general indicator "Higher education and training" Ukraine in 2017 took 35th place (Germany – 15, Great Britain – 20, France – 22, Czech Republic – 27, Poland – 40), and according to the partial indicator "Quality of the education system" – 56th place (Germany – 9, Great Britain – 22, France – 40, Czech Republic – 59, Poland – 72) [21, p. 365]. These data show a significant lag of domestic higher education from the leading economically developed countries in Europe – signatories of the Bologna Declaration. Such a situation cannot satisfy the requirements for the economic development of a country that has to adjust its lags in order to take a worthy place in the European Economic Area. Therefore, it is obvious

that “the challenge of the national economy is impossible without the formation of a new generation of intellectual elite, able to combine broad humanitarian erudition with high competence in the development of funds and tools of productive activity” [22]. To achieve this goal significant, and in many cases even radical changes are required in understanding the essence of the educational process, taking into account the leading place of education in public life, the choice of forms and methods of its implementation using world experience and national traditions. The key task of higher education should be the development of future-oriented thinking [21, p. 326]. However, it should be a comprehensive process of professional knowledge formation with a patriotic public position. Higher education should educate the citizen of the state of Ukraine, a harmoniously developed personality, for whom the need for fundamental knowledge and the general and professional level improvement is associated with patriotism [21, p. 259].

This becomes especially relevant in the current conditions, when the outflow of young people abroad for work and study, even after graduation from the Higher Educational Institutions at home, is becoming threatening for the economy of Ukraine. More and more of the best school leavers are going to study abroad with the hope of employment there after graduation. At the same time, Higher Educational Institutions of Poland, the Czech Republic, Slovakia and other countries are selected for training, which are behind Ukraine in the world rankings in terms of the quality of education.

It should be noted that the awareness of the need for changes in the system of HEIs specialists training in Ukraine led not only to the signing of the Bologna Declaration, but also the situation on the domestic and world labor markets. The National Strategy for Education Development in Ukraine for the period up to 2021 [13] notes that the modern labor market requires from the graduate not only deep theoretical knowledge, but also the ability to apply them independently in non-standard, constantly changing situations, transition from knowledge society to life-competent citizens society. This initiated changes from education, reduced to the study of functional approaches that teach how to act in specific standard situations, to learning approaches of thinking in non-standard situations. This approach to higher education in Ukraine was adopted by the Law of Ukraine “On Higher Education” adopted in September 2014. It lays the foundations for reforming higher education in accordance with the requirements of the Bologna Declaration. At the same time, it became clear that the reforming of higher education alone

will not give the desired result without changes in the education system, such as preschool, secondary and higher education. The first two of them are the steps to the third most important level – higher education, on which depends the intellectual and spiritual development of society, the level of science and production, and ultimately creates the material basis of the nation's wealth.

Already at the first two stages of the education system the quality of higher education is laid down. Therefore, without a doubt, each previous level of education should provide a quality product for the higher level, and its higher level – quality for production and society. In the Law of Ukraine "On Education" (2017), levels of education (Figure 5.4) in the National Qualifications Framework (NQF).

Levels of education			Level of the National Qualifications Framework
pre-school education			zero
Initial			first
Secondary education	basic secondary education	the first level of professional education	second
	profile secondary education	the second level of professional education	third
third (higher) level of education			fourth
Professional pre-higher education			fifth
Higher education	initial level (short cycle)		sixth
	the 1st (bachelor's) level		seventh
	the 2nd (master's) level		eighth
	the 3rd level		nineth
	Scientific level		tenth

Figure 5.4 Levels of education according to the NQF [9]

The NQF contains ten levels and is a tool for classifying qualifications according to the criteria for achieving certain levels of education; contains a list of qualification levels and a description of each level through competences. It has become a powerful tool for ensuring the transparency and clarity of the education system and has made it possible to compare it with the qualifications framework for the European Higher Education Area and the European Qualifications

Framework for lifelong learning. In it, the zero level corresponds to preschool education, the 1st – primary education, the 2nd and 3rd – secondary education (basic and specialized), the 4th – higher level, the 5th – professional pre-higher.

Levels of higher education correspond to levels 6-10 of the NQF, indicating the level of training and readiness to perform certain tasks, which allows those who hold them to work at relevant positions. A great advantage of this approach was the reduction of all levels of education to a common denominator – the description of each level through competences. This made it possible to identify education as a system in which the exit of the previous level of education is the entrance to the next, it means that the results of the previous level are the starting point for the next level, and certain competences can be formed at different levels of education. The ranking of important competencies in Table 5.4, as the average opinion of teachers, graduates and students (compiled on the basis of [7, p. 36]), confirms that most of the competencies, in particular 1, 2, 4-6, 9, 11-17, are formed at all levels of education.

Table 5.4

Ranking of competencies

Competence	Place
Ability to analyze and synthesize	1
Ability to learn	2
Ability to apply knowledge in practice	3
Ability to adapt to new situations	4
Oral and written communication in the native language	5
Interpersonal skills and abilities	6
Ability to generate new ideas (creativity)	7
Basic computer skills	8
Decision-making	9
Ability to criticize and self-criticize	10
Ability to work in an interdisciplinary team	11
Basic general knowledge	12
Assimilation of the basics of fundamental knowledge	13
Ethical obligations	14
Knowledge of a second language	15
Research skills and abilities	16
Positive attitude to dissimilarity and other cultures	17

Source of information [7]

This shows that a qualitative end result – higher education is possible only with qualitative secondary education and early vocational guidance, starting from lower levels, which will help to avoid the current gap in the graduates choice of future specialties and make informed choices based on their achievements in acquiring knowledge. Therefore, it is important to coordinate and implement cross-cutting educational programs with their gradual complication at the next levels with the same approaches to all components of the educational process.

Ensuring the quality of higher education is a priority not only of the Bologna Process, but also of the world education system as a whole. These positions should be taken in reforming the domestic higher education system. The adopted Laws of Ukraine "On Higher Education", "On Secondary Education" and other normative documents related to them bring the existing system of education as close as possible to modern requirements. At the same time, only the copying of foreign experience in the educational process is not able to bring us closer to European and world standards, which are constantly improving. What is needed is not modernization, but rethinking, a clear understanding of where our education is, to forecast its development with a focus on reducing the gap with the leading countries. In particular, this applies primarily to educational technologies. Generalized data [21, pp. 302-307], their evolution allows us to determine what we should do on the way to recognition in the European Higher Education Area.

From the time of the study (1940-1950s) to the present day, the global evolution of educational systems has gone from traditional to mobile technologies. Traditional technologies were aimed at the requirements of the labor market, when the knowledge of students was transferred by teachers in the classrooms, and the teacher simultaneously transferred knowledge and monitored the results of the educational process. Such educational technology prevailed in 1940-1950s and changed slightly in 1950-1960s and fully met the requirements of an industrial society with stable technologies in industry and slow changes in social life. The rapid development of post-industrial society has necessitated a change in educational technologies to intensify the educational process and the emergence of problem-based learning with the widespread use of business games, cases and other active teaching methods as well as the use of computers. But traditional educational technologies with minor changes existed until the mid-90s of last century. Since then, interactive technologies have begun to develop,

which are beginning to be based as much as possible on the use of computer technology in the educational process: computer classes are created, computer programs and electronic textbooks are used. The highest achievement of this period in educational technologies is that the teacher ceases to be the main source of information and becomes the leader and coordinator of the educational process. The learning process takes place through constant, active interaction of both students and teachers, and the forms of its implementation are – modeling of reality, brainstorming, creative work, testing and more. There is a possibility of distance learning, for which distance learning centers are created at universities, which very soon become centers for individual education and contribute to the emergence of electronic technologies - e-learning (e-distance learning, 1988); blended learning (1999); m-learning (multimedia mobile education, 2000) [16, pp. 28-29]. The first of them (e-learning) involves the interaction of distant participants in the educational process (teachers and students) in a specialized environment based on modern psychological and pedagogical and information and communication technologies; the second (blended learning) is based on a combination of different types of classroom learning with the help of modern mobile devices with the use of multimedia learning tools. Based on the latest advances of the scientific and technological revolution, electronic technologies have opened the way for smart technologies that meet the level of the smart society development, which is already on the line of developed countries, and the leader in their implementation – South Korea – currently has 20 cyber universities [16, p. 26]. Smart education, which means the learning process using technological innovations and the Internet, is becoming crucial in developed countries.

The essence of smart-education reveals a set of concepts:

– Self-directed – self-organized;

– Motivated – motivated;

– Adaptive – adapted;

– Resourse riched – enriched with resources;

–Technology embedded – with built-in technologies.

That is, smart education is an independent, motivated, adaptive, resource-enriched learning with embedded technologies. It is based on the use of appropriate data center software on the platform of cloud technologies, interactive boards, tablets, etc. The most commonly used application package is Microsoft office (Word, Excel, Power Point), Scype, software for an interactive board from the company “Smart”, in particular “Smart Notebook”, a training complex based on Smart Board,

etc.

Thus, the key features of modern smart education are:

– mostly individual training, and if necessary – work in mini-groups;

– ability to work with Internet resources, use application packages, search for the necessary information in the Internet environment.

It should be noted that smart-education, in addition to the use of modern educational technologies requires high qualification of teachers and proper training of those receiving education. Teachers must have a thorough knowledge of computer hardware and software, the ability to present teaching materials and implement control measures. Students are required to be able to use computer equipment and software, work with communication systems, and most important – to master the material themselves.

The development of smart education creates conditions for the widespread use of mobile technologies, including dual education as a flexible form of vocational training and technologies for the use of artificial intelligence (virtual reality – a fully digital environment; reality – a real environment, supplemented by multimedia superimposed information; connected reality – real and virtual reality are intertwined). A characteristic feature of modern educational technologies is the deepening of individualization and distance learning. However, the ultimate success in acquiring knowledge and training is largely determined by the level of interaction of participants in the educational process. The answer to this question is easy to determine by an anonymous survey of students at different levels of the institution, institute (faculty), department. A good result is provided by the anonymous questionnaire of students developed by us and successfully tested for many years after the end of the course. The sample questionnaire developed by us in Figure 5.5 is filled in by students independently and through their representative is passed to the head of the department for generalization and conclusions. Such a questionnaire allows management to identify problems in a timely manner and guide the teacher to eliminate “bottlenecks” in his work, and in conflict situations to make appropriate decisions.

An integral requirement of higher education reform to the requirements of the EHEA is its basing on the national idea, the education of a citizen of the state of Ukraine. This approach allows Lviv Polytechnic to occupy leading positions in domestic and worthy places in international rankings. It should be noted the high places of the university in the rankings according to the areas that determine scientific

progress – Engineering and technology, Physical Sciences, Computer Science, Business and Economics. Well-developed material and technical base (equipped classrooms and laboratories, 7020 personal computers), educational-methodical and information support (3021 certified electronic educational-methodical complexes; provision of wireless access to the Internet; access to the most modern corporate e-mail services; use of licensed products, etc.), qualified human resources (394 full-time doctors, professors; 1327 full-time candidates of sciences, associate professors), modern innovation infrastructure, including the business innovation center "Tech Startup School" [19], provide high quality training of specialists.

QUESTIONNAIRE
Estimation of the teacher's/lecturer's work students of the specialty_____
Teacher/Lecturer_____

Indicator	Mark		
	1 high level	2 medium level	3 low level
Quality of the material teaching			
Availability of teaching			
Relationship with students (ethics)			
Contact with the audience			
Objectivity of knowledge assessment			

Note: at the intersection of the indicator and the corresponding grade, in the opinion of the student, a "+" sign is affixed.

Figure 5.5 Questionnaire for estimation of teacher's/lecturer's work

Progressive ideas for the realization of the strategic goal of the university – to become the first university in Ukraine in terms of international and national rankings, laid down in the Strategic Development Plan of Lviv Polytechnic National University until 2025 [20], are a guarantee of readiness for integration into EHEA.

Conclusion

The conducted research and practice of many domestic universities activity in the conditions of quarantine (COVID-19) testify to the approximation of the educational services provision in Ukraine to the

requirements of the EHEA. However, the transformation process should include:

– improvement of domestic legislation by ensuring consistency and clear continuity of the content of education in the chain of preschool education – primary education – secondary education – higher education – post-education;

– legislatively restore and improve in accordance with modern conditions the external form of training;

– improvement of the system of the educational process organization;

– improvement of educational and methodical;

– strengthening the role of practical training.

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MANAGEMENT SYSTEM FORMATION FOR EFFECTIVENESS OF INSTITUTIONS OF HIGHER EDUCATION ACADEMIC ACTIVITIES

High education is rapidly evolving and developing, expanding into business-related industries and increasing competitive advantages. In the market environment, Ukrainian and foreign institutions of higher education are being transformed from state-funded education and scientific and cultural centers into enterprises with all enterprises' activities, including: advertising – to increase the volume of entrants, diagnostic – assessment of efficiency and economic feasibility of operating structural units, entrepreneurial – research into the cost of training specialists, etc. Therefore, there is a need for a quick and effective adjustment of the activities of institutions of higher education to the external environment requirements.

In a competitive environment, where the ability of institutions of higher education to respond quickly to environmental changes becomes one of the most important components of successful functioning in the education service market, the long-term development is of paramount importance. Its main factors are sound strategic management of the

institution of higher education; the effectiveness of business processes occurring in the IHE; management of capital embodied in the knowledge and qualifications of academic staff; ability to retain and attract new students; innovative development and organizational improvements; investment in information technology (N. Obolyaeva, 2011).

Increasing competition in the education services market prompts IHE management to improve management efficiency. New economic conditions require new approaches to governance in higher education. In view of this, scientists are increasingly talking about the necessity for a strategic approach to managing institutions of higher education. A prerequisite for the successful functioning of the IHE in the modern world is compliance with the rule "the benefit of the result must exceed the cost of achieving it". The choice of performance assessment methods is one of the objectives of management accounting in the IHE performance management system. The interests of consumers of education services are of paramount importance, the interests of management subjects are secondary, therefore the strategic management of IHE should not be aggressive towards the external environment.

The analyzes of methods of assessment of IHE effective activity and their connection with other economic categories in their researches were paid attention by such Ukrainian and Russian scientists as: L.O. Voloshchuk, S.R. Demidov, N.V. Pankova, Bielialov T., Vlasiuk T., Gryshchenko I.M., Tarasenko I.O. and others.

N.V. Pankova's work (p. 12) provides a methodology for assessing the IHE effective activity related to the current transformations in the higher education system. S. R. Demidov (S. R. Demidov, p. 245) proposed a methodology for determining the IHE effective activity based on an assessment of the correlation of such indicators as the actual volume of intellectual goods and services, the demand for IHE intellectual products and services, the actual and regulatory excess of revenue over the costs remaining in the IHE, actual and regulatory costs resources for the creation and sale of intellectual products.

The issues of assessing the management effectiveness of social and pedagogical systems have been considered by such scientists as O.S. Bodnar, N.G. Korneshchuk, A.I. Chmil and others. They suggested authoring approaches to assessing such performance. There are also a number of concepts for assessing management effectiveness that have emerged in recent years, based on a comprehensive approach to organizing (usually production) as an open system. However, these concepts are not always interrelated and, to some extent, contradictory.

It should be emphasized that the concept "management mechanism" as a key element of the IHE is a relatively new and not well-researched concept. Mechanism in economics means the sequence of actions, states that determine a process or phenomenon (A.Borisov, 2010). Accordingly, the control mechanism can be defined as a clear sequence of actions (steps, stages, phases) that determine the control process. And, since control is a deliberate process in which certain tasks are solved, the control mechanism can be represented in the form of an algorithm, which is defined as a sequence of certain actions or steps to solve the given task (A.Goncharuk, 2010, p. 326).

The main types of management mechanisms are: organizational, economic, structural mechanisms, mechanisms of management, technical and administrative, information mechanisms and others. Most scientists consider the individual components of the general economic mechanism: organizational, economic or organizationally economic mechanisms. Given the managerial nature of the objectives of this study, the use of only an economic mechanism or organizational component would be incorrect.

Considering the above, the mechanism of managing the IHE effectiveness is a system of interrelated elements, including methods, organizational structures, operations, IT tools, levers and tools that interact with each other in a cyclical complex of strategic and operational tasks and functions for measurement and evaluation of efficiency, implementation of management actions and monitoring the results of performance, ensuring steady growth of indicators of IHE effectiveness.

Organizationally economic mechanism of management of the IHE effectiveness should be considered as a set of organizational and economic levers (each of which has its own forms of managerial influence) that have an impact on the economic and organizational parameters of the IHE management system, which contributes to the formation and strengthening of organizational and economic potential, obtaining the competitive advantages and IHE effective activity as a whole.

Summarizing the definition of organizationally economic mechanism for managing the IHE effective activity, all the information can be presented schematically in Figure 5.6. The application of the proposed methodological approach will help to solve one of the most important problems of managing modern education institutions – improving the effectiveness level of activity and competitiveness.

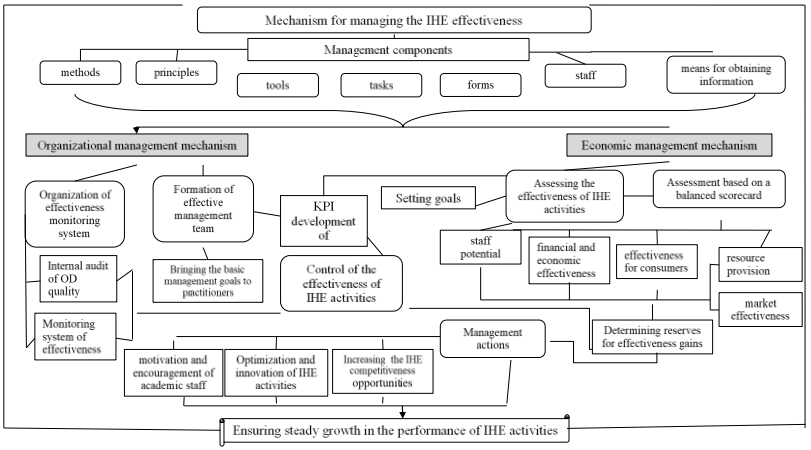

Figure 5.6 Organizationally economic mechanism for managing the IHE effectiveness

Source: authors' development

In the structure of the organizationally economic mechanism, three systems are distinguished: the system of provision, the functional system and the target system (A. Sadekov, 2006).

The system of providing the organizationally economic mechanism consists of subsystems of legal, resource, regulatory, methodological, scientific, technical, and information support of the process of managing the IHE effectiveness.

The functional system of organizationally economic mechanism for managing the IHE effective activity includes the following main subsystems: planning, organization, motivation, control and regulation.

The target system of the organizationally economic mechanism includes the goals and main results of the IHE activity, as well as the criteria for selecting and evaluating the results of achieving the specific goals of the IHE.

Therefore, in order to ensure a competitive position in the market for educational services, IHE must constantly work towards improving the effectiveness of its activities, which should be based on the dialectical combination of external and internal efficiency.

Accordingly, the formation and implementation of the mechanism for managing the IHE effectiveness will be provided by the following basic tools: economic, organizational, social-psychological, technical

and technological, marketing, legal, and use indicators that allow to evaluate the performance of each tool (Figure 5.6).

The organizationally economic mechanism of IHE effective management is determined not only by environmental factors, but first and foremost, its effectiveness depends on the actions of academic staff in the process of IHE activity, in the implementation of the developed plans and programs of development, in the process of achieving the set goals. That is, the management of the IHE effectiveness will depend on the compliance of the selected strategies with the IHE objectives, the optimal processes of the strategies implementation, the motivation of the personnel to achieve the goals, the qualification of the personnel, the technology and management style.

It should be noted that in the context of the human capital theory, higher education is considered to be an investment in the potential market value of an individual, as a participant in the labor market, where the economic efficiency of money spent on education and social effects is evaluated (Economic encyclopedia, 1980). The human capital theory interprets the effectiveness of higher education from the standpoint of the state, society and employer (the social effect of higher education is manifested not only at the individual level, but also extends to the whole society as a whole).

To date, the concept "management effectiveness" in relation to social and socio-pedagogical systems in the scientific literature is quite ambiguous. From the theory of economics and management it is known that effectiveness is considered as the ratio of the received effect (that is, the result) to the cost of resources that ensured the said effect. That is:

$$\text{Effectiveness} = \frac{\text{Result}}{\text{Costs for obtaining results}} \tag{5.1}$$

In view of this, we will perform the appropriate manipulations, and from the formula (5.1) we derive a formula for effectiveness control, which in the general expression will look like:

$$\text{Management effectiveness} = \frac{\text{Management effect (result)}}{\text{Costs for management}} \tag{5.2}$$

This formula is inherent in the concept of management effectiveness, called the target concept of management effectiveness. It is a concept according to which the activity of an organization is aimed at achieving

certain goals, and the management effectiveness is characterized by the achievement degree of the set goals (N.G. Korneshchuk, 2007).

In addition to this concept, a number of others have been considered in this study. For example, the functional concept of management effectiveness and the functioning of management staff and management effectiveness are characterized by comparing the results and costs of the management system itself. The concept of management effectiveness based on the achievement of "balance of interests" is a concept according to which the activity of an organization is aimed at meeting the expectations, hopes (interests) and needs of all individuals and groups interacting in the organization and with the organization. In the context of this concept, the focus is on the relative importance of different group and individual interests in the organization (A. Chmil, 2007). Within this concept, it is difficult enough to compare the two states of the management process, since changing managerial states may not only change the interests of different groups, but also their composition (new members may appear, groups may unite or disintegrate), new groups may appear, etc. Systemic concept of management effectiveness is a concept according to which the results of the organization's activity are influenced by both internal and external factors, and management effectiveness is characterized by the degree of adaptation of the organization to its environment (A. Chmil, 2007). With this in mind, this is the concept that most fully embraces the various aspects of the work of an institution of higher education, provided that there is a selection of criterion objects, the calculation of the management effectiveness which is not in doubt when using a certain methodology.

Thus, the modern approaches to assessing the IHE effectiveness (officially approved methods and development of different authors) can be divided into several main areas: assessment of compliance with licensing and accreditation requirements, assessment of the quality of educational service and professional qualities of the graduate, assessment of the effectiveness of budget expenditures for higher education, evaluation of the IHE effective economic (entrepreneurial) activity, rating of institutions of higher education. In Figure 5.7 an analysis of typical methods for each of these directions has been given.

As a result of the analysis of the methods of assessing the IHE effective activity (Figure 5.7), the following conclusions have been made:

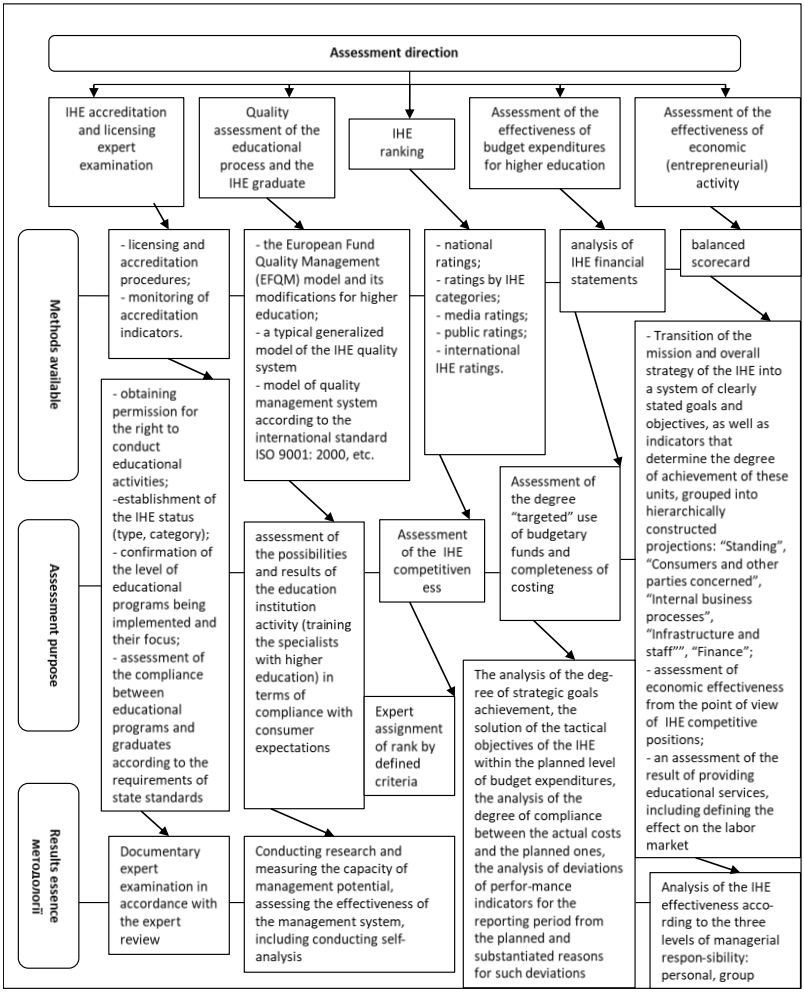

Figure 5.7 Approaches to assessing the effectiveness of IHE activity

Source: authors' development

– all the discussed techniques cover one or more of the aspects of the IHE effectiveness discussed above;

– there are different interpretations of approaches, evaluation tools and performance indicators among the techniques of one group affiliation;

– for the integral assessment of the effectiveness of IHE activities, it is necessary to clarify the basic directions, criteria parameters and methods of evaluation.

Against this background, it has been concluded that the effectiveness of institutions of higher education should be determined by four key points:

– from the state's position as a customer and guarantor of meeting public needs (external or macroeconomic effectiveness);

– from the perspective of the individual as a consumer of education services (individual effectiveness);

– from the position of the employer or the labor market as a whole, as a consumer of the final product of IHE (market effectiveness);

– from the position of IHE as a business entity (financial or economic or internal effectiveness).

In view of the above, the priorities of the IHE management should be formulated in a balanced way, taking into account the possibilities of ensuring the targets of social and economic effectiveness (individual and public).

Based on the results of the generalization of the conducted researches and the existing experience in the field of management effectiveness of activity of institutions of higher education the authors of the study have developed a methodical approach for assessing the effectiveness of IHE activity. The model for assessing the effectiveness of IHE activity is presented in Figure 5.8.

It should be emphasized that this model includes modified methods and approaches to collecting and processing information depending on the stage of its implementation.

It should be noted that the basis for assessing the effectiveness of an institution of higher education is based on resource-based approach to the calculation of effectiveness, because its use allows to assess the degree of achievement of the stated goal and using expert evaluation allows to take into account a sufficiently wide range of indicators for different areas of IHE activity in the calculation of the integral indicator of effectiveness. An important aspect of using a resource-targeted method to assess the performance of an institution of higher education is that IHE as a system is made up of different groups of the parties concerned, with whom it is in resource exchange depending on the activity direction, since the main purpose of IHE activity is not to maximize profits as for business organizations, but meeting the needs and requirements of the parties concerned.

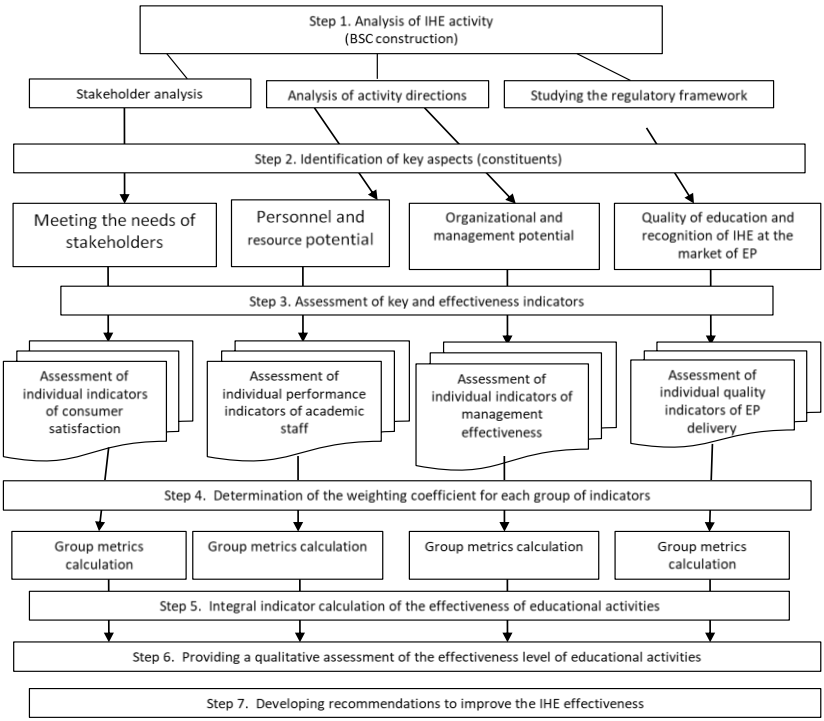

Figure 5.8 A model for assessing the effectiveness of IHE education activities

Source: authors' development

In the second stage, it is proposed to identify the key aspects (components) of the effectiveness of the IHE education activities. At that moment it identifies the resources that the parties concerned receive from, and transfer to, the IHE, and determines the effectiveness of the IHE resource exchange with each party concerned group (stakeholders). Against this background, the most appropriate

According to the proposed model (Figure 5.8), at the first stage of assessing the effectiveness of the activity of an institution of higher education, it is recommended to analyze the legal framework of the IHE, determine the main directions of its activity, and analyze the party concerned loyalty to the IHE approach to assessing the performance of

an institution of higher education is to use a resource-based target effectiveness criterion.

In the third stage, it is proposed to assess the key indicators of the financial and economic activity of the IHE according to the criteria characterizing:

– education activities (number of students enrolled for studying, including by state order and on a contract base);

– the socio-economic status of the IHE (average number of staff members, average monthly salary, arrears of salary, costs of social events);

– financial status (receipt of appropriations from the state budget and special fund and the ratio between general and special funds, cash and actual expenditures by economic classification codes of expenditures, results of general and special fund estimates, accounts receivable and payable, etc.);

– availability of material base, its condition and use.

In view of the above, it is advisable to apply a systematic approach to assessing the performance of an institution of higher education, the essence of which is that relatively separate components are considered not in isolation, but in their relationship, in the system with others. The system approach allows to reveal the general system properties and qualitative characteristics of the constituent elements.

It should be emphasized that in the systematic approach IHE is considered as a set of the following interrelated components: goals of education activity, subjects of pedagogical process (a teacher and students), content of education (general, basic, professional), methods and forms of educational process and material-technical base.

In view of this, for each area of IHE activity, the target values are set, they are planned to be achieved in the course of the activity and the actual values for each line of activity, for which results are obtained in a certain defined period of time.

Thus, the developed methodological approach for assessing the performance of institutions of higher education includes the methodology of resource-based assessment and modified methods and approaches for collecting and processing information depending on the stage of its implementation.

In view of the above, the methodology of assessing the IHE effectiveness on the basis of resource-targeted approach will allow to assess the effectiveness of each line of activity separately, as well as taking into account the importance of the line of business, to assess the

effectiveness of the whole IHE activity. The resource-targeted method is the most appropriate for such tasks (R.E. Freeman, 1984), because the assessment of the effectiveness of an institutions of higher education only in financial indicators is insufficient (the use of a balanced scorecard is necessary), since the financial indicators do not reflect the level of use of intangible resources, especially resources based on knowledge.

As the studies evidenced at the level of commercial organizations as for the assessment of management effectiveness, the method of building key performance indicators (KPI) is often used (A.V. Kartuzov, 2011). This approach was taken as a basis for the development of key performance indicators for managing the IHE activity. This involved solving the problem of bringing the quantitative indicators specific to the higher education system into a single coordinate system. To solve this problem, scientists use the following methods and approaches:

1. An approach according to which this kind of coordinate system is not constructed at all, and different indicators of development should be eliminated, which often does not allow to reveal the general trend.

2. An expert method, according to which indicators different in terms of dimensions are reduced to a single coordinate system by expert way. A known disadvantage of this method is the subjectivity and bias of experts.

3. An index method, which uses not the actual performance indicators, but the rate of change, which allows you to compare differently measured indicators, as well as to create common indexes by multiplication (division) of individual indicators. In the initial form, within the framework of building a general performance index, only indicators representing the specific weight are usually used. This method, which is most relevant, is proposed to be adopted as a mathematical basis in the construction of a system of key indicators of the effectiveness of IHE education activities.

This leads to the conclusion that, in accordance with the general principle of systematic nature, it is advisable to use a wide range of indicators that characterize various aspects of the IHE activity: assessment of the EP quality by the labor market, the image of the IHE, satisfaction of the consumers' needs with educational services, the success of educational service recipients, the effectiveness of the academic staff, financial indicators of the effectiveness of the IHE development, etc.

Taking into account the indicated, effectiveness of IHE activities has been proposed to assess using the formula:

$$E_i = \sum_{i=1}^{k} \frac{P_i}{P_{ni}} \tag{5.3}$$

where: E_i is the effectiveness of the ith activity; P_i is the actual local performance indicator; P_{ni} is the planned local performance indicator; k is the number of local indicators under study.

In the fourth stage, it has been proposed to determine the weighting factors for each group of indicators. A method of expert estimation was used to calculate the coefficients of significance (particles) of subsystems, since the degree of significance of subsystems in shaping the work results is different.

It has been established that the assessment of the relative importance of directions (factors, parameters) does not limit the processing of questionnaire data. The assessment of the indicator of the experts' opinions coherence degree by means of the indicators' system has an equally important issue for the scientific substantiation of the forecast.

For assessment of the general measure of opinions concordance in all directions (factors, parameters) the coefficient of concordance is used.

$$K_{\text{кон}} = \frac{\sum_{j=1}^{n} d_j^2}{\frac{1}{12}\left[m^2(n^3-n) - m\sum_{i=1}^{m} T_i\right]}, \tag{5.4}$$

$$d_j = S_j - \frac{\sum_{j=1}^{n} S_j}{n} \tag{5.5}$$

We have to mention that the sum of ranks provided by experts in the jth direction is determined by the formula:

$$S_j = \sum_{i=1}^{m} R_{ij} \tag{5.6}$$

$$T_i = \sum_{l=1}^{L} (t_e^3 - t_e) \tag{5.7}$$

where: L is the number of related (equal) ranks; t_e is the number of related ranks in each group.

It should be emphasized that the coefficient of concordance takes a value from 0 to 1. The greater the value of the coefficient of concordance, the higher the degree of experts' agreement. If $K_{con} = 1$ there is complete agreement of experts' opinions; then when $K_{con} = 0$, then agreement is almost absent. The statistical value of the coefficient of concordance is checked by Pearson criterion (x_p^2):

$$x_p^2 = \frac{\sum_{j=1}^{m} d^2}{\frac{1}{12}\left[mn \cdot (n+1) - \frac{1}{n-1} \cdot \sum_{i=1}^{m} T_i\right]} \quad (5.8)$$

The calculated value x_p^2 is compared with the table value of x_t^2 for n-1 degrees of freedom and confidence (P = 0.95 or P = 0.99). If $x_p^2 > x_t^2$, then the coefficient of concordance is significant, and if $x_p^2 < x_t^2$, then the coefficient is insignificant, and the experts' opinions are not agreed and it is necessary to increase the number of experts or brainstorm them.

Given this, if x_p^2 is significant, it is assumed that the weighting coefficients of each indicator are determined by the formula:

$$\omega_i = \frac{mn - S_i}{0{,}5mn \cdot (n-1)} \quad (5.9)$$

The calculation of group performance indicators of functional subsystems is recommended for summarizing the values of single (local) indicators of functional subsystems based on the use of a taxonomic indicator of development by the method of V. Plyuta. This method lacks the disadvantage of using hurdle constants, which is inherent in several other methods. According to this method, a data matrix consisting of standardized attribute values is used. The standardization eliminates units of measurement (both cost and positive). All attributes of the original population (both incentives and disincentives) are converted to indicators of incentives.

As a result of the conducted research it has been established that one of the most evident research methods of social-economic systems is the generalized function of E.K. Harrington. The construction basis of the generalized function of E.K. Harrington's idea is to convert (normalize) all dimensions, natural values of system states into dimensionless indicators (desirability functions), which change from zero (very poor quality and efficiency) to one (high quality and efficiency), that is, the positive values of individual indicators are transformed in dimensionless

on a single scale of desirability. E.K. Harrington's desirability scale refers to psycho physical scales.

The normalized value of the jth indicator of the effectiveness of the IHE education activity is recommended to be determined by the formula:

$$a_j = \frac{x_j - x_{j\min}}{x_{j\max} - x_{j\min}} \tag{5.10}$$

where: x_{jmax} and x_{jmin} are respectively the maximum and minimum values of the jth index among all similar indexes.

For this reason, the optimum value of the indicator that is at least 95%, and the worst one at 5%, and at least one more value should be specified to test.

According to the research data, the unilateral dependencies of E.K. Harrington are defined as following:

$$y_j = \exp[-\exp(-a_i)] \tag{5.11}$$

In view of the above group indicator of effectiveness assessment of IHE education activities has been proposed to determine by the formula:

$$I^{\Gamma} = \sum_{i=1}^{n} y_i \tag{5.12}$$

where: I^{Γ} is a group indicator of the effectiveness of education activities; x_i – the ith (local) indicator; n is the number of individual (local) indicators to be evaluated.

The positive dynamics of changing group performance indicators testifies an increase in the effectiveness of IHE activities as a whole.

The fifth stage is the formation of a comprehensive system for assessing IHE effectiveness. On the basis of the established system of indicators, an integrated assessment of the effectiveness of each activity and the IHE in general is carried out.

It should be noted that the integral indicator of the effectiveness of the activity of an institution of higher education is a general indicator that comprehensively characterizes the different directions of the IHE activities brought to a single system.

The need to calculate the integral index is due to a number of reasons, including:

– the availability of a large number of unit indicators that characterize the IHE and the difficulties involved in processing significant flows of information when obtaining objective results that complicate the analysis process. The use of an integral indicator of the IHE effectiveness will allow you to be quickly guided and make management decisions in a timely manner;

– the existing indicators of IHE performance assessment do not fully cover all areas of its functioning. The integrated indicator will allow to take into account all areas of activity of the IHE;

– the availability of an integral indicator of the IHE activity effectiveness will allow to make a generalized assessment with the assessment in separate directions;

– the usage of an integral indicator will allow to make a generalized comparative assessment. The integral efficiency index, classified by one feature, will be the same according to the calculation methodology.

Thus, the usage of a single, aggregated on the basis of a set of indicators covering all areas of the IHE activities, integrated indicator will allow a more informed approach to the objective management decision.

The integral indicator of the effectiveness of IHE education activities, based on the objective significance of each factor, has been proposed to calculate by the formula:

$$I_E = \sum_{i=1}^{k} I^{\Gamma} \cdot \varpi_i \qquad (5.13)$$

where: ϖ is the weighting factor of the ith group of indicators.

The sixth stage involves generalizing the results of the assessment of the effectiveness of the IHE activities and formulating conclusions.

According to the results of the research, it was found that of Harrington's function allows the transformation of any natural values of indicators into a dimensionless scale of desirability, which establishes a correspondence between the psychological (the analyst's subjective assessment) and the physical (values of indicators) performance of the IHE. The disadvantage of E.K.. Harrington's standard dimensionless scale of desirability (Table 5.5) is that numerical scores on this scale do not have a specific meaningful loading. For example, the choice of ratings on the scale of desirability of 0.37 and 0.63 is explained by the convenience of calculations (0.37 = 1/e, 0.63 = 1-1/e), and a score of 0.37 is generally considered to be within the permissible limit values. The rest of the scores on this scale are indicative.

Table 5.5

Harrington's scale of desirability

Levels of desirability	Parameter value according to the scale of desirability
Very good	1–0,8
Good	0,8–0,63
Satisfactorily	0,63–0,37
Bad	0,37–0,2
Very bad	0,20–0

Source: given according to the sources Harrington E.S. (1965)

Taking into account the given information, the integral indicator of the level of effectiveness of the IHE, it is proposed to determine on a scale from 0 to 1 with an expanded characteristic of the range of assessment:

• 0,75 – 1 – high efficient (leading) IHE;
• 0,5 – 0,75 – effective IHE;
• 0.25 – 0.5 – low efficient IHE;
• 0 – 0.25 – ineffective IHE

The seventh stage envisages the development of recommendations and measures to improve the efficiency of an institution of higher education.

Summarizing the results of the scientific literature elaboration, the main directions of increasing the efficiency of IHE activities have been identified, among which:

– social responsibility in education;
– modernization of education content;
– introduction of new functions and forms of control and assessment.

It should be noted that the proposed method allows to analyze the contribution of each component to the complex integral indicator of the effectiveness of IHE activities. The results of the analysis of the status and dynamics of individual and group indicators on the level of effectiveness of IHE activities are the basis for making managerial decisions in operational and tactical planning, as well as the substantiation of strategic directions for improving the level of effectiveness of the IHE education activity.

Given this, the proposed methodological approach envisages the development of a balanced system of indicators of the effectiveness of IHE education activity and their assessment using the resource target method and the theory of desirability.

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METHODOLOGICAL TOOLS OF STRATEGIC TRIANGLE IMPLEMENTATION "BUSINESS – EDUCATION – SCIENCE"

In modern business conditions, for various types of entities, an important factor in ensuring their competitive advantages in the market and for sustainable profits is the dynamic development and advancement of the preferences of key stakeholders. Every entrepreneur embodies various innovations and implements the latest technologies in a dynamic environment, which has recently been in an emergency. Currently, the global trend puts on the agenda skills, competencies and qualifications for constant change and renewal. At present, all this is impossible to imagine without fundamental knowledge of theoretical and applied nature. That is why the most important is a strong relationship and continuous improvement of such elements of strategic development as the demands of business structures, the formation of the educational level, the improvement of scientific progress. In our opinion, these imperatives of different spheres of activity should be embodied in the general concept in the formation of the strategic development of the economy of a particular sector and the state as a whole.

In the course of our study, it was determined that the main focus of stakeholders in most cases is to identify and form a relationship given the two-way intersection of components. That is, the issues of the business environment during the formation of competencies in the educational process of applicants, or the development of scientific achievements, formed on the basis of the educational process or implementation of scientific and technical developments without appropriate skills and abilities. But in our opinion, it is worth paying attention to the complex characteristics of the strategic triangle "business – education – science" and all possible intersections of this definition (Figure 5.9).

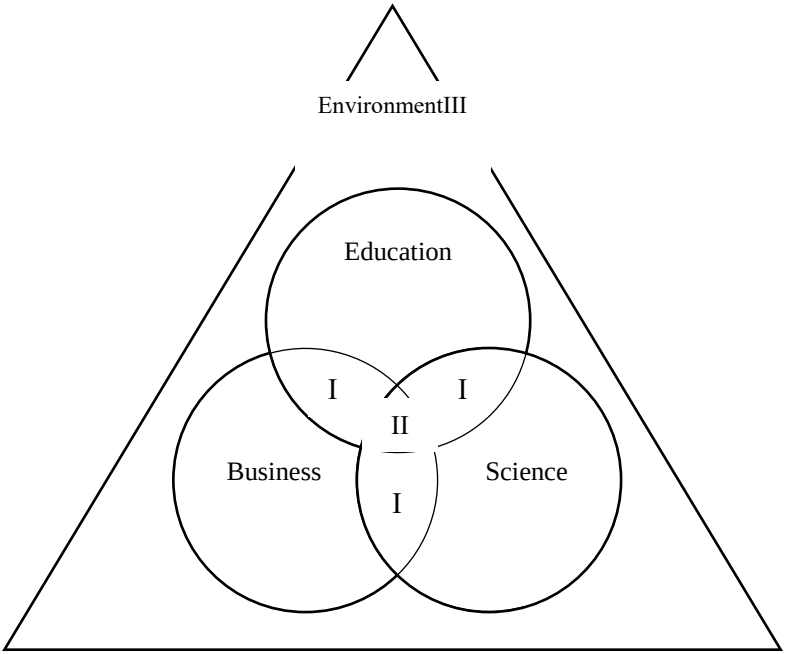

Figure 5.9 Strategic triangle "Business – Education – Science"
Source: generated by the authors

As a result of the study, we determined that the strategic triangle "business – education – science" should be considered a combination of each component and its components, in which there is a mutual division, influence, synergy and implementation of information flow with subsequent impact on each element. In addition, it should be noted that during the interaction of even two components out of three, the results will affect each element. We believe that the three components of the strategic triangle are a complex and basic combination for the successful development of any sector of the economy and the state as a whole.

It should be noted that in a turbulent operating environment of all issuers, the process of complete and complete sequence of penetration of each element cannot often take place. Accordingly, in this case we want to propose and present the levels of interaction of the components of the strategic triangle (Table 5.6).

The presented division of the components of the strategic triangle "business – education – science" at the level includes either two-way or

Table 5.6

Levels of influence of components of a strategic triangle

No.	Level	Name	Elements	Characteristic
1	I	"Basic training"	Business Education	- formation of the basic inquiries of business structures during training; - creation of educational programs from the requirements of business structures.
2		"Basic scientific"	Education Science	- ensuring the introduction of scientific achievements in educational processes; - creation of platforms for scientific development.
3		"Basic innovation"	Business Science	- implementation of the scientific component in economic activity; - development of science in accordance with requests.
4	II	"Advanced"	Business Education Science	- implementation of a general approach to taking into account each element.
5	III	"Professional"	Business Education Science	- creating a synergy effect from constant interconnection and accumulation of experience.

Source: generated by the authors

three-way communication of elements. In our opinion, the third level is the most acceptable, but its achievement is possible only after passing all levels and gaining relevant experience. Yes, paying attention to the first level, it should be noted that the relationship of two of the three elements is still present in our environment, but unfortunately in an informal form.

For example, level I “Basic training” should include such activities as small in volume of information and duration of training courses, training, formalized associations to share experiences, and so on. This type of training is very common and in great demand due to its ease of use and accessibility. That is, there is such a niche in the educational process, which can easily be filled by a small training, which is formed on the requests of business units. Accordingly, as a result we can get the necessary knowledge in theoretical gaps, increase the special competencies of their subordinates, to form a new level of communication in the team through a generalized approach.

But all these advantages are, in our opinion, only a temporary solution to such a global problem as the constant sustainable relationship of business and education in the framework of the constant training of the last necessary personnel (qualified personnel) for economic development in general. In our opinion, to achieve this goal requires a three-way interaction of the strategic triangle, which is solved at the third level of the relationship. In our opinion, the environment itself (direction of activity, type of economic obligations, field of scientific knowledge, interdisciplinary associations, etc.) can fully form the necessary package of all components for the development of each element.

As a result of the analysis of theoretical developments and studying the practice of implementation of the strategic triangle, we can say that the results of the interaction of business, science and education are present at a sufficient level only in countries with sustainable economic development. These conclusions can be drawn from the analysis and evaluation of the reports of the Taoist World Economic Forum, which publishes the results of an international analysis of the growth potential of countries, namely the “Global Competitiveness Report”.

The methodological basis of the above concept, on the basis of which the report is formed, is to determine that any state is able to generate new knowledge and perform their commercialization in the form of technological and innovative products, which is considered a major factor in competitiveness. Therefore, successful countries consider the transformation of established institutions (large corporations, classical universities and research institutions) that promote the development of knowledge and innovation potential, among the priority reform measures. For example, consider the data of the World Forum (Table 5.7), which clearly represent the world leaders and the place of our country among the total number.

Table 5.7

The place of the countries in the world according to the Global Competitiveness Index in the period 2014-2018

Country	2014 – 2015 (from 144 countries)		2015 – 2016 (from 140 countries)		2016 – 2017 (from 138 countries)		2017 – 2018 (from 137 countries)	
	place	index	place	index	place	index	place	index
Switzerland	1	5,7	1	5,76	1	5,81	1	5,86
USA	3	5,5	3	5,61	3	5,70	2	5,85
Singapore	2	5,6	2	5,68	2	5,72	3	5,71
The Netherlands	8	5,5	5	5,50	4	5,57	4	5,66
Germany	5	5,5	4	5,53	5	5,57	5	5,65
Hong Kong	7	5,5	7	5,46	9	5,48	6	5,53
Sweden	10	5,4	9	5,43	6	5,53	7	5,52
England	9	5,4	10	5,43	7	5,49	8	5,51
Japan	6	5,5	6	5,47	8	5,48	9	5,49
Finland	4	5,5	8	5,45	10	5,44	10	5,49
Russia	53	4,4	45	4,44	43	4,51	38	4,64
Poland	43	4,5	41	4,49	36	4,56	39	4,59
Georgia	77	4,2	66	4,22	59	4,32	67	4,28
Serbia	94	3,9	94	3,89	90	3,97	78	4,14
Tajikistan	91	3,9	80	4,03	77	4,12	79	4,14
Brazil	57	4,3	75	4,08	81	4,06	80	4,14
Ukraine	**76**	**4,1**	**79**	**4,03**	**85**	**4,00**	**81**	**4,11**
Butane	103	3,8	105	3,80	97	3,87	82	4,10
Greece	81	4,0	81	4,02	86	4,00	87	4,02
Moldova	82	4,0	84	4,00	100	3,86	89	3,99

Source: compiled by the authors according to the World Economic Forums 2014-2018 [1]

According to the presented data, world leaders occupy established positions and hold their leading positions, which cannot be said about Ukraine. The presented data clearly show the precarious situation of our state and constant fluctuations within the ninth dozen countries. Given the greater retrospective, it should be noted that Ukraine had the best position in 2006-2007 – it is 69th place and the worst in 2009-2010 – it is 89th place. In our opinion, the growth of the competitiveness index was observed in view of the general rise of the economy and the gradual strengthening of the interaction of the strategic triangle "business – education – science".

So far, we have lost several more positions over the last year and rank 85th (out of 141 countries). It is clear that this trend is caused by the global pandemic, as well as the deterioration of domestic economic

factors. Among the main regression values, it is worth noting the decrease to 136th place in the field of finance (deterioration by 19 positions) and to 101st place in health care (decrease by 9 positions).

But among the positive trends are such as the labour market – an increase to 66th from 69th place, education – from 46th to 44th place, the business indicator decreased by 1 position (from 86th to 85th), etc. That is, if we look at the average value of the competitiveness index, then of course it has a negative trend, but the components of this indicator in our opinion are more far-sighted.

Therefore, for example, a positive trend in education and business may manifest itself in a few years, especially when the first level of graduates will have a stable impact on the development of the industry. Or the adjusted direction of admission in the field of education in health care can increase the figure of the same name in 4-5 years. Accordingly, the key component that requires procrastination for good results is education and its stimulation.

In our opinion, to get the best results from the implementation of the strategic triangle "business – education – science" it is necessary to introduce mechanisms for the functioning of the educational process so that it fully meets the staffing needs of business structures and forms a field for scientific potential. Therefore, we propose to achieve this goal through the mechanism of functioning of the strategic triangle (Figure 5.10).

In our opinion, it is education that should unite and harmonize all the components for the production and transfer of knowledge and skills. In order to better adapt higher education to the latest needs of the labour market and wider access of young people to quality jobs, there is a transition from traditional forms of higher education to a competency-based approach to learning. This innovation has the following advantages:

• involvement of employers, which allows to identify regional and national needs of the labour market and to develop adequate training programs that meet these needs;

• the opportunity to study and work at the same time: offers of internships and internships are considered as the first step to further employment;

• allows you to make the right choice: to provide all the necessary information about possible programs and their features for both potential participants and employers;

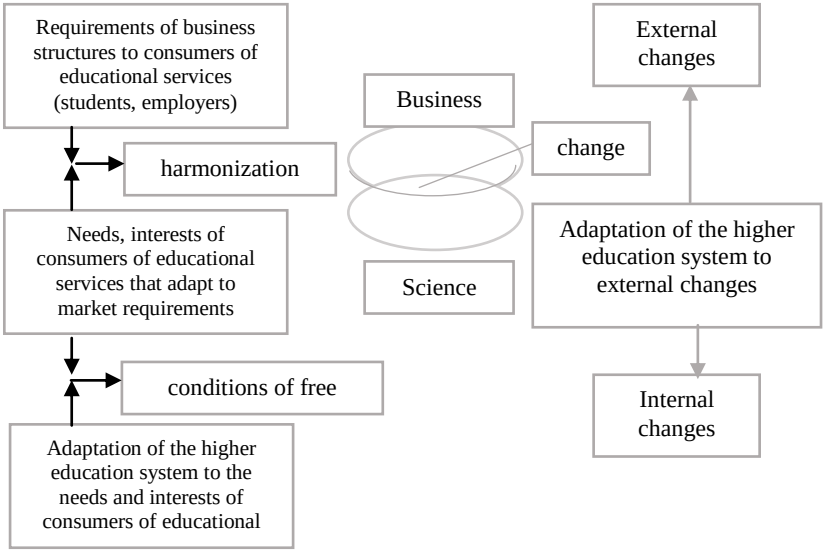

Figure 5.10 The mechanism of functioning of the strategic triangle "business – education – science"

Source: generated by the authors

• removing barriers to specialized vocational training and access to support services and support;

• coordination of joint work of employment centers, local employers, educational institutions and other public and private organizations.

The establishment of a new role, a new status of universities for the needs of regional development is a mechanism of state and regional influence, aimed at overcoming the devaluation and preservation of intellectual capital of the country and the region. As the analysis shows, it is not only universities that need to undergo some transformation and reincarnation.

For a long time now, the weak point has been the innovative development system, which does not sufficiently ensure the commercialization of scientific achievements and technological developments. This leads to a significant discrepancy between the large number of completed scientific developments and the received internal patents and the very low frequency of their commercialization. The reason for this is, on the one hand, that the owners of patents and research results (scientists, teachers, inventors) are not focused on the

specific needs of the enterprise, and on the other hand, there is a very low demand from business structures for innovative developments. Therefore, in our scientific institutions, science often exists for the sake of science without any commercialization. Thus, the need for harmonization of business and society relations, as well as scientific and technological achievements in the format of joint innovation is very significant.

Today we see it expedient to implement the above collaboration through the implementation of a cooperative model of the innovation process, when different stages of the relationship "business – education – science" are combined into a system of organic cooperation of simultaneous scientific and applied work with direct focus on conditions and requirements stages of competitive implementation. It is seen that in this way the probability of commercial success of scientific and technical developments increases significantly.

The results of support and further implementation of the strategic triangle "business – education – science" in more successful and stable countries shows that the above combination and support of elements in creating innovation creates an extraordinary effect of creative environment for mass birth of innovative ideas. This circumstance can be both a "side effect" and the result of which an association of representatives of economic activity, educational process and scientific communities was created and already has a well-established definition, namely "spin off or spillover". In the practice of foreign missions, this is the process of emergence of numerous accompanying additional innovations, which are indirectly formed under the influence of a certain innovation, which is the main object of management action.

Particularly high innovative productivity of spin offs is formed as "creative clusters", which emerged on the basis of university science during the general work of representatives of business structures, teachers, students, customers from the public sector and other stakeholders. This set a new course of development for higher education and initiated changes in the institutional model of education. Against this background, a new type of university appeared – the so-called centres of spatial research and production regional clusters.

So today, the world's leading universities are dynamically carrying out institutional transformation and beyond. New powerful business academic centres are being created, which produce new developments and research and educational products that are rapidly entering the market. The central link of their activity is the generation and transfer of

innovative technologies in the process of commercialization of the results of research work, which becomes an organic part of the educational process. Since universities are interested in obtaining and creating added value from the commercialization of their own scientific and technological developments, they contribute to the development of the project from an idea to an innovative product or high-tech enterprise.

It is important to create in Ukraine special institutional support for the formation of a "cooperative" model of implementation of the strategic triangle "business – education – science", to develop and adopt regulations that will promote self-organization in innovative cooperation of scientific institutions and universities on the one hand and business and government – on the other. In this context, the problem of greater autonomy of universities to be able to carry out such activities in terms of diversification of funding sources – by developing commercial relations with business and government agencies in innovation, as well as to make more flexible and mobile to changes in the external market environment.

From the analysis of the practice of innovation of world-class universities we can also conclude that to initiate new collaborations of the strategic triangle "business – education – science" should start new associations based on university research, licensed on its own behalf of scientific and technical developments and will to form appropriate ecosystems both in the university and in the region and the country as a whole.

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JUSTIFICATION OF TECHNICAL AND SOCIO-ECONOMIC FEASIBILITY OF THE CONSTRUCTIONS IMPLEMENTATION WITH FUNCTIONS OF A TRAINER AND RECHARGING OF EXTERNAL DEVICES AT HEIs

Introduction

An important aspect of modern times is the increase of interest in the detailed study of technical-economic life of society. The well-being of people depends on the economy, the correctness of management, the rational use of resources. By changing the perception on processes, objects, their management by the state, enterprises, community, ordinary citizens, the well-being of country in general and each of us individually is achieved.

Economic feasibility (EF) is one of the identified criteria during the implementation of any object, whether it is at the enterprise, company or

the organization, including Higher Educational Institutions (HEIs). In general, the economic feasibility consists of two components: the social effect and (or) income (Figure 5.11).

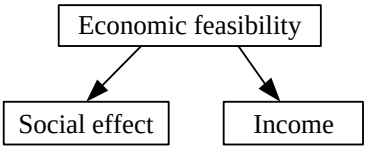

Figure 5.11 Components of economic feasibility

Sometimes, economic feasibility is equated with efficiency, which is understood as the ratio of planned revenues to estimated costs.

Depending on the goals, the mathematical calculation of EF is carried out according to different mathematical formulas. If an approximate assessment of economic feasibility is performed, the following issues are analyzed and (or) taken into account: planned and unplanned costs; income from savings involvement; quantity of risks (sometimes called precautions). When analyzing projected income, the potential benefits are usually underestimated.

There are cases when EF can be justified in terms of savings (reduction) of costs, because as we know – what is saved – is earned. In fact, this statement to some extent can be applied to the justification of the EF of the proposed project.

In this work, on the basis of EF calculations, technical-economic and social justification of the project implementaton feasibility at HEI, this relates to the use of constructions with the functions of the trainer and recharging of external devices. The economic feasibility of this project is confirmed by the situation analysis at the market. The study was conducted both in Ukraine and in other countries.

Analysis of previous research

In today's world, one of the main tasks of society is to develop effective approaches to the use of all types of resources (both natural and created). In addition, an important aspect is the formation of human consciousness about the best actions in this direction.

In recent years, there has been a steady rise in raw material prices in the form of electricity. This situation significantly reduces the financial-economic performance of any industry, regardless of whether they

produce different types of goods or provide certain services. That is why both producers and consumers of electricity are looking for ways to reduce its consumption. Therefore, alternative methods of electricity obtaining or consuming are in demand. The economic feasibility and efficiency of such activities is confirmed by the stability of such enterprises.

The main factors influencing the production and consumption of electricity are: internal; external.

There is a graphical representation of these factors below, indicating the accompanying factors that determine them.

The economic feasibility of such type of resource as electricity for any enterprise is an opportunity to reduce its consumption. Among the reasons that cause a decrease or increase in demand for electricity, we may highlight:

– economic situation in the country;

– state policy, in particular on the control of monopolists – at the energy market;

– fair competition between electricity production companies;

– purchasing ability of the population;

– changes in the cost of its production;

– appearance of alternative sources of production at the market.

As the main consumers of electricity among educational institutions there are several groups:

– educational institutions with a small number of employees and pupils (schools);

– educational institutions with average number of employees and students (colleges);

– educational institutions with a large number of employees and students (universities).

According to these two classifications, it is possible to predict the estimated electricity consumption, the demand for which depends on the operating hours of the institution and the intensity of electricity consumption by users. Taking into consideration that the research was conducted at the educational institution with a large number of employees and students (university), therefore, the calculation of the economic feasibility of such a resource as electricity consumption obtained from alternative sources will be based on them.

Predicton of the required number of sources of electricity generation and consumption is based on the technical and economic feasibility of such projects. It is planned to install several dozen constructions with

the functions of a trainer and recharging of external devices at HEIs. This is due to the demand for such facilities, as these are institutions where students spend most of their time without movement, at desks, being at lectures or practical classes.

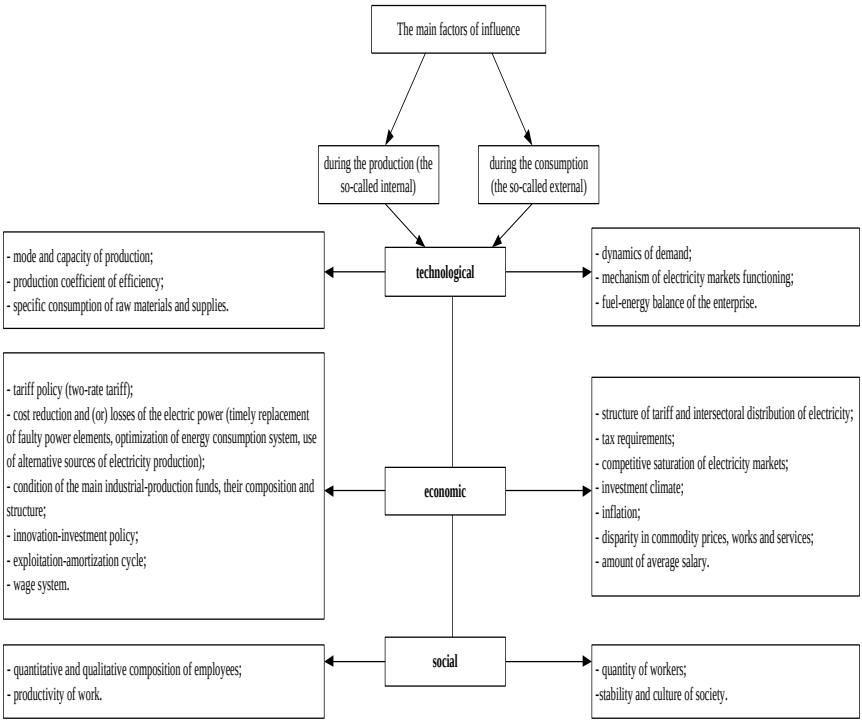

Figure 5.12 Generalized scheme of influence factors on the electricity production and consumption

Similar devices can be seen in gyms in Europe, America and here in Ukraine. By exercising at trainers, visitors generate electrical energy, which power lamps to illuminate the premises in the sports complex. Exercise bikes have become popular in Germany. Initially, to combat hypodynamics, they were installed to study demand in the library of the Free University of Berlin by converting one reading table for a trainer bike with laptop charging. Students and teachers received this experiment with enthusiasm – an unusual fitness that does not require time to visit the gym. But when they learned about the experiment in

other German educational institutions, without waiting for its end, they began to look for an opportunity to install trainer bikes at their universities.

About 80% of the total time spent at the university, students use various devices that need recharging. The level of filling the market with such constructions in Ukraine is (according to various estimates) from 1 to 3%. This is due to the lack of methodological and technical approach to the study of such a plan, and the lack of economic feasibility of such projects implementation. Therefore, the introduction of constructions with the functions of the trainer and recharging of external devices at HEIs is quite promising.

The main material

Economic feasibility is an indicator without which it is impossible to organize anything new and which is a strong argument in the conversation "B2C".

The economic feasibility of this project is not so much an assessment of its profitability, as an assessment of the social effect with some elements of profitability (in the form of reducing the consumption of total electricity by student users by generating it from an alternative source – in particular, the trainer).

If you charge gadgets from the power grid, then on average in 30 minutes the device is recharged to 50%. The charging process consists of three components: power (W watts), current (A ampere), voltage (V volts). If we multiply volts by amperes, we get watts. In this way we can find out the power of every device. The higher the power, the faster the gadget charges. In a month one person spends about 5-6 UAH to charge the gadget from the power grid. Therefore, there will be no significant energy savings when using our proposed device. The social effect will be more significant. As part of this study, appropriate preparatory work was carried out, the prototype was tested as part of the annual event "Scientific Festivals" at Lviv Polytechnic National University. The socio-economic feasibility of this project can be presented in the form of a diagram below.

To implement this project it is necessary to use a small area (about 3 m^2) in closed non-residential premises (buildings) with a flat (concrete) floor in the autumn-spring period and similar areas of flat asphalt surfaces in the spring-autumn period at the university territory (or a combination of ones, and others).

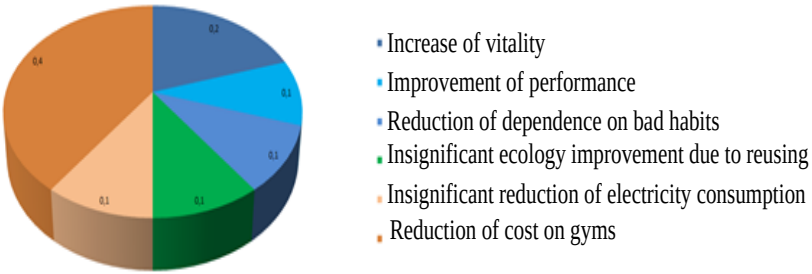

Figure 5.13 Generalized diagram of economic feasibility of the prototype

Cost calculation

Construction and implementation of any project begins with the construction of a generalized business model of the project, which can be presented as follows (Figure 5.14).

To implement the project, a one-time investment is required (purchase of components, their assembly, etc.). Because for the project exploitated bicycles were used that were broken and were not suitable for their direct use, inexpensive special equipment for the conversion and storage of electricity and some other components that are necessary for the full operation of the trainer. The use of such components has somewhat reduced the cost of construction. The average service life of such a trainer is five years. The cost calculation is provided below (Tables 5.8-5.9).

Table 5.8

Cost calculation of the construction project with the functions of the trainer and recharging of external devices

No.	Cost item	Sum, UAH
1.	Materials and components needed for production	2000
2.	Expenses for payment of specialists	500
3.	Organizational costs	500
4.	Contingencies	500
	Totally	**3500**

The fixed costs of this project include the payment for employees for technical support of the construction, as well as the lease of space, the creation of promotional materials. In addition, fixed costs include obtaining and maintaining patents.

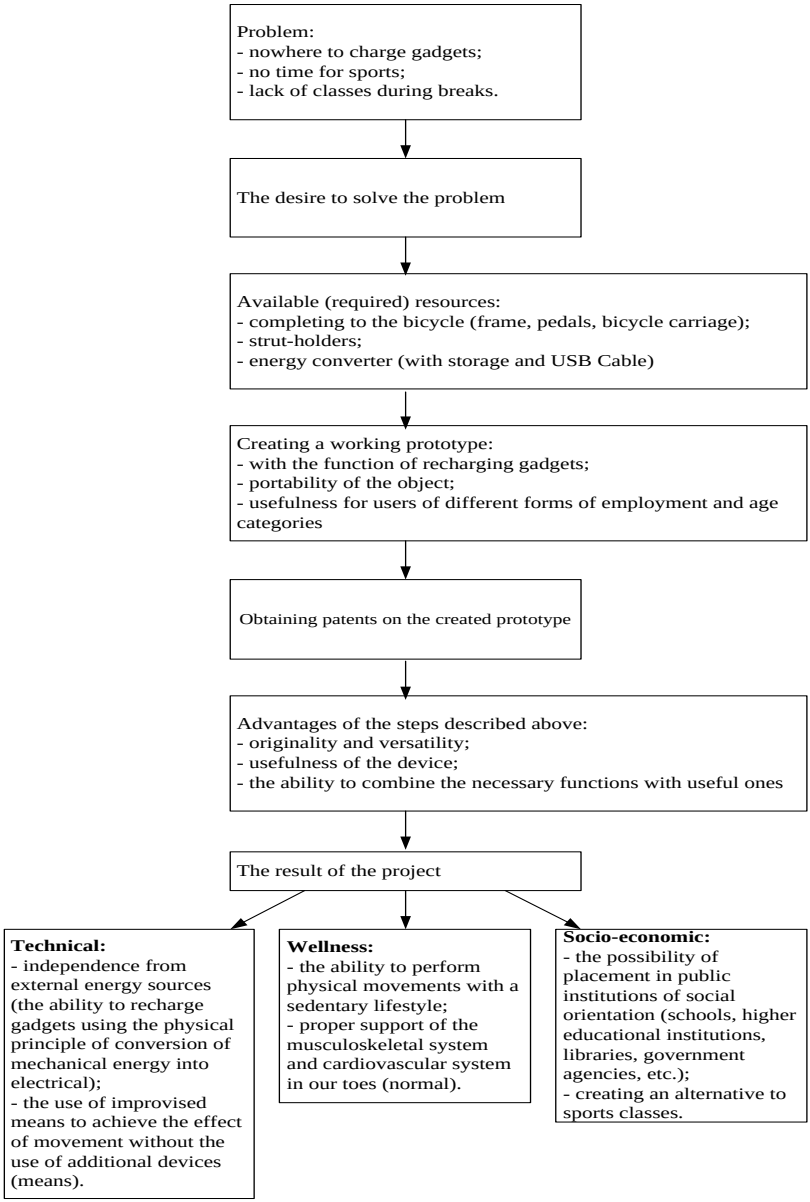

Figure 5.14 The general scheme of creation of the exercise machine with function of recharging of gadgets

Table 5.9

Cost calculation of the construction project with the functions of the trainer and recharging of external devices (made of new constructive elements)

No.	Cost item	Sum UAH
1.	Steel pipe	750
2.	Chain, gears	2250
3.	Pedals, connecting rods, connecting bolts, nuts, etc	3500
4.	Paint, decor elements	1000
5.	Expenses for payment of specialists	6000
6.	Organizational costs	1000
7.	Contingencies	500
	Totally	**15000**

Amortization is calculated by a linear method, taking the cost of the equipment 100 euros (1 euro – 30 UAH) with a service life of 5 years. Amortization deductions are determined by the formula:

K = (1 / n) * 100%, where K is the standard amortization rate in%; n is the duration of useful use of the fixed mean, expressed in years.

K = (1/5) * 100% = 20%.

Amortization deductions: A = (3000 * 0,2) / 12 = 50 UAH.

Variable costs are related to the material costs for raw, materials, components, etc. When calculating the costs, the cost of electricity was taken into account, which in Ukraine is about 1.7 UAH for 1 kW (including VAT). Installation and commissioning can be performed by specialists with engineering education. Financial-economic risk is possible with a sharp drop in consumer demand, the development of an alternative product, declining interest of ordinary consumers, the pricing policy of the nearest competitors. In order to minimize such unpleasant situations, it is necessary to respond in a timely manner to any changes observed in this economy segment. Technical risks take into account the decommissioning of basic equipment, low-quality components, as well as the need to purchase new mechanisms. To minimize this risk type, it is planned to carry out preventive work, periodic scheduled monitoring of the complex.

Substantiation of cost and quantitative indicators that characterize the EF of the trainer with the function of recharging gadgets in different interpretations

The amount of the required financial investments is 100 euros. Economic feasibility for the university was calculated at the exchange

rate – 30 UAH. Its payback period is approximately 25 months.

The cost of the trainer

	Prototype of Lviv Polytechnic	Personal	Public place (gym)
Made on the basis of a new trainer	1500 UAH	1500 UAH	45000 UAH
Made of new constructive elements	15000 UAH	15000 UAH	15000 UAH
Made on the basis of the used bicycle	3500 UAH	3500 UAH	3500 UAH

Exploitation terms

	Prototype of Lviv Polytechnic	Personal	Public place (gym)
Made on the basis of a new trainer	10 years	20 years	15 years
Made of new constructive elements	10 years	20 years	15 years
Made on the basis of the used bicycle	5 years	10 years	7 years

Exploitation costs (maintenance)

	Operating mode	Prototype of Lviv Polytechnic	Personal	Public place (gym)
Made on the basis of a new trainer	Indoor	250 UAH/ year	150 UAH / year	1000 UAH / year
	In the street	500 UAH / year	-	-
Made of new constructive elements	Indoor	250 UAH / year	150 UAH / year	1000 UAH / year
	In the street	500 UAH / year	-	-
Made on the basis of the used bicycle	Indoor	500 UAH / year	300 UAH / year	2500 UAH / year
	In the street	1000 UAH / year	-	-

Frequency of use

	Operating mode	Prototype of Lviv Polytechnic		Personal		Public place (gym)	
		Number of users / year	Average duration of use per 1 person	Number of users / year	Average duration of use per 1 person	Number of users / year	Average duration of use per 1 person
Made on the basis of a new trainer	Indoor	2500 people/ year	15 min	1 - 5 people/ year	30 хв	7000 people / year	15 min
	In the street	3500 people/ year	30 min	-		-	
Made of new constructive elements	Indoor	2500 people/ year	15 min	1 - 5 people/ year	30 min	7000 people/ year	15 min
	In the street	3500 people/ year	30 min	-		-	
Made on the basis of the used bicycle	Indoor	1500 people/ year	15 min	1 - 5 people/ year	30 min	5000 people/ year	15 min
	In the street	2000 people/ year	30 min	-		-	

Download level (day/month/year // hours)

	Operating mode	Prototype of Lviv Polytechnic	Personal	Public place (gym)
Made on the basis of a new trainer	Indoor	6/150/720	3/60/1000	12/360/3600
	In the street	8/200/1200	-	-
Made of new constructive elements	Indoor	6/150/720	3/60/1000	12/360/3600
	In the street	8/200/1200	-	-
Made on the basis of the used bicycle	Indoor	6/150/720	3/60/1000	10/300/3200
	In the street	6/150/720	-	-

Expected level of energy production (Watts/year)

	Operating mode	Prototype of Lviv Polytechnic	Personal	Public place (gym)
Made on the basis of a new trainer	Indoor	21600	15000	0
	In the street	48000	-	-
Made of new constructive elements	Indoor	21600	15000	
	In the street	48000	-	
Made on the basis of the used bicycle	Indoor	21600	15000	0
	In the street	21600	-	-

The estimated cost of the potential consumer service (UAH/month)

	Operating mode	Prototype of Lviv Polytechnic	Personal	Public place (gym)
Made on the basis of a new trainer	Indoor	0	0	600
	In the street	0	-	-
Made of new constructive elements	Indoor	0	0	600
	In the street	0	-	-
Made on the basis of the used bicycle	Indoor	0	0	400
	In the street	0	-	-

Exploitation costs on the side of consumers (UAH/month)

	Operating mode	Prototype of Lviv Polytechnic	Personal	Public place (gym)
Made on the basis of a new trainer	Indoor	0	150 UAH / year	0
	In the street	0	-	-
Made on the basis of the used bicycle	In the street	0	300 UAH/year	0
	In the street	0	-	-

To select the optimal of several alternatives of capital investment indicators of *the comparative economic efficiency* are used, which take into account only those cost parts that vary according to comparative options. The criterion for choosing an option is the maximum of the integrated effect or the minimum of the modified amount of the reduced expenditures:

$$Bp = E\,K + C \rightarrow \min,$$

where: E is the constant discount rate; K – capital investments; C – annual running costs.

For LPNU prototype:

$B_{p1} = 0,15*45 + 0,25 = 7,0$ (for premises)
$B_{p1} = 0,15*45 + 0,50 = 7,55$ (for the street)
$B_{p1} = 0,15*15 + 0,25 = 2,5$ (for premises)
$B_{p1} = 0,15*15 + 0,50 = 2,75$ (for the street)
$B_{p3} = 0,15*3,5 + 0,5 = 1,025$ (for premises)
$B_{p3} = 0,15*3,5 + 1,0 = 1,525$ (for the street)

For personal use:

B_{p1} = 0,15*45 + 0,15 = 6,9 (for premises)
B_{p1} = 0,15*15 + 0,15 = 2,4 (for premises)
B_{p3} = 0,15*3,5 + 0,3 = 0,825 (for premises)
For a public place (gym):
B_{p1} = 0,15*45 + 1,0 = 7,75 (for premises)
B_{p1} = 0,15*15 + 1,0 = 3,25 (for premises)
B_{p3} = 0,15*3,5 + 2,5 = 3,025 (for premises)

Therefore, from the calculations we see that the lowest reduced expenditures are on the third option. However, taking into account twice the exploitation and not significant exploitation costs in the second option, it is also advisable to implement. These calculations are performed per unit of output. With the established production and manufacture of at least small batches of products, we can achieve savings on the purchase of materials and components, fixed costs, which will slightly reduce the price of the proposed trainer.

The third option is very expensive and can be considered as an alternative for the elite expensive sports clubs or private users with a very high level of income.

The installed complex with the generation, accumulation and use of electricity can become competitive in the economic market not only in Ukraine but also abroad. If we talk in terms of economic feasibility, then it is necessary and real to commercialize this project. It is possible to arrange their release at Lviv Polytechnic. For this purpose there is a scientific, engineering potential – teachers, students, engineers, laboratory assistants of the necessary specialty (mechanics, radio engineers, computer scientists, economists), there are technical possibilities – a technopark, a startup school. For interested persons, the option of concluding agreements for the sale or lease of such complexes is possible. For those who cannot buy such a trainer, master classes are possible on the basis of LPNU on their manufacture. The idea of commercialization of this project is especially relevant today – in the context of the global Covid-19 pandemic, when people have limited access to gyms for sports.

Conclusion

In terms of survival in the modern consumer market, the creation of any project and its implementation requires experience and calculation

of economic feasibility. To do this, you need to have the principles of the idea formation, the ability to choose the right strategy for its implementation, and so on. Otherwise, it will not be able to withstand competition at foreign and domestic markets.

To ensure a stable economic effect it is necessary to:

– be able to make clear decisions that contribute to the growth of the social effect;

– increase interest in the proposed project or product;

– increase the profitability of the project or product by promoting.

HEI is an independent economic object, which is created in accordance with the legislation of the country for the provision of educational services, which, ultimately, contributes to meeting the needs of society and, as a result, obtaining a stable social effect.

For example, for enterprises engaged in the manufacture of metal structures, it is important to involve them in the manufacture of such structures. After the start of the analyzed complex operation, the university budget will not spend certain funds on the purchase of electricity, so there is no doubt about the socio-economic feasibility of using the project at the university. In addition, young people will be physically trained.

The formation of a comprehensive approach to alternative generation and consumption of electricity based on innovative technologies will solve the problem of its systematic use and make the university somewhat energy independent. The use of such a project in the framework of recycling (reuse of the "used" trainer bikes with a small technical refinement) will become an effective option for the "conditional income".

Economic feasibility in this particular case, provides for the receipt by HEI of indirect profit in the form of social effect from the mass use of such constructions in the form of:

– promotion of a healthy lifestyle;

– improvement of the physical shape of students, and as a consequence – increasing the efficiency of learning;

– education of careful attitude to natural resources;

– indirect energy savings due to the use of accumulated electricity after its generation by converting mechanical energy.

Subject to the commercialization of the proposed project and the establishment of the production of the construction with the functions of the trainer and recharging of external devices, the university can receive a profit from the sale to potential consumers.

However, regardless of the format of the educational institution, there may be some individual characteristics, although the main factor for all of them is to inform about projects in this direction and the stability of their functioning.

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Chapter 6

BEST GLOBAL PRACTICES IN THE ECONOMIC SYSTEMS MANAGEMENT

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THE ROLE OF CSR BUSINESSES IN MANAGEMENT OF WORLD ECONOMIC SYSTEMS

Household payment capacity, as well as income security for the population and steady social security guarantees is one of the fundamentals for sustainable economic development. Traditionally, effective demand from households as well as existence of the middle-class, including representatives of micro-, small- and middle-sized businesses, skilled and highly-paid officially employed workers, IT business specialists and representatives of intellectual property sphere and services is considered the basis for economic system stability. The problems of shaping, distribution and redistribution of wealth and income in the world, the role of social security system in this process have been of great significance for economics theoreticians and practitioners who pay a lot of attention to their tackling.

After world financial and economic crisis (December, 2007 – June, 2009) which was accompanied by mortgage crisis and further emission infusions into backbone commercial banks from state financial aid structural misbalances concerning distribution of world wealth have been increased. The general capacity of world wealth (financial and material assets) as at 2018 was estimated at 361 trillion USD, whereas the global world GDP in 2018 equaled 85 trillion USD [1]. Yet, nearly a third of the Earth's population – 32,6 % (1,661 mln.) as at 2018 p. got annual income within 10-100 thousand USD, which equaled nearly 15,5 % of the world wealth (more than 55,7 trillion USD). Whereas the most

populated group – 2 bln. 883 mln. people (nearly 56,6 % of the Earth's population) – got annual income at less than 10 thousand USD per year. Therefore, the largest part of the Earth's population eligible for obtaining the greatest portion of social expenditure (56,6 % of the whole population), in fact, possessed only 1,8% of general capacity of world wealth (6,3 trillion USD) in 2018, which is considered the period of thriving world economy [1; 2]. Such wealth distribution in the world reveals the trend towards decreasing the middle-class and increasing poor sectors in all countries. Another trend is drastic decline in a share of the Earth's population (1,8%) who possessed more than a half of the whole world wealth in 2018. Such trends as for population increasing stratification by income lead to intensification of social conflicts in the society, cause massive social protests and political instability. All these requires the search for new tools of social protection of the population and improving the management of economic systems in the 21st century.

Trends as for decreasing the percentage of the middle-class in a social structure of all world countries strengthened due to mass transition to neo-protectionism policy and national markets lockdown in the light of the spread COVID-19 pandemic. Massive lockdowns in the world countries during 2020, closure of services (in particular, restaurants, cafes, travel agents and other micro- and small businesses) cause huge losses to small and middle-sized businesses, significantly reduce household income which means that the share of the middle class is constantly declining. Consequently, in the majority of the world countries the burden on budget funding the social protection sector is significantly increasing; there are considerable risks of states' and insurance companies' failure to perform their duties concerning provision of social assistance to the most vulnerable groups of world population.

It is expected that social risks, risks of unemployment and poverty increasing, risks of social conflicts in the 21st century will spread and reveal alongside environmental problems, as well as social and gender discrimination problems. Under these conditions in the 2020s the role of "Corporate Social Responsibility" (CSR) business as an essential constituent of current economic system management is increasing steadily.

Traditionally, CSR is viewed as a kind of business economic activity (as a rule, of big corporations, companies, transnational corporations). It provides for considering social and environmental consequences of business management in everyday company activity on a voluntary

basis. CSR of a business focuses on systematic addressing the set of tasks: respect for human rights; introduction of socially responsible labour practices (including official employment and paying all taxes, preventing any discrimination by race, gender and age); environmental protection and creation of environmentally friendly production; adherence to respectable business practice; observance of human rights and interests, security assurances of their life and health; active participation in social life. In general, undoubtedly implementation CSR practice into everyday business activity of a company will promote the transition of society to sustainable development and secure stable and progressive economic system development.

CSR of a business envisages the involvement of various groups of influence like mass media and journalists, politicians and civilians, educational institutions (including regional educational establishments and universities), non-profitable civil organizations, volunteers, national and international experts; representatives pf international organizations, professional associations and local authorities, governmental organizations and other civilian society institutions.

It should be noted, that term CSR first arose in the 1970s in the USA and the UK because of increased attention of consumers and general public to the company image, in particular, concerning the estimate of its responsibility while selecting diligent and conscientious business partners and associates [3]. Traditionally, in developed countries of the world company's CSR focuses on such issues as social security and non-discrimination of employees; quality and safety assurance of goods and services produced by the company; diligent attitude of the company to environmental problems and tackling social challenges of society; keeping the principles of transparency and openness, social responsibility while adopting and implementing strategy of company's competitive manner at national and world markets [4].

The increased role of trade unions in security of employees' rights and keeping compliance with labour protection standards, the enforcement of stringent standards in labour legislation and creating environmentally friendly production provides spreading CSR practices in the world. In the 21st century the requirements of the society as for addressing climate change and global warming, environmental protection, minimization of companies' and corporations' ecological risks are growing in accordance with standards of sustainable economic development [4].

In economic systems of developed countries of the world companies

(corporations, TNC etc.) CSR business-practice is introduced through implementing social and environmental criteria while investing and business operating. Companies' CSR is linked to diligent management of business-processes logistics and establishment efficient cooperative ties, concentrated on charity development.

Companies' CSR is aimed at considering and implementing into business-practice the system of environment protection measures, includes the development and implementing corporate culture, adherence to the principles of sustainable development both at the level of company and beyond it, engaging the system of education and training, as well as improving qualification courses for employees. CSR of companies is involved in sponsorship and charity, financial support of cultural and art projects, projects targeted at youth development and sports promotion, as well as improvement projects at local and national levels [3]. In the world practice CSR of a company is regarded as a pragmatic way of shaping its positive image and brand, which guarantees income for the company, promotes investment attractiveness and positively affects product and services placement at the market.

In developed countries of the world CSR of a company is positively appreciated by the society. The most obvious example of it is European practices. We should note that in EU countries CSR of a company is regarded as an essential part of its strategy which is designed for a long term. Policy of company's CSR in EU countries is open and public, promoting constant communication establishment with internal and external groups of influence to comprehend the society's demands. While developing the strategy of CSR businesses communicate with clients, communities, non-governmental organizations, governmental institutions, media and other stakeholders. A company reveals social challenges and demands, seeks business solutions to them which impacts the company behaviour at the market.

Neglecting CSR principles leads to financial losses of a company and ruining positive image at the market and – vice versa – keeping the CSR principles by a company leads to long-term and financial benefits. For instance, 'diesel scandal' of German company Volkswagen (2017) led to judicial decisions on reimbursement 1,5 bln. USD for 11 bln. USD civil cases settlement as compensation to purchasers for violation of safe and environmentally friendly operation, including uncertain results in 'tests on wastes' and breaking USA environmental legislation [5]. Volkswagen being for such charges faced the threat of image losses which forced the company to introduce appropriate measures and

resolve accusations by the way of improvement managerial processes and production, increase level of environmental friendliness, safety and reliability of the goods produced. Thus, improvement of production system based on CSR promotes both shaping the company's positive image for consumers and improve its competitiveness level.

Among positive examples of company's CSR there are decisions made within 2015-2016 by such businesses as Adidas, Puma, Levi Strauss, IKEA, Walmart, Marks&Spencer, Tesco, H&M to stop cooperating with suppliers which purchased cotton from Syria and Turkmenistan. It was confirmed that these countries use illegal juvenile labour while harvesting cotton. CSR decisions like that were positively approved by European consumers.

The manufacturer of electro cars Tesla (USA) at the end of 2017 made a decision on withdrawing nearly 53000 electro cars from the market (crossovers Model X and sedans Model S), produced during February-October 2016. Among the reasons for such decisions Tesla mentioned the fact that the company found the detail defect in the system of hand brakes. Preventing the risks of accidents, Tesla decided to withdraw the cars sold to the customers and pay back the money, but maintain the image of the company which cares abot the life and security of its customers [6]. In long-term period the Tesla's decision positively impacted the image and revenue of the company.

Security assurance of product consumptions is an essential part of company's CSR. For instance, while manufacturing children toys the company LEGO provides CSR guarantees concerning high quality, environmentally-friendly and secure materials which are used for producing the toys for kids around the world, as well as guarantees products safety for children's health [7].

In the 21st century CSR of a company has become a condition for civilized doing business. It pays stable image and financial dividends for a business, as well as meets society's demands for realization social and environmental projects, strengthen indicators of economic security and human activity safety, which means promoting sustainable social development.

Implementing CSR practice of a company has its own specificity in each world country. That is why in the world management of economic systems there are several models of company's CSR.

European CSR model emerged and spread quickly in the northern countries of Europe at the end of the 20th century. The principles and fundamentals of CSR in the European model are governed by the state,

laws and regulations which define standards, criteria and performance of company's CSR.

In EU countries Directive on disclosure of non-financial and diversity information by large companies and groups came into force on January, 1, 2017 [8]. In EU countries it is proposed to carry out obligatory preparation and public disclosure of annual managerial report on economic, environmental and social results of company's activity with more than 500 employees. European businesses which respect the CSR principles take on and perform duties aimed at promoting sustainable and environmental progress, enhance responsibility in employment sphere (particularly, as for youth employment), guarantee high quality, environmental friendliness and safety of goods and services for consumers.

European practice of CSR implementation is of great prospects for businesses and enterprises of various ownership types, including small- and medium sized businesses, micro-enterprises, though small business is not eligible to disclose publicly their annual reports on CSR. It is the small- and mediem-sized businesses which create the greatest number of workplaces. Among the direct consequences of CSR principles implementation there is partnership between state and business concerning social problems tackling, introduction of sustainable and environmental progress principles, transition to 'green business', creation of new workplaces, involvement of youth and women in working process and cooperation with companies, prohibition of juveniles' employment, non-discrimination in recruitment [9]. Among indirect consequences of CSR implementation there is shaping positive image of a company at national and international levels, attracting investments to business-structures, improving the competitiveness of a company which promotes economic growth of the country and its citizens' well-being.

It should be noted that in Ukraine expert organization "Centre of CSR development" has been operating successfully for more than 10 years. It unites over 40 companies of Ukraine which systematically implement CSR projects. Up to October, 2020 according to the reports by "Centre" 67 % of a company's reputation is provided by its CSR business activity; 83 % of all companies which operate on the territory of Ukraine implement CSR projects; 52 % of Ukrainian companies have approved CSR strategies of their business activity [10]. "Centre" cooperates with over 120 Ukrainian companies in various CSR projects of environmental and gender dimension, promote tackling urgent social

problems at local and regional levels.

British CSR model, in general, is correlated with European CSR model. Alongside this, in the UK state is actively participated in funding CSR projects, popularization of CSR ideas and monitors their practical implementation. In the UK business schools and universities special study programmes are introduced. They help popularize CR ideas among the youth, especially concerning formal employment and remuneration, tax payment, adherence to environmental norms and business standards, general transition to circular economy etc.

American CSR model is featured by minimum impact of the state on company's CSR development and CSR business processes in private economy. In the US businesses actively participate in funding non-commercial CSR projects through corporative funds of the company. The state supports CSR by legislative introduction of fiscal incentives. This model is spread not only in the US but also in several countries of Latin America and Africa.

Asian CSR model is common in Japan and Southern Korea. The state actively manages CSR of companies, whereas businesses fulfill social obligations of the state towards their employees. Scope of the powers of company's CSR covers system of employment and career promotion of employees. Asian corporation (companies) employing CSR provides their employees with service housing, encourage development of family professional dynasties, pay tuition fees of employees' children, fund health care services and security retirement benefits (often – at the cost of corporative social and insurance funds). Such CSR system is correlated with the system of life-long recruitment which became widespread in Japan in the second half of the 20th century [4; 9].

African CSR model pays special attention to business activity projects which consider the interests of local communities (for instance, providing clean drinking water for locals, prohibition of child labour exploitation, diligence and assistance with health care services, fighting epidemics and famine). CSR of companies and business in Africa focus on tackling social and environmental problems peculiar to the poorest world countries.

It should be noted that in the 21st century the role of company's CSR will be constantly growing in all models of economy management. It is due to institutional and socio-economic links derived from CSR that balance of interests at the level 'business-state-society' is achieved. In its turn, this modifies technology of management in the world economy.

The opportunities which CSR of a company opens up for business, state and society should be considered.

For business mass spreading of CSR practices guarantees a set of competitive benefits, including the following: facilitating access to investments and new markets for a company, promoting growth in volume of goods and services distribution, increasing revenues of a company at the cost of rise in consumers' confidence in company products. According to expert estimates of the US citizens survey on consumer benefits (2017 Cone Communications CSR Study), 87 % of respondents-consumers purchase the goods and services of the company which operates on CSR basis and actively participates in tackling social, environmental and social problems which concern the country's population. Alongside this, 76 % of respondents-consumers refuse to buy goods and services of the company which neglects CSR principles in its operation [11]. Thus, in the 21st century consumers in developed countries prefer products manufactured by the companies which have reliable business reputation and actively implement CSR policy in their daily activity.

For the state widespread practice of CSR promotes development of state-private partnership, in particular, aimed at realization of regional and national social and environmental projects. What is positive about CSR is that it employs business to tackle the social problems which were traditionally considered priorities of state social policy. Among them there is promoting employment of the youth and the elderly; establishing retraining system for the unemployed and promoting formal employment for economically active population; creation corporative system of social, pension and medical insurance at the company level as a supplement to state and non-governmental system of social security; making manufacturing environmentally friendly and adherence to environmental legislation by the company etc.

In the 21st century the state transfers a part of its social obligation to businesses. With the CSR assistance a company is able to tackle the problems of the youth employment and secure provision of 'first workplace' to graduates of schools, colleges, lyceums, vocational institutions and universities, provide the elderly and the pre-retirement with a job; employ people with physical disabilities [9]. CSR of a company includes investing into social infrastructure (schools, libraries, hospitals and museums) etc.

Alongside this, company's CSR is the 'point' of cooperation state and private sectors aimed at realization of social projects at national and

regional levels and while implementing strategies of socio-economic development. The purpose of that is to tackle the energy efficiency challenges, intensify innovations and creation of environmentally friendly production (investments to environmentally friendly technologies and renewable energy). CSR of the companies operating at local and regional levels is directed at tackling urgent issues of local communities life support like provision clean drinking water, maintenance drainage and water supply systems, realization of landscaping and refurbishment projects. CSR of a company encourages development of enterprises specialized on recycling solid household wastes which will improve environmental situation in regions and in the state in general. Thus, CSR promotes realization of social and environmental projects which, in its turn, coincides with the state goals of transition to sustainable development.

For society CSR of a company guarantees the solution to the set of social issues, increase in environmental security level, efficiency and environmentally friendly behavior of businesses to natural resources use. CSR promotes cooperation businesses and local communities which positively impacts the indicators of human's life quality and safety level in the whole country. CSR enables to tackle efficiently the issues of employment at local level, as the companies focus on creation of new workplaces, including those ones for physically disabled people. CSR is directed at close cooperation with social partners, non-governmental organizations, local authorities and local public administrations, mass media (local, regional and national). Openness and transparence of company activity based on CSR guarantee ruining corruption schemes in businesses activity. CSR promotes eliminating any forms and types of discrimination at labour market (by race, age, gender, religious and political views). CSR secures adherence to generally accepted environmental and social norms of business by a company. Therefore, It is on the CSR basis when business is involved in social functions fulfillment, cooperates with the state on equal grounds, causes modification of economic management processes within transition of society to sustainable development.

Conclusions

The core of company's CSR whether it is corporation or other businesses lies in adherence to the following principles: legal business activity and official tax payment in full; compliance with national and international legislation requirements concerning legal and socially

responsible doing business; intellectual property right protection; high-quality assurance by the company, guarantees on safety of consumption and environmental friendliness of produced goods and services, safety security for consumers and environment; ensuring responsible behavior of a company at the labour market, including any discrimination prevention as for employment and remuneration, child labour prevention and violent coercion of a human to work prevention; assurance of corporative programs realization concerning improving qualification and retraining of employees at the company's cost; guarantees on social protection of employees etc.

Company's CSR is aimed at shaping positive public opinion on business, quality and safety of businesses' goods and services, which, in its turn, promotes the growth in sales and increase in revenues.

Company's CSR provides for regular accountability and transparency of its activity; business ethics of a company; harmonization of interests among customers, business partners, state and society; adherence to the norms of national and international legislation; respect for human rights. Companies adherent to the CSR principles in their activity cooperate closely with mass media, representatives of local authorities, universities, youth and public organizations, as well as other stakeholders. Such cooperation promotes openness, transparency in doing business which lessen the risks of corruption and shapes developed competitive environment in the country.

Company's CSR provides natural balancing of economic, social and environmental interests at the level 'business-state-society' directed at achieving sustainable development goals. Such grounds indicate that in the 21st century company's CSR is an essential part of economic systems management aimed at achieving progressive development of the state and world economy in general.

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MODEL OF RECREATIONAL AND TOURIST DEVELOPMENT OF THE REGION AS AN EXAMPLE OF EFFECTIVE MANAGEMENT TAKING INTO ACCOUNT MODERN CHALLENGES

The current stage of social development involves the search for new and optimization of existing state models that can support social and economic progress even in the face of current challenges and threats (Covid-19). It is extremely important for Ukraine and the complex development of its regions to clearly define the priorities of regional development and those directions of specialization that will ensure a rapid economic effect. Against the world background, Ukraine is distinguished by extremely diverse natural recreational resources and a number of protected nature areas, which creates unique opportunities to find future "growth points" within its individual regions. Accordingly, it is extremely important to examine the prospects of recreational resources of the regions in the formation of recreational and tourist specialization; to note the importance of environmental activities in recreational areas; to form directions of tourist specialization and to improve the management system in the conditions of external challenges and threats (Covid-19). Thus, natural and recreational areas and objects can be used for environmental, research, educational, health, tourism purposes and for environmental monitoring. The regime of territories and objects of the nature reserve fund is a totality of scientifically substantiated ecological requirements, norms and rules that determine the legal status, purposes of these territories and objects, nature of admissible activity in them, order of protection, use and reproduction of their natural complexes. The legal regime of territories and objects of the nature reserve fund of Ukraine deserves attention. The Volyn region is a special territory in this context. Volyn is a land of unique nature,

healing microclimate, original folk art and great historical and cultural heritage. Due to the availability of natural and recreational resources, which have undergone relatively little anthropogenic impact and well-preserved recreational capacity, the region belongs to the promising regions of Ukraine for the development of tourism and recreation. Rich natural and anthropogenic heritage, lakes, rivers, forests with healing wild berries and mushrooms, medicinal peat mud, spring mineral waters of four types create all the necessary prerequisites for the organization and functioning of health tourism. However, this specialization in Volyn is just beginning to develop. Therefore, the study of current trends in the development of recreational and tourist specialization of the region and its tourist resources is relevant right now.

Accordingly, studies of tourist and recreational potential of the region are reflected in the works of domestic and foreign authors, mostly economists: Butko M.P., Butova T.G., Dutchak S.V., Krupochkina E.P., Los M.A., Svyatokho N.V., Teltsova A.A. [1]. Among the Ukrainian scientists, the potential of the region has been most carefully studied, including the natural-resource recreational one – Lutsyshyn P.V., Cherchyk L.M., Pavlov V.I. General ideas of theory and conceptual and terminological apparatus are carefully developed by Beidyk O.O., Lyubitseva O.O., Smal I.V., Uligants S.I. etc.

It can be argued that each region on the basis of the analysis of tourist resources forms the tourist potential relevant to the abilitis of tourism entities to use the tourist resources of the regions. Tourist potential contributes to the attractiveness of the territory for tourists, and tourist regions – promising.

Tourist potential emphasizes belonging to the sphere of tourism, and recreational potential contributes to the restoration of human strength in the process of recreation. The phrase “tourist and recreational” is the most perfect because it allows you to combine both recreational activities, the purpose of which is to meet the needs of recreation, and tourism, which includes, in addition to meeting the needs of recreation, also professional and business purposes. Resources, their potential, structure, dynamics and balance of sources of formation are important factors of tourist and recreational development of the region. Thus, many authors of scientific works consider the potential as a set of interconnected resources needed to achieve certain goals. Tourist and recreational potential is a rather capacious concept, which contains numerous determinants that define the tourist and recreational attractiveness of a certain region.

Let's trace the experience of the model of recreational and tourist development of the region on the example of Volyn region, which demonstrates some successes on the Ukrainian background. In this context, the specific features of recreational and tourist potential and its individual components in this context are of scientific interest in the Volyn region. As is known, the area of the region is 20,144 km^2, the population is 1,042 million people, and the level of urbanization is 52.3%. The average population density is 51.7 people / km^2. Characteristic features of the district are its north-western position, proximity to Poland and Belarus, relatively low economic development, associated with the lack of significant mineral deposits that would serve as a basis for industrial development, and low soil fertility, which hinders agricultural development of these areas. At the same time, the significant tourist and resource potential of the district, its border position, transit transport highways open significant prospects for tourism development. We describe the natural recreational and tourist resources that provide an idea of their uniqueness. The surface of the area is flat. The northern part lies within the Polissya lowland, the flat surface of which is crossed by separate isolated hills of the Volyn ridge within the Volyn and Rivne regions. The southern part of the region is occupied by the Volyn Upland, the surface of which is densely cut by shallow beams and river valleys. The temperate continental climate with humid, hot summers and mild winters allows for a wide range of recreational activities in the area. The average temperature in January is -5 ...- 6ºC, in July - +18 ... + 19ºC. Currently, the most popular for mass recreation are Shatsky lakes. On the territory of Volyn region there are sources of mineral waters that can be used for the treatment and prevention of diseases of the gastrointestinal tract and musculoskeletal system, regulation of metabolic processes in the body, excretion of radionuclides. The bottom sediments of the lakes are associated with deposits of therapeutic mud: Zhuravytske and Shatske, which can also be used for therapeutic purposes. The Volyn miracle is called the Okonskie springs – two powerful springs of karst waters that beat all year round and do not freeze even in the strongest winter frost, and their healing water is not subject to aeration. They are located in a small lake in the village of Okonsk, Manevychi district. Volyn region lies within the natural zones of mixed forests and forest-steppe, which determines the richness and diversity of vegetation and fauna. 32.9% of the district's territory is covered with forests. The main forest-forming species – pine and spruce – have phytoncide properties used in the

treatment and prevention of diseases of the respiratory and nervous systems. Polissya land is a place of distribution of a significant number of medicinal herbs, which can be the basis for the use of phytotherapy in the sanatorium and resort business, as well as the object of industrial and medical tourism. Large areas of forest, occupied by berries and mushroom areas, are attractive to those who prefer to rest in the woods. Of the animals that are important for the organization of hunting tourism, there are badger, wolf, fox, hare, squirrel, marten, otter, mink, beaver, muskrat.

Nature reserve facilities can be used for recreational purposes. The most significant for the tourist activity of Volyn region are Shatsk National Nature Park (Volyn region), Lutsk Botanical Garden (Volyn region), Lutsk zoos, etc. [2]. Shatsk National Nature Park was established in 1983 on an area of about 50 thousand hectares for the preservation, reproduction and rational use of the unique natural complexes of the Shatsk Lake, strengthening the protection of wetlands and swamps. On the territory of the national nature park there are 23 lakes of karst origin, which have the ability to self-clean. The water in the lakes is drinkable. A characteristic feature of the Shatsk Lakes is: they are mostly connected to each other and the Pripyat River by straits and canals. In this area is the deepest (depth of 58.4 m) lake in Ukraine – Svityaz, which for its depth and purity of water is called Ukrainian Baikal. Lake Pishchane is smaller than Svityaz, but very picturesque, decorated with oak and birch groves. Lakes Pulemetske, Luki, Nobel, Peremut, Lucimer, Turske and dozens of other picturesque lakes, which are part of the natural complex of Shatsk Park, are beautiful in their own way. Lakes and forests, picturesque landscapes, well-developed transport network contributed to the development of recreation. The territory of the park set aside for recreational activities is about 14 thousand hectares. On the shores of the lakes there are numerous boarding houses, recreation centers, sports and children's camps, campsites [1].

On the lands of the nature reserve fund and other nature protection any activity that negatively affects or may negatively affect the condition of natural and historical-cultural complexes or prevents their use for its intended purpose is prohibited. The development of nature reserves is one of the main priorities of the state's environmental policy. The issue of environmental protection, in particular the nature reserve fund, is considered as one of the priorities of European and Euro-Atlantic integration of Ukraine. Requirements for accession to the

European Union provide for the implementation during a short transition period of the strategy of environmentally sustainable development not only at the level of documents, but also its implementation in practice. There are 390 territories and objects of the nature reserve fund with a total area of 234985.74 hectares, 27 of them are of national importance and 363 are of local importance on the territory of Volyn region. Given the fact that more than 15 thousand hectares of territories and objects of the nature reserve fund of local significance became part of the territories of national importance, the actual percentage of reserves in the Volyn region is 10.9%. In 2017, a new object of nature reserve fund was created on the territory – a botanical natural monument of local significance "Oak tract Rudochka" within the Tsuman village council in the village of Kadyshche with an area of 2.5 hectares. Volyn Regional State Administration is working on approving the creation of the Western Pobuzhzhya National Nature Park. The decision of the Volyn Regional Council of April 12, 2017 № 13/37 approved the Regional scheme of formation of the ecological network of the Volyn region. In 2017, work began on the development of a Strategy for the development of protected areas in the Volyn region, the logo "Volyn Reserve" was created. As part of the implementation of the Regional Environmental Program "Ecology 2016-2020" and in accordance with the order of the head of the regional state administration from 12.05.2017 No. 239 "On approval of the list of environmental measures financed in 2017 by the regional environmental fund", The Department of Ecology and Natural Resources of the Regional State Administration with the participation of the Lesia Ukrainka Eastern European National University prepared an interactive map of territories and 56 objects of the nature reserve fund of the Volyn region, which is freely available on the Internet. In 2017, together with the Ministry of Ecology and Natural Resources of Ukraine and Shatsk National Nature Park, the 5th meeting of the Coordination Council of the Transboundary Belarusian-Polish-Ukrainian Biosphere Reserve "Western Polissya" was held on the territory of Shatsk National Nature Park. ecological development of the biosphere reserve [2]. There are 13 objects of the Emerald Network of Ukraine with a total area of 2486.94 square meters. km – territories with the international status of special nature protection value are also on the territory of Volyn region. The Emerald Network is part of the Pan-European Network of Protected Areas of Europe, established by a decision of the Convention on the Conservation of European Wildlife and Natural Habitats, supported by the member States of the Council of Europe. The territories of the

Shatsky and Pripyat-Stokhid National Nature Parks, as well as the Cheremsky Nature Reserve, have the status of wetlands and swamps of international importance as a habitat for waterfowl.

Volyn region has a strong natural recreational potential, for the implementation of which it is necessary to take measures to strengthen the tourist and recreational specialization: ensuring the environmental safety of recreational development of the territory; zoning of recreational areas with the allocation of developed, promising and reserve areas; to intensify the social need to use the existing base of the recreational sphere to the real needs of rehabilitation; administratively stimulate the ability to meet the demand of the population for recreational services in the region; to provide economic expediency (profitability of activity of objects of recreational branch and social and economic benefit for the territory); to promote the development of environmentally friendly types of recreational management and the involvement of broad sections of the population in recreational entrepreneurship.

The experience of preserving the tourist resources of Volyn, taking into account modern challenges, deserves special attention of scientists and managers of various ranks. Modern regional development, regardless of the complexity of external circumstances and internal threats, involves the formation of a balanced recreational and tourist potential of the territory, which in the best European traditions should serve the implementation of sustainable development in Ukraine. It can be argued that each region on the basis of the analysis of tourist resources forms the potential relevant to the ability of tourism entities to use the tourist resources of the regions. The Volyn region occupies a special prominent place in the list of regions. Tourism potential contributes to the attractiveness of the territory for tourists, and the economic importance and competitiveness of the region is growing. At the same time, the tourism component of the regional system of Volyn, on the one hand, is unique, as it was one of the first in Ukraine to be "developed" by an algorithm of actions that includes institutional and local initiative. On the other hand, the realities of the present moment demonstrate the aggravation of all-Ukrainian challenges and problems that hinder the development of tourism in the region. Accordingly, at the beginning of 2020, the decision of the session of the regional council approved the "Strategy for the development of the Volyn region for the period up to 2027" (from 12.03.2020). Local authorities understand the need to seek incentives that will not only support the tourism industry in

the region, but also promote a strong recreational and tourist potential in the context of increasing the competitiveness of the region in the Ukrainian "background". The concept of the so-called "tourist magnets" of the Volyn region was presented by the Department of Foreign Relations, Investment and Tourism and Resorts of the Volyn Regional State Administration in early July 2020. This happened during the visit of the President of Ukraine to Volyn region. The position of the State Agency for Tourism Development of Ukraine is favorable. The "developed" six tourist routes, which are the "highlight" of the region, are especially appreciated. All of them are adapted to modern requirements and challenges and can be one-day or designed for several days. Professionally regulated locations where tourists can eat and spend the night. Photo and video shooting of the routes has been completed, the collected information is being processed for the purpose of popularization and registration in 3D tours, which can be found on the Volyn Tourist website. Among the most important "tourist magnets" that attract tourists from all over Ukraine and the world: the historical and cultural reserve "Ancient Vladimir", Lutsk Castle, Svalovichi village, Pripyat – Stokhid National Park, Olyka village, Radziwill residence and, especially , Shatsky lakes with a pearl Svityaz.

According to the "Big Construction" program, a number of measures are envisaged to preserve the cultural heritage of Ukraine and further develop the cultural potential. The Law of Ukraine on Support of Culture, Creative Industries, Tourism, Small and Medium-Sized Enterprises in the format of "Large Construction" provides for a powerful restoration of cultural facilities. In fact, these are the nine main cultural and tourism sites in the region that need timely support, both from the state and through local initiatives and businesses. In this regard, plans are being developed for the restoration of cultural monuments, castles, fortifications, palaces and parks, etc. Accordingly, in the region, the program offers a number of restoration projects and works. This is an architectural monument of national importance – the fortress walls of Lutsk Castle; monuments of history of national importance "Lesya Ukrainka's Estate" – "White House of Mowers" and "Gray House of Mowers" in the village. Well; restoration of the archeological monument "Horodyshche-Valy of the IX-XIII centuries" in the city of Volodymyr-Volynskyi; revival of the complex of monuments in the village. Olyka, in particular, Trinity Church, Peter and Paul Church, Lutsk Gate and Radyvyliv tract, etc. In this difficult time, including during the quarantine period, the historical and cultural

heritage suffers first of all. It is a powerful basis for the development of tourism in the region and, therefore, requires careful attention to the preservation and promotion, regardless of the circumstances and threats. At the same time, we should note another very significant problem in the development and tourism specialization of the region, this is a certain lag behind European standards of infrastructure, especially road transport. It is no secret that the condition of roads remains a weak point in tourist transport communications. That is why, despite the urgency of the moment, within the framework of the national project "Large Construction" repair work was started on one of the tourist "magnets" of the region – Shatsky Lakes. Repair work started in November 2020. This is a section on 9 kilometers of the highway T-03-02 Pischa – Shatsk – Lyuboml – Volodymyr-Volynskyi – Pavlivka – Gorokhiv – Berestechko – Kozyn – / M-06 /. This road will provide the best way to get to the Shatsk Lakes, in particular, the unique and deepest reservoir of natural origin – Lake Svityaz. According to Ukravtodor, this infrastructure project should be completed by the summer of 2021. In order to prevent the problems of territorial communication in the region at the site of repair works, traffic continues in reverse mode, alternately, one of the lanes.

At the same time, the quarantine restrictions in which the entire state is forced, of course, have affected the tourist realities in the region. If the first half of the year revealed the weaknesses of the system of administrative regulation and even the confusion of the subjective initiative in the field of tourism, the second half of 2020. really demonstrates gaps and errors. However, the experience of responding to the challenges of time in the region suggests otherwise. Thus, at the beginning of the problematic 2020, changes to the Volyn Region Development Strategy for the period up to 2027 were approved. According to this document, the tourist potential of the region is formed by: 2 tourist information centers, 3 national parks, 231 recreational areas, 118 recreational points, 267 lakes, 285 farmsteads, 152 accommodation establishments, 7 sanatoriums, 17 museums, 1534 cultural heritage sites, 11 festivals, 1 tourist cluster, 8 marked tourist routes, 7 tourist signs, 5 active tourist clubs, 2 ecological parks, 2 official tourist web resources, 341 subjects of tourist activity of the region. At the same time, among the main directions of development of the tourism industry, which are emphasized in the document, remain in the field of view: the development of tourism infrastructure; constant attention to staffing and scientific and methodological support of the

industry; promoting the development of spa tourism; intensification of rural tourism; multifaceted promotion of tourist and recreational potential and, of course, the safety of tourists in a variety of unforeseen challenges and threats. In the second half of the year, at least most of the regional programs that intersect in the field of tourism and culture were extended. And this is at a time when local budgets have a strong additional social burden. It is in the second half of the year that the need to extend the validity of targeted programs in the region becomes apparent. Among the prolonged programs, respectively, approved with changes, first of all: "Program of tourism and recreation development in Volyn region for 2016-2020"; "Regional program for the development of international and cross-border cooperation for 2018-2020"; "Regional program for the development of culture, art and protection of cultural heritage in the region for 2016-2020" and other. This confirms the consistency of the regional algorithm to strengthen the position of local government, local self-government in terms of maintaining the competitiveness of the region, especially in priority activities, one of which is tourism.

In today's conditions it is already obvious – the tourism sector of Volyn region has suffered significant losses. It is due to quarantine restrictions that revenues from tourism have decreased significantly. Thus, in particular, according to the information of the Department of Tourism of the Department of Foreign Relations, Investment and Tourism and Resorts of the Volyn Regional State Administration, the tourist tax for 2019. amounted to 1.4 million hryvnias. The results of 2019 showed the productive activity of 341 tourism entities. Revenues to the budget from their work made 187 million hryvnias as a result of the year. Accordingly, for the first half of 2020 the tourist fee made only about 500 thousand hryvnias, it is 30% less, than for the similar period of last, as a whole, favorable year. At the same time, budget revenues from tourism entities have critically decreased. It was because of the coronavirus pandemic that they amounted to only 1 million hryvnias in the first half of 2020. Under such circumstances, while maintaining the trend at best at the end of the year, this figure may double; however, the level of 2019 will remain unattainable, and these are sad realities. At the same time, the systematic actions of local authorities to anticipate existing threats and mobilize development reserves inspire hope that the Volyn region will be able to overcome the risks in the recreational tourism industry and remain one of the leading tourist regions of the country.

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CURRENT TRENDS IN INTERNATIONAL INTEGRATION PROCESSES

The processes of integration in the world economy developed rapidly in the XX century. Regional integration has become one of the main trends in international economic relations. However, since this field of research in economic science is relatively young, there are some differences in understanding the essence of this phenomenon.

In the literature, integration is defined as a process, a result or a process and a result. Based on a comprehensive study of regional integration associations, A. Liebman showed that “the main factor contributing to the formation of active associations is the level of economic development of member countries”, and “the increase in the intensity of trade and economic relations between the member countries of the group does not itself contribute to the formation of an active association” [1].

An important theoretical issue is the correlation of economic and political factors in the integration process. B. Balassa wrote that political will is not enough to form sustainable economic linkages, and vice versa.

A. Inotai in "Regional Integration of Developing Countries" showed that political motivations often play a crucial role in the integration of developing countries seeking to overcome their dependence on developed countries [2]. From the above, it can be concluded that economic and political factors play an equally important role in integration processes.

In the analysing integration processes, it is important to identify the effects of integration on the economies of partner countries. To do this, consider the current trends of integration processes in the world economy.

According to the WTO (01.05.2018), 473 integration agreements had been registered worldwide, of which 278 were in force, including agreements to which the integration association is a party (for example, the EU, European Free Trade Association – EFTA, Common Market of South America – MERCOSUR, Association of Southeast Asian Nations – ASEAN). Another 42 agreements were under negotiation. The activities of concluding an integration agreement is increasing – before 1990, 19 agreements were signed, in the period 1990-2000 – 32 agreements, after 2000 – 227 agreements.

Ukraine in 01.05.2018 formed free trade zones with the EU, EFTA. In addition, the country has concluded bilateral free trade agreements with Azerbaijan, Georgia, Macedonia, Montenegro, Turkmenistan and Uzbekistan. Bilateral free trade agreements with Canada, Serbia, Singapore and Turkey were under negotiation. It should be noted that since 01.01.2016, preferences in mutual trade between Ukraine and Russia have ceased to apply [3].

The creation of integration associations has a significant impact on international trade: the direction of trade flows (due to the effects of "creation" and "trade deviation"), the level of market protection.

According to the UN Conference on Trade and Development (UNCTAD), in 2018 1/3 of international trade was exempted from tariffs under preferential agreements, another 1/3 was implemented under the most favored treatment. The global average level of tariff restrictions encountered by exports in host countries in the period 2012-2018 is shown in Figure 6.1.

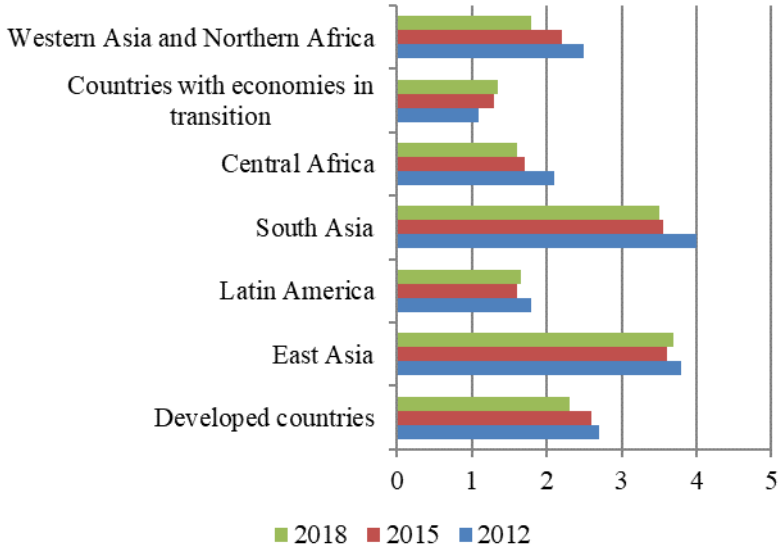

Figure 6.1 Average tariff restrictions on exports in host countries, 2012-2018, %

Source: based on data [4]

Figure 6.1 shows that exports from transition economies are the least affected by tariff barriers. This is due to the large share of raw materials in the exports of the countries concerned. Exports from East and South Asia, where the share of manufactures is high, face higher tariff barriers (about 3.5 %).

The observed differences in tariff barriers to exports from different groups of countries are related to the widespread application of tariff escalation [4].

This practice is applied by both developed and developing countries. On the one hand, national producers of finished products are protected. On the other hand, there are no special barriers to the entry of raw materials and semi-processed goods. Application of tariff escalation has contradictory effects. It is possible to establish efficient production within the framework of integration associations, but in case of asymmetry – often leads to the preservation of the raw material structure of exports of less developed countries [4].

World average tariff restrictions on imports for the period 2012-2018 presented in Figure 6.2.

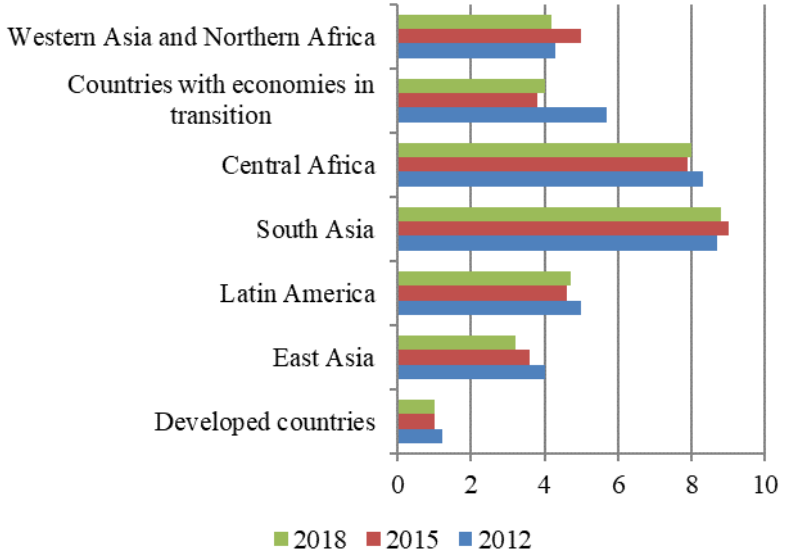

Figure 6.2 Average tariff restrictions on imports by world region, 2012-2018, %

Source: based on data [4]

According to Figure 6.2, the markets of South Asia and Central Africa are the most protected in terms of import tariffs (about 8-8.5% in 2018). UNCTAD experts note that for such States, tariff reductions in intra-trade can lead to significant increases in export opportunities. Developed countries have the lowest level of import tariff protection (about 1.5 %) [4]. Overall, for the period 2012-2018 the average level of export and import tariffs has tended to decline, including through the operation of integration associations.

However, joining an integration association does not guarantee benefits. For example, UNCTAD experts compared the forecasts of the foreign trade of seven large groupings with the real results of their integration. The EU, NAFTA, ASEAN, MERCOSUR and CIS outperformed projections, while the real performance of the Common Market for Eastern and Southern Africa (COMESA) and the Economic Community of West African States (ECOWAS) was significantly lower

than forecasts.

The researchers concluded that, despite the overall improvement in the level of development of all world States, there is still a significant gap between developed and developing countries, preventing them from integrating equally well. Market sizes of partner countries, complementarities of economic structures continue to play an important role [4].

It is not always possible to significantly increase trade between the partners of the alliance. In reality, the share of intraregional trade in most integration structures is below 10 %. Only the EU (58.7 %) and NAFTA (40 %) are significant traders [4]. There are prospects for improvement in the ASEAN Free Trade Area (FTA) (24.5 %), MERCOSUR (16.3 %), and the Central American Common Market (CACM 15.7 %). Within the CIS-FTA, only 10.7% of the trade volume is accounted for by members of the association [5].

One of the most important trends in the current stage of integration is the increasing complexity of agreements. While earlier many associations were based on the model of import substitution by domestic production, the idea of building blocks is now to stimulate international trade rather than to control it [6, pp. 18-19].

This has contributed to the emergence of draft mega-regional agreements. These include primarily the Transatlantic Trade and Investment Partnership (TTIP) and the Trans-Pacific Partnership (TPP). The emergence of such agreements is probably due in large part to the lack of progress in negotiations to further liberalize trade within the WTO. UNCTAD specialists are of the view that mega-regional agreements will have a significant impact on the development of international trade in the future [4].

TPP is a new type of agreement, since its main purpose is to create “institutionally homogeneous space”. It is the harmonization of legislation in the various areas (investment, competition, public procurement, etc.) that should contribute to the creation of a favourable environment for trade among the member countries and for the supply chain of the association. Thus, at the current stage of integration, priority is given not to the reduction of tariff and non-tariff barriers to mutual trade, but to the establishment of uniform standards for the regulation of various economic activities. Therefore, modern integration agreements can be called “deep”.

The Association Agreements (AA) as a form of free trade agreements between the EU and its partners are a prime example of deep

integration agreements. AA as a type of treaty has a number of distinctive features:

– joint actions are carried out to implement the EU goals by third countries;

– one of three forms of integration is established between the parties: a FTA (for example, with Montenegro), a customs union (for example, with Turkey) or a common market (for example, with Norway);

– declares that deeper integration of the EU with the partner country is possible only if the commitments made are honoured;

– the law of the partner State is significantly influenced. Harmonization of legislation in different areas with EU standards or even adoption of such standards as national standards;

– AA are concluded on an indefinite basis, while it is possible to determine the timing of the implementation of the required reforms [7].

The experience of concluding AA between the EU and the countries of the post-Soviet space, namely Ukraine, Georgia and Moldova, is interesting. These agreements were signed at the same time, on 27.06.2014, countries have a common historical past, similar management mechanisms and goals of deepening cooperation with the EU. By 2016, however, they had achieved different results. At the start of the integration process, the conditions were different. In addition, while Georgia and Moldova started implementing AA provisions at the end of 2014, in Ukraine this process was postponed until January 2016.

According to preliminary projections, AA was expected to have a positive impact on the economies of these countries. In the long term, gross domestic product (GDP) would grow by 5%, exports would grow by 16%, wages would rise by 5%. In practice, however, these projections have not been fully realized [8].

The EU's integration with Georgia has been most successful. At the time of the signing and entry into force of AA, the country was politically stable and had already undertaken a number of important structural reforms. In 2015, exports from Georgia to the EU countries increased by 25%. In 2015, exports from Georgia to European Union countries increased by 25%. Moldova and Ukraine failed to achieve such results due to the political crisis, devaluation of the national currency and high levels of corruption.

The emergence of deep integration agreements prompted B. Balassa to revise the classical theory of the stages of international economic integration. At the current stage of integration, serious doubts have arisen as to the inevitability of the transition from one form of

integration to another and the lack of practical examples of alliances that accurately meet the criteria of integration modalities [9].

The current scientific work of individual scientists shows a qualitative rethinking of modern integration processes. Thus, in the article by V. Zuev "Methodology of classification and evaluation of forms of regional integration" (2014) integration is divided into "soft" (formation of common mechanisms) and "structural" (merging of national mechanisms in the supranational system). At the same time, the example of the EU proves that integration can initially manifest itself as partial cooperation in various areas of the economy and can stop at any stage of deepening of relations between partners based on their perceptions of the best way to cooperate [10].

Of particular interest is the concept of the integration models of A. Libman and B. Heifetz. Their typology of economic integration models is based not on the degree of trade liberalization and economic policy coordination, but on the balance of forces that drive integration processes. These models and examples of their implementation are presented in Table 6.1.

The authors of the concept note that the model of intergovernmental treaties is predominant in the modern world, that is, the main driver of integration is national authorities, as a result of which political motives and traditional political cooperation between countries continue to play an important role in this process [11]. The classification of A. Libman and B.A. Heifetz helps to look at integration from a different angle: not in terms of the outcome of the process, but in terms of the characteristics of the process. However, this concept has an institutional bias and does not allow for the determination of the degree of liberalization of intra-trade in clusters of different models.

An important feature of modern agreements is that the preferred form of integration is FTA (234 out of 278 in force). The number of bilateral agreements is increasing (149 under the country-model and 55 under the association-country model). This trend is the same for developed countries (for example, Japan and the US) and developing countries (for example, China and India). The vast majority of bilateral agreements are concluded between neighbouring countries or countries in the same region. In recent years, however, another trend has been the conclusion of bilateral agreements between countries in different regions (for example, Canada-Israel or Chile-Vietnam). In general, FTA agreements cover all regions of the world.

Table 6.1

Characterization of economic integration models according to the concept of A. Liebmann and B. Heifetz

Model	Characteristic	Examples
Model of intergovernmental treaties	Barriers removed by individual territorial authorities through agreements in accordance with the principle of consensus	MERCOSUR ASEAN
Model	Characteristic	Examples
Dominant Participant Model	One particular territorial authority assumes the function of removing barriers by coercing all other entities	UTC, EU – Eastern Partnership
General model centre	The principal integrating force is specialized jurisdiction, a supranational body or central government, not linked to any particular territory	Military regionalism models
Informal trading model	Large corporate structures are dominated by informal networks that operate in part in the illegal economy	Byzantine Empire Countries of Africa
Corporate interaction model	The main «integrator» are large corporations forming production networks in the whole region	Japan's investment in South-East Asia
Model of the non-State law	Integration is based on common rules generated by a particular non-State actor to organize economic interaction between individual territories	INCOTERMS Harmonization of accounting standards

Source: based on data [11]

Customs union remains a major form of integration. There are only 15 customs unions in the world today, but they are no less important in the development of international trade than FTA.

There are no customs unions in North America and the Asian regions geographically close to India and China. This is because the customs union imposes an obligation to pursue a common foreign economic policy, and not all neighbouring countries want to have one. Asian countries are quite heterogeneous in their level of development, which complicates integration processes in the region [12].

Thus, the integration processes, which began actively in the second half of the 20th century, have not lost their relevance even today. The most common forms of integration in the modern world are FTA and customs union. Integration associations have a significant impact on

international trade, stimulating its level of development. However, despite the overall improvement in the level of development of all the world's States, there was still a significant gap between developed and developing countries, which prevented them from successfully integrating.

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FRANCHISE NETWORK AS PART OF THE INSTITUTIONAL FRAMEWORKS OF BUSINESS

Despite the relative newness of the phenomenon for the Ukrainian economy, franchising significantly changed the pace of development and hundreds of thousands of companies and individual entrepreneurs worldwide. The practice of foreign franchise shows that foreign companies, despite their high cost franchises sufficiently widely available in local markets. Polish experience also confirms this thesis, since more than 80 franchise networks operating in the country, 80% are foreigners.

As summarized in the sources [1, 2], the most common interpretation of franchising are:

1) a special type of license;
2) forms of vertical integration of large and small enterprises;
3) the methods of promoting and marketing of goods and services;
4) organization and forms of business cooperation on the basis of material and financial resources of enterprises;
5) types of business cooperation.

These interpretations fully reveal the essence of franchising as an economic category but are insufficient in the study of a franchise network of relations. However, it should be noted that today in the scientific literature there is no unified approach to interpret the concept of "franchise network".

In [3, pp. 183-184] given the following definition of "franchise network": a collection of entities that operates in the market under one brand on a franchise and includes their franchisor company and one or more business units franchisees that operate on the basis of his franchise. The development of the franchise led to the existence of

different types of franchises, the combination of which can be used to form a particular type of franchise network. That is, within the same franchise network can be used different franchises provided by one franchisor. Under the diversified franchise network, the authors in [3] understand the franchise network, which consists of business units of franchisees coordinated by one franchisor, but operating on the market under different trademarks.

The result of the relationship between franchisor and franchisee are numerous on the market a network of similar businesses that are alike to each other both in terms of exterior design, and on how to conduct their business. Such enterprises form such organizational formation in which the successful operation of each member in particular and all together a positive effect on the establishment and further development of the goodwill of the designated products or a particular brand, that is, in fact, the franchisor's reputation [4]. Such organizational formation called the franchise network or franchise system. However, it is not necessary to identify these two slightly different in meaning.

Franchise network – a set of companies that operate in the market under the same brand name franchise on terms of cooperation and consist of company-franchisor and franchisee businesses that operate on the basis of the franchise.

The concept of a franchising system is broader and considers the network of franchised enterprises led by the franchisor as a system formation, the elements of which closely interact.

Under the franchise system members understand the totality of the franchise network, the conditions of their cooperation and other specific characteristics, the interaction between them and with the environment contributes to formation of a new organizational entrepreneurship.

Analysis of existing definitions franchise showed that they do not contradict each other, various different accents on certain aspects of franchise relations. According to the authors, regardless of the degree of coverage and specification of certain provisions of the cooperation, the essence of franchising relationships significance is determined by interaction of the network, which is a strategic resource and the basis of profitability partners in the network.

The diversity of methods of interaction in franchise networks is reduced to the following basic schemes of operation, the individual characteristics of which are presented in Table 6.2.

Table 6.2

Distinguishing features of schemes functioning franchise networks

Scheme of functioning	Characteristics of schemes	Features of scheme selection
1	2	3
Classical scheme	Two parties – the franchisor and the franchisee (one or more) enter into separate agreements; the latter uses the non-exclusive rights envisaged by the contract: trademark, know-how, support of the franchisor in exchange for an obligation to make a down payment (flat rate payment) and to pay royalties. Each individual franchisee is responsible for opening one outlet. There is a direct cooperation of participants in franchising relations.	Used to maximize control on the part of the franchisor, in the initial stage of the franchise network or long-term relationships with members of the network. It is used typically when the franchisor and franchisee are in the same country.
Sub-franchising (general franchise)	Franchisor and sub-franchisor (intermediary) enter into a general agreement (general franchise), resulting in the latter acquires independent rights of the franchisor (master franchisee) in a territory with exclusive rights to open franchise businesses, provide the right to use the franchise to third parties (the franchisee). Master franchisees train other franchisees, supervise their activities, provide guidance on the features of doing business, and more. Franchisees pay a lump sum payment and royalties exclusively to the sub-franchisor, which transfers some of these proceeds to the parent organization. Sub-franchisor responsible for the actions and activities of the franchisee to the franchisor.	Used for the rapid expansion of the franchise network (mainly abroad), in the presence of a franchisee with sufficient business practices and opportunities to create a network of sub-franchise businesses in a particular region.

Table 6.2 (continued)

1	2	3
Networks operate on the principles of franchising, developing (investmet, franchisin, contract development areas)	The franchisor and the principal franchisee (intermediary) enter into an agreement for the development of the territory, under which the latter's obligations include the opening within a fixed period of a certain number of outlets and the establishment of a franchise network in a certain region where the principal franchisee is the official representative of the franchisor. The principal franchisee receives payment from the franchisor for the work stipulated in the contract, which usually depends on the number of franchisees involved in the network. The main franchisee has the right to act on behalf of the franchisor, and only perform the functions assigned to it under the contract of territory (search for new franchisees, staff training, etc.).	Used for rapid expansion of the franchise network (mainly overseas), the urgent need for finance, if you want the franchisor to develop a region without spending their own managerial resources to find qualified franchisees in a particular area.

Source: compiled by the authors

The main differences from the franchise licensing relationship lies in the fact that the franchisor and franchisee relationship is not only limited to transfer of rights to use intellectual property. Membership franchisee network provides its continued cooperation with the franchisor, which controls its activities, provides its customer base, helping in the training of staff, control the competition between the individual franchisee in a specific region.

Franchisor during the formation of the network aspires to build their relationships with franchisees so that the latter was not profitable to violate the terms of the franchise agreement. On the other hand, the franchisee is interested in the franchisor not violating these conditions, as this leads to the loss of entrance fee or investment made in the specific assets of the franchisor, as well as the estimated profit from

joining the franchise network.

The analysis showed that one of the main objectives of businesses using the franchise is scaling up operations and develop new regions. Therefore, the success of franchise networks depends on their rate of growth. Restrictions for them will only increase the level of saturation of the market of goods / services and the sharpness of competition in the relevant market in a particular region. The higher saturation is on the domestic market of goods/services, the greater is a risk of an economically unstable network. An important factor in the creation and development of sustainable franchise networks are institutional factors, developed infrastructure, support franchise format at the regional / national authorities, relevant measures of regional economic policy.

Economic growth of small businesses promotes their integration into business networks are formed as a strong and stable structure. One of the organizational forms such integration is very franchise that allows small businesses to increase efficiency by combining their benefits with the benefits of big business.

Let's summarize the benefits of having a big business as a franchisor and the advantages available to small business as a franchisee (Figure 6.3).

Using a franchising as a way of integration of large and small businesses gives rise to relations based on economic interest of the corporation-holder (usually large businesses and potential franchisor) and user firms (small or medium business – potential franchisees). The key to the franchisor is the independence and flexibility of the franchisee.

Creating a franchise network allows the company-owner to significantly reduce costs, in particular, to avoid enough capital-intensive costs for the organization and maintenance of its own sales network. Released funds can be used to expand or modernize their own production. Especially effective for the franchise holder is marketing network, especially in entering foreign or obscure distant markets. At the forefront local small businesses are well aware of the needs, tastes, traditions and habits of local buyers, customers, clients who trust them more. They can buy the most attractive modification products from local firms-holders, bring them to the local needs, or produce the goods/services themselves under license or through the firms-holders.

From an objective franchise wins a third interested party – the consumer (customer, client), which products and services are offered not the only condition for proprietary trading and service, and the individual

circumstances on a combination of independent franchised companies. Franchising protects the network against competition from third parties, but it does not prevent franchisees attract customers from other franchise chains by providing more favorable terms of trade or service. Therefore, consumers can always find a more acceptable delivery of goods or services cheaper and more affordable with guaranteed high quality branded product and level of service.

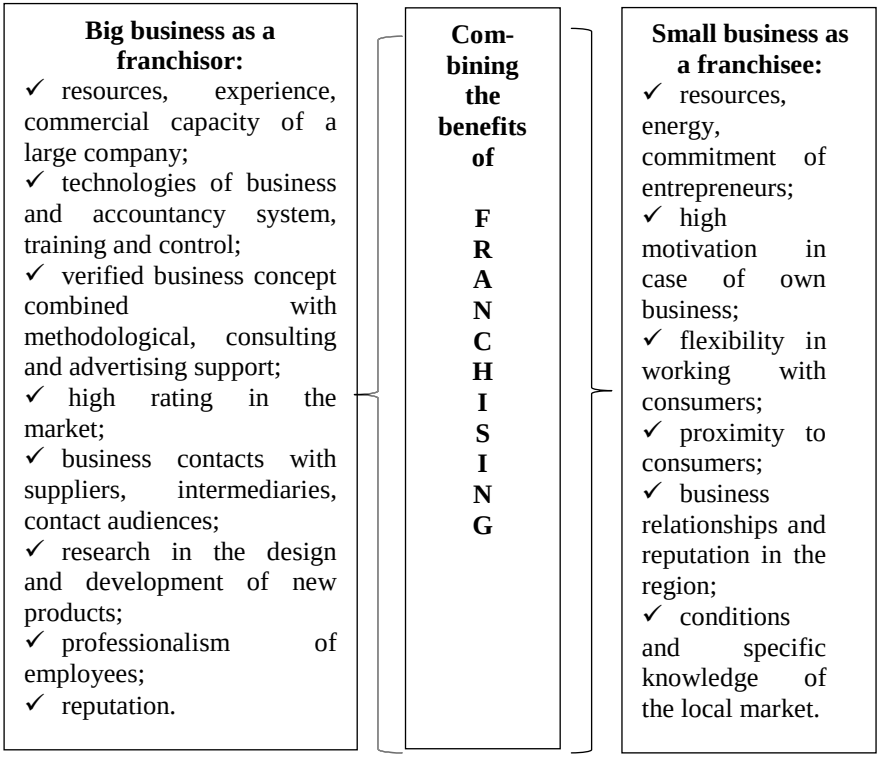

Figure 6.3 Combining the benefits of big and small business with a franchise system

Source: compiled by the authors

In Table 6.3 we summarize the commercial benefits and disadvantages of small business franchising.

Table 6.3

Highlighting the positive and negative aspects of franchising for small businesses

Positive aspects of franchising	Negative aspects of franchising
1. A unique opportunity to start your own business, even for an unprepared person. The franchisee is not an employee of the franchisor, but a business owner.	1. Need for initial capital. It is necessary to buy a franchise and start working, the value varies depending on the type of activity.
2. Obtaining a ready-made "niche" for the business, because the franchisee buys a ready-made business that has proven itself well-rounded, comprehensively tested by the franchisor in practice; high guarantee of getting a reliable, profitable business.	
3. Use of the trademark. Franchisees acquire the right to use a well-known brand, style, or trademark. Often, the customer does not differentiate between the franchisor or franchisee's products/services.	2. Less freedom than usual business. Franchisee not alone in making strategic decisions, often tightly controlled by the part of the franchisor that for many types of businesses treated as a restriction of the freedom and lack of independence.
4. Wide advertising. The presence of well-known trademark, advertising and marketing programs enable the franchisor to use them not only locally, but also nationally, and sometimes internationally.	
5. Help and support. The franchisor gives the franchisee a set of clear instructions for the use of equipment, materials, vendors, business technology, conducts training. In the process of work provides the necessary consultations and jointly decides in case of serious problems.	3. Franchising business cannot be "tasted" and terminated. Franchise agreement is valid for a very long time – from a few to several decades, leading to substantial financial losses in case of abrupt termination. The limited duration of the franchise agreement creates some uncertainty in planning future franchisees.
6. The question of financing. A franchise business is considered more secure in the world than a "free" small business, as it is well-tried, part of a system or franchise network. A popular practice when a franchisor interested party is a guarantor for loans or leasing, as banks and other lenders often give priority to franchisees compared to conventional small firm.	

Source: compiled by the authors

A typical small business is characterized by a rather wide diversification of activities, which allows it to test its more profitable types and quickly eliminate them in the event of a failure; for individual entrepreneur and small enterprises that can intelligently build a relationship with the franchisor, some loss of freedom in free enterprise is not a serious drawback. That is, the disadvantages highlighted are the natural pay for the above benefits.

As a franchise, it is primarily an economic tool for its successful implementation requires appropriate economic and institutional conditions that in Ukraine or not formed or formed only partially. To analyze the institutional environment of franchising in Ukraine, define the scope of its implementation in the economic environment.

Firstly, it is the sphere of production. Franchise exploit economies of scale in terms of marketing, production and management, so new franchisors have developed rapidly in the early years to achieve the level of efficiency rather than competitors. However, rapid growth is often limited by the following factors:

– market saturation limits. The capacity of the domestic market is not large, so the situation when one network agents will drag each other consumers come fast enough;

– insufficient capitalization of agents. Lack of the necessary start-up capital for domestic entrepreneurs to enter the franchise network is a significant problem for most domestic businesses. The difficulty and sometimes impossibility of obtaining credit for maintaining the necessary level of investment exacerbate the problem of attracting foreign successful experience for national service;

– complexity of partners' selection. New independent markets for services spontaneously emerged in Ukraine: auditing, accounting, advertising, computer, recruiting, real estate, etc. with insufficient development of the information sector. That is the issue of lack of necessary information to assess business reputation is quite acute, as firms for rapid growth have signed contracts with different agents. Negative effects of rapid growth of the franchise network can very negatively affect its viability.

Secondly, franchising provides efficient access to resources, including labor and capital because such schemes contribute to survival of the fastest growing companies with high capital requirements.

Thirdly, a contract type. Franchisors who do not skimp on agency costs associated with partner selection, moral hazard and unfair

competition, as well as effectively distribute risks among agents, increase their chances of survival in the long run.

In general, the institutional environment for the development of franchising in Ukraine is determined by a number of factors, among which are:

– instability of the economy as a whole;

– imperfect legislation that will stimulate the development of franchising;

– undeveloped current legislation in terms of protection of intellectual property;

– insufficient state support for small and medium enterprises;

– unavailability of credit and other resources to franchise relationships;

– lack the necessary knowledge of the benefits and the economic content of franchise relationships in most domestic entrepreneurs.

From this list, in our opinion, the most dangerous is the lack of stability. If the employer in countries with developed economies, can accurately predict the prospect of its private activities and its performance over the next ten years, in our country, the entrepreneur had always doubted the stability and beware of innovations, such as the selective introduction of quarantine for certain groups of entrepreneurs.

In the global financial and medical crisis, all entrepreneurs operate with a high probability of risk, based on the general state of the economy, but Ukrainian entrepreneurs are forced to act even in specific organizational and economic conditions caused by domestic realities.

For the economy of the country as a whole (macro-level) franchising also has a number of positive features:

– enhances the culture of entrepreneurship in general;

– promotes the creation of new jobs;

– promotes the acquisition of new ideas, methods, technologies in business;

– creates a comprehensive system of practical training for small business without creating any special training structures and programs;

– attracts significant foreign investments in the Ukrainian economy.

At first sight it is clear and available for domestic entities form of entrepreneurial activity requires continuous learning and improvement. Franchising cooperation can provide both the benefits and risks of participants of franchising relationships. That is the purpose of avoiding all parties to franchise agreements are in the preparatory phase of

cooperation is necessary to understand the nature and specifics of business activity in franchising.

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CHINA WORLDWIDE INTERNATIONAL LOGISTICS AND SUPPLY CHAIN TECHNOLOGIES MARKET

Introduction

Supply chain scholars have recognized that inter organizational networks can furnish resources that convey various benefits, such as increase supply chain capital, inspire firm innovations and enhance operational efficiency (e.g. Cousins et al., 2006; Autry and Griffis, 2008; Stolze et al., 2015; Wichmann and Kaufmann, 2016). While network perspective is becoming a cornerstone to understand inter organizational relationships, the antecedents of network formation remain understudied. The formation of networks can affect both firm performance and economic activity (Choiand Wu, 2009a; Mamavietal, 2017). Forexample, many leading Chinese companies and their business partners are creating new business models and processes to attract consumers (Chenetal, 2010; Lyu *et al.,* 2019).

Supply chain technologies

To optimize operational efficiency (Alizila, 2018a). This research embodies Alibaba and CN as the context to understand the antecedents of inter organizational network and its impact on firm performance. Prior research defines inter organizational networks as a combination of relationships that a business maintains with its partners to give access to information, resources, markets and innovations (Gulati *et al.*, 2000). A common theme running through the studies of inter organizational networks is the importance of network characteristics. For example, network reachability, richness and receptivity are a three-dimensional characteristic of inter organizational networks to the field of supply chain management (Borgatti and Foster, 2003; Gulati *et al.*, 2011). Since different network characteristics provide different benefits, firms need to strategically design their network especially in dynamic environments (Borgatti *et al.*, 2009; Choi and Wu, 2009b). In alignment with the extant literature and the uniqueness of Alibaba, this research investigates the expansion of network reachability, richness and receptivity within Alibaba (Gulatietal, 2011). Understanding and knowing the antecedents and the optimum use of these network dimensions will benefit a focal firm, such as providing better accessing, structuring, bundling and leveraging network resource (Jensen, 2003; Lavie, 2006; Gulati and Sytch, 2007; Liu *et al.*, 2016). Specifically, we aim to address the following research questions: RQ1. What are the antecedents that affect Alibaba's inter organizational network? RQ2. What is the relationship between the inter organizational network and Alibaba's performance? We examine these relationships using a case study approach. Case study is a type of qualitative approach that facilitates in-depth analysis of complex and contemporary phenomena in its context which is suitable for these research questions (Yin, 2003; Eisenhardt and Graebner, 2007; Bell *et al.*, 2014; Yin, 2017). An ultimate supply chain is "all the organizations involved in all the upstream and downstream flows of products, services, finance, and information from the ultimate supplier to the ultimate customer" (Mentzer *et al.*, 2001, p. 4). Specifically, Alibaba functions as a conductor of an orchestra that directs the supply chain actors, such as the suppliers, focal firms and logistics providers through the ultimate supply chain. Not only is Alibaba a conductor that directs the actors within the ultimate supply chain, it is also a self-contained, self-adjusting service ecosystem (Flint *et al.*, 2014; Ketchen *et al.*, 2014; Zeng, 2018). Its vision (Alibaba Group vision) is to build an infrastructure where suppliers and customers will meet, work and live,

and that Alibaba will become one of the few companies that remain in business for more than 100 years (Alibaba Group, 2014). Therefore, CN was created in 2013 to address the logistics challenges of obtaining data to forecast inventory size and location, managing omni channel, connecting nationwide warehouses, allocating resources to build modern warehouses and optimizing operational efficiency (Alizila, 2018a). Cainiao Network Technology Co., Ltd Cainiao (pronounced as Tsai Nyao) means neophyte or newbie in Chinese. Cainiao Network Technology Co., Ltd (CN) was founded by Alibaba in May 2013 with a consortium of logistics companies. CN operates a logistics information platform that links a network of logistics service providers forming a highly efficient and integrated logistics industry in China. The initial consortium included companies such as Yintai Group, Fosun Group, Forchn and leading logistics companies like SF Express, ZTO, YTO, STO and Yunda. Yintai's specialty is warehouse management; Fosun handles warehouse construction; Forchn's focus is line hauling. "CN will connect every courier, connect every warehouse, every hub, every city and every house" says Jack Ma (Air Cargo Week, 2018). The goal of CN is to connect the leading Chinese logistics companies and coordinate them to reach any location in China within 24h and any location globally in 72h. Similar to how cell phone technology disrupted traditional land line technology and FedEx overnight service disrupted traditional small parcel delivery, CN supply chain model is disrupting the online fulfillment model. Before CN, China was suffering from a "logistics dark age" because there were no standard logistics practices or procedures (Alizila, 2018a). Most logistics companies were privately owned, competed in small markets and engaged in price wars. These companies depended heavily on human labor with hand-written bills of lading. CN has moved China away from this unstandardized, fragmented, logistics dark age and toward a logistics platform with a modern infrastructure with an asset-light, data-driven logistics network platform (Alizila, 2018a).

Worldwide international transport market

Theoretical foundation and literature review Network theory emphasizes that a company's economic actions are embedded in a network and that their outcomes are substantially influenced by the ongoing patterns of a relationship (Gulati, 1998; Granovetter, 2005). Inter organizational network, specifically, is a combination of relationships that a business maintains with its partners to obtain access

to information, resources, markets and innovations (Granovetter, 1985; Uzzi, 1997; Gulatietal, 2000; Autry and Griffis, 2008). The primary focus of network theory is to explain how patterns of ties produce better economic outcomes and why inter organizational networks are formed, collapse, succeed or fail (Kim, 2014; Tsai, 2001). According to network theory, firms pursue better performance through prominent network characteristics by forming alliance relationships (Koka and Prescott, 2008). Prominent networks provide significantly more access to key and valuable information relative to those firms that are less prominent in the network. Bellamy *et al.* show that structural supply network characteristics, such as accessibility and interconnectedness, are drivers of firms' innovation (Bellamy *et al.,* 2014). Accessibility is a firm's effectiveness in accessing knowledge and in formation flows in its supply network. In addition, research shows that the strength of ties of strategic alliances has a significant effect on the success of firms' contract bidding (Mamavietal, 2017). In a situation of high uncertainty, such as bid ding on a government procurement contract, networks can improve confidence between the public buyer and stakeholders (Klijn *et al.,* 2010; Mamavi *et al.,* 2017). In an effort to consolidate the different network perspectives and elements, Gulati *et al.* identify three mechanisms that underlie the performance effects of inter organizational networks; reachability, richness and receptivity. Receptivity encompasses both "the motivation to engage in exchange and the capability to do so" (Gulati *et al.,* 2011, p. 209). Inter organizational networks are critical competitive advantages. Since different characteristics provide different benefits, firms need to strategically design their network especially in dynamic environments. However, the drivers of inter organizational networks are understudied although research on firm performance reveals that achieving prominent network characteristics is crucial to a firm's success (Selviaridis and Spring, 2007; Tianetal, 2010). The literature suggests that organizations may achieve this goal when implementing an efficient and effective technological innovation program across their supply chains (Yee-Loong Chong and Ooi, 2008). By using supply chain technologies, long-term relationships between partners are established thus leading to significantly improved supply chain performance (Prajogo and Olhager, 2012; Evangelista *et al.,* 2013). Supply chain technologies facilitate information transfer within and across firm boundaries and enable efficient logistics integration (Saldanha *et al.,* 2015). Logistics integration refers to specific logistics practices and operational activities

that coordinate the flow of materials from suppliers to customers throughout the value chain (Stock *et al.*, 2000; Prajogo and Olhager, 2012). Wemeasure firm performance by Alibaba's net annual revenue from year 2010-2019 (Bracker and Pearson, 1986; Oke *et al.*, 2012).

Methodology

The goal of this research is to develop an in-depth understanding of how supply chain technologies improve inter organizational networks and subsequently lead to better performance. A case study approach was chosen because qualitative approaches facilitate an in-depth analysis of the complex and contemporary phenomena in its context (Yin, 2003; Eisenhardt and Graebner, 2007; Bell *et al.*, 2014) and is suitable for dealing with "how" type questions (Sousa and Voss, 2002). The unit of analysis in this study is the multifaceted network of a company that underwent an innovative transformation. We conducted the purpose five sampling procedures, field visit sand multiple data collection methods (Yin,2003) at the targeted firm – Alibaba and across its key business partners. Alibaba was selected because of its emerging power in technological innovations and its influence in not only China but also on global e-commerce.

Supply chain logistics

In addition, consumers prefer deliveries on weekends or after work hours when they are at home to avoid potential theft issues (Lim *et al.*, 2018). The quandary for logistics providers is to keep the business of as many e-retailers as possible while meeting delivery service expectations (Luo, 2018). Supply chain technologies facilitate information transfer within and across firm boundaries and enable efficient logistics integration (Saldanha *et al.*, 2015). All of the participants from Alibaba stated that CN was equipped with supply chain technologies in response to the growing expectations and challenges of stakeholders. CN's innovative business model provides the frame work that enables it to achieve stunning success in China.

Discussion

It is widely acknowledged in both academic and the managerial literature that supply chains are interwoven networks (e.g. Wichmann and Kaufmann, 2016; Bernon *et al.*, 2016). In this research, inter organizational networks, as a sources of competitive advantage, are investigated through three aspects – network richness, reachability and

receptivity (Gulati *et al.,* 2000, 2011; Borgatti and Foster, 2003; Gulati and Sytch, 2007). Network receptivity is the extent to which the organization can channel and leverage network resources across supply chains and an indication of how relationship quality facilitates resource flows (Barney, 1991). The results suggest understanding and managing these network elements through supply chain technologies, directly benefits a firm's performance (Gulati, 2007).Theframeworkdeveloped in this research offers a unique insight by simultaneously considering the innovative technologies and inter organizational networks as determinants of improved performance. Theoretical implications this research makes the following contributions to the literature on inter organizational networks, logistics and supply chain management. First, while the prior literature focused on the conceptual understanding of inter organizational networks and their impact on firm performance (Gulati *et al.,* 2011), this research provides a comprehensive and in-depth empirical investigation of the relationship (Choi and Wu, 2009a; Bryman and Bell, 2011). In general, network research characterizes relationship connections as enduring patterns of social structures among firms (Borgatti and Foster, 2003; Choi and Wu, 2009a). Asian developing countries because they have significant influence and contribution to expansive global supply chains (Chenetal, 2010; Cao and Zhang, 2011). There search first describes the background of Alibaba and how it evolved into today's giant e-commerce ecosystem that is able to facilitate an ultimate supply chain throughout China. Third, this research contributes to the supply chain management literature by providing empirical evidence of supply chain technologies as the antecedents of network richness, reachability and receptivity. This is consistent with prior research which suggests that having standardized technologies is a key element in establishing firms' competitive advantages (Anderson and Tushman, 1990; Tegarden, 1999; Sodero *et al.,* 2013). The companies were in a standoff which threw a cloud over parcel deliveries in China's 6.2 trillion yuan ($ 910) online retail market (Ye, 2018). Alibaba (BABA) has a market capitalization of $ 465 bn, has surpassed Walmart in global sales, and has expanded into all the major markets in the world (Zeng, 2018). An example is, Alibaba establishing itself as a global innovator in what it has called "new retail" – a blending of digital into real-world shopping experience (Walton, 2018).

Conclusion

Alibaba, theworld's largest ecommerce company, has the evidence to support its renowned attention in terms of innovation and success (Zhu, 2018). Its commerce platform includes Tmall, Taobao and AliExpress; marketing through Alimama; cloud computing via Aliyun; financing with Ant Financial (Alipay); wholesaling domestically by 1688.com; whole saling internationally by Alibaba.com, and logistics are handled by CN. This is a formidable line up geared to chase worldwide disposable income with an estimated $ 4.6 trillion in China alone (Alizila, 2018b). Looking forward, Alibaba is developing a marketing strategy called "New Retail" that aims to bridge the gap between on line and offline shopping (Jungetal, 2015). CN platform is the backbone in this strategy because its data analytic software tools can offer brick-and-mortar retailers a way to cross marketing, inventory and distribution networks.

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Chapter 7

IMPLEMENTATION NORMS OF INTERNATIONAL LAW AND EUROPEAN UNION LAW IN THE PROCESS OF ENSURING EFFECTIVE ECONOMIC SYSTEMS MANAGEMENT

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COMPARATIVE ASPECT OF LEGAL REGULATION OF STATE AID IN UKRAINE AND THE EUROPEAN UNION

Due to the spread of the COVID-19, the economies of various countries worldwide have dealt a shocking blow to their stability and economic development. In addition, the global economic crisis, previously predicted, is approaching faster and is requiring immediate actions in response from the state leaders. If at the very beginning of 2020 economic growth was predicated, at the present the IMF expects economy to fall globally by 3%, and by 7.7% in Ukraine respectively (Ekonomichna Pravda, 2020). According to the S&P Global Ratings projections, the service sector will suffer much more losses than production. Also, the COVID-19 pandemic will stronger affect small businesses than large ones (Konsensus-prognoz, 2020). Therefore, in response to all the above-mentioned threats, governments implement various state aid measures: grants, subsidies, subventions, tax benefits, tax holidays, etc. In this regard, study of the legal regulation of state aid in Ukraine and the European Union seems to be quite relevant, in order to determine their common and distinctive features, as well as the peculiarities related to the study object.

Our study is mainly grounded on the Ukrainian and European legal systems in the field of state aid regulation. Based on the analysis of the

studies that disclose the problems of legal support of state aid, namely by L. Sinichkina (2017), O. Bakalinska (2017), O. Kulyk (2019), O. Gadomska (2020), etc., it can be concluded that the main attention was paid to the certain aspects of regulations, while comprehensive analysis of these regulations and their relationship still remains unstudied.

State aid is the selective support provided by the state through provision of resources in various forms, which confers benefits for economic entities and can affect trade relations and competition (Chyzhevska L.V., Osipchuk D.S., 2020).

State aid is, by nature, a resource that has a definite, legally enforced procedure of its provision. That is due to the reasons as follows: 1) state aid is a resources of the state that are always under strict control over their use; 2) state aid at the state level is referred to as threat to competition and trade on the domestic market; 3) state aid is selective, which, in turn, defines strict parameters of the assessment of the business entity to be entitled to receive it; 4) as state aid may introduce certain distortions into the level of competition and trade relations between market participants, there is a need for its constant monitoring and control.

To ensure control over the process of obtaining, using and return of inadmissible state aid, there are so-called regulators presented by the public authorities to implement policies in the field of state aid regulation. As far as the European Union is concerned, the European Commission acts as a regulator; while in Ukraine the Antimonopoly Committee of Ukraine received such powers since the adoption of the Law of Ukraine "On State Aid to Business Entities". The mentioned institutions receive and review any notifications of state aid granted; the affiliation of the aid with the state is determined, its admissibility for competition is assessed; information on providers of such assistance is collected and analyzed; state aid is granted; decisions are made regarding temporary suspension of assistance or termination and return of illegally obtained assistance declared inadmissible for competition; state aid is monitored, etc. (Chyzhevska L.V., Osipchuk D.S., 2020).

Regulation of the state aid is carried out by means of some legal acts as presented in Table 7.1.

Study of some aspects of legal regulation of state aid in Ukraine and the European Union, given in the Table 7.1, enables us to conclude the following:

Table 7.1

Regulation of State Aid in the European Union and Ukraine

No.	Legal Act	Provisions on regulating state aid
1	2	3
1	Treaty on the Functioning of the European Union (Official Journal of European Union C 326, 2012)	Aid granted by a Member State or through State resources in any form, which distorts or threatens to distort competition by favoring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market. The following shall be compatible with the internal market: (a) aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned; (b) aid to make good the damage caused by natural disasters or exceptional occurrences; (c) aid granted to the economy of certain areas of the Federal Republic of Germany affected by the division of Germany, in so far as such aid is required in order to compensate for the economic disadvantages caused by that division.
1.1	Treaty on the Functioning of the European Union (continuation)	The following may be considered to be compatible with the internal market: (a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment, and of the regions referred to in Article 349, in view of their structural, economic and social situation; (b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State; (c) aid to facilitate the development of certain economic activities or of certain economic areas; (d) aid to promote culture and heritage conservation;

Table 7.1 (continued)

1	2	3
		(e) such other categories of aid as may be specified by decision of the Council on a proposal from the Commission
2	Treaty establishing Energy Community, (Energy Community, 2005)	The following is incompatible with the proper functioning of the Treaty, insofar as it may affect trade of Network Energy between the Contracting Parties: (a) all agreements between undertakings, decisions by associations of undertakings and concerted practices which have as their object or effect the prevention, restriction or distortion of competition, (b) abuse by one or more undertakings of a dominant position in the market between the Contracting Parties as a whole or in a substantial part thereof, (c) any public aid which distorts or threatens to distort competition by favouring certain undertakings or certain energy resources
3	Law of Ukraine "On State Aid to Business Entities", (Verhovna Rada Ukrai'ny, 2014)	State aid to business entities – aid granted in any form through state or local resources, which distorts or threatens to distort economic competition, favouring production of certain goods or carrying out certain types of activity This Law applies to any support of economic entities by state aid providers at the expense of state or local resources for the production of goods or carrying out certain types of economic activity, except in certain cases.
4	Ukraine-European Union Association Agreement, (Official Journal of the European Union L161, 2014)	Any aid granted by Ukraine or the Member States of the European Union through state resources which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods is incompatible with the proper functioning of this Agreement insofar as it may affect trade between the Parties. However, the following will be considered to be compatible with the proper functioning of this

Table 7.1 (continued)

1	2	3
		agreement: (a) aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned; (b) aid to make good the damage caused by natural disasters or exceptional occurrences. Moreover, the following may be considered to be compatible with the proper functioning of this Agreement:
4.1	Ukraine-European Union Association Agreement (continuation)	(a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment; (b) aid to promote the execution of an important project in the common European interest or to remedy a serious disturbance in the economy of Ukraine or one of the Member States of the European Union; (c) aid to facilitate the development of certain economic activities or of certain economic areas; (d) aid to promote culture and heritage conservation; (e) aid to achieve objectives allowed under the EU horizontal block exemption regulations and horizontal and sectoral state aid rules granted in line with the conditions set out therein; (f) aid for investment to comply with the mandatory standards of the EU directives listed in Annex XXIX to Chapter 6 (Environment) of Title V of this Agreement
5	The Agreement on free trade between Ukraine and the states of EFTA, (The European Free Trade Association, 2010)	Rights and obligation of the Parties in the part of subsidies and countervailing measures shall be regulated by Articles VI and XVI of General Agreement on Tariffs and Trade (1994) and by WTO Agreement on Subsidies and Countervailing Measures

Table 7.1 (continued)

1	2	3
6	The Agreement on Subsidies and Countervailing Measures, (World Trade Organization, 1994)	The following subsidies shall be prohibited: (a) subsidies contingent, in law or in fact upon export performance; (b) subsidies contingent, whether solely or as one of several other conditions, upon the use of domestic over imported goods

1) Treaty on the Functioning of the European Union is the general legislative act, which regulates state aid in the European Union, whereas in Ukraine it is Law of Ukraine "On State Aid to Business Entities".

2) Treaty on the Functioning of the European Union defines state aid as a threat to competition and trade in the domestic market. However, the Treaty also identifies the cases when aid is allowable: social sphere, projects of common European interest, programs of developing the important economic areas etc., where such aid does not adversely affect trading conditions to an extent contrary to the common interest

3) Treaty establishing Energy Community contains very similar explanation of nature the state aid to the one provided in text of the Treaty on the Functioning of the European Union. However, the peculiarity of the document mentioned is that it is regulating the specific market of energy resources only.

4) The Law of Ukraine "On State Aid to Business Entities" gives the same meaning of state aid as one provided by the Treaty on the Functioning of the European Union. There are also certain activities for which any support at the expense of state resources is allowed.

5) Ukraine-European Union Association Agreement identifies state aid as a threat to distort competition and is incompatible with the internal market, though it mentions options where this type of support is possible.

6) The Agreement on free trade between Ukraine and the states of EFTA duplicates the requirements of The Agreement on Subsidies and Countervailing Measures, i.e. prohibits subsidies that may affect exports or subsidies giving preference to the domestic goods over imported ones.

7) All the above-mentioned regulations, except for The Agreement on free trade between Ukraine and the states of EFTA and The Agreement on Subsidies and Countervailing Measures, indicate that

state aid is considered to be incompatible with the internal market and distorts competition, moreover its ise is possible only under certain circumstances specified: a) in legislation; or b) by the regulator in specific situations (for example, to overcome the coronavirus crisis).

If we compare the legislation in the field of state aid in Ukraine and the European Union, their similarity is obvious despite the fact that the Ukrainian legislation on this issue is still in the process of its formation. It is worth mentioning that the Ukrainian legal acts regulating state aid were introduced as a result of the signing of the Association Agreement between Ukraine and the European Union, and the adoption of legislation on state aid was then one of the mandatory conditions.

Besides, the regulation of state aid is carried out partly by the following by-laws: the Procedure for the return of illegal state aid, inadmissible for competition (Kabinet Ministriv Ukrai'ny, 2017) and the Resolution "On approval of the list of services of general economic interest" (Kabinet Ministriv Ukrai'ny, 2018). The Procedure for recovery of illegal state aid, which is inadmissible for competition, regulates the issue of state aid return in accordance with the Decree of the Antimonopoly Committee of Ukraine. The effect of this normative act is aimed at leveling the impact of illegal state aid on competition and restoring the previous situation on the market. The Resolution defines the list of the services of the general economic interest, i.e. spheres of economy in which state aid can be provided without any restrictions.

Ukraine, being a subject of international cooperation must comply with the international law in addition to the domestic legal acts. That is, all the above-mentioned treaties and agreements signed by the state of Ukraine will have the same effect on the territory of our country.

Our study of the legal regulation of the state aid in Ukraine and the European Union make it possible to draw the following conclusions. 1) Legislative documents, both in Ukraine and the EU, define state aid as a threat to competition and trade in the domestic market, and therefore all measures of legal regulation of this object are aimed at: a) preventing such effect; and b) leveling such influence to the minimum possible level. 2) It has been revealed that there is a certain feature related to the generalized phenomenon of "state aid", but each of the legal documents define specific types of permitted and/or prohibited state aid, and therefore, it is necessary to comply with all the documents effective on the territory, as well as for countries that have ratified these rules (i.e. signatories of the agreements). 3) It has been determined that the legislation of Ukraine and one of the EU in the sphere of state aid

regulation is quite similar, as a result of the following occurrence: a) Ukraine is a signatory of many agreements and therefore takes the responsibility to comply with their provisions; b) taking into account the European vector of the state of Ukraine, it was necessary to develop a national legal framework in accordance with the European requirements in this area.

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IMPLEMENTATION OF V. AML DIRECTIVE INTO NATIONAL LEGISLATION IN THE TERRITORY OF THE SLOVAK REPUBLIC

Introduction

Due to the rise of new technologies, providing easier and faster access to a bank account, opening a new account or executing a

transaction, the threat of money laundering and terrorist financing is still a topical issue. Taking into account all the measures taken so far, the number of economic crimes is growing, which often causes difficulties for the financial institutions themselves.

One of the main task of organized crime is to introduce illegally collected funds into the legal economy of the state, while the legality of this introduction should not arouse suspicion among financial supervisors. Proceeds from criminal activities are in principle introduced into the financial system and, after complete "laundering", are returned to their owners in the form of legalized income.

The European Union currently has a system in place to combat money laundering and terrorist financing. After several amendments to the AML directives, one can assume that in current state of affairs an effective regime for combating organized crime has been created. European legislation in the area of money laundering and terrorist financing provides a comprehensive regulatory framework in this area setting out fundamental types of countermeasures against money laundering.

The regime provided for in the 5th AML Directive has become an effective tool in the fight against money laundering in an environment where this problem has become particularly acute due to the inadequacy of previously adopted measures (being the reason why the European institutions have been forced to reconsider IV. AML Directive).

Individual areas of transposition of the V. AML Directive into the Slovak AML Act

As of November 1, 2020, the V. AML Directive (and to some extent the IV. AML Directive) as well as some FATF recommendations were transposed into national money laundering legislation. The main grounds for the amendment to the IV. AML Directive were (i) the necessity to reflect a new version of the FATF Recommendations adopted in 2012 and (ii) the willingness of the European legislators to fill the gaps in that directive, as further described in the Report from the Commission to the European Parliament and the Council on the application of Directive 2005/60/EC on the prevention of the use of the financial system for the purpose of money laundering and terrorist financing.[1]

[1] *Report from the Commission to the European Parliament and the Council on the application of Directive 2005/60/EC on the prevention of the use of the financial*

Amendments to the Slovak AML Act mainly relates to the following areas: virtual currencies, obliged entities, politically exposed persons, register of ultimate beneficial owners, registers, electronic client identification, simplified customer due diligence, prepaid payment instruments, high-risk third countries, register of payment accounts, financial intelligence unit.

- **Virtual currencies**. In accordance with the V. AML Directive, the definition of obliged entities has been extended to entities providing services related to virtual currencies. Providers engaged in exchange services between virtual currencies and fiat currencies as well as custodian wallet providers for storing virtual currencies were added to the list of obliged entities.

It was a response to FATF Recommendation No. 15, which draws attention to increased risk of money laundering in connection with the development of new products and technologies due to the absence of any regulation in this area. The European Central Bank's report[2] also justified the need to define or classify virtual currencies in order to ensure their subsequent regulation. The original advantage of using virtual currencies was the anonymity of their clients and the "irreversibility of transactions", i.e. the impossibility of reversing such transactions.[3]

In order to tighten the regulation governing activities related to virtual currencies, the requirement to obtain a prior trade license for providers of exchange services between virtual currencies and fiat currencies as well as custodian wallet providers was introduced.[4]

Despite the efforts of the European institutions to extend the scope of the V. AML Directive to all entities providing services with virtual currencies and at the same time to include in the definition all types of virtual currencies, this effort has not been left without criticism. The relevant clause in the recitals of the V. AML Directive addresses this issue as follows: "*To combat the risks related to the anonymity, national*

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system for the purpose of money laundering and terrorist financing, COM/2012/0168 final.

[2] *European Central Bank. Virtual currency schemes – a further analysis. February 2015, str. 25.*

[3] *For further details see: Explanatory Report (in Slovak: Dôvodová správa) to Act No. 279/2020 Coll. amending Slovak AML Act.*

[4] *Section 80ag of the Act No. 455/1991 Coll. on small business activity (Trade Licensing Act). (in Slovak: zákona č. 455/1991 Zb. o živnostenskom podnikaní (živnostenský zákon).*

Financial Intelligence Units (FIUs) should be able to obtain information allowing them to associate virtual currency addresses to the identity of the owner of virtual currency."[5]

The first problem is the lack of a single register for people using virtual currencies. Thus, the identity of the e-wallet user will not be registered and need not be made available to the public. However, the European Commission has the task of assessing the need to create such a register by January 2022.

In addition, only providers of exchange services between virtual currencies and fiat currencies have been added to the list of obliged entities, keeping entities engaged in the exchange of one virtual currency for a type outside of that list. Another problem is the inadequacy / incorrect definition of the term virtual currency[6].

Firstly, the definition regulates the requirement for the virtual currency to be able to be transferred, stored and traded electronically, but there are tokens that cannot be permanently transferred (locked tokens).

Secondly, the virtual currency is defined as a "means of exchange". One can argue, there can be a wide range of possible means of exchange, for example, stones can also be used as a means of exchange. Thus, this concept has no limiting boundaries. At the same time, the means of exchange represents only one of several forms of possible use of the virtual currency that are regulated in the V. AML Directive. The term means of exchange used in the above definition includes only currency tokens, while investment and utility tokens remain outside the scope of such definition.[7]

In the case of the definition of the term electronic money / custodian

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[5] *Recital 9 of the Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.*

[6] *See: Art.1(2)(d)(18) of the Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.*

[7] *For further details see: Haffke, L., Fromberger, M., Zimmermann, P. (2020). Virtual currencies and anti-money laundering – the shortcomings of* the 5th AML *Directive (EU) and how to address them. Journal of Banking Regulation, Vol. 21, Issue 2, pp. 125-138.*

wallet provider,[8] the requirement "to safeguard private cryptographic keys" raises a problem. This provision can be easily circumvented, for example, by introducing the obligation to enter the private key of the wallet at each entry.[9] It is clear that all the above problems allow both users of the virtual currency and entities providing services in this area to circumvent, or to remain outside the scope, of the V. AML Directive.

- **Obliged entities**. In addition to the above-mentioned providers of exchange services between virtual currencies and fiat currencies, the list of obliged entities has been extended to other entities. These are, for example, persons providing advice on tax matters as their principal business or professional activity. Estate agents including when arranging the rental of real estate and persons carrying out trades in works of art are also considered to be obliged entities, the value of these trades being set at least EUR 10,000.
- **Politically exposed persons**. The original proposal to expand the range of politically exposed persons was already outlined in proposal of IV. AML Directive. The V. AML Directive put the original proposal into practice and extended the range of politically exposed persons to include functions of regional or national importance. This category includes, for example, the judge of the highest court, the head of the regional court, etc. Until 01.11.2020, the Slovak AML Act focused only on foreign politically exposed persons who performed their function outside the territory of the Slovak Republic. For this reason, this is a significant change in the basic understanding of this concept.

The Slovak Republic was also obliged to create and maintain an official list of prominent public functions. The same condition applies to international organizations based in the Slovak Republic. For this purpose, the Ministry of Foreign and European Affairs of the Slovak Republic is obliged to request international organizations to provide the

[8] *See: Art. 1(2)(d)(19) of the Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.*

[9] *For further details see: Haffke, L., Fromberger, M., Zimmermann, P. (2020). Virtual currencies and anti-money laundering – the shortcomings of the 5th AML Directive (EU) and how to address them. Journal of Banking Regulation, Vol. 21, Issue 2, pp. 125-138.*

above-mentioned list of persons.[10] The FIU is then required to publish these lists on its website. In our opinion, the reason for making the list of politically exposed persons available to the general public is to ensure direct control by the public (e.g. mass media communications) of any failure to comply with law by politically exposed persons as well as to assess individual transactions in terms of their legality and connection to terrorist groups.

- **Ultimate beneficial owners**. Original IV. AML Directive laid down the obligation for legal entities to keep a central register of ultimate beneficial owners. Legal entities and special-purpose associations of property without legal personality obligatorily maintained this register. In essence, there was no single register containing information on all ultimate beneficial owners, which caused a number of different problems in obtaining this data by authorized persons.[11] The following groups were given access to this information: Unrestricted access was provided to supervisory authorities, i.e. in the territory of the Slovak Republic it was the National Bank of Slovakia and the Financial Intelligence Unit, as well as other authorized persons, such as a body active in criminal proceedings or a state tax and customs administration authority.[12] Limited information on ultimate beneficial owners was also provided to any person or organization that demonstrated a legitimate interest. In essence, it was still a matter of protecting the privacy and personal data of the ultimate beneficial owners.

The V. AML Directive imposes stricter requirements on the transparency of business relations and, in particular, on all rules concerning the protection of privacy and personal data, requiring to clearly distinct the categories of legal entities carrying out the

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[10] Section 6(5) of the Slovak AML Act. (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov.)

[11] For further details see: Oravcová, L. (2015). Identification of the client from the perspective of protection from money laundering and protection of personal data (in Slovak: Identifikácia klienta z pohľadu ochrany pred legalizáciou príjmov z trestnej činnosti a ochrana osobných údajov). Protection from money laundering in the context of new legislation in the European Union. Journal of scientific works, p.124-126.

[12] Section 10a of the Slovak AML Act (valid until 31 Oct. 2020). (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov.)

management of entrusted assets as their business activity.[13]

Under the new legislation, information on beneficial owners has become public. However, it is not a question of making available all information about the ultimate beneficial owners, but only of a certain set of data, which is of a general nature. The reason is the protection of the privacy of the ultimate beneficial owners as well as the associated risk of prejudice. In implementing this standard, the European legislator assumed that the openness of information on beneficial owners would ensure greater transparency of transactions and allow civic associations and the media to exercise control over financial market transactions.[14]

- **Registers.** A special obligation is also imposed on obliged entities, consisting in notification to the source register (e.g. business register, register of foundations) of the current identification data on the beneficial owners. Thus, in the event of a discrepancy between the information obtained by the obliged entity and a specific register, the obliged entity shall resolve this discrepancy by checking correctness of information with the client. Consequently, correction of data in the relevant register is required. Otherwise, the obliged entity will inform the relevant register itself.[15]

Obliged entities shall request not only from legal entities but also from other similar institutions (foundation, non-profit organization), a certificate of registration or an extract from a specific register or records. It is also obliged to identify the natural person authorized to act on its behalf.

- **Electronic identification of the client**. The identification of the client is realized in two levels: the initial identification of the client and the subsequent verification of the identification. Originally identification

[13] *Buznová, M., Leskovský, D. (2017). Amendments to IV. AML Directive in the field of prevention from money laundering and terrorist financing (in Slovak: Novelizácia štvrtej smernice EÚ v oblasti prevencie legalizácie príjmov z trestnej činnosti a financovania terorizmu). Biatec, No. 1, y. 25, p. 18.*

[14] *For further details see: Recital (33), (34), (35) and (36) of the Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.*

[15] *Explanatory Report (in Slovak: Dôvodová správa) to Act No. 279/2020 Coll. amending Slovak AML Act.*

of the client could be realized only in its physical presence.[16] Currently, due to advanced technical development, there is a change in the understanding of how to identify the client. Client identification can currently take place at the "internet" level. Thus, the verification of the client's identification is performed by the use of technical means, enabling secure remote identification.[17] In a world of plurality of financial institutions providing multiple products, it is essential to ensure the least "disruptive" approach of clients to products of interest to them. The reason for introducing the above-mentioned regulation could therefore be to facilitate and simplify access to products offered by financial institutions, as a consequence of the competitive struggle for the client.

- **Simplified due diligence**. The implementation of the V. AML Directive has also affected clients posing a low risk of money laundering. The inclusion of the client in the "low risk" category allows the use of simplified due diligence in relation to the client. Section 11 par. 2 of the Slovak AML Act regulates the conditions for the use of simplified due diligence in relation to individual types of transactions. The original list has been expanded to include long-term investment savings,[18] account information service[19] and payment initiation service.[20]

Properly designed and implemented control of low-risk products is

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[16] For further details see: Kyncl, L. (2012). Know your customer – essential principle of financial law (in Czech: Poznej svého klienta základní zásada finančního práva). Brno: Masarykova univerzita, Spisy Právnické fakulty Masarykovy univerzity. Řada teoretická sv. 433), p. 35-36.

[17] For further details re manners of electronic identification see: Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC

[18] For further details see: Act No. 566/2001 Coll. on Securities and Investment Services (Act on Securities). (in Slovak: zákon č. 566/2001 Z. z. o cenných papieroch a investičných službách a o zmene a doplnení niektorých zákonov (zákon o cenných papieroch)).

[19] Section 2(44) of the Act No. 492/2009 Z. z. on Payment Services. (zákon č. 492/2009 Z. z. o platobných službách a o zmene a doplnení niektorých zákonov).

[20] Section 2(43) of the Act No. 492/2009 Z. z. on Payment Services. zákon č. 492/2009 Z. z. o platobných službách a o zmene a doplnení niektorých zákonov).

considered an important element facilitating financial inclusion.[21] In this case, we can talk about positive progress in relation to the entities that face financial exclusion.[22] However, even in this case, it must not be forgotten that terrorist financing transactions can take place in very small volumes, which, when applying a particular type of risk, could be those transactions that are often considered low-risk transactions in connection with money laundering.[23]

- **Prepaid payment instruments**. In order to mitigate possible risk of misuse of "low risk" transactions for terrorist financing purposes, the AML Directive lowered the limit for operations with selected types of prepaid payment instruments. At present, therefore, the limit for transactions using electronic money is set at EUR 150.[24] Compared to the previous wording of the Slovak AML Act, the amount of the limit for the above transactions has been reduced by EUR 100 from the original EUR 250.

The aim of lowering the original limit for electronic money transactions is to limit the anonymity of prepaid payment instruments. Thus, prepaid payment instruments are to be used for legitimate purposes, which ultimately reduces their attractiveness to criminals and terrorists.[25]

For comparison, current European Union legislation also regulates the limit on the amount of cash entering or leaving the Community. The

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[21] *de Koker, L. (2009). Identifying and managing low money laundering risk: Perspectives on FATF's risk - based guidance. Journal of Financial Crime, Vol. 16 No. 4, pp. 338.*

[22] *For further details see: de Koker, L. (2006). Money laundering control and suppression of financing of terrorism: Some thoughts on the impact of customer due diligence measures on financial exclusion. Journal of Financial Crime, Vol. 13 No. 1, pp. 26-50.*

[23] *de Koker, L. (2009). Identifying and managing low money laundering risk: Perspectives on FATF's risk - based guidance. Journal of Financial Crime, Vol. 16 No. 4, pp. 338.*

[24] *For further details re conditions for use of electronic money see: Art. 1(7) of the Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.*

[25] *Buznová, M., Leskovský, D. (2017). Amendments to IV. AML Directive in the field of prevention from money laundering and terrorist financing (in Slovak: Novelizácia štvrtej smernice EÚ v oblasti prevencie legalizácie príjmov z trestnej činnosti a financovania terorizmu). Biatec, No. 1, y. 25, p. 18.*

value of the funds currently corresponds to EUR 10,000.[26] Although cash as well as electronic money can have an unidentifiable origin and in some cases it is impossible to identify the real owner of the funds, the amount of the cash limit is much higher compared to electronic money. Even if the legislator aimed to prevent excessive restrictions on free movement or disproportionate burdens on citizens with administrative formalities,[27] the question arises as to whether, with the introduction of the above-mentioned limits on electronic money, criminals will not simply focus on the use of cash.

- **High-risk third countries**. Prior to latest amendment, Slovak AML Act provided only general information on the execution of enhanced due diligence in relation to high-risk countries. The V. AML Directive provides more detail on monitoring of transactions carried out by clients from high-risk third countries. The basic precondition for the application of additional measures of increased client care resulting from the V. AML Directive is the application of basic care in relation to the client of a high-risk country. Under general provisions governing enhanced client due diligence, the obliged entity shall ascertain the following information:
  - performing client identification through other documents;
  - requesting a written confirmation from another bank that it is its client, ensuring the execution of the first payment through an account held in the client's name, provided that the client has submitted a document proving the existence of such an account;
  - verification of the client's identification to the extent a payment initiation service or a payment account information service by another obliged entity permits so, provided that the obliged entity has performed at least standard due diligence.[28]

[26] *Art. 3 of the Regulation (EC) No 1889/2005 of the European Parliament and of the Council of 26 October 2005 on controls of cash entering or leaving the Community.*

[27] *Heseková, S. (2019). Limitation of payments in cash (in Slovak: Obmedzenie platieb v hotovosti v legislatíve Slovenskej republiky). Právní rozpravy 2019: recenzovaný sborník příspěvků z mezinárodní vědecké konference. Hradec Králové: Magnanimitas, p. 162.*

[28] *Section 12(2)(a) of the Slovak AML Act. (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov).*

Moreover, there are additional measures of enhanced due diligence that shall be applied to a client of a high-risk third country. The use of additional measures reflects the V. AML Directive as well as the Delegated Regulation.[29]

The aim of introducing these additional measures is to reduce the risk of speculation in choosing a forum, otherwise known as forum shopping. In such a case, the choice of jurisdiction reflects the strictness of the rules applied by that jurisdiction against high-risk third countries.[30]

In addition to implementing the above provisions, the Art. 18a par. 3 letter e) of IV. AML Directive was transposed into Slovak AML Act as from 1 November 2020. Generally, the obliged entity shall exercise in their branches and subsidiaries located in the territory of a third country equal care in relation to the customer as is exercised in accordance with the requirements of European Union legislation.[31] Further to the above-mentioned, the regulation of banks and financial institutions has been tightened. The banks and financial institutions are obliged, if necessary, to reconsider the existing correspondence relations with the partner institution established in a high-risk third country.

Following transposition of the V. AML Directive, the Annex no. 2 of the Slovak AML Act was supplemented by factors reflecting potentially higher risk when performing increased due diligence in relation to the client. These risk factors were divided into the following areas: in relation to the client and in terms of product, service, transaction or distribution channel.[32]

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[29] *For further details see: Recital (8) of the Commission Delegated Regulation (EU) 2019/758 of 31 January 2019 supplementing Directive (EU) 2015/849 of the European Parliament and of the Council with regard to regulatory technical standards for the minimum action and the type of additional measures credit and financial institutions must take to mitigate money laundering and terrorist financing risk in certain third countries.*

[30] *Buznová, M., Leskovský, D. (2017). Amendments to IV. AML Directive in the field of prevention from money laundering and terrorist financing (in Slovak: Novelizácia štvrtej smernice EÚ v oblasti prevencie legalizácie príjmov z trestnej činnosti a financovania terorizmu). Biatec, No. 1, y. 25, p. 19.*

[31] *Section 21(5) of the Slovak AML Act. (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov).*

[32] *For further details see: Annex III as amended by Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of*

- **Register of payment accounts**. It is a data retrieval system, allowing identification of holders of bank and payment accounts and safe-deposit boxes. In this context, the bank is obliged to provide comprehensive information on the bank account of a particular client at the request of the Financial Intelligence Unit.
- **Financial Intelligence Unit**. V. AML Directive broadens and deepens original competencies of the Financial Intelligence Unit. The aim of the implemented provisions is to expand the range of information available to the FIU and to ensure timely access to the necessary information without any restriction by the obliged entities.

Acquired respectively deepened competencies can be divided into the following areas:

- **Assessing the compliance of third country legislation with the requirements of European Union legislation**. This is an extension of the original obligation of the obliged entity to provide equivalent care in relation to third country clients.[33] The obliged entity shall inform the Financial Intelligence Unit and the National Bank of Slovakia about its inability to perform equivalent care in relation to such client in accordance with the requirements of European Union legislation. The Financial Intelligence Unit and the National Bank of Slovakia shall forthwith so inform the relevant institutions of the European Supervisory System. In accordance with the Commission Delegated Regulation,[34] the obliged entity shall then take additional measures to mitigate the risk of money laundering and terrorist financing in such a case.
- **Restrictions on the provision of information**. This requirement follows from Art. 32 par. 5 of IV. AML Directive. The FIU shall be under no obligation to comply with the

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money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.

[33] *See: section on high-risk third countries above and Section (21) (5) of the Slovak AML Act. (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov).*

[34] *Commission Delegated Regulation (EU) 2019/758 of 31 January 2019 supplementing Directive (EU) 2015/849 of the European Parliament and of the Council with regard to regulatory technical standards for the minimum action and the type of additional measures credit and financial institutions must take to mitigate money laundering and terrorist financing risk in certain third countries*

request for information, if its disclosure could frustrate or jeopardize an ongoing investigation or if disclosure would be contrary to the legitimate interests of a natural or legal person or would be irrelevant to the purposes for which it was requested. In this case, the legislator has put the ongoing investigation at the forefront of the hierarchy of importance, which seems to be justified as the perpetrators of money laundering and terrorist financing are being identified in the ongoing investigation. It should be emphasized that this is a temporary restriction for the duration of the obstacle.

- **Providing the results of the national risk assessment**. One of the tasks of the Financial Intelligence Unit is to prepare and pre-update the national risk assessment. The material so prepared shall be submitted to the Government of the Slovak Republic for approval. In addition, the V. AML Directive extended the range of entities to which the FIU is obliged to provide the results of the national risk assessment. The list of such bodies includes the European Commission, the European Supervisory Authorities and the other Member States.
- **Statistical data**. In addition to basic data on unusual or suspicious transactions (e.g. number of reports on unusual or suspicious transactions), the Financial Intelligence Unit was required to keep statistics on the number and results of controls performed as well as on the types of sanctions imposed.
- **International cooperation**. The FIU shall cooperate with the European authorities and the European institutions, in particular in the field of exchange and verification of information necessary for the prevention and detection of money laundering and terrorist financing. Participants in the European System of Financial Supervision have also been included in the original list of European Institutions with which the Financial Intelligence Unit cooperates. International cooperation between European bodies and institutions in the field of money laundering and terrorist financing may not be restricted, except as set out above.[35] The process of exchanging information between the FIU and the Member States has also been tightened up. For example, FIUs may, upon request or on their own

[35] *See: section on restrictions on the provision of information above.*

motion, measure information on money laundering and terrorist financing, designating one contact person to receive a request from another FIU.

- **Exchange of information**. This is to ensure a smooth and efficient exchange of information between the Financial Intelligence Unit and the National Bank of Slovakia. The Financial Intelligence Unit is obliged to inform the National Bank of Slovakia about the inspection of a specific obliged entity, stating basic identification data of obliged entity as well as information on the subsequent imposition of a sanction.
- **Imposition of a sanction**. This is a transposition of Art. 60 of IV. AML Directive. The financial intelligence unit is entitled to impose a fine of up to EUR 1,000 000[36] on a natural or legal person in the event of non-compliance with, or breach of, the obligations laid down in the Slovak AML Act. In addition to such fine for an administrative offense, the Financial Intelligence Unit is also entitled to impose a sanction requiring publishing a final ruling under which such fine was imposed. "*The sanction of publishing a final ruling on administrative offense requires publishing the verdict of final ruling on the FIU's website for five years*."[37] The V. AML Directive emphasized the need to carefully consider the seriousness of the administrative offense. In imposing the above sanction, special account shall be taken of the nature, gravity and circumstances of the administrative offense committed. Likewise, the sanction imposed must not jeopardize the stability of the financial market. Otherwise, the Financial Intelligence Unit may decide to postpone the publication of a valid ruling, to publish a valid ruling anonymously or not to publish it at all.[38]

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[36] *Section 33(1) of the Slovak AML Act. (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov).*

[37] *Section 33a(2) of the Slovak AML Act. (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov).*

[38] *For further details re this procedure see: Section 33(3) of the Slovak AML Act. (in Slovak: zákon č. 297/2008 Z. z. o ochrane pred legalizáciou príjmov z trestnej činnosti a o ochrane pred financovaním terorizmu a o zmene a doplnení niektorých zákonov).*

Conclusions

In recent years, the legislation on money laundering and terrorist financing within the European Union has developed particularly actively. In less than five years, two new pieces of legislation have been drafted, bringing about fundamental changes to the existing anti-money laundering and anti-terrorist financing regime. The requirements set out in the V. AML Directive were mainly based on the need to regulate newly established entities and innovative financial instruments. To that extent the V. AML Directive focuses at, *inter alia*, virtual currency and the introduction of a single register of ultimate beneficial owners and a register of payment accounts.

The obligation to transpose the V. AML Directive into national law follows from the membership of the Slovak Republic in the European Union. The transposition of the above-mentioned directive itself had both, positive and negative, consequences on the Slovak AML Act. The former being primarily a matter of narrowing the scope of obliged entities by setting a minimum amount of monthly rent or the value of transactions (works of art, collectors' items, etc.). The latter represents an increase in administrative costs, for example required for procuring the monitoring of transactions carried out by clients of high-risk countries.[39]

In respect of a process of transposition the V. AML Directive into national law, we see the challenges posed by the late transposition into the Slovak AML Act. The original Explanatory Report to relevant amendment to the Slovak AML Act assumed an earlier date for the changes to take effect, which was set for the beginning of January 2020.

Moreover, we see fundamental problems in the incompleteness or inadequacy of the regulation of individual areas regulated by the V. AML Directive. We refer to Haffke's comments on the incorrect definition of the term virtual currency or the sufficiency/appropriateness of measures in the field of electronic identification of persons and clients from high-risk countries. The cost of adjusting changes for individual financial institutions is also questionable.[40] In addition, as

[39] *For further details see: Specific impact report; Explanatory Report (in Slovak: Doložka vybraných vplyvov; Dôvodová správa) to Act No. 279/2020 Coll. amending Slovak AML Act.*

[40] *For further details see: Specific impact report; Explanatory Report (in Slovak: Doložka vybraných vplyvov; Dôvodová správa) to Act No. 279/2020 Coll. amending Slovak AML Act.*

discussed above, the requirement to adjust the amount of electronic money transactions remains a problem.

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ENVIRONMENTAL TAXATION: THE EU PARADIGM AND ITS IMPLEMENTATION INTO UKRAINIAN LEGISLATION

The work investigates the problem of global scale – reducing anthropogenic pollution of the environment by choosing an optimally effective system of environmental taxation. The issue has been discussed at international forums by international organizations and world-leading countries.

To motivate the process of implementation of the advanced foreign experience of legal regulation of environmental relations in the tax system of Ukraine the authors have described the operation mechanism of domestic environmental tax fixed in the Tax Code of Ukraine as well as international experience in the formation and regulation of environmental taxation by analyzing the key positions of foreign scientists, statesmen, community leaders and politicians delivered to the public in the course of the 20th Global Conference on Environmental Taxation in 2019 (GCET20).Based on the GCET20 materials the author outlines the principles and practices of building legal mechanisms for global environmental taxation as well as the methodologies of other market-based tools for greening the world economy and promoting a societal transition to technologies that are capable of ensuring the efficient use of natural resources and the low level of carbon dioxide emissions into the atmosphere. Considering the best global practices, there are suggested the directions of reforming the domestic environmental taxation system, aiming to cover the sectors of the economy that produce the largest pollutant emissions into the atmosphere etc.

The environment is a complex concept that developed within its

framework two forms of interaction between society and nature – economic (consumer) and protective. The economic form consists in the consumption by a human of the beneficial properties of nature to satisfy their material and spiritual needs. Environmental protection is a prerequisite for the conservation of a human as a biological and social organism and the natural habitat. The issue of legal support for environmental protection is becoming increasingly relevant in the process of improving the system of socio-economic relations on a planetary scale. This issue is being discussed at the level of the United Nations, the European Commission, the leading countries and a number of international environmental organizations etc. The key issue that is raised in the overall array of issues is the reduction of anthropogenic pollution by choosing an optimally efficient environmental tax system, and the creation of a legal tax mechanism having the ability to minimize the influence of the eco-destructive factors impacting the environment both directly and indirectly, as well as on goods and services that are or may cause natural hazards.

In Ukraine, unlike the vast majority of countries of the world, there is a state-legal uncertainty regarding the way to establish the optimal form of interaction between the humans and the environment and further formation of effective vectors of environmental taxation based on the preferred form of interaction.

Even though the issues of development and functioning of the ecological-economic mechanism of taxation and payment of interest for the use of natural resources have been investigated in the works of many specialists in the field of environmental, financial and administrative law, such as V.I. Andreytsev, H.I. Balyuk, A.I. Berlach, O.O. Veklych, A.P. Het'man, P.V. Yevdokimova, V.V. Kurzova, V.I. Kurylo, N.S. Makarova, L.H. Mel'nyk, A.A. Pylypenko, I.M. Sotnyk and others, however, the problem of ensuring the European paradigm of environmental taxation has not yet been adequately enshrined in the domestic tax legislation and the supposedly integrative oriented main strategic vectors of the tax policy of Ukraine.

Thus, the domestic legislative bodies, while building their system of legal regulation of socio-economic relations in the environmental sphere, have not yet completed the formation of a harmonized and balanced legal mechanism of environmental taxation as a regulator that would ensure the most efficient protection of humans and nature as the elements of the environment. A particular problem of modern domestic lawmaking is the complex imitation of European integration processes

in the field of environmental taxation in Ukraine. Representatives of national legal science, in our opinion, should update, investigate and provide rational advice on improving the process.

The information base for this study were legal acts of Ukraine, including the Tax Code of Ukraine as well as authoritative scientific positions of political and public figures and scientific works in the field of law, economics, ecology, statistical materials. The methodological basis of the research is the general scientific and special legal methods of cognition, the use of which provided a high degree of reliability of the obtained results.

Based on the above, the purpose of this study is an attempt to substantiate the need to implement advanced foreign models of legal regulation of environmental taxation in the tax system of Ukraine to change the existing paradigm of domestic environmental and legal relations between a human and the environment.

Therefore, the main objectives of the study are: 1) analyzing the mechanism of domestic environmental taxation; 2) characterization of international experience in greening social and political relations; 3) development of the legal paradigm to reform the domestic system of environmental taxation.

As a result of the state's search for its own model of socio-economic development, tax mechanisms in Ukraine are constantly changing and improving. The state is trying to find such forms of taxation that are most closely consistent with the tax psychology and culture of taxpayers; take into account their solvency and the size of tax bases. During almost 30 years of formation and development of the environmental taxation system in Ukraine, this problem has been exacerbated by the increase in the number of regulations, which made it impossible to do the proper application of environmental regulations in the implementation of tax obligations.

In the tax system of Ukraine, the system of environmental taxation includes the environmental tax as a nationwide mandatory payment, paid on actual volumes of emissions into the air, discharges of pollutants into water bodies and disposal of waste, including radioactive [1, p. 124].

Based on the analysis of the Tax Code of Ukraine (hereinafter referred to as the TC of Ukraine), we will give a brief description of the legal mechanism of tax assessment for the domestic environmental tax. Therefore, environmental taxpayers are economic entities that carry out: 1) the emission of pollutants into the air by stationary sources of

pollution; 2) discharges of pollutants directly into water bodies; 3) disposal of waste; 4) generation of radioactive waste (including previously accumulated); 5) temporary storage of radioactive waste by their manufacturers beyond the specified conditions of the license of the term (clause 240.1, p. 240) [2].

The objects of taxation with environmental tax are: 1) the amount and types of pollutants that are: a) released into the atmosphere from stationary sources; b) discharged directly into water bodies; 2) the amount and types (classes) of disposed waste; 3) the amount and category of radioactive waste generated as a result of the activity of economic entities and/or temporarily stored by their producers beyond the specified terms of the license; 4) the volume of electricity generated by operating organizations of nuclear plants (NPPs) (p. 242) [2].

The order of administration of the environmental tax in 2020 (at the time this article was written) has not changed. However, in 2019, changes were made to the general tax administration rules to identify environmental taxpayers in respect of carbon dioxide emissions from stationary sources of pollution and the rates of this tax and provided the mandatory completion of a separate Annex 1 to the declaration by such taxpayers, concerning their obligations for carbon dioxide emissions [3].

As an intermediate summary, it should be noted that the process of domestic environmental taxation is regulated by Articles 240-250 of Section VIII of the TC of Ukraine [2], which determines the tax base, rates, and sources of payment and terms of payment of taxes, penalties to taxpayers for violation of tax legislation. Besides, the sources of environmental taxation include the laws of Ukraine "On Environmental Protection" [4], "On Stimulating the Development of Regions" [5], "On the Basic Principles (Strategy) of Ukraine's Environmental Policy for the Period until 2030" [6] and other laws and regulations.

To achieve the purpose of this study, we will compare the paradigm of the domestic economic and legal mechanism of environmental taxation with international and foreign trends. First of all, let us pay attention to the fact that Western European countries have initiated the greening of public relations and have embarked on the path of "greening" their economy for quite a long time. After all, as early as the 1980s and 1990s these countries have begun more intensive use tax instruments to create environmental friendly behavior of its citizens. This was the period of the so-called environmental tax reforms (hereinafter referred to as ETR) [7]. In the 2000s, at the level of the European Union (hereinafter – EU) was formed by a mechanism of

environmental taxation – “carbon taxes”, introducing a “minimum tax rates for energy and emissions trading system for greenhouse gases” [8].

Attention should be pain to the fact that there is no single no single unified system of such payments in Europe. The term “environmental tax” is used to collect statistics on the receipt of such payments and is interpreted as a tax, the tax base of which is a physical unit that has a specific, proven negative impact on the environment. In view of the above, environmental taxes in the EU include the following groups of payments:

– energy taxes – taxes on energy products, including coal, petroleum products, gas, electricity, fuel, etc .;

– transport taxes – payments for the import, operation, disposal of vehicles, their sales and resales;

– taxes on environmental pollution – payments for direct emissions of pollutants into the air, discharges into water bodies, noise pollution;

– taxes on the use of natural resources – for mining, water abstraction, etc.

From this list, it is clear that the environmental tax in the EU covers a much wider range of mandatory payments than the concept of “environmental tax” under domestic law. It is worth noting that the lion’s share of revenues is generated by energy and transport taxes – about 2/3 of all revenues from payments related to the environment. Taxes on resource use and pollution in the EU provide much less revenue. However, even under such conditions, these revenues are tens and hundreds of times higher than revenues from similar payments in Ukraine, if calculated in shares of the total amount of tax revenues [9].

Specifying the international experience in the development of the environmental tax system, it is advisable to draw more attention to addressing the above issues within the framework of the 20th Global Conference on Environmental Taxation 2019 (hereinafter referred to as GCET20). This conference is being held to ensure the exchange of environmental taxation practices, as well as other market-based instruments for greening the world economy and facilitating the transition of the world society to use technologies capable of ensuring the efficient use of natural resources and low levels of carbon dioxide emissions.

At GCET20, representatives of government, international organizations and business entities, as well as scientists from different countries, discussed the economic and legal issues of environmental taxation, its principles, as well as ways to transition to a low carbon

economy and resource-efficient production and consumption models. The general conclusion of the solution to the problem raised was the recognition of the need for reform in such areas as finance, trade, land use, etc.

In the course of the work of GCET20, in our opinion, one of the important scientific problems is the prospects for the transition of states to environmental taxation and the introduction of ETR. We are positive that the following conclusions and suggestions should be noted in more detail:

1. Senior Legal Advisor for the Swedish Ministry of Finance S. Akerfeldt noted that carbon tax rate increases gradually in Sweden for nearly 30 years and environmental taxation reform – is not "rocket science" and the governments just have to step over themselves and just do it.

2. The representative of France, Professor Christian de Perthuis announced the country's goal for the next 10-15 years is to reach an effective level of environmental tax like in Sweden. However, he noted that by the fourth year of reform, it had become one of the key causes of the Yellow Vest Revolution. Consequently, an important lesson is that environmental tax has a rather high impact on the poor.

3. Kurt Van Dender, Head of the Tax and Environment Unit Centre for Tax Policy and Administration Head of the Department of Taxation and the Environment of the OECD Center for Tax Policy and Administration, believes that the reform should result in small but growing budget revenues. He also noted an interesting trend as the emergence of a request from businesses to promote environmental taxation.

4. Jacqueline Cottrell of Green Budget Europe believes that ETR should be neutral in terms of budget revenues as the public receives it better [8].

Thus, the position of the above speakers allows concluding that an important issue for modern economic and legal science is ETR impact on budget and citizens' revenues. Indeed, enhancing the environmental component of the tax system by increasing the rates of environmental payments is unsupported in some foreign countries when such an increase has the effect of reducing taxpayers' income. However, European society demonstrates an understanding of the need for greening socio-economic relations. Moreover, environmental tax for the EU emerged as a new paradigm for further strengthening of tax pressure. Therefore, the basic idea of environmental taxation

development is that payment should be perceived irrespective of whether it was a tax, a limit payment, or a quota value.

The results of their research show that the EU's experience in building a model of environmental taxation is being sought by the People's Republic of China. After all, the environmental tax was introduced in this country only in 2018, and several pilot emission-trading systems have already been launched [8]. That is, the idea of "greening" the economy, along with EU member states, is supported by most developed countries in the world. After all, existing instruments of fiscal regulation of environmental policies provide broader regulatory policy in various areas (social cohesion, urban development, agriculture, health care, etc.) and can affect the overall stabilization of general tendencies: climate change, combating air pollution, greening energy production and consumption, the environmental consequences of urbanization, rational land policy, waste management, etc.

However, Ukraine has chosen its own direction of development when it comes to building an environmental tax system. For many years, the domestic legislator has been trying to control the level of pollution with a rather controversial success, while the spectrum of European states is focused on the taxation of energy carriers.

Problems of environmental taxation have never been the focus of domestic tax lawmaking. The model of taxation of activities that directly exploit certain environmental resources, in fact, has not changed since the end of the last century. A significant difference between the current environmental tax (has existed since 2011) and the former environmental pollution tax (which existed from the 1990s until 2011) is unlikely to be found.

The overall objective of any instrument of environmental policy is preventing pollution and minimizing the negative anthropogenic impact on the environment. The tools for implementing such a policy vary greatly in the degree to which the goal is achieved, its economic efficiency, its impact on different social groups, its ease of implementation, its political acceptability, and so on. European environmental taxation is a complex system consisting of various types of tax payments, a mechanism for trading emission allowances and a range of both tax and non-tax incentives. EU business entities pay most of their environmental taxes in the price of the energy products and electricity they use in their activities. Emissions are regulated through marketable pollution trading. These entities have the potential to benefit from tax incentives obtaining of which is aimed to encourage business

to adopt environmental technologies or production methods, manufacturing, processing, post-consumer recycling, etc.

Introduction of the system of ecological payments in Europe at the end of the XX century took place within the so-called green tax reforms – structural restructuring of tax systems with the introduction of environmental payments and simultaneous reduction of the tax burden on wages. As a result, a win-win situation developed: due to the introduction of environmental payments, environmental protection was stimulated, and income taxation was significantly reduced [9].

EU experience shows that greening of the relations in the national economy should be quite complex. The effectiveness of the domestic environmental tax system should be determined by several criteria such as environmental and economic efficiency, social and political acceptability and institutional feasibility. Ukraine needs to form a renewed paradigm, in particular, consider shifting the environmental tax burden on primary energy sources, take a broader approach to "securing tax" benefits for various categories of taxpayers (users with zero-waste production technologies [10, p. 1070], organic farming subjects [11, p. 195], etc.). For the tax system of our country, it is important to shift the emphasis from income taxation to the taxation of the negative impact on the environment. Increased environmental taxes rates should be compensated by a liberalization of the tax burden in other areas to avoid increasing the price of goods and services to the public.

The prospect of further development of the implementation of the state legal environmental policy is the substantiation of expediency to cover by ecological tax those sectors of the economy of Ukraine, where the subjects produce the highest emissions of pollutants into the atmosphere (fuel and energy complex, metallurgy, industry, building materials production).

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CONCLUSION

The development of the theory and practice of economic systems management takes place against the background of rapid changes in the environment and high rates of increase in the amount of information that the management of economic entities needs to process and analyze in making management decisions. Recently, the effective management of economic systems has been negatively affected by the pandemic caused by COVID-19, which has significantly increased the attention of the management system of economic entities to ensuring effective functioning. The developing of modern strategies, models and technologies of economic systems management and develop of appropriate mechanisms to ensure further development is of key importance. The dynamism and unpredictability of the market environment increase the likelihood of suboptimal and erroneous management decisions due to uncertainty and turbulence of the external environment, lack of crisis managers in most enterprises and unwillingness of personnel to accept changes due to pandemic consequences and lack of appropriate analytical tools. The creation and use of decision support systems in everyday management practice is one of the most important conditions for the successful operation of economic entities. When designing and using such systems it is necessary to pay priority attention to forecasting the development of situation and changes in the internal and external environment, modeling the description of the subject area and the consequences of management decisions, recognizing objects, their states and situations in the facility and management environment.

The results of the authors' study in the scientific monograph are devoted to solving the problems of developing and implementing new strategies, introducing modern models and technologies for managing economic systems and mechanisms for their implementation in the context of international economic integration, based on a rational resource concept and making optimal management decisions.

An important component of the scientific monograph is the developing of new models of controlling, economic security, financial support, the development of intellectual capital, the optimization of logistics flows with using modern world experience, the digitalization of business processes, areas of tourism support in certain regions in connection with restrictive measures through a pandemic, the use of resource-saving technologies, etc.

The results of the study, presented in the scientific monograph, reflect the theoretical-methodological and practical aspects of the introduction of mechanisms for economic systems management that ensure optimal use of the resource potential of economic entities in accordance with the current state and its possible development in the future.

It is established that the deepening of globalization processes, further spread of the pandemic and the imposition of appropriate restrictions, creates new requirements for public policy to improve and create conditions for effective of economic systems management. Ensuring the effective functioning and sustainable development of economic entities is primarily due to the introduction of innovative activities, the action of factors aimed at supporting the development of advanced in technique and science, technologies. Innovation factors are decisive in the economic systems management and serve to accelerate, the permanence of the innovation process and development, the efficiency of economic entities. The search for new driving forces to ensure the sustainable functioning of economic entities, adequate to the current state of the world economy, has become a permanent task today, primarily due to the exhaustion of the factors of extensive economic development. The manifestation of negative trends in efficient management indicates the lack of a systematic approach to the management of innovative development and processes. This situation initiates the formation of strategies at all levels of government, which will be an effective tool for developing and implementing a system to increase the competitiveness of economic entities to stimulate their innovative and socio-economic development.

Given the current pandemic challenges and various financial-economic crises, modern scientific thought is aimed at developing a new model of economic systems management, based on the strategy of sustainable development of economic entities. Today, the transition to sustainable development is being transformed from defining the tasks of environmental protection, due to the slowdown in economic growth, to the tasks of achieving social stability and reducing risks in ensuring economic growth. The methodology of economic systems management in this case is based on a systems approach that allows you to combine within the ecological-economic system of heterogeneous structural elements that interact with each other. It is worth focusing on the need to use resource-saving technologies.

In our opinion, the creation of a modern system of economic systems management has three interrelated aspects: political, economic and administrative. At the heart of the political aspect of economic systems

management is the separation of powers and functions between central and regional executive bodies. A balanced integration of the interests of all parts of the state is needed. The economic aspect is related to the maintenance of the proper state of resources by economic entities, the developing of a reasonable system for updating certain types of resources through financial leverage and knowledge. The administrative aspect of economic systems management is related to the need to optimize organizational management structures, the formation of optimal organizational-legal structures.

An important aspect of the transition of the economy to the principles of sustainable development is the formation of organizational-economic mechanism for economic systems management. Such a mechanism is based on financial-credit support, the use of reserve and additional funds of economic entities and state support. The proposed mechanisms for economic systems management can reduce the time to developing and implementing management methods, and solve complex problems such as selecting and justifying the optimal organizational structure, assessing the economic efficiency of economic entities, as well as coordination of processes in general. At the same time, the high-quality implementation of the strategy will allow for the effective carry out of economic systems management, which will have a positive impact on the results of management the economic activity.

Particular attention in the scientific monograph is paid to the technologies of economic systems management, which are a set of defined operations and procedures that are entrusted to the management system of economic entities, which must be performed in accordance with the relevant methodology (set of methods, approaches and technical means) within the established time intervals. To achieve the best effect, the personnel system of economic entities of all levels and cycles must have an accessible communication network. The effectiveness of management decisions in the technology of economic systems management in this case will depend on the successful combination of analytical, technical methods and intuition of all involved in this process.

The research results showed that in the context of international economic integration the ensuring of efficient economic activity is based on strategic management of economic systems, which combines a combination of methods of organization and competition of business to meet consumer needs and achieve goals. In the conditions of pandemic crisis, changing the paradigm of strategic management of economic systems, due to the objective requirements of state the market

environment, draws attention to the need to choose those models, technologies, methods, resources of economic entities that best meet their potential and the situation in which they are. In our opinion, practical steps towards the introduction of scientifically sound principles of changing the paradigm of strategic management of economic systems should consider the following areas of activity: improving the efficiency of the management system; increasing the efficiency of economic entities, expanding the potential of their activities and creating appropriate conditions for planning and implementing changes; strengthening the relationship between the subsystems of strategic, tactical and operational management; carrying out analytical activities and monitoring of the environment of economic entities in order to identify the current situation and its projected changes; organizational support for the implementation of changes, etc.

When planning and implementing changes, particularly in the area of strategic management, it is important to identify the effects that may arise. This is possible through the use of methods for estimating the additional benefits to economic entities from such activities. Perform this task is possible by identifying hidden opportunities that may arise as a result of relationships that create additional benefits for economic entities and manifest themselves in certain circumstances, including negative changes, which allows you to reorient or refocus activities (diversification). Any economic system has many combinations to attract and use the available resource potential; in addition, each economic entity has its own competencies for effective business conduct. All this can ensure of economic entities with additional economic results in the case of skillful management. Therefore, it is important today to use methods to identify hidden opportunities to achieve qualitative changes through the use of modern management technologies.

In general, the authors of the scientific monograph are convinced that in the context of international economic integration in order to improve and create and effectively function a modern of economic systems management should apply modern strategies, models, technologies within the chosen management concept, focus on ensuring effective functioning and development also to improve the integrated of economic systems management and subsystems in order to ensure effective management decisions, improve the organizational structure, improve the information management system of economic entities to be able to quickly implement decisions, use world experience to ensure the required level of quality to development of economic systems management.

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