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SOCIAL ENTREPRENEURSHIP AND WHAT DOES IT MEAN FOR MANAGEMENT OF CONSUMER BEHAVIOR

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ABSTRACT

The most important factor in the success of an organization on the market is to study and satisfy the needs of the end customer of the product/service. The exclusion and insufficient consideration of the interests of consumers of social services is not only equivalent to the imposition of these services, but also leads to a significant increase in costs in the implementation of measures aimed on improving the quality of life of the population. By including these interests as the forces of self-movement of the population in the service mechanism, it is necessary to create conditions for the self-organization of citizens, who are choosing themselves the services they need and the ways services are provided. However, neither state nor companies are ready, due to a number of factors, to solve this problem. Under these conditions, there is an opportunity for the development of socially oriented enterprises. The aim of this work is to study the evolution of social entrepreneurship in the world space. To achieve this goal, the concept of "social entrepreneurship" was clarified, the practice of developing social entrepreneurship worldwide was studied, periods of development of social entrepreneurship were identified, and the existing Ukrainian experience in this matter was presented. The purpose of this article is to analyse works devoted to the study of social entrepreneurship: the definition of the conceptual framework, its essence and concept; identifying characteristics of its influence on consumer behaviour management, signs and characteristics of social enterprises; types and motives of social entrepreneurs.

Keywords: Entrepreneurship, Social entrepreneurship, Management, Consumer behaviour, market

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INTRODUCTION

Social entrepreneurship is becoming popular all over the world. It occupies a place in line with such universally recognized phenomena as non-profit initiatives, charity, and social responsibility. The existence of social problems is an inalienable attribute of any society, the reason for this is the impossibility of providing all members of society with equal opportunities for self-realization in all spheres. In social entrepreneurship, a person places higher demands on the ratio of economic efficiency and social justice, as a result of which social entrepreneur decides to independently deal with a problem, which is a kind of annoying factor to the society.

Being a promising and fast-growing area of research, the concept of social enterprise is still insufficiently studied, which is confirmed by a large number of theoretical and limited number of empirical studies in this area. The concept of social entrepreneurship is multifaceted and reflects a wide range of its inherent tasks and features. Scientists continue to study the entrepreneurial process, entrepreneurial behaviour and consider the social needs in social entrepreneurship.

The British entrepreneur Florence Nightingale in the nineteenth century helped to improve conditions in the hospital during the Crimean War, thereby reducing the mortality rate, her compatriot social entrepreneur Andrew Moson received the title of peer in 2007 for his work on economic and social renewal and improvement of urban areas. He was the author of the book “Social Entrepreneur” and the manager of the company “Andrew Moson and Partners”, which spreads his experience.

The term “social entrepreneurship” appeared in the academic world in the 1990s thanks to the efforts of researchers Bill Drayton, company founder Ashok and Charles Leadbeater. In addition, in 1991 S. Wadad published a short article on social entrepreneurship (Certo & Miller, 2008).

Jan-Urban Sandal has been studying phenomena of social entrepreneurship over decades and is directing Fil. Dr. Jan-U. Sandal Institute, one of the main directions of research of this institute is social entrepreneurship. Jan-Urban Sandal defined social entrepreneurship as a special form of management, which purpose is to run a production function in such a way as to ensure the increase of value for all the participating parties in that function (Sandal, 2004).

Social entrepreneurship as a profession and field of study was presented by Gregory Dees, director of the Centre for the Development of Social Entrepreneurship at Duke University. He noted that social entrepreneurship is distinguished by the dominant role of social change, calling it “striving for a result associated with a mission” (Dees, 2007).

Social entrepreneurship has been recognized by the public sector, scientific interest in this area has become noticeable since 1998 and has been actively increasing over time (Nicholls & Cho, 2006).

Michael Young played a major role in the development of social entrepreneurship. Harvard professor Daniel Bell named Yang the most successful entrepreneur in the world in the field of social initiatives, thanks to his role in setting up more than 60 organizations around the world, including several UK social entrepreneurship schools.

A successful example of social entrepreneurship is the activity of the “Grameen Foundation” under the leadership of Muhammad Yunus, who formulated the image of social business in its current sense. The essence of his project is to create and subsequently replicate the new institutional model of microfinance, which is an effective tool to combat the problem of poverty and stimulates the economic activity of the relevant segments of the population.

Methodology

Descriptive and analytical research design is followed in the study. The major concern is to review of social entrepreneurship, its practice and development. In addition, was studied the influence of social entrepreneurship on effectivity of consumer behaviour management.

Results

The advantages of interest in studying social entrepreneurship are its solution of social problems using innovative technologies (Thompson et al, 2017) and the creation of hybrid enterprises, where innovative entrepreneurial activity is guided by a strategy of ensuring both social and economic growth. This activity is different from the activity of entrepreneurs of traditional entrepreneurship of a public and private nature (Wallace, 1999).

In developing countries, social entrepreneurship, using innovative and cost-effective methods, contributes to solving basic social problems, such as reducing poverty rates and eliminating gender inequalities (Chell et al., 2010).

In underdeveloped countries, where traditional state initiatives are not able to satisfy the entire social deficit, social entrepreneurship has a clear application. Problems are exacerbated in a social context, characterizing massive inequalities in education, housing, and form high unemployment and poverty rates. Under these conditions, social entrepreneurs play the role of agents of change by addressing these problems by adopting a mission to create and maintain social value and use new opportunities to provide this mission (Urban, 2013).

The concept of social entrepreneurship is constantly criticized, as it is difficult to identify problems for its research (Mair & Martí, 2006; Weerawardena, Mort, 2006; Choi & Majumdar, 2014). Different interpretations of social entrepreneurship may be associated with the consideration of entrepreneurship and society (Steyaert & Katz, 2004).

The author argues that the business space may depend on discursive, social and geographical factors. The discursive factor focuses on the cultural, environmental, social and economic dimensions of entrepreneurship. Social - considers entrepreneurship as a social process that includes participants and stakeholders. The geographical factor is the measurement of the spatial categories of social entrepreneurship between regions, peoples and surroundings. The conceptual foundations of social entrepreneurship are determined by (Austin et al., 2006):

- Market failures, that create various business opportunities in the provision of public goods;
- Mission, as a fundamental distinguishing feature of social entrepreneurship;
- Resource mobilization processes, aimed at creating a social goal and consisting in making a profit;
- Formation of hybrid forms of social enterprises;
- Efficiency of social impact.

Social entrepreneurship can enrich more traditional areas of research, such as structuring theory, institutional entrepreneurship and social movements (Mair, Martí, 2006). Supporters of the theory of social actions believe that it can be used to understand and explain the most diverse social phenomena from individual acts of individual behavior to large-scale socio-historical processes. The genesis and development of this theory are closely connected with the names of such sociologists as M. Weber, F. Znanetsky, and T. Parsons.

In their studies, researchers note the dynamic, disequilibrium aspects of the environment in which innovations take place in social entrepreneurship.

The concept of the self-organization of Schumpeter's theory stands out, arguing that the success of the market system lies not in effectively achieving static optimal equilibrium, but in the ability to make dynamic changes in technology and achieve dynamic growth through such changes (Tapsell & Wood, 2010). Thus, the historical and cultural context in which innovations occur is important for the development of social entrepreneurship.

As a direction of social entrepreneurship research, other authors point out achieving a sustainable competitive advantage in the implementation of a social mission, which is the main result of organizing social entrepreneurship (Weerawardena & Mort, 2001). At the same time, they note that social entrepreneurship should be modelled within the wider competitive environment in which this activity takes place (Weerawardena & Mort, 2006). The studies emphasize that social entrepreneurship is a limited multidimensional construct, where the realization of the organization's social mission and its commitment to sustainability is necessary, while at the same time it should be strongly influenced by a dynamic environment.

The concept of social entrepreneurship can be complex, combine several sub-conceptions: social enterprise, social entrepreneur, social significance, market orientation and social innovation (Choi & Majumdar, 2014).

This concept is based on the theory of the researcher Gallie, which was put forward in 1956. In it, author examines entrepreneurship by the example of the "art" concept and defines its seven main criteria: compatibility, internal complexity, describability, openness, aggressiveness and defensiveness, originality of an instance and progressive competition (Gallie, 1956).

Thus, understanding of social entrepreneurship is forming cluster concepts raised in the researches by authors all over the world. The analysis of articles revealed controversial conceptual differences that influence the definition of social entrepreneurship. Social entrepreneurship can be viewed as a model of political transformation, process or activity of entrepreneurial behavior, founder of social initiatives, creating a social enterprise and interest in material results.

Numerous studies of the essence of social entrepreneurship revealed shows that there is still no single definition of the concept of "social entrepreneurship". The literature review is fragmented and there is no single consistent theoretical framework. The conceptualization of social entrepreneurship does not take into account the unique characteristics of social entrepreneurs and the context in which they should work.

Concepts of social entrepreneurship

The definitions of social entrepreneurship overlap with classical approaches to the analysis of entrepreneurship, as many scholars claim. The author emphasizes that the key word in the category of social entrepreneurship is "entrepreneurship", and "sociality" plays only a modifying role.

The key properties of entrepreneurship are the creation of value as a result of moving assets to a higher productivity area (Say); "Creative destruction" as a transformative activity (Schumpeter); search for changes

and use of opportunities (Drucker). All this applies equally to both entrepreneurship and social entrepreneurship, each of which offers a new value (benefit), overcoming the well-established equilibrium (Batalina et al., 2007).

The researchers have already proposed a classification of definitions by social entrepreneurship: these definitions are inclusive and exclusive. Inclusive definitions include the elements: “the number of subjects, social ideas, opportunities and the system of organizations”. Exclusive definitions are distinguished by a smaller number of listed elements (Swanson & Zhang, 2010).

One of the main definitions of social entrepreneurship is the mission with the creation of social values, the study and formation of new opportunities and innovations with unlimited use of resources, as well as a high sense of responsibility for entrepreneurship (Dees, 1998).

Many authors believe that “social entrepreneurship encompasses activities and processes that determine and use opportunities to improve the well-being of society by creating new enterprises or managing existing organizations in an innovative manner” (Zahra et al., 2009).

Authors S. Bacq and F. Janssen consider social entrepreneurship as a multidimensional and dynamic model, previously proposed by Gardner, combining interrelated elements: social entrepreneur, business process, social organization, reflecting its characteristics and development strategy and the environment (Bacq & Janssen, 2011).

Within the framework of economic theory, social entrepreneurship identifies the main characteristic — an innovative component due to the fact that entrepreneurship is defined as the process of creating something new that has value, or as a type of management based on the innovative behavior of the managers of the enterprise; and a social entrepreneur is defined as a self-organizing subject of economic activity.

The absence of a unifying paradigm in the field of social entrepreneurship has led to the formation of a large number of its definitions. Currently, researchers continue to actively explore its conceptual framework, explore the essence of social entrepreneurship, discuss the contribution of social enterprises to the creation of social wealth, and explore the typology of search processes, which leads to the discovery of opportunities for creating new social enterprises.

Social entrepreneurship is based on the notion of “entrepreneurship”, that is, initiative self-directed activity (self-organizing in essence) of citizens, aimed at making a profit or personal income, carried out on its own behalf, under its property responsibility or on behalf of and under the legal responsibility of a legal entity. Social entrepreneurship is an innovative activity, initially aimed at solving or mitigating the social problems of society on the basis of self-sufficiency and sustainability (Arai & Burmistrova, 2014).

The study of various definitions of social entrepreneurship (Austin, 2006; Nicholls, 2009) allowed to take as a basis a definition that combines the definitions of many authors: social entrepreneurship is an entrepreneurial activity or a process that creates the possibility of a hybrid partnership, aimed at establishing social responsibility and solving problems in the social protection system, ensuring systematic social changes

and generation social values by the creation of new organizations or innovative ways to manage already existing organizations.

A feature of social entrepreneurship is the way in which it works, that is, the forms and mechanisms of its implementation. Here the central role is occupied by the concepts of “entrepreneurship” and “innovation”. The task of the social entrepreneurship is to solve social problems by an innovative method, by creating a self-replicating mechanism for providing social benefits. In essence, this is the source of the synergistic effect of the interaction of the entrepreneur’s existing resources and the needs of purchasers of social services.

The result of socially oriented entrepreneurial activity is social innovation (Nyssens, 2006), that is, a new way to solve a social problem. The significance of social innovation - its value - is determined by the ability to meet the social needs of the recipient of the service in a new, convenient for him/her, way. The most important result of the social entrepreneurship is the growth of social value added by innovation - improving the quality of life of the population due to:

- Compliance (achievement) of the life standards minimum quality;
- Finding new ways to solve social problems;
- Synergistic effect of the interaction of resources and self-organization of consumers.

The borderline of social entrepreneurship (between entrepreneurship and charity) necessitates the allocation of criteria inherent to the social entrepreneurship as a phenomenon. These criteria are (Golubovic & Bullain, 2006):

- Social mission;
- Entrepreneurial approach;
- Innovation (innovation in solving social problem, by new combination of resources);
- Replicability;
- Self-sufficiency and financial sustainability.

The starting point in such business development is a social problem that the entrepreneur is trying to solve. To achieve his/her goals, entrepreneur must be able to see the situation in a new way and use new opportunities, effectively use available resources, and possess the necessary activity and motivation.

Many social problems could not be solved within the framework of standard approaches. Therefore, the success of a socially oriented business is largely based on the use of an innovative (sociocultural) approach. This refers to the use of new approaches in solving a specific social problem, the use of a new combination of resources, launching of a new product or service on the market.

The scale of a business is one of the conditions for its success (Swanson & Zhang, 2010). Therefore, one of the criteria of success for social entrepreneurship is the possibility of its replication (maximum development within the borders of the current territory, coverage of new territories). A successful business should provide a constant cash flow, be self-sustaining and financially sustainable. A socially oriented business involves a certain balance between social objectives and the commercial component. Money here is not an end in itself,

but a means for achieving the social goals of the organization. Profits are mainly reinvested basing on the goals into a business or local community, and do not flow fully into the pockets of shareholders and owners.

The scope of the potential of the social entrepreneurship is the non-profit sector (Stryjan, 2006). The purpose of the activities of non-profit organizations is the satisfaction of primarily domestic and spiritual needs. Primary areas of activity for non-profit organizations are culture, healthcare, legal and educational services, science, and sports. These are areas of activity that are insufficiently financed by the state. In turn, purely commercial organizations are not ready to invest in these areas of activity due to the economic unprofitability of investments.

On the contrary, the goal of the activities of social enterprise is to alleviate the existing social problems by using mainly the mechanism of self-organization and innovation. Profit is not the purpose of these organizations. Work is carried out on the border of charity and profitability. The proceeds are directed to the further development of organizations.

Using the resource of self-organization allows not only reducing the costs of social services in comparison with existing commercial organizations (for example, nanny / nursing agencies), but also improves the quality of life of the population by identifying and meeting the needs of the population for those services that do not appear within the framework of the existing social infrastructure (for example, the provision of services for the delivery of products and medicines to the home).

Thus, the role of social entrepreneurship in the economy is to increase the overall economic efficiency by introducing into the economic turnover those resources and mechanisms that were not previously used as such (for example, a more developed level of property management culture). This applies to unused material and human resources, as well as new combinations of available resources.

Non-governmental organizations and social enterprises

In the early stage of studying the phenomenon of social entrepreneurship, researchers identified two types of social enterprises: based on pure philanthropy and based on pure commerce. Somewhat later, C. Alter proposed the theory of hybrid organizations (Popov & Veretennikova, 2016). Features of various models of social organizations are reflected in tab. 1. Unlike a socially responsible business, the motive of a social entrepreneur is a social effect, a solution to a social problem.

Thus, the differences between the non-profit sector, commercial sector, socially responsible business and the social enterprise can be identified based on objectives, reporting and distribution of profits. The goal of the social enterprise and non-profit organization is to fulfil the mission, the profit is reinvested in the realization of the social mission, that is, the solution of the socially significant problem; reporting is carried out to partners and stakeholders. In contrast to this, for a traditional commercial enterprise the main and only goal is to make a profit, which is distributed among the participants and reporting is carried out to shareholders.

Table 1. Features of different models of social organizations

Organizations	Based on pure charity	Hybrid	Based on pure commerce
Motives	Good will	Mixed	Personal interest
Methods	Determined by the mission	Determined by a combination of mission and market	Determined by the market
Goals	Creating social value	Creating social and economic value	Creating economic value
Purpose of income	Directed directly to the implementation of the NGOs mission (determined by the law or by organization's policy)	Reinvested on the implementation of the mission, or on operating expenses and/or retained for the expansion and development of the business (can be partially redistributed among the participants)	Distributed between shareholders and the owners

The experience of social entrepreneurship shows that solving social problems on the basis of entrepreneurship is often more effective than using standard government mechanisms or non-profit organization. This thesis underlies the theory of hybrid non-profit organizations. The basis of the activities of organizations of this type are the following postulates:

- Combination of goodwill and personal benefit to the leadership of the organization;
- Working methods are determined not only by the social mission, but also by market conditions;
- Product (service) being created represents not only social but also economic value;
- Profit is fully or partially invested in the further expansion of the business (depending on the organizational and legal form of the enterprise).

If the first part covers the expenses of social organization, is limited in time and does not fundamentally change the nature of the work of social organization, then the second type is systematic in nature, is associated with ongoing operational activities and can serve as the basis for becoming a social enterprise. According to K. Alter, the criteria for attributing an enterprise to an non-profit organization or a social enterprise are not so much the scale of the profitable activity, its share in the total income structure or the amount of personnel employed in it, but whether the enterprise functions and is managed “as a business” (Defourny & Nyssens, 2010). The latter means that income-generating activities are strategically designed for the production of social / economic benefits focused on long-term goals and are constantly being reproduced. Features of motivation and distribution of income in hybrid organizations is given in tab. 2.

Table 2. Features of motivation, responsibility and distribution of income in different types of organizations

Spectrum of hybrid organizations					
Traditional NGO	NGO with profitable activities	Social enterprise	Socially responsible business	Company which is applying social responsibility to its activities	Traditional profitable enterprise
➤ motivation, which is determined by the mission; ➤ responsibility to stakeholders; ➤ reinvesting income into social programs or operating expenses			➤ motivation on generating profit; ➤ responsibility to shareholders; ➤ profit is distributed among shareholders

Social entrepreneurship is a business aimed on solving (mitigating) social problems (Nyssens, 2006). Entrepreneurs working in this area have a double task: first, to satisfy the needs of the population for those social services that cannot be provided in a quality manner within the framework of the existing system of organizations that make up the social infrastructure; secondly, to improve the quality of life of certain categories of citizens due to their inclusion in the labour activity, if for a number of reasons they were turned off from it (retirement, disability, etc.).

Social enterprise as well as purely commercial structures operate in a competitive market. Therefore, it is necessary to consider the specific features of the competitive environment of social entrepreneurship. One of the competitors of social entrepreneurs is the state, more precisely, the state system of social support for the population. As part of the ongoing social and economic policy, the state guarantees that certain categories of citizens to receive social support (the provision of free medical care, social services are disabled for citizens, etc.). However, for a number of reasons (economic downturn, economic crisis), the state cannot provide social protection to all citizens in need.

The lack of resources, personnel, as well as the lack of necessary services in state (municipal) organizations does not allow the provision of social services with the required level of quality. Moreover, here for a socially oriented organization, emerges the possible market, in which enterprise can develop. A feature of a socially oriented organization is its functioning at the intersection of charity and entrepreneurship. Consumers of goods and services of these organizations are people with low income. Therefore, the competitive advantage of social entrepreneurs, compared with purely commercial organizations, is the lower price of manufactured goods and services provided.

Close cooperation with the authorities allows socially oriented organizations to set lower prices by reducing individual items of expenditure (lower rental rates, provision of municipal premises for use free of charge, subsidies for separate expenses, tax holidays) (Arai & Burmistrova, 2014).

The competitive environment in the field of social entrepreneurship has a number of features. First, a competitor may be a state represented by state institutions. However, in this case, competition is not an alternative one (either enterprise or the state), but an additional one.

Due to various factors, budgetary institutions cannot satisfy all needs of the people and, therefore, provide only basic services to citizens. As the reason, entrepreneurs may offer to the market new social services and even interact with government agencies and state institutions (for example, to offer of nursing services in hospitals). Competition with purely commercial organizations is possible based on lower costs of goods and services, provided while they retain their proper quality.

Features of the consumer behavior management in socially oriented organizations organizations

Non-commercial product. From the standpoint of social marketing, the product represents the desired behaviour and the associated benefits from the implementation of this behaviour. The very concept of

“behaviour” also includes material objects that can be sensed, proposed in order to maintain and promote the planned changes in the behaviour of the target audience (David & Day, 2011). With reference to a socially oriented business, examples of traditional three levels of a product (basic product, real product, expanded product) may look as it is presented in tab. 3.

Table 3. Examples of three product levels in a socially oriented business

Basic Idea of the Product	Actual Product	Expanded product
<i>Project "Healthy Lifestyle"</i>		
Longevity and health	Quit Smoking	Trainings
Reducing the risk of heart attack	Measuring blood pressure regularly	Special equipment (tonometer)
Protection against preventable diseases	Strengthen children's immunity in time	Wallet-sized immunization card
Natural immunity for children and nursing mothers	Breastfeeding for at least 6 months	Home Consultation with a medical specialist
<i>Project "Environmental Protection"</i>		
Improving water quality	Growing native plants only	Landscaping work
Protection of children, pets and wildlife from toxic chemicals	Careful study of instructions and measures of pesticide use	A magnifying glass attached to a pesticide container

The price for the product/service of social enterprise. A special feature of pricing in such conditions is the consideration of consumer motives. According to Hermann, consumer behavior is impacted by four factors: benefits, costs; other consumers; self-efficacy (Hermann, 2015). In accordance with these factors, while purchasing a product, the buyer always faces the need to make a choice - or make an exchange - between benefits and costs. In the private sector, costs are usually expressed in monetary and temporal terms, but social organizations can often include pain, embarrassment or loss of self-esteem, guilt, and many other non-monetary costs associated with making difficult decisions.

Distribution of the product/service in social enterprise. A very important marketing tool is the place of purchase of the product. In marketing for social enterprises, this is the place where and when the target audience can get the opportunity to show the desired behavior, to acquire the required material objects and associated services. The main purpose of creating and developing a distribution system for a non-commercial product is to develop strategies that will make it more convenient and pleasant, as far as possible, to purchase a non-commercial product. This marketing tool involves the development of logistic channels for distribution, delivery of the finished product from the place of production to the consumer. Marketing channels are the set of measures (independent or dependent) that allow a product / service produced / provided by a manufacturer to reach its consumer.

In some cases, the funding of social activities is provided through raising the necessary funds through donations, grants, social procurement, etc., thus, organization have to deal with two interrelated tasks in the field of marketing: activities to raise the necessary funds and resources; usage of attracted funds and resources in accordance with the mission of the organization.

Maintaining a balance between the interests and expectations of these two groups is often a very difficult task. For example, donors, as well as many organizations that provide intermediary services on an unpaid basis, may require that the funds they provide (any resources) be used to provide services to a particular group

of the population, while the leaders of the organization believe that their programs should be aimed on another group of people (Morris & Hirschman, 2012). In addition, “third parties” are often interested in the activities of the organization — for example, health insurance companies, politicians, former clients who, one way or another, may or may not support the activities of the organization, as well as the media (Morris & Hirschman, 2012).

Ideally, participants in the marketing channel of any organization should strive to coordinate with each other their goals, plans and programs, thus ensuring the maximum efficiency of the overall distribution system. That is, the maximum effect of the distribution channel’s work is achieved if the participants maintain certain partnership relations. Partnerships are based on close relationships, cooperation, trust and fulfillment of obligations by the participants of the marketing channel. The development of such relations leads to the creation of a solid marketing channel, in which the boundaries between its participants disappear.

Promotion of a non-commercial product/service. The main goal of product promotion in marketing for social enterprises is to make sure that the target audience knows about the offer, wants to get certain benefits and is ready for action (Wallace, 1999). For this reason, depending on the stage at which the target audience resides, the tasks of developing communications are different. Here it is necessary to understand that the behavior of a high degree of involvement does not change instantly, but changes over time. Therefore, in the marketing literature, it is proposed to break the long process of “behavior change” into several stages, as it is shown in tab. 4.

Table 4. Tasks of communication development depending on which stage the target audience is on the path of “behavior change”

Stage	The task for building communications
The preliminary stage, when members of the target audience do not think about the behavior that enterprise wants to change. This happens if they are not aware of the behavior, or they know, but for some reason it is unacceptable to them.	Informing the target audience about alternative actions and attempts to interest it.
The stage of reflection, when the beneficiaries weigh the costs and benefits of the proposed exchange, and are interested in the opinions of others and form an idea of whether they can adhere to this behavior.	Report on the positive consequences of choosing certain behaviors and the formation of role models.
The stage of preparation and action, when the beneficiaries think over their new behavior and are ready to act. It is only need for them to take the first step.	Formation of motivations for performing an action at a certain time and place and teaching them all necessary skills.
Stage of maintaining behavior when beneficiaries perform a one-time action, but there is a probability of returning to the old behavior.	Communicate the rewards for repeating actions.

The development of a communication strategy includes two important stages: the creation of message and choosing channels for its dissemination, or bringing it to the target audience. The first stage of the communication strategy is to generate possible messages (Lepeyko & Blyznyuk, 2016). There are different ways to create messages. One possible approach is to hold conversations with representatives of the target market and other influential persons (for example, through in-depth interviews or focus groups), listen to their wishes and reflect them in the message. Another way is to conduct brainstorming with the participation of key employees of the organization to generate different ideas. The third technique involves the use of some formal

deductive scheme to identify possible communication messages. The second stage of the development of a communication strategy involves the choice of channels for disseminating a message.

The most frequently used communication channels in Ukraine for the promotion of a non-commercial product are advertising and PR, printed materials, and personal sales (Popov & Veretennikova, 2016). The main functions of the promotion channels for socially oriented enterprise comes to the forefront of the fund raising function aimed at creating with potential donors a certain understanding of the organization and providing the donor with the necessary “encouraging” information to make a positive decision on financing the activities of NGOs.

Non-profit organizations use communication channels to create a positive image of the organization in the eyes of the public, in other words, to implement PR activities. Finally, by offering a certain message (from informing about past and upcoming events to presenting analytical materials and annual reports) and choosing a channel to bring it to the target audience, the organization seeks to make its activities more open and transparent for the external and internal functioning environment.

Usually, the mission and goals of non-profit organizations provide an understanding of who is the main target group of a given organization. The target audience in the broad sense is people whose behaviour can have a negative impact on themselves, those around them and society as a whole. Therefore, on the one hand, the target group of NPOs are the people touched by one or another social problem; on the other hand, these are all members of society who can support the organization and help solve a specific social problem (people of this category can become supporters or volunteers of the organization) or, on the contrary, contribute to the exacerbation of a social problem, etc. (Meyer & Johnson, 2015).

Each segment of the target audience requires careful study, namely: all sorts of motives, reasons, incentives that serve as the basis for a certain behaviour of members of the audience. The success of a social entrepreneur depends largely on the extent to which the product it offers to the market is able to meet the needs of the consumer. In other words, an entrepreneur should be aware of market trends, look for new opportunities for the development of his/her organization (forecasting market trends, finding new markets, finding new ways to mitigate social problems, offering new services to consumers). In other words, a social entrepreneur is an innovator who is ready to work constantly on himself/herself and his/her organization in order to realize social mission.

Any organization at the first stage of its development requires certain investments. Sources of financing socially oriented enterprises can be own or attracted funds. In the absence of own financial development resources, the founders of the organization can attract funding from social venture capital organizations - organizations that invest in the development of the non-profit sector of the economy. Social investment is one of the tools for implementing social programs of commercial companies and part of a company's strategy according to its mission. Social investment is a form of financial assistance allocated to the company for the implementation of long-term and, as a rule, partner social programs aimed on reducing social tensions in the

regions where the company operates and raising the standard of living in various sectors of society. Return of funds is not a prerequisite. The following advantages (or motives) of social investments are distinguished:

- Fame;
- Improving the image of the company on the local and national level;
- Improvement of relations with investors, investment attractiveness of the company;
- Associating with a high quality or prestigious event;
- Attracting new employees and retaining old employees;
- Access to the labor market, including the highly professional one;
- Strengthened customer relationships;
- New partners are attracted;
- Tax breaks.

Evaluation of the effectiveness of social investments is an objective final judgment about the comparison of the benefits and costs, which are aimed at making an investment decision on their implementation and a financial decision on their financing. Indicators of the effectiveness of social investment are (Slaughter, Sinar, Highhouse, 2009):

- Social effect - characterizes the degree of satisfaction of the population with the quality of life;
- Social efficiency - an indicator that determines the improvement of people's living standards;
- Socio-economic efficiency - an indicator that gives an idea of the economic efficiency of investments in the social sphere, taking into account the social effect achieved;
- Economic efficiency - an indicator reflecting the economic efficiency of the project based on the ratio of results and costs.

Among the modern trends in the development of social entrepreneurship, the problem of its globalization comes to the fore (Choi & Majumdar, 2014): global inequality in the distribution of wealth; growth of corporate social responsibility; market, institutional and government failures and the growth of distress in the social strata of the population; technological progress and general achievements that promote interest in the formation of investments, donations, partnerships with social organizations.

As the main social problems of society, which are necessary for solving by organizations of social entrepreneurship the following are distinguished: designing production in such a way that the surrounding nature is minimally damaged; helping people get out of the “pit of poverty”; finding use of the abilities of people in need of the workplace; improving the old and create new models suitable for solving social needs; solving social and environmental problems (Seelos & Mair, 2005; Neck et al., 2009).

The main factor that distinguishes social entrepreneurship from the traditional one is the availability of social opportunities that entrepreneurs can use. Social and environmental problems provide an opportunity for entrepreneurial activities for social entrepreneurs. Solutions of social problems in healthcare, education, problems related to poverty of the population, environmental problems are alternative business spaces usage of new technologies and innovations.

DISCUSSION

Social entrepreneur is identified as a person whose activities are aimed at exploiting opportunities to increase social wealth, creating new enterprises or managing existing organizations through innovative technologies. The concept of “social management” has been developed in scientific and educational literature on the sociology of management and the sociology of labour, social psychology and other social sciences. All this testifies the interdisciplinary nature of this field of research. However, the differences in interpretations of the basic terms, tasks, and problems of social management in various scientific and educational materials (Sandal, 2004) indicate that this area of knowledge is in its infancy, many questions remain little studied. In this regard, it is important before combining, synthesizing the achievements of different sciences, which will create a complex system of knowledge, to distinguish approaches from the point of view of each science, specify concepts and problems, and fill them with content related to the subject of a particular science.

This task also applies to the field of economics, where “social terminology” began to penetrate later than to other sciences (Dees, 2007) and where, respectively, there are more unexplored areas of social management, including CSR management, HR management, social entrepreneurship, social welfare state and others. Little studied questions become the subject of analysis of modern dissertation research in the field of economic sciences.

The proliferation of the new concept and phenomenon of social management can be found on many grounds, including the Ukraine. In vacancy announcements, as a rule, now not only the salary is noted, but also the presence of a social package. The positions of “social manager”, “deputy director for social policy”, “head of social facilities management” have appeared in a number of organizations and firms. In the classifier of educational specialties appeared specialty management (social and administrative). Social entrepreneurship, social responsibility of business, social assets of enterprises become the topics of scientific and practical seminars and conferences.

The increasingly active use of the concepts of socially responsible business, social entrepreneur, social package and others by economists and managers today testifies not so much about the impact of sociology on economics, but rather the development of new processes in the world practice of managing economic systems at the micro and macro levels. If sociologists tend to see elements of social management in different periods of history, then economists emphasize the novelty of the phenomenon itself, the objective character of its distribution as a new management style (Thompson et al, 2017).

The increasing role of human resource management in comparison with the management of material flows expands the functions of management, including in them as obligatory, social functions. This qualitatively changes management on all of its levels, and not just HR management. This is observed in the global economy as a whole, although new functions and characteristics of the new management style are spread unevenly across countries, regions and enterprises and continue to coexist with old forms and styles.

Today, positions of both economists and sociologists are similar that a qualitatively new management is the management based on extending the principles of humanization, which is implemented in modern requirements for education and the practical work of managers. Nevertheless, sociologists pay more attention to the system of social relations, insufficient knowledge of the social problems of production management, increasing tendencies associated with the imbalance of social space, the threat of the destruction of individual ties with society, the impoverishment of spirituality and culture. While economists focus on increasing the role of human capital and the image of the organization, their impact on the economic efficiency of the organization and long-term competitiveness (Wallace, 1999).

This influence has formed new approaches to the principles of management formulated at the turn of the 20th and 21st centuries. In the new system of requirements for professional competencies of the manager, important elements are: ability to communicate; loyalty to employees; the creation of an atmosphere conducive to the disclosure of the abilities of staff, its ongoing training, job satisfaction; creating an atmosphere of honesty and trust as a new institutional framework in economic relations with customers, customers, partners. From this broad point of view, any modern manager can be called a social manager.

It would be wrong to assume that economic rationalism, associated with the desire to minimize costs and increase profits, is becoming a thing of the past, as an outdated management model, as the usual social management is crowded out. The expansion of the social functions of management is dictated by changes in the economic environment. Changes in the systems of resources, needs and technologies determine new ways to achieve the same economic goals. Therefore, the above-mentioned principles of the new management are just based on the requirements of economic feasibility and rational economic choice, associated with the optimization models of "cost-benefit", which guide economists and managers.

CONCLUSION

In this work, in order to study the evolution of social entrepreneurship in the world space, the following results were obtained.

First, it is substantiated that the formation and development of social entrepreneurship in different countries of the world is heterogeneous. Its features depend not only on the current institutional environment, but also on the historical conditions in which this type of activity is formed.

Secondly, it is shown that the model of European or American social entrepreneurship was transplanted into the developing countries of Latin America and Africa through the active support of international organizations and foundations.

Third, the drivers for the development of social entrepreneurship have been identified. It is shown that a necessary condition for the creation of socially oriented organizations is a political and legal environment that allows the creation of socially oriented organizations, and for their successful functioning and development, socio-cultural conditions and the presence of institutions involved in the study, training and support of social entrepreneurship are important.

Fourth, the Ukrainian experience in the development of social entrepreneurship is presented, the conditions influencing the choice of the further path of development of social entrepreneurship are described.

The theoretical significance of this study lies in the systematization of research in terms of the development of social entrepreneurship in the global space. The practical significance lies in analysing the experience of introducing social entrepreneurship in various countries and studying the possibility of using social entrepreneurship to manage consumer behaviour.

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Conflict of interests

The authors declare no conflict of interest.

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APPLYING LEAN SIX SIGMA IN CONSTRUCTION. WORLD PRACTICE EXPERIENCE

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ABSTRACT:

Background: persistent problems faced across the world by managing and construction companies (increasing construction costs, unsatisfactory level of construction materials quality, lack of coordination and consistency between process participants, decreased profitability of principal contractors, subcontractors and suppliers, failure to meet deadlines and budget deficit, inconsistency and fragmentation of processes) can be eliminated.

Objective: a centralized and integrated approach is needed to identify, prioritize, find and eliminate the origin of problems, help to develop effective solutions and manage consequent activities to get necessary results.

Methods/approach: foreign experience analysis has proved that both the required approach, the methodology and the problem-solving tools in the construction industry are available – this is the Lean Six Sigma management methodology, acknowledged as industry leading across the world. Without exaggeration, it seems possible to evaluate the results of Lean Six Sigma methodology practical application as outstanding since they stay ahead of the curve of industry average performance indicators in such developed economies as, for instance, the USA and Great Britain. The Lean Six Sigma methodology is focused on achieving world-class quality by eliminating all types of losses, costs, overhead expenditure and creating value for consumers.

Results: to achieve this goal, the Lean Six Sigma deployment affects all construction project participants involved and acting in the common interest - the customer, managing company, principal contractor, subcontractors, product suppliers, equipment suppliers, designers, surveyors.

Conclusions: the concept of “Six Sigma” allow in a fairly short time and with own resources to achieve production and services cost reduction, service delivery time reduction, increase in the volume of performed work, decrease of the design cost.

Key words: Lean Six Sigma, construction, integrated supply chain, process cycle time, quality, waste, defects.

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INTRODUCTION

The development of the modern economic system of any hierarchical level is based on the constant pursuit of business entities to obtain competitive advantage for implementation of selected strategic objectives

(Jarmusevica et al, 2019; Kurmanov & Petrova, 2019; Kurmanov et al, 2018; Uteubayev & Petrova, 2017; Yelubayeva et al, 2018).

A key feature of the Lean Six Sigma methodology application in the construction industry is the need to apply the methodology principles only in full and with all the parties engagement (contractors, suppliers, consumers) involved in the activity, while the main improvement efforts should be aimed at improving processes. A vital element of the Lean Six Sigma methodology in construction is the delivery of construction materials, products, equipment and JIT performance. To meet the just-in-time criterion, construction companies around the world are working to create their networks of suppliers and contractors, making significant efforts to adopt the same “Six Sigma” concept in order to overcome all sorts of difficulties and circumstances that cannot be foreseen within traditional contract.

The creation of integrated supply chains based on the Lean Six Sigma management methodology in several construction companies, ranging from the general contractor and to various suppliers, can provide not only a systematic solution to all the problems that any general contractor faces daily, but also bring the supplied construction products to the world-class quality level of 99.9%.

Lean Six Sigma methodology application in construction

Lean Six Sigma is an integrated concept of Lean Production and Six Sigma principles focused on eliminating losses and unproductive costs, reducing process variability and stabilizing product characteristic, including construction products.

In the first decade of XXI century active testing of tools and large-scale deployment of the Lean Six Sigma methodology in construction companies began through the application of its fundamental principles and tools in practice (Mikhalchenko V., et al., 2016).

Thus, the application of the concept of 3.4 defects per million possibilities (6 sigma level or quality at the level of 99.9%) as the main criterion for evaluating the interior decoration process in housing construction was first implemented in 2004 (Construction Task Force, 1998). The process indicators level was initially low, at 2 sigma level (more than 300 thousand defects per million possibilities or quality at the level of 69%), which served as a powerful incentive for close scrutiny of the performed work quality and compliance with quality standards by the contractor.

In 2006 (Fischer et al, 2014), the DMAIC project management cycle (ISO 13053-1:2011 Quantitative methods in process improvement - Six Sigma - Part 1: DMAIC methodology, Standard, 2011) was used as a model to improve interaction between project teams, reduce delays, add structure to the improvement strategy implementation and, ultimately, increase the construction processes efficiency (Oakland J.S., Marosszeky M., 2017).

Since 2009, the Lean Six Sigma methodology has been used as a strategy to increase efficiency and reduce costs in a government agency, the England Travel Agency. The Lean Six Sigma initiative, launched

in the organization, is intended to be a response to a 20% reduction in government spending and help to more effectively spend budget allocated on road network management (the annual cost of maintaining 2,000 km of roads amounted to £2.5 billion before budget cuts). The cost of deploying and adjusting the Lean Six Sigma methodology to the organization amounted to £2 million, the amount of savings from implemented projects to improve the organization's performance is estimated at £43 million (Lange, 2016). Projects deploying the Lean Six Sigma methodology involve traditional infrastructure construction, road network expansion and asset management; moreover, the mandatory use of methodology tools is specified in contracts concluded with contractors. The management of motorways has also been completely changed: instead of expanding existing and building new roads, advanced technical means of collecting and processing information about traffic jams are used. In terms of building effective supply chains, the Lean Six Sigma methodology served as a base to develop a toolkit, helping to determine the progress level in deploying the Lean Six Sigma methodology by suppliers and contractors and to assess the penetration level of Lean Six Sigma into the organization's culture according to the criteria for adopting a methodology as a strategy, management leadership, value creation for the consumer, organizational culture transformation, process flows, process indicators monitoring, standard work performance, quality control, design and construction work performance, factory premises and production equipment maintenance, as well as related infrastructure (Ohno T., 1988).

Figure 1 shows the projection of the construction industry lag from the UK industry, in which the Lean Six Sigma methodology is widely used, as in most developed countries. Without the advanced management methodology application, construction costs tend to increase, so the timely application of such Lean Six Sigma methodology principles, as creating value for the customer, reducing costs and improving the value stream, plays a crucial role today.

Figure 1. The construction industry lag from the industry, in which the Lean methodology is widely used
Source: developed by BAA (British Airports Authority), the former operator of several biggest British airports, currently the Heathrow Airport Holding

By the value to the buyer the construction industry refers to important factors that significantly affect the decision to purchase. These, of course, include safety, meeting deadlines, limited access, maintenance, minimal remedial works, durability and quality, value for money.

The construction industry offers ample opportunities for making various measurements of performance indicators, but in terms of cost reduction, it would be practical to attribute a significant share of construction materials, transferred to the category of waste at the construction end, to the main losses. The key areas of loss accumulation, according to the Lean production concept, include unnecessary stocks, motion, conveyance, unproductive time and expectations, overproduction, unnecessary steps in processes, defects and throw-outs, as well as failure to use staff skills.

By creating a flow of value the movement of materials, information, equipment, people is meant, necessary to fulfill the consumer's order and at the same time bringing value (Linde et al., 2017). These include process mapping, the workspace organization according to 5S principle, integrated project teams, the just-in-time (JIT) concept, control cards and the systematic measurement of statistical indicators (the number of defective products, unresolved problems, unplanned downtime, compliance with the tact time, and operational efficiency) (Pheng & Hui, 2004).

Lean Six Sigma deployments in the organization

Deployment of the Lean Six Sigma methodology begins in the principal contractor's organization, and then cascades to other organizations in stages, depending on the criticality and importance degree of the delivered products/services for achieving the main goal.

The Lean Six Sigma methodology deployment is essentially a project, i.e. an activity that has a certain timeframe, requires certain resources and aimed at obtaining certain results. In addition to obtaining certain results (which may include, for example, improved processes, saved money, shortened deadlines, fulfillment of certain requirements, market share increase, etc.), the upper level organization goes through a transformation process that is deeper than tangible and visible project results, that is, a smooth transition from the current state of organizational culture to the world-class culture level. The transformation process, as well as the methodology deployment project itself, requires continuous and close attention of the management, but unlike the deployment project, the improvement projects implementation is executed on a systematic basis and by the trained personnel of the organization.

At the upper level, the Lean Six Sigma methodology deployment is carried out in several stages, which conceptually copy the DMAIC project implementation cycle according to the Lean Six Sigma methodology:

1) Conceptualization:

the conceptualization (definition) stage is the initial phase of the project, at which the resources for its implementation are determined, relationships are established between the project participants and

stakeholders, a methodological procedure is executed to collect information about the organization's current state, allowing to understand the relationships in the organization and pre-determine the accumulation areas of loss, costs, defects and overhead costs, the main processes, needs and expectations of consumers, critical and important types of products, requirements imposed on suppliers;

2) Research:

the research (measurement and analysis) stage is an intermediate project stage, where the organization's state is audited in accordance with the score sheets for diagnostic audit and identification of organization's maturity level to deploy the Lean Six Sigma methodology, as well as an analysis of cause and effect relationships between accumulation areas of losses, costs, defects and overhead costs and the current state of the organization. The result of the research stage is an approved list of improvement projects (for example, the quality function deployment) to be implemented by project teams;

3) Implementation:

the implementation (improvement) stage is the main stage of the Lean Six Sigma methodology deployment, when improvement measures and projects are accomplished (for example, process improvement), necessary training materials are prepared, employees are trained, certified and engaged in projects, projects are guided by successfully certified employees and guided by external consultants.

4) Evaluation:

the evaluation (control) stage is the final stage before replication of the Lean Six Sigma methodology, where the improvement projects results and the organization's state from "as it was" to "how it became" are evaluated, a detailed plan for the Lean Six Sigma methodology development is prepared at upper-level organization, including the necessary work for continuous improvement;

5) Replication:

projects of transferring existing work methods according to the Lean Six Sigma methodology and communicating the principal contractor requirements for products/works/services to the suppliers of construction materials/products/works/services, which are, for example, part of the integrated supply chain.

Building the integrated supply chain based on Len Six Sigma methodology

For many years, such peculiarities of construction industry as inconsistent and fragmented processes and lack of coordination between suppliers and contractors, low quality construction products, have been ruthlessly criticized. According to experts in various countries, these problems are pervasive and entail serious consequences in the form of systematic failure to meet established deadlines, exceeding construction and subsequent operation costs, inefficient use of labor, waste of construction materials, and last, but not least, uncertain prospects for profit for participants involved in the construction.

One approach to solving these problems is building integrated supply chains based on the Lean Six Sigma methodology (Stewart & Spencer, 2006). The creation of integrated supply chains is the latest and

revolutionary invention in the area of supply management and logistics (Womack & Jones, 2003). The main advantage of an integrated supply chain is the possibility of making profit for all participating parties - from the end customer to the supplier of construction materials. The essence of the integrated supply chain is in concentration of full responsibility at the top management level of the principal contractor, as well as close coordination and alignment in the supply chain (Mikhalchenko & Rubanik, 2019). As a rule, the central link in the organizational structure of an integrated supply chain is the principal's contractor's procurement department, which initiates the placement of all orders. Every step - from raw materials sources to final delivery to the customer - is considered part of the supply chain (Yelubayeva M. et al., 2018).

Creating an integrated supply chain is a significant opportunity to achieve the goal of creating value for the consumer at the lowest cost by expanding the scope of control and influence (Oakland J.S., 1995).

The basic principles of building the integrated supply chain are:

1. Competition through creating value for the consumer and ensuring the best value for money
2. Identification of value for the consumer
3. Establishing relationships with suppliers
4. Coordinated and aligned project activities
5. Cost management
6. Continuous improvement
7. Personnel development

The application of the seven principles of integrated supply chain creation requires a consistent and structured approach to the management of construction projects, which provides continuous support for of all supply chain participants integration by involving all interested parties in the process - from the supplier to the end user.

As a result of this approach, the consumer (customer) receives such benefits as saving, transparency of expenditure, improving the cash flow predictability both during the construction process and throughout the construction site life (Rumane A.R., 2019).

The practical application of this approach in foreign construction companies allowed obtaining the following results (Plenert G., Plenert J., 2018):

- Construction time reduction by 20%;
- Number of remedial activities in the project by 98%;
- The possibility of profit increase for contractors and suppliers by 8-14%.

CONCLUSIONS

Currently, an increasing number of organizations arrive at continuous improvement of processes vs. a one-time project for the processes reengineering. Improvement is necessary for any organization, because the level of most processes indicators tends to decrease over time, if not supported, and modern consumers are

becoming more and more demanding and, frankly speaking, even spoiled with regard to quality. The rapid growth of consumer expectations, as a rule, motivates the organization to meet them. If this is not done, the loss of the client is guaranteed.

As practice shows, the concept of “Six Sigma” at foreign enterprises allow in a fairly short time (about a year) and with own resources to achieve the following results:

- Production and services cost reduction by 30-60%
- Service delivery time reduction of by up to 50%
- Increase in the volume of work performed by 20% without additional cost
- Decrease of the design cost by 30-40%
- Accomplished projects time reduction by up to 70%.

Summarizing the given above material (Desale & Deodhar, 2013), the key success factors of the Lean Six Sigma methodology application in construction industry are:

1) In the area of design:

- using the IT visualization capabilities to determine the final product from the consumer’s point of view;
- an in-depth understanding of consumer needs and focus on creating value for the consumer;
- creation of mechanisms and use of integrated design technologies for achieving close cooperation between architects, project designers, industrial designers, suppliers and contractors;
- availability of product requirements and testing of structural assemblies and other construction processes to ensure high quality, work cost reduction and time saving;

2) In the area of supplier relationships:

- supply chains management and improvement in order to integrate in a single process all parties that contribute to creating value for the consumer;
- transparency of expenditure: eliminating costs and losses in processes, understanding the cost of value creation for the consumer in compliance with targeted confidentiality of costs and cash flows;
- partnership concept: boundaries and barriers between different companies involved in achieving a common goal (value creation for the consumer), should become less pronounced

3) In the area of production planning:

- benchmarking in order to achieve best in class production;
- creating a project implementation program with a clearly defined critical path;
- risk management throughout the project.

4) In the area of logistics:

- The “just-in-time” concept for materials delivery to the place of their use eliminates the need for on-site storage and double processing (for example, movement, and transportation).

5) In the area of construction:

- clear communication of plans and tasks;
- personnel training, teamwork and multitasking;
- daily reporting in order to measure progress;
- motivated and trained workforce.

Conflict of interests

The authors declare no conflict of interest.

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DECISION-MAKING IN CONDITIONS OF DILEMMA: RISKS AND MIXED INFORMATION UNCERTAINTY

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ABSTRACT

In modern conditions of crises and instability of the functioning and development of socio-economic systems, an important problem of providing management tools and making effective decisions is the development of models, methods and information technologies for optimization and decision-making in a situation of risk and in a mixed information environment. Moreover, the widespread introduction of optimization methods, decision making and optimal control was facilitated by the fact that applied optimization problems in most cases are reduced to standard problems solved, and the growth of the power of updated computer tools contributes to the expansion of the spheres of successful application of decision optimization methods in solving complex and diverse economic problems.

The paper proposes models of risk functions related to the decision-making task for harmonizing and optimizing risks and security of a complex system in a mixed information environment, and also proposes a model of penalties for damage to ensure the safety of functioning of complex systems. The work is a continuation of some of the authors' research in the field of modeling, forecasting and managing complex socio-ecological and economic systems to ensure safe, sustainable, sustainable and harmonious development in the face of modern risks and crises.

Key words: dilemma, risks, risk function, posterior risk, decision making, decision rule, Bayesian decision, minimax decision, guaranteed decision, information environment, penalty model.

JEL classification: C02; C11; C61; C65

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INTRODUCTION

In the current environment of crises and unstable functioning and development of social and economic systems, an important problem related to provision of tools for management and efficient decision-making is development of the models, methods and information technologies of optimization and decision-making in the conditions of risks, danger, and mixed information environment.

At the same time, a wide implementation of the methods of optimization and optimal management was facilitated by the fact that the majority of applied optimization tasks imply solution of typical tasks, and the increase of the capacity of the updatable computing facilities helps to widen the spheres of successful

application of the methods of optimization of decisions for resolving complex and diverse economic tasks (Ramazanow & Stemplewska, 2014; Ramazanov et al, 2012; Ramazanov, 2009; Ramazanov, 2015).

1. Task identification. Formulation of the risk function.

The task of decision-making (DM) is exercised in the course of observation of a random process $Y(t)$, which is taking place either in a discrete or in a continuous way. If $y \in Y$ - is the space where various realizations of the $Y(t)$ random process occur, and θ - is some parameter (a vector in general) that belongs to the set range Ω , which means that $\theta \in \Omega$ is the environment (the parametric space).

It is assumed that distribution of probability of the observed process $Y(t)$ depends on the parameter θ , the value of which is unknown to the observer.

If a finite sequence of random variables is observed $\{y(t_i), i = \overline{1, n}\}$ - being the discrete realization of the process $Y(t)$, then it can be completely described with the help of n - dimensional probability distribution function (PDF), which depends on θ , and we mark this function at this value of θ through $F(y / \theta)$. Here, y_1^n is the dimensional vector, which means $y_1^n = (y_1, \dots, y_n)$, where $y_i = y(t_i)$, $i = \overline{1, n}$.

Note that the parameter θ may acquire both discrete values (e.g., 0 or 1) and a continuous set of values.

Here, the observed process $Y(t)$ is a kind of mixture of a useful component (information) with obstacles (mistakes), i.e. $y(t) = H(x, v)$, where $x \equiv x(t)$, in this case, is the vector of the status of the studied system (process) where as $v \equiv v(t)$ is the vector of random obstacles (mistakes) during observations or dimensions of the experiment.

For instance, this can be a model of the following pattern:

$$y(t) = \xi(t)x(t) + \zeta(t),$$

i.e the multiplicatively additive mixture of the watch equation (Ramazanov, 2012).

It should be remembered that

$$F(Y / \theta) = F(y_1, \dots, y_n / \theta; t_1, \dots, t_n) \equiv P_r(Y_1 < y_1, \dots, Y_n < y_n / \theta), \quad y_i = y(t_i).$$

Let us use X^* to define an element of the set $X^* \subseteq X$ - being the array of all solutions that can be assigned with regard to the parameter $x \equiv \theta$ based on the results of observation of $Y(t)$ and use δ - to denote the decision function (DF) or the decision rule (DR), which belongs to the class of decision functions

Δ and which reflects the array Y in X^* , which means that in accordance with this decision rule of the each possible relation of $y \in Y$ determines a certain solution of $x^* = \delta(t)$, $x^* \in X^* \subseteq X$ - the space of the system states.

Therefore, based on specific decisions, mistakes are possible. The “loss” inflicted on the observer – a person who decides (PD) in the end can be described by some function $\rho(x^*, x)$ selected on the basis of heuristic reasoning. This function is called the penalty function (PF) or the loss function (LF), and it determines the size of the losses incurred as a result of x^* decision-making (DM) provided that the true value of the parameter is equal to x .

LF (PF) can be used to compare the decision rules and to select the most suitable of them. Since the solution of $x^* = \delta(t) \equiv \delta(y(t))$ depends on the realization of a random process y , the $\rho(x, \delta(y))$ LF has a random nature, and therefore it will be natural to select the DR on the basis of comparison of statistical (probability) characteristics of LF. In the DM theory, the mathematic expectation of the LF is usually used (although other characteristics may be taken into consideration as well).

The mathematic expectation of the LF when the value of x is known can be shows as ((Ramazanov et al, 2009; Ramazanov, 2015):

$$r(x, x^*) = M_Y [\rho(x, \delta(y))]. \quad (1)$$

And called the risk function (RF). Sometimes (1) is called a conditional risk (CR). RF depends on the adopted decision rule (DR) δ and on the distribution of probability $F(y/x)$:

$$r(x, x^*) = \int_Y \rho(x, \delta(y)) dF(y/x) \quad (2)$$

When a sequence of uninterrupted random variables is observed $\{y_i\}$, there is the probability density $f(y/x)$, where the RF can be described as follows:

$$r(x, x^*) = \int_Y \rho(x, \delta(y)) f(y/x) dy \quad (2^*)$$

It is said that the DR δ_1 is uniformly better than δ_2 , provided the following inequalities are true: $r(x, \delta_1) \leq r(x, \delta_2) \quad \forall x \in \Omega \subseteq X$, $r(x, \delta_1) < r(x, \delta_2)$, at least for one x .

The DR δ^* is called acceptable if there is no other DR δ in the Δ , which would be uniformly better than δ^* . The DR $\tilde{\Delta}$ class is called complete if in $\forall \delta \notin \tilde{\Delta}$ the DR δ^* can be found, which is uniformly

better than δ . The complete class $\tilde{\Delta}$ is called minimal if it does not contain any complete subclass of its own. If there is such complete class, then it coincides with the class of all acceptable DR.

Note that if the class $\tilde{\Delta}$ DR is complete, the selection of the most suitable decision function (DF), obviously, would be sufficient only within this class disregarding the DF $\delta \notin \tilde{\Delta}$. Therefore, identification of complete classes is an important task of the DM theory.

2. Optimization of decisions in the conditions of risk and dangers

2.1. Bayesian decision.

It would be natural to assume that the most acceptable DR is the one that minimizes RF (1) for all values of $\mathcal{X}$. However, this rule exists only in individual cases. Typically, the DF minimizing (1) depends on $\mathcal{X}$, and for various values of $\mathcal{X}$ it will be different; at the same time, it is not clear, which DF should be considered the best.

The aforementioned correlation can be excluded if one uses, for instance, the Bayesian approach to the problem of decision selection. The nature of this approach is the following.

It is expected that, first, the parameter $\mathcal{X}$ is a random variable, the distribution of probability of which $F_0(x)$ exists, and second, the distribution of $F_0(x)$ (i.e., a priori distribution) is known to the PD (the observer).

Then, the average risk (AR) can be determined by taking the repeat mathematical expectation of the RF (1), treating the mathematical expectation of the RF as conditional (regarding $\mathcal{X}$):

$$R(F_0, \delta) = M\{M[\rho(x, \delta(y)) / x]\} = \int_{\Omega} r(x, \delta) dF_0(x). \quad (3)$$

Therefore, the AR $R(F_0, \delta)$ is the complete mathematical expectation of the RF, that is

$$R(F_0, \delta) = M[\rho(x, \delta(y))], \quad (4)$$

where it depends on the a priori distribution of the variable $\mathcal{X}$ and on the assumed DF.

If $\mathcal{X}$ is a continuous random variable, and $\rho_0(x)$ - is the density of probability (a priori density). This means that the AR according to (3) and (2) can be written as:

$$R(\rho_0, \delta) = \int_{\Omega} r(x, \delta) \rho_0(x) dx = \int_{\Omega} \int_Y \rho(x, \delta(y)) \rho(y/x) \rho_0(x) dy dx. \quad (5)$$

The DF minimizing the AR, i.e. the DF δ^* , for which $R(F_0, \delta^*) \leq R(F_0, \delta)$ with all values of $\delta \in \Delta$, is called the Bayes solution with regard to the a priori distribution $F_0(x)$.

The value of $R(F_0, \delta^*)$ is called the Bayes risk (BR) for $F_0(x)$.

Therefore, the Bayes solution is the best or the optimal solution if the minimum AR is assumed as the optimum criterion – the Bayes criterion:

$$R(F_0, \delta^*) = \inf_{\delta \in \Delta} R(F_0, \delta). \quad (6)$$

Here $\delta^* = \text{Arg} \inf_{\delta} R(F_0, \delta)$.

Given the known Bayes' formula (Sosulin, 1978; Volodin, 2010), formula (5) can be rewritten as follows

$$R(\rho_0, \delta) = \int_Y \tilde{R}(y, \delta) \rho(y) dy, \quad (7)$$

where

$$\tilde{R}(y, \delta) = \int_{\Omega} \rho(x, \delta(y)) \rho(x/y) dx = M[\rho(x, \delta(y)) / y]. \quad (8)$$

A posteriori mathematical expectation of the RF is called a posteriori risk (AR).

Therefore, the Bayesian solution can be found by minimizing the AR, which is

$$\tilde{R}(y, \delta) \longrightarrow \min_{\delta} (\inf).$$

It should be noted that this statement is correct in the case when x - is a discrete random variable.

It should also be noted that

$$R(\rho_0, \delta^*) = M[\tilde{R}(y, \delta^*)] = M\{M[\rho(x, \delta^*(y)) / y]\} = M[\rho(x, \delta^{*(y)})] \quad (9)$$

and therefore, the mathematical expectation of the minimal AR gives the Bayes risk.

2.2. Minimax solutions.

The Bayesian approach is connected to two limiting assumptions, the second of which is usually the strongest. If a priori distribution of the variable x is not known, the Bayesian approach in the form demonstrated above cannot be applied. In this case, various non-Bayesian methods of the DM are used, under which both assumptions of the Bayesian approach are not made.

One of these methods is the minimax solution method. The decision function δ^* is called the minimax solution if

$$\sup_x r(x, \delta^*) \leq \sup_x r(x, \delta) \quad (10)$$

for all δ . The value of $\sup_{\delta} r(x, \delta^*)$ is called the minimax risk (MR).

If each of the spaces $x \in \Omega$ i $\delta \in \Delta$ contains only a finite number of elements (finite-dimensional), then obviously there is always the minimax solution δ^* , for which $\min_{\delta} \max_x r(x, \delta) = \max_x r(x, \delta^*)$.

The minimal solution is the best solution in the worst conditions, and that means the solution is guaranteed.

In the general case, finding the minimax solution is a rather difficult task. However, the minimax solution δ^* with some slight limitations (Sosulin, 1978; Volodin, 2010) is the Bayesian solution with regard to a relatively favorable a priori distribution that maximized the Bayes risk, i.e. that value of $\tilde{F}_0$, for which

$$\inf_{\delta} R(\tilde{F}_0, \delta) \geq \inf_{\delta} R(F_0, \delta) \quad (11)$$

for all F_0 . In this case, the minimax risk is equal to the Bayes risk:

$$\inf_{\delta} \sup_x r(x, \delta) = \inf_{\delta} R(\tilde{F}_0, \delta), \quad (12)$$

and RF $r(x, \delta^*)$ of the minimax solution δ^* does not depend on the values of the variable x .

Here, among other things, it can be concluded that if the BR $R(F_0, \delta^*)$ for certain a priori distribution F_0 is independent of x (permanent at Ω), then a priori distribution of F_0 is the least favorable ($F_0 = \tilde{F}_0$), whereas the Bayesian solution δ^* - is the minimax solution. This fact helps search for the least favorable a priori distribution (often, it turns out to be “uniform”) and for minimax solutions.

3. Guaranteed solution in the conditions of the mixed information environment.

The degree of complexity of the system of management and decision-making in «riskology» depends on the level of information certainness, and the quality thereof is higher if the mixed uncertainty is accounted: stochastic, multiple and ambiguous. The generalized model of the studied economic or environmental process can be shown as $F_0: U \times W \rightarrow X$, and the models of monitoring of the factors and indicators as:

$$F\{C1\}: X \times V_x \rightarrow Y, F\{C2\}: C \times V_c \rightarrow \tilde{C},$$

where

$I_c = \{p(w), p(v_x), p(v_c)\}$ is the information field of stochastic uncertainty;

$I_{\mu} = \{w \in W, v_x \in V_x, v_c \in V_c\}$ - is the information field of multiple uncertainties;

$I_M = \{\mu_{X_0}, \mu_{V_0}, \mu_{G^*}\}$ is the unclear information field.

The mixed information uncertainty now can be described in the form of the following sequence: $I_0 = \langle I_C, I_M, I_H \rangle$. In this case, the uniform base of data and knowledge of the integrated management system comprises the totality of three bases of all levels of hierarchy: $I = \langle B_0, B_1, B_2 \rangle$.

As the device functions of $\mu_{X_0}, \mu_{V_0}, \mu_{G^*}$, one can use, for instance, the "Gaussian" radial functions.

Therefore, in this case the task of management (decision-making) can be reduced to solution of the following optimal task:

$$u = \text{Arg max}_w M_w \{ \mu_d(x, w) \} = \text{Arg max}_{u \in U} M_w \{ \mu_{X_0}(F_0(u, w)) \cdot \mu_{V_0}(u) \cdot \mu_{G^*}(g) \}$$

at $C \in C^*$, where M is the symbol of mathematical expectation, and $U = [u, r + \varepsilon_{mp}]$ is the decision made by the PD.

4. Models of penalties for loss and the PD's task.

Let's assume that $u_i \geq 0$ is the volume of production, and $v_i \geq 0$ is the volume of expenses on environment conservation measures taken by the i -th enterprise, and at the same time it's production-related activities always entail the loss totaling $Y_i^0 \equiv Y_i^0(u_i, v_i) \geq 0$. However, the real amount of loss $Y_i \geq Y_i^0$ is a random value that has its function (density) of distribution of probability. Often, the information on the actual amount of the loss is lacking, and the only available information is that on the density of distribution of probabilities, such as $f(Y_i, Y_i^0(u_i, v_i), \alpha_i)$.

Assume that $z_i(u_i)$ denotes production expenses for the production volume totaling u_i , and the target function is the profit of the i -th enterprise, i.e. $P_i \equiv P_i(u_i, v_i, \chi_i(\cdot))$, whereas $\chi_i(\cdot)$ is the amount of penalty (the function of some indicators), which is set by the "Center" depending on the amount of actual losses inflicted on the environment by the i -th enterprise.

Then, the expected profit of the i -th enterprise is the following function:

$$P_i(u_i, v_i, \chi_i(\cdot)) = p_i \cdot u_i - z_i(u_i) - v_i - \int_{Y_i} \chi_i(\cdot) f(Y_i, Y_i^0(u_i, v_i), \alpha_i) dY_i,$$

where p_i - is the price of a unit of production of the i -th enterprise.

The totality of solutions for the enterprise is an indefinite number of couples of the following type:

$$D = \left\{ (u, v) : \text{Arg} \max_{(u_i, v_i)} P_i(u_i, v_i, \chi_i(\cdot)) \right\}$$

Decision-making task.

Managerial decision-making by the “Center” means selection of the system of penalties $\{\chi_i(\cdot)\}$, maximizes the mathematical expectation of the criterion of the “Center”, i.e. its utility function, for instance, $M_Y[\Phi(u, v, Y)]$ in the totality D :

$$\max_{(u, v) \in D} M_Y[\Phi(u, v, Y)] \Rightarrow \max_{\{\chi_i\}} \quad \text{or} \quad \max_{(u, v) \in D} \int_Y \Phi(u, v, Y_i) f(Y_i, Y_i^0(u_i, v_i), \alpha_i) dY_i \Rightarrow \max_{\{\chi_i\}} .$$

Level of danger and risk.

Let's use $y_i(t)$ - to denote the current level of safety, and $x_i(t)$ - the required (desirable) level of safety of the i - th enterprise at the moment of time t . It should be noted here that the notion of the “danger level” (DL) and the “risk level” (RL) is dubious, for instance, the increased RL results in the decreased DL and vice versa, i.e. $DL = 1 - RL$.

If S_i is the amount of penalty for ensuring the required DL, the profit that is retained by the i - th enterprise can be described as the following function:

$$P_i = p_i \cdot u_i - P_i(u_i, v_i, \chi_i(\cdot)) = p_i \cdot u_i - z_i(u_i) - v_i - S_i(x_i, y_i) .$$

where as

$$S_i(x_i, y_i) = \begin{cases} 0, & \text{если } y_i \geq x_i, \\ \chi_i(y_i), & \text{если } y_i < x_i \end{cases}$$

For instance, when the set value of risk or danger of q_i for the i -th enterprise takes into account certain economic mechanism for ensuring safety, the penalty function is $S_i(x_i, y_i) = q_i \cdot (x_i - y_i)$ at $y_i \leq x_i$, i.e. provided the required DR is not achieved (otherwise it will be fined). Other options of the penalty functions can be found, for instance, in the monograph (Burkov et al, 2008).

CONCLUSION

This paper offers the models of the tasks related to decision-making in the conditions of risks, danger, and in the conditions of mixed information environment, models of penalty for damage for harmonization and optimization of the risk and safety of a complex system. The paper continues the author's studies in the sphere of modeling, predicting and managing complex social, environmental, and economic systems for safe, viable, sustainable and harmonious development in the current conditions of risks and crises.

Conflict of interests

The authors declare no conflict of interest.

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INNOVATIONS IN THE SYSTEM OF LOCAL SELF-GOVERNMENT IN POLAND IN THE PROCESS OF SHAPING MODERN ADMINISTRATION

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ABSTRACT:

In the process of shaping a modern administration, the key issue is to build a rational political basis and activities of this administration. Self-government administration occurs in individual territorial division units, i.e. in communities, districts and voivodeships. This administration is formed on the basis of decentralization of public authority and independence of exercising power by particular local government units. The competence of this administration is to undertake public matters of local and regional dimension in terms of meeting the collective needs of local government communities. These matters are dealt with by local government authorities (community-district-voivodeship) and an extensive administrative system of local government organizational units.

Key words: community, district, head of a district, mayor/president, marshal, local community

JEL classification: H10; H50; H70

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INTRODUCTION

The issue of the multilevel territorial division of the state in Poland, which has been discussed for many years in the process of democratization of the state, was determined by the Act of 24 July 1998 on the introduction of the basic a three tier territorial division of the state which results from the very title of the Act. The units of the basic three-tier territorial division of the state are: communities, districts and voivodeships. The basic three-tier division of the country's territory was introduced on 1 January 1999. The Act passed by the parliament fulfilled the constitutional footnote of Article 15 (2) on the creation of the division of the state. At the same time, the provision indicates the premises to be followed in making the territorial division, i.e. to take into account social, economic or cultural ties and to ensure that territorial units are able to perform public tasks. (Zieliński, 2004, p.19).

Poland is divided into 16 voivodeships, 314 districts and 2477 communities (including 302 urban communities, 66 towns with district rank, 642 rural and urban communities and 1533 rural communities (Ministry of the Interior and Administration, 2020).

System of community self-government

Community is a basic self-government commune. It is granted by Article 164(1) of the Constitution of the Republic of Poland, which states “The community (*gmina*) shall be the basic unit of local government”. It does not exclude the possibility to create other self-government units on the local or regional level, which may be established by law (Zieliński, 2013, p. 261).

The Act on local self-government stipulates that „the inhabitants of a community form self-government commune by law” (Article 1) and that:

- community fulfills public tasks on its own behalf and responsibility
- community has legal personality
- independence of a community is under legal protection (Art. 2).

The bodies of a community are: community council – decision-making body and a head (mayor, president of town) – executive body. Rules and procedures for conducting elections of community council, and a head (mayor, president) are defined by separate Acts. (Article 11a).

The activity of community bodies is public. The publicity can be limited only by legal Acts. Publicity of activities of community bodies includes citizens' rights for information, access to sessions of the community council and its commissions as well as access to documents from performing public tasks including minutes of community and community commissions sessions (Article 11b). Rules on access and using documents are described in a community statute. The term in the office of a community council lasts 5 years from the election day. (Article 5)

The Act in Article 18 defines all the competencies of a commune.

The community council controls the activity of mayor, community organizational units and community auxiliary units and for this purpose, in accordance with the Act, it appoints an audit committee. Community council also deals with complaints against the activities of a mayor and community organizational units and citizen's applications and petitions. A commission of complaints, applications and petitions is appointed for this purpose. The audit committee gives opinion on budget implementation of a community and applies to the community council whether to grant or not a discharge to a mayor. The proposal for discharge is a subject to an opinion of the Regional Audit Chamber (Article 18a, Article 18b)

Mayor implements resolutions of the community council and tasks of the community stated by law. Mayor's tasks include: preparation of drafts of the community council, preparation of development programs according to the procedures defined in regulations on principles of the development policy, principle of manner of resolutions implementation, managing community property, budget implementation and hiring and dismissal of managers of organizational units of a community. While performing community's own tasks, mayor responds exclusively to the community council. (Article 30)

Mayor manages community's current affairs and represents it externally, prepares operational plans of flood protection as well as announces and cancels emergency services and flood alarm. If there is no other possibility to remove the direct danger for people's life and property, the mayor may order an evacuation from the directly threatened areas. In case of state of emergency mayor may act according to separate regulations (Article 31, 31a, 31b).

According to the Act of 20 June 2002 on direct election of mayor and president of town, mayor / president is elected in general, equal and direct vote by a secret ballot (Article 2)

Scope of activity and tasks of a community.

Scope of activity includes mainly all public matters with a local importance not reserved by law for other bodies. Satisfying collective needs of a community is one of community's own tasks. Moreover, community's own tasks mainly concern: spatial order, property management, nature and environment protection, water management, community roads, streets, bridges, squares, traffic organization, water pipes and water supply, sewage, removing and treatment of urban waste water, cleaning, maintaining order, sanitation, landfills and disposal of urban wastes, supply of electricity, heat and gas, activity concerning telecommunication, local public transport, health care, social assistance – including care centers, nurseries and family support, foster custody system.

Community is also responsible for: community building, state education, culture (community libraries and other institutions in charge of culture and protection and care of monuments), physical culture and tourism, including recreational areas and sports facilities, markets and fair halls, municipal greenery and trees, municipal cemeteries, public order and safety as well as fire and flood protection, including maintaining fire protection warehouse, community and public utility facilities, administrative facilities, pro-family policy, including ensuring health, social, medical and legal care for pregnant women, support and promotion of self-government ideas, including creating conditions for the activity and development of auxiliary units, implementation of programs to stimulate civic activity, promotion of the community, cooperation and activity for non-governmental organizations, cooperation with local and regional communities from other countries. Tasks of government administration may also be performed by the community on the basis of an agreement with the bodies of this administration (Article 7). Good workers, who are able to work and deal with problems effectively, negotiate, offer the highest quality of service, etc., are sought-after in the labour market (Stemplewska, 2020, p. 154).

System of a self-government of a district

District is a territorial self-government unit, called district self-government. According to the Constitution of the Republic of Poland (Article 164 (2)) and Act of 5 June 1998 on district self-government (Article 1 (1)), district self-government is a local self-government commune. This commune is by law formed by district

citizens who live in a specific territory. Territory and citizens of a district are therefore an essential factor to create local self-government commune. (Zieliński, 2013, p. 303)

According to the Act on district self-government – District carries out public tasks defined by the Acts on its own behalf and responsibility. District has legal personality. Independence of a district is a subject to judicial protection and system of a district is defined in its statute (Article 2). District residents make decisions by general election (district elections and referendum) or through district bodies (Article 8.1)

District bodies are: district council (decision-making body) and district board (executive body).

Activity of district bodies is public. The publicity can be limited only by legal Acts (Article 8a. 1.) Publicity of activities of district bodies includes citizens' rights for information, access to sessions of the district council and its commissions as well as access to documents from performing public tasks including minutes of district bodies and district council commissions. Rules on access and using documents are described in a district statute (Article 8.3). District council is a decision-making and control body, subject to provisions of district referendum. The term in the office of a council lasts 5 years from the election day. Councilors are elected in general elections. The rules and procedure for conducting elections to the district council are defined in a separate act (Article 9).

Competences and tasks of the district council are defined in Article 12 of the Act on District Self-Government. Resolutions of the district council and board are adopted by a simple majority of votes in the presence of at least half of the statutory composition of the council (board), in an open voting.

District council controls the activity of the board and district organizational units. For this purpose it appoints an audit committee. The audit committee gives its opinion on implementation of district budget and applies to the district council whether to grant or not a discharge to the board. The proposal for discharge is a subject to an opinion of the Regional Audit Chamber. The district council deals with complaints against the activities of the board and district organizational units and citizen's applications and petitions and for this purpose it appoints a committee of complaints, applications and petitions (Article 16, 16a).

District board is an executive body of a district. The district board is composed of Starosta (head of a district) as a chairman, vice Starosta and other members. Non-Polish citizen may not be a member of a district board (Article 26)

District board implements the resolutions of the district council and tasks of the district stated by law. The tasks of a district include in particular:

- preparation of drafts of council resolutions;
- implementing council resolutions;
- preparation of development programs according to the procedures defined in regulations on the principles of conducting development policy;
- managing the property of the district;

- implementation of the district budget;
- hiring and dismissal of managers of organizational units of a district,
- enacting the organizational regulations of Starost (the head of a district).

In carrying out the tasks, the district board is responsible only to the district council. The internal organization and working manner of the board is defined by statute of the district. The statute of the district is published in the voivodeship official journal. (Article 32)

The board carries out the tasks of a district with the support of the Starost Office (the office of the head of a district) and district organizational units, including the district employment office.

The heads of district services, inspections and guards carry out the tasks and competences defined in the Acts and are supported by organizational units – police commands and inspectorates.

Organizational units constituting the auxiliary units of managers of district services, inspections and guards may be created, restructured and liquidated by a voivode, upon request of a Starost (head of district), with an opinion of a competent head of a combined service, inspection or voivodeship guard. Organizational units (except for organizational units of the Police) are budgetary units of a district.

Specific terms and conditions or rules for appointing, dismissing and procedures for employment and dismissal of managers and employees of district services, inspections and guards are defined in separate acts. The district combined administration comprises:

- 1) Starost's Office (Head of district office);
 - 2) district employment office, an organizational unit of a district;
 - 3) organizational units constituting the auxiliary units of heads of district services, inspections and guards.
- (Articles 33, 33a, 33b)

Starost (head of a district) organizes the work of a district board and district office, manages the current affairs of a district and represents the district outside. The Starost (head of a district) prepares a flood protection operational plan, announces and cancels emergency services and flood alarm (Article 34.1. and 1a). The organization and functioning of a district office is defined in the organizational regulations. The Starost (head of a district) is the head of a district office, district employees, district organizational units and district services, inspections and guards (Article 35). A security and order committee, hereinafter referred to as "the committee", is established in order to carry out the tasks of the Starost (head of a district) with regard to the authority over district services, inspections and guards and tasks specified in the Acts on public order and safety of citizens (Article 38a.1.)

Scope of activity and tasks of a district

District carries out the supra-community public tasks specified in Article 4 of the Act on district self-government.

At the same time, district's own tasks are presented doctrinally and grouped on the basis of 5 cases:

- extended social infrastructure,
- extended technical infrastructure,
- public security and order of citizens in a supra-community dimension,
- organizational activity aimed at solving local problems (Chmaj 2007, pp. 105-106.)

The public tasks of the district also include ensuring that the tasks and competences of district heads of services, inspections and guards specified in the Acts are fulfilled (Article 4.).

System of self-government of a voivodeship

In the voivodeship, government administration is performed by specific entities, as indicated in the Act of 23 January 2009 on the voivodeship and government administration in the voivodeship and other Acts. These acts not only indicate these entities, but also refer to the Acts which create entities of government administration. Moreover, it should be remembered that the administration in a voivodeship is, to a large extent, exercised as a decentralized authority by self-government units, apart from the tasks of government administration. Thus, the public administration system in a voivodeship is composed of two subsystems: government and self-government administration (Zieliński 2013, p.193).

The inhabitants of the voivodeship form a regional self-government community by law. Self-government administration in the voivodeship is united in one office and under one superior. Under Article 4.1 of the Act on Self-Government of the voivodeship, the scope of activities of the self-government of a voivodeship does not interfere with the independence of a district and a community. The voivodeship self-government bodies are not supervisory or control bodies for a district and community and are not higher in administrative proceedings.

The structure of a voivodeship as a self-government unit is defined in the voivodeship's statutes adopted after consultation with the Prime Minister. The statutes and amendments thereto are published in the voivodeship official journal. The voivodeship self-government performs public tasks specified by the statutes on its own behalf and on its own responsibility, has at its disposal the voivodeship property, runs financial management based on the budget. The voivodeship has legal personality and the voivodeship's independence is subject to judicial protection.

The voivodeship self-government bodies are: Sejmik of the voivodeship (voivodeship assembly) - the decision-making body, the voivodeship board - the executive body.

Activity of voivodeship bodies is public. The publicity can be limited only by legal Acts. Publicity of activities of voivodeship bodies includes citizens' rights for information, access to sessions of the

voivodeship assembly (Sejmik) and its commissions as well as access to documents from performing public tasks including minutes of voivodeship bodies and voivodeship council commissions.

Voivodeship board is an executive body of a voivodeship. Voivodeship board consists of 5 persons, they are: Marshal of the voivodeship (marszałek) as a chairman, one or two vice-marshals and other members.

Three months after a competent electoral authority announces of the election results, the voivodeship assembly (Sejmik) elects the voivodeship board, including the provincial marshal and no more than 2 vice-marshals. The voivodeship assembly (Sejmik) elects the voivodeship marshal by an absolute majority of votes of the statutory composition of the assembly (Sejmik), in a secret ballot. The marshal, vice-marshals and other members of the voivodeship board may be elected from outside the composition of the voivodeship assembly (Sejmik).

Every year till the 31st May the voivodeship board presents to the voivodeship assembly (Sejmik) a report on the condition of the voivodeship. The report includes a summary of the activities of the voivodeship board in a previous year, in particular the implementation of policies, programs and strategies, resolutions of the voivodeship assembly (Sejmik) and a participatory budget.

The tasks of the voivodeship board are defined in the Act on voivodeship self-government. The rules and mode of operation of the voivodeship board are defined in the voivodeship statute.

The voivodeship assembly (Sejmik) is the constituting and controlling body of the voivodeship. The term of office of the voivodeship assembly (Sejmik) is 5 years, starting from the election day. The voivodeship assembly (Sejmik) is composed of thirty councilors elected in direct elections in voivodeships with up to 2,000,000 inhabitants and three councilors for each subsequent 500,000 inhabitants. (Article 16.2)

The competences of the voivodeship assembly (Sejmik) are defined by law, in particular in Article 18 of the Act on the voivodeship self-government. Resolutions of the voivodeship Assembly are adopted by a simple majority of votes, in the presence of at least half of the statutory composition of the Assembly, in an open or open vote by roll call, unless the provisions of the Act provide otherwise. (Article 19.1)

Scope of activity and tasks of a voivodeship

The voivodeship self-government defines the voivodeship development strategy in accordance with Article 11 of the Act. When formulating development strategy and implementing development policy, the voivodeship self-government cooperates in particular with: local self-government units from the voivodeship and with economic and professional self-government, government administration - especially with the voivode, other voivodeships, non-governmental organizations and units listed in Article 3 (3) of the Act of 24 April 2003 on public benefit and volunteering (*Journal of Laws of 2018, item 450, 650, 723 and 1365 and of 2019, item 37*), universities and scientific and research units.

While performing these tasks voivodeship self-governments may also cooperate with international organizations and regions of other, especially neighboring countries.

The voivodeship assembly (Sejmik of the voivodeship), as a legislative body defines the rules, mode and schedule for the preparation of the voivodeship development strategy. The draft voivodeship development strategy is agreed by the head of the regional water management board of the National Water Holding, Polish Waters in cases concerning building and development of areas of flood risk. The strategy is a local law and is adopted by the Sejmik of a voivodeship as a resolution. This resolution is published in the voivodeship official journal.

According to the Act, in the sphere of public utility, a voivodeship may establish limited liability companies, joint stock companies or cooperatives, and may join such companies or cooperatives.

The voivodeship self-government fulfills voivodeship task as specified by the Acts, in particular: public education (including higher education), health promotion and protection, culture and protection of monuments and care for monuments, social assistance, family support and foster custody system, pro-family stock companies or cooperatives, and may join such companies or cooperatives.

The voivodeship self-government performs tasks of a voivodeship scope specified by the Acts, in particular: public education policy, modernization of rural areas, spatial development, environmental protection, public transport and public roads, physical culture and tourism, protection of consumer rights, defence, public safety, counteracting unemployment and activation of the local labour market, activities in the field of telecommunications, protection of employee claims in case of employer insolvency (Article 14).

Acts may define issues concerning the voivodeship's operation as government administration tasks, performed by the voivodeship board. Acts may also impose on voivodeship an obligation to organize and hold general elections and referendums.

CONCLUSION

In Poland, there is a three-tier division of territorial self-government: communities, districts and voivodeships. This division allows local and regional authority to perform their functions. It encourages civic activity, which brings benefits to the inhabitants and local communes. On the basis of statutory tasks, local government units are complementary to one another, and in case of threat in a community, district or voivodeship, the decision-making and executive bodies cooperate. The most important legal act regulating the functioning of territorial self-government is the Constitution of the Republic of Poland and the Acts on Community Self-Government, District Self-Government and voivodeship Self-Government.

Conflict of interests

The authors declare no conflict of interest.

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THE IMPROVEMENT OF THE INVESTMENT ATTRACTIVENESS OF INDUSTRIAL ENTERPRISES IN THE CONVENTION OF THE COVID-19 PANDEMIC

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ABSTRACT

In this article we consider the directions of increasing the investment attractiveness of the holding's industrial enterprises in the COVID-19 pandemic conditions. In today's challenging industrial environment, most companies need to raise additional funds to pursue an active anti-crisis and investment policy. At the same time, while determining the potential object of investment resources, an investor focuses on the investment attractiveness of the enterprise and the region as a whole. The main tendencies for increasing the efficiency of the investment activity at the state and regional levels are developed. The basic methods of regulation of investment processes, the priority directions of use of the state and non-state sources of financing are determined. The main factors hindering the processes of the investment activity are summarized. The priority tasks for the reform of administrative mechanisms at the enterprise level are identified. Therefore, there is a need to consider ways to increase the investment attractiveness of enterprises in modern conditions.

Key words: increase, investment attractiveness, industrial enterprises, investments, COVID-19 pandemic.

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INTRODUCTION

At the current stage of development of Ukraine's economy, profound changes are taking place due to the general processes of the crisis associated with the COVID-19 pandemic and the economic recession, which requires effective steps to overcome it. Experience shows that more and more industrial enterprises are searching for urgent assistance from the authorities and science that must justify mechanisms to prevent bankruptcy of enterprises that will ensure the proper management of crisis situations and processes. It is impossible to get out of the financial crisis without a scientific substantiation of the mechanisms of anti-crisis management of the holding's enterprises. Therefore, the study is undoubtedly relevant today.

In recent years, the dynamics of investment processes began to decline. Therefore, our government should analyze the indicators in more detail and start developing real measures that will lead to increase of investment attractiveness of industrial enterprises in Ukraine. At the same time, Ukrainian holding companies should intensify all their opportunities to attract investment and improve the investment activities of enterprises.

In the current conditions, the investment attractiveness of enterprises requires the improvement and enhancement the legal, socio-economic, financial, and socio-political components; this way, it can lead to growth of investment resources and contribution to the overall socio-economic development of Ukraine.

Attracting investment is very important for the activities of enterprises and it requires management of such enterprises to constantly improve anti-crisis activities and increase the level of investment benefits compared to other enterprises.

Latest research and objectives

The issue of increasing the investment attractiveness of industrial enterprises of Ukraine in the crisis period needs further study and generalization. To effectively attract investment, it is necessary to form effective investment attractiveness at industrial enterprises. Therefore, the conditions should be created, when the utilizing of such investments will provide the maximum economic and social effect from their implementation in compliance with the established level of investment risk.

This is especially important for the category of investors that do not have clear investment interests and form their investment strategy based on an assessment of the investment attractiveness of the enterprise.

Many works are devoted to the causes of the crisis in Ukraine, in particular: Babil (2011), Gritsenko (2011), Yurchuk (2012), Sushchenko (2016), Akhmetshin et al. (2019), Madaminjonov (2020), Matyushenko et al (2020), Ramazanov&Petrova (2020), Labunska et al (2017), Sushchenko et al (2019), Zagorodnya et al. (2020). The developments of effective management of the enterprise are presented in such significant research as: Petrovich (2008), Gura (2018), Khidirov (2020), Zhernov et al (2020), Tepavicharova et al. (2020).

The purpose of the article is to consider and introduce the measures to improve the investment attractiveness of industrial enterprises in the conditions of the COVID-19 pandemic.

Results

According to the International Monetary Fund, the world economy is expected to fall by 3 per cent. At the same time, Ukraine has traditionally been more vulnerable to economic shocks: GDP may fall by 4-8% in 2020 compared to 2019. The expected decline in Ukraine's economy is a consequence of global shocks: an unfavourable situation in important commodity markets for Ukraine, the closure of commodity markets for Ukrainian exporters, a change in global production chains.

According to the forecasts of the National Bank of Ukraine, Ukraine in 2020 may face a decline in exports to -10%, imports to -14.5%, expanding the budget deficit to 8% and growth of the gross domestic product and unemployment to 9.5%. During the crisis, industrial enterprises face a liquidity shortage. Measures aimed at saving funds by reducing tax and administrative pressures, reducing the cost of raw materials, transportation and energy will minimize the decline in production, employment and exports in the industry.

Effective tools to promote exports and facilitate access to key raw materials for businesses should be identified. At the same time, during the deteriorating situation in foreign markets, it is important to stimulate industrial production by increasing domestic demand through public procurement and by protecting local manufactures. The crisis should be used to prepare the ground for growth by saturating the sector with equipment for the transition to higher value-added production, designing and building infrastructure for industrial parks to attract investment, and promote environmental modernization.

The high export orientation of the industry creates both risks and opportunities. Industry provides 58% of merchandise exports, and, accordingly, significant foreign exchange income for the Ukrainian economy. The domestic market has a low capacity: 51% of industrial sales are made through foreign markets; this makes the industry sensitive to changes in world conditions and protective measures of other countries. The crisis surrounding the COVID-19 pandemic will exacerbate existing problems in the industry.

In particular, the metallurgical industry before the pandemic experienced a decline due to deteriorating world conditions. For example, steel prices have fallen by about 30% since 2018. Mechanical engineering was in the process of recovery after the loss of traditional markets, capacity in the occupied territories and the economic crisis, from 2012 to 2015. The sales fell threefold, which was very slow due to outdated funds and insufficient capital investment for modernization. Declining demand in domestic and global markets, the rupture of production chains due to the pandemic and the economic crisis will exacerbate existing problems.

Exports of metal products provide 26% of Ukrainian exports of goods and are one of the main sources of foreign exchange earnings. The mining and metallurgical complex import equipment and raw materials that are not produced or insufficiently produced in Ukraine. Mechanical engineering industry mainly exports semi-finished products, around 67%, including spare parts for cars, air and rail transport, communication equipment. The largest segments of finished products for export are household appliances, ships, engines, and generators. In comparison, about 70% of finished machine-building products are imported to Ukraine, such as vehicles, agricultural machinery, computers, and household appliances.

At the same time, domestic engineering depends on imports of the intermediate consumption of spare parts and components, metallurgical products of approximately 53% in (Cabinet of Ministers of Ukraine, 2020).

The mining and metallurgical complex sells only 15% of the products on the domestic market and is a supplier for domestic orders in the quantity of 68% for construction, 23% for mechanical engineering; and a consumer for mechanical engineering - 6% of domestic orders, transport - about 40% of all transported goods by rail and water, energy - 10% of electricity.

The investment attractiveness of a holding company is a set of qualitative and quantitative indicators that comprehensively determine the ability to increase invested capital, and as an integral indicator formed under the influence of influencing factors, determines the investor's willingness or refusal to invest in such an instrument as an industrial enterprise. To determine the method of assessing the investment attractiveness of

the enterprise it is necessary to take into account all possible fields of factors influencing its investment attractiveness (Fig. 1).

According to Endovitsky (2010, p. 374), factors that affect the investment attractiveness of the enterprise can be divided into two groups: external factors in relation to the enterprise and internal ones. External factors are factors that do not depend on the results of economic activity of the enterprise. These include the investment attractiveness of the territory, and the investment attractiveness of the industry. Internal factors include factors that depend directly on the result of economic activity of the enterprise.

Therefore, internal factors are the main lever of influence on the investment attractiveness of the enterprise. These factors include the financial condition of the enterprise, the organizational structure of enterprise management, the degree of innovation of the company's products, the stability of cash flow generation, the level of diversification of the company's products, and more. Blank (2011), Vorobyov, Vorobyova (2004) in their works distinguish five indicators: the importance of the industry, the characteristics of product consumption, the level of government intervention, social role of the industry, and financial conditions of the industry.

Fig. 1. The main components of the investment attractiveness of the enterprise
Source: prepared by the author

All factors were grouped into two groups: factors of indirect and direct influence of the enterprise on investment attractiveness. The first group includes factors that are not subject to the influence of an individual enterprise, they can be adjusted only at the state level. The second group includes factors that the company can influence in order to change their performance, characteristics, and so on.

Factors of direct influence are the most important ones for an enterprise. Because of these factors, the enterprise can independently influence investment attractiveness. Among the most important factors of direct

influence are such factors as human resources, duration of the investment program, the state of property and financial resources, and the amount of expenses. For the industrial enterprise of the holding, internal factors or factors of direct influence are more important, as because of them, the enterprise is capable of independently influencing its investment attractiveness.

Among the internal factors, the most important are human resources, duration of the investment program, the state of property and financial resources, and the amount of expenses. In fig. Figure 2 shows the most important factors influencing the investment attractiveness of the holding's industrial enterprise.

Fig. 2. Factors effecting the investment attractiveness of the holding's industrial enterprise
Source: prepared by the author

It should be emphasized that the investor when choosing an investment object pays most attention to the state of property, financial resources, the cost of the enterprise, which is determined by the degree of depreciation of fixed assets, their ability to produce products at a high level, liquidity, solvency, financial performance stability, indicators of business activity, the state of non-current and current assets, their renewal

and disposal. The amount of costs of the enterprise includes all the costs of the enterprise associated with its operating activities (Baklanova, Petrova, Koval, (2020).

After defining the factors that influence the formation of investment attractiveness, we can clarify the more vulnerable aspects of the enterprise and, as a consequence, to conduct a more objective and complete assessment.

Based on the analysis of the existing literature, the proposed quantitative and qualitative factors that affect the investment attractiveness of an industrial enterprise are listed in Table 1.

Table 1. Factors influencing the investment attractiveness of an industrial enterprise

External environment and market position of the enterprise	Financial condition of the enterprise	Enterprise management
External market environment	Return on equity in terms of net income	Financial transparency and disclosure
The geography of the exported products	Profitability of sales at net profit	Corporate management
Investment climate of the region, in which the company is located	Asset turnover ratio	The percentage of shares in free circulation on the secondary securities market
The degree of competition in the market	The ratio of borrowed and own funds	Observance of the rights of small shareholders to manage the enterprise
Ecological environment	Current ratio	Degree of protection of shareholders' rights
Investment attractiveness of the company's industry	Financial condition of the enterprise	The share of state property in the authorized capital of the company
Stage of the life cycle of the main type of product	Coefficient of ownership (autonomy)	The amount of remuneration to members of the board of directors

Source: prepared by the author

The conducted review showed the importance and necessity of separation and systematization of factors that comprehensively characterize the investment attractiveness of industrial enterprises (Petrova et al., 2020). The study and monitoring of such factors form the basis for effective diagnosis of the level and index of investment attractiveness of a particular industrial enterprise and Ukraine as a whole for a real investor. Thus, all the considered factors, which comprehensively characterize the investment attractiveness of the industrial enterprise of the holding, closely interact and interact with each other.

Therefore, in the current difficult conditions of industrial functioning, when the functioning of enterprises is constantly affected by the crisis, it is necessary to consider the investment attractiveness of economic activity in the current conditions. The crises of recent decades indicate the inability of national and international institutions for a long time to ensure stability and balance in financial markets. Modern processes have led to a number of unfavourable factors for the development of national financial systems, so the crisis associated with COVID-19 for industrial enterprises in Ukraine was a very serious test.

Ukraine's industrial enterprises find it difficult to survive the crisis, and it is important for those who survived to develop effective financial management aimed at overcoming future post-crisis consequences. All countries of the world have suffered from this, but some have managed to get out of it at lower cost. Practical measures to combat the crisis were taken, such as lowering the discount rate on loans, government guarantees for interbank loans, nationalization of investment institutions. creation of special credit funds, providing tax holidays, etc.

The capacity of the government in a crisis makes it impossible to fully implement the envisaged methods and measures. Many of the approved anti-crisis policy programs remain only strategic intentions, the implementation of which should take place through the adoption of regulations in the Verkhovna Rada. The economy of our country was not ready to respond quickly to the crisis. The negative effects of the crisis on Ukraine's economy can be considered in the following aspects: slowdown in the development of the financial services market of Ukraine; reduction of aggregate demand of the population due to negative expectations, which, in turn, leads to a decrease in GDP growth; weakening the business activity of society; reduction of production by credit-dependent enterprises; the desire of some Ukrainian politicians to "transfer" the problems of the financial market to the industry and the population of Ukraine in general.

The study of the practice of developing anti-crisis measures showed that today companies prefer to develop a protective strategy, which is characterized by curtailment, and offensive strategies of enterprises are in the waiting stage, characterized by in-depth study of cost reduction and search for innovative approaches to production and sales technologies. principles of anticipation of demand.

Only by producing products that are ahead of modern demand, the company can stay working and even develop in a crisis. It is clear that such products are new and more efficient in consumption. Unfortunately, the financial crisis has led to an increase in the number of financially insolvent enterprises in each sector of Ukraine's economy, due, firstly, to objective macroeconomic instability, and secondly, a number of subjective factors, among which the inability of management comes first. to carry out effective anti-crisis management of the enterprise, timely identify problems and take the necessary measures (Budnikova, 2014).

Today, industrial enterprises face both external and internal factors of the crisis. The influence of external factors is mainly general economic, objective, strategic in nature and is further enhanced by the influence of a number of market and political factors. Internal factors that affect the results of the enterprise are closely related to its operating, investing and financing activities. Based on statistical data, it should be noted that the current state of Ukraine's structures is characterized by first, the rapid laundering of working capital due to the impossibility of obtaining short-term loans to optimize current activities, as well as the freezing of development programs; second, massive breaches of payment obligations; third, the reduction of production due to reduced demand in foreign and domestic markets; fourth, mass layoffs or vacations at the expense of employees, reduction of work shifts from 2-3 to one, the transition to part-time work (Usherenko, 2010). According to experts, the most vulnerable to the crisis were companies focused on export (metallurgy, transport, and agricultural engineering), as well as on the consumer sector (car production). Under such conditions, the management of enterprises must ensure the development of anti-crisis measures for at least a year. Such development should be comprehensive, aimed at forming an optimal portfolio of anti-crisis measures, the implementation of which will help get the company out of crisis, restore its solvency and liquidity.

In Ukraine, the factors influencing the investment process are in such a state that they cannot contribute to the development of this process. However, the experience of many countries shows that the way out of the crisis is impossible without attracting new investments.

Thus, the intensification of investment activity is also hampered by the political situation, while a way out of the crisis without a significant increase of investment is impossible. However, with the monetary reform in Ukraine, a factor of economic stabilization has emerged. However, it should be consolidated and strengthened by real, not declarative, reforms. We are talking about overcoming inflation. High inflation rates make the accumulation of financial resources aimed at long-term projects completely inefficient. Reducing inflation makes it possible to normalize the financial condition of enterprises, to stimulate increased production.

The management of investment activities is influenced by a variety of factors that have external and internal nature and direct or indirect influence on an individual enterprise. External factors that effect the investment activities of the enterprise can be divided into four main groups: international factors, industry factors, factors related to the state management of investment activities, market factors. Each of these groups of factors indirectly affects the process of investment management, however, in the absence of prompt response to them by management, these factors can lead to negative consequences.

Internal factors influencing the management of investment activities are determined by the activities of the industrial enterprise as a whole, the level of employees skills, the ability of management and employees to respond to changes in the external environment, the level of business activity and reputation of the enterprise, the development of the sales and marketing system, the process of organizing production, and the availability of the necessary resources.

At the present stage, the investment activity of enterprises should be focused not only on meeting current investment needs, but also on prediction of the directions and forms of this activity in the future. This necessitates the formation of the management system for investment attractiveness, taking into account development trends, and the system of opportunities and threats, which can be determined by conducting SWOT-analysis, taking into account the investment benefits and threats of the enterprise.

Among the investment advantages, one of the priorities for enterprises in general, and especially for industrial enterprises of the holding, is to attract investment in order to introduce innovations, which are necessary for the intensive development of the country's economy. Innovation, by increasing the efficiency of the economy, expands sources of investment. One more fact that proofs the priority of investment in innovation is the problem of rational use of available financial resources. The problem is the formation of such an investment structure that is characterized by progressive changes. Areas of investment are characterized by reproductive and technological structures. The reproducible structure of investment in fixed capital characterizes the distribution of investment in construction and technical re-equipment, expansion and reconstruction of manufacture. The share of obsolete equipment in some industries is 60-70 per cent.

Ukrainian industrial enterprises do not ensure the proper rate of its renewal. The industry is dominated by outdated technologies. This leads to unjustifiably high consumption of energy in the Ukrainian industry. In Ukraine, it is 4-5 times higher than in European countries. The equipment of mechanical engineering is updated extremely slowly as well, while it is designed to be a powerful engine of innovation processes in all sectors of the national economy (Babil, 2011).

The Ukrainian economy needs capital for the construction of new, and reconstruction and modernization of existing enterprises. But, unfortunately, foreign analysts see our country as a region with almost 100 per cent risk for investment.

In order to improve the investment attractiveness of the country and enterprises, it is necessary to provide the required conditions for business operations and to develop a system of guarantees and exemptions for foreign investors. The priorities of economic development are the introduction of educational, scientific and technical activities, the implementation of measures to concentrate investment resources on the implementation of investment projects.

Analysis of national legislation in the field of investment regulation is unstable, the regulatory framework is constantly changing, because in the process of its formation, some regulations are adopted, others are repealed, or their provisions are reflected in other regulations.

The general state of the economy is significantly influenced by tax legislation system that has a lot of shortcomings in Ukraine. Therefore, in the future the government should provide for a reduction of tax pressure on manufacture, differentiation of tax rates depending on the priority of manufacture areas, the application of tax exemptions for profits used for the development of production.

Analyzing the scientists' views, we can see that the directions of improving the investment attractiveness of industrial enterprises in a market economy country should be based on the following principles:

- the objective need to recognize long- and medium-term cycles of investment activity;
- interaction of local, branch, regional and national economic cycles of investment activity;
- formation of market levers in the investment sphere simultaneously with similar processes in other sectors of the economy;
- logic and integrity of the investment cycle;
- succession in the implementation of specific measures;
- priority of directing funds for the implementation of the investment process (Petrovich, 2008).

All over the world, capital financing is largely done in the form of credit resources. However, due to the imperfection of our banking system and the general state of the economy, investment loans are now almost non-existent. The banking system of our country does not have the ability to sufficiently lend to national manufactures. One of the sources of domestic financing is the strengthening the control over foreign economic transactions. This will help to ensure the return of export earnings.

Foreign loans for our economy have reached a significant size, but are used mainly for current consumption. Ukraine often receives so-called "tied" loans, which can be used only to purchase goods from the creditor countries.

Thus, investors, especially foreign ones, search for the information about the conditions that influence the formation of investment attractiveness of the enterprise. The availability of complete information about the industry, region and, especially, business conditions significantly effect the attractiveness of an enterprise.

The experience of working with Ukrainian and foreign investors shows that a strategic investor will always be interested in an attractive company in an investment-attractive industry and an attractive region.

The main directions of improving Ukraine's investment attractiveness for foreign investors should be:

- consistent reduction of pressure on investors and the revocation of diversified sources of investment, uneven distribution between regions;
- creation of effective mechanisms for investment management;
- restructuring the economy, priority investments in the industries that require investments the most;
- increase motivation of business entities in long-term investments, as well as of the population in investing in economic development, rather than consumption;
- stimulating reinvestment;
- improvement of investment legislation and ensuring its stability;
- providing guarantees to investors;
- correspondence between the inflow and outflow of investment resources (Peresada, 1998).

In conditions of economic and political risks, both internal and external, the key to improving the investment activities of enterprises in Ukraine is the consistent implementation of the steps declared by the new government:

- implementation of the judiciary and law enforcement agencies reform,
- implementation of systemic anti-corruption actions,
- ensuring transparency of public procurement,
- significant deregulation of the economy in accordance with European standards of doing business.

Exit from such crisis requires a purposeful state policy to socialize the market economy, increase of incomes of all the population segments to the level of supply of quality goods and services to provide a balance between market demand and supply of goods and services.

Overcoming the COVID-19 crisis by enterprises in Ukraine involves the following stages:

- stabilization (short-term) - the restoration of liquidity of banking institutions and enterprises of the real sector of the economy, prevention of their mass bankruptcy, stabilization of the state financial system and foreign economic relations with other countries;
- renewable (medium-term) - this stage implies the growth of domestic production of goods, primarily consumer goods, energy saving in all sectors of the economy;

- qualitative growth (long-term) – improvement of the quality of public administration and building its integrated system, the development of high-tech sector of the economy based on accelerating the introduction of innovations.

Since the main directions of overcoming the crisis cannot be financed only from domestic sources, there is a need to attract loans. This is the most acute problem today. Therefore, it is very important to determine the optimal ratio and sequence of all actions of the crisis management mechanism of the business entity, necessary for a company in order to survive, not go bankrupt, which requires a protective strategy, and then to restore its solvency and start a new more effective stage of its activities in order to move to a development strategy. Among the methods of overcoming the consequences of the crisis in enterprises are the following: cost reduction; growth of the incoming funds; restructuring of accounts payable; reorganization or restructuring of the enterprise, improvement of its organizational structure and corporate governance, the formation of a portfolio of production technologies in accordance with the crisis of the market, the adjustment of sales policy and personnel management.

It is necessary to take priority measures to create the preconditions for economic growth: to increase domestic demand, to avoid reduction of state budget expenditures, to take measures to develop the domestic market, to intensify measures to regulate and limit unwanted imports, to create favourable conditions for foreign direct investment, to intensify export activities through the use of financial, legal, informational and diplomatic levers.

Important actions taken by government in order to overcome the crisis can be the partial nationalization of commercial banks while strengthening state control over their activities; mobilization of household savings and restoring confidence in the banking system; comprehensive assistance to small and medium-sized businesses; support for youth vocational training programs and expansion of retraining programs for unskilled workers; creation of new jobs due to the implementation of large-scale infrastructure projects by the state; elimination or significant restriction of tax benefits.

To overcome the economic crisis, it is necessary to develop effective public policy mechanisms aimed at providing market efficiency, ensuring compliance with legal norms, preventing unfair actions of business entities, especially monopolists, ensuring protection of property rights, creating conditions to combat raiding and reduce corruption by public authorities.

The first step is to achieve macroeconomic stability. It is clear that macroeconomic stability is a necessary condition for the development of scientifically sound systemic actions to combat the crisis, real planning of public finances and investment and manufacture programs and projects.

In this context, we should mention the bills aimed at solving the problems of the mining and metallurgical industry, construction, light industry and the agro-industrial sector.

In my opinion, further alignment of inter-sectoral and intra-industry price proportions, improvement of energy efficiency, search for domestic markets for products manufactured for export and by import substitution

programs are required. Further prospects of innovation and investment activities of Ukrainian enterprises will be determined by the flexibility and efficiency of responding to changes of the competitive situation in the domestic market.

Analysis of the state's macroeconomic ambitions in terms of investment policy implementation shows that the declared tasks can be contradictory. Even a cursory review of government programs aimed at the development of the real sector of the economy will give grounds to conclude that there are many goals and objectives (achievement and implementation of which is possible only in an ideal model, free from external factors). The combination in one set of different regulatory measures leads to "scattering" of resources and loss of system control of the investment process (Gritsenko, 2011).

Stabilization of the economy and improvement of the innovation and investment climate require the adoption of a number of drastic measures aimed at forming in the country both general conditions of civilized market relations development and specific conditions, directly related to solving the problem of attracting investment. Such measures should primarily include:

- creation of the civilized non-criminal market and the mechanism of bankruptcy provided by the legislation at the national level;
- radicalization of the fight against crime;
- orientation of tax legislation towards stimulating production and investment;
- mobilization of free funds of enterprises and individuals for investment needs by raising interest rates on deposits and contributions;
- providing tax benefits to banks, domestic and foreign investors;
- creation of an investment climate monitoring system in Ukraine;
- creation of a system of support of foreign investments, which would combine a wide and competitive network of state institutions, commercial banks and insurance companies, protecting foreign capital from political and commercial risks; creation of the information intermediary centres engaged in the selection and ordering of projects relevant to Ukraine, the search for investors interested in their implementation and prompt execution of transactions (Yankovy, Koval, Trokhymets, Karpenko, Matskevich, 2020).

To create an attractive investment climate and incentives for innovation, it is necessary to comprehensively involve state regulatory mechanisms, which are provided by budget, tax, monetary, depreciation and customs policy, improving the legal regulation in each of these areas. However, it is clear that solving a set of these tasks is possible only in the long run (Koval, Prymush, Popova, 2017).

CONCLUSIONS

Summarizing the above, investment attractiveness should be considered as an organized activity of enterprises that operate in the actual business conditions of the country with the help of investment entities; functions that consist in a purposeful process of finding the required amount of investment resources and selection of

appropriate facilities or tools for their investment; development and implementation of a phased investment program or strategy and ensuring its effective implementation for profit.

An active state position and a comprehensive approach to solving existing problems related to the investment attractiveness of industrial enterprises in modern conditions will allow Ukraine to embrace its potential in the investment sphere with maximum efficiency. This will become a prerequisite for its sustainable economic development in the future.

Therefore, measures to intensify investment activities in enterprises should be carried out at all levels of management. It is necessary to try to create a favorable investment climate not only for foreign investors but also for Ukrainian ones. Fostering investment activities is possible through implementation of decisive, comprehensive, rapid, transparent and consistent market reforms, as well as through concerted management actions that will awaken entrepreneurial initiative, create a competitive environment and provide incentives for effective economic development.

The study revealed that the crisis is influenced by many factors, the most significant ones are disproportion of financial and industrial capital. Importers of negative trends in the Ukrainian economy have become domestic banks, which have significant debts to foreign partners. Now there are real opportunities to review priorities and discover new opportunities.

To overcome the crisis of enterprises and ensure the financial stability of industrial enterprises, solvency and profitability in the long run, it is necessary to implement and systematically improve financial management through the application of systems aimed at increasing cash flows while reducing costs, that will ultimately lead to improvement of financial state.

One of the main ways out of the recession for economy and to ensure further economic growth, in addition to eliminating the factors that caused the crisis, is finding new ways to create added value, create new goods and services that could better than existing ones meet new realities formed in the market as a result of changes in a number of factors.

Thus, as a result of the study, recommendations were developed to improve the investment attractiveness of the holding's industrial enterprises in the context of the COVID-19 pandemic.

These proposals are an important methodological basis for further study of the investment attractiveness of the holding's industrial enterprises in modern conditions.

Conflict of interests

The authors declare no conflict of interest.

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ENSURING THE SUSTAINABILITY OF THE HUMAN RESOURCES MANAGEMENT SYSTEM OF MARITIME INDUSTRY ENTERPRISES

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ABSTRACT

The article examines the conditions for ensuring the sustainability of the human resources management system of maritime enterprises. The procedure of developing an international human resources management strategy is observed. It is proved that the transformation of the management system becomes a necessary condition for the productive competitive development of the enterprises of the maritime industry. It is established that the key factors of enterprise success is the strategy of international human resources management of maritime enterprises, which is a system of establishing time-bound possible directions of human resources development through the use of appropriate rules, means, analytical methods and management tools, which aim to reach the sustainability of human resources management system under the influence of environmental factors of the maritime industry. On the basis of the conducted research the formation of the strategy of management of the international human resources of the maritime enterprises, the model of maintenance of sustainability of the human resources management system, the system of methodological and economic and analytical support of strategic decisions are developed. The sequence of the stages of the strategic decisions formation dealing with sustainability of human resources management system of the maritime enterprises and the block complex of strategic decisions formations on steady functioning of the human resources management system of the sea transport enterprises are formed. Based on the review of the existing theory of expert research methods, we can say that it is necessary to develop that kind of a procedure of expert survey, which would fully meet the task of providing a strategic decision and would be convenient in practice and which will form the basis, information background for strategic decisions on the sustainability of the human resource management system.

Key words: human resources, maritime enterprises, management strategy, sustainability, economic and analytical support.

JEL classification: O15, J28, J24, Q56

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INTRODUCTION

The analysis of factors that contribute the introduction of elements of international human resources management practices into the human resources management system, as well as factors that raise concerns about the need for such practices, gives the right to talk about opportunities and threats to the sustainability of the human resources management system. When formulating an appropriate human resources management strategy that would take into account the need to achieve an appropriate level of stability of the human resources management system, a difficulty is the lack of analytical procedures. The tooling and information support are meant. The particular emphasis should be placed on the lack of connection between the established level of system stability and the choice of the appropriate strategy, the lack of a mechanism for establishing

the relationship between the factors of successful use of international human resources management and achieving the main goal of maritime enterprises which is the competitive development. Therefore, for the economic and analytical support development it is necessary to identify the problems and tasks of human resource management, the solution of which will create a basis for justifying the choice of the appropriate strategy that best meets the conditions prevailing in the maritime industry.

Analysis of recent research and publications

The studies of the implementation of approaches of the international human resources management in the practice of maritime enterprises management have begun to appear relatively recently: Armstrong (2006), Buzko (2009), Makarenko, Shaikhatdinov (2015), Fombrun, C.J., Tichy, N.M., & Devanna, (1984), Oracle (2005), Petrova (2020), Schmerling, (2008).

The main emphases of the authors were on the context of application, namely, multinational corporations and large international companies. But the maritime industry is directly related to and close to international business. Therefore, the problems of international human resource management are of great interest and need research.

The purpose of the article is to study the conditions for ensuring the sustainability of the human resources management system of maritime enterprises.

Results

Modern operating conditions, a dynamic market environment have revealed an important component of the successful operation of human resources of maritime enterprises which is the level of adaptation to the environmental changes. Therefore, an important strategic issue is to establish the conditions for ensuring the sustainability of the human resources management system.

All this, as well as the principle of systematic management in the maritime sector provide an opportunity to develop a procedure for formulating a strategy for managing international resources in accordance with the action of various groups of environmental factors (Demyanchenko et al., 2017)

The strategy of international human resources management of maritime enterprises is a system of establishing time-bound possible directions of human resources development through the use of appropriate rules, means, analytical methods and management tools, which aim to achieve sustainability of human resources management under the influence of environmental factors maritime enterprises. The formed strategy should be characterized by complexity, have a hierarchical structure and determine different levels of strategic decisions.

Fig.1. The procedure for forming the strategy of international human resources management of maritime enterprises

Source: prepared by the author

Thus, it is necessary to implement the systematic approach to the development of the strategy of international human resources management of maritime enterprises, which will allow the most complete consideration of all the factors that directly affect the effectiveness of international human resources application. This will allow us to characterize all the existing interconnections in the human resources management system in the context of globalization and internationalization.

Therefore, the procedure of the international human resource management strategy development must be systemic. The scientific reasoning of management decisions on the use of international human resources on the basis of analytical processing of information is considered to be of the particular importance (Rachinskiy, 2012; Petrova et al., 2020)

The strategy is a systemic process, and therefore, the use of its main merit – consistency in combination with economic-mathematical models and analytical tools provides an opportunity to analyze the stability level of human resources management system taking into account all levels of hierarchical structure of the company and to set goals and objectives, to form possible directions of human resources development in the conditions of turbulent impact of environmental factors of the companies in the maritime industry.

Studies of the factors that determine the sustainability level of the human resources management system, considering the proposed management principles, methods and tools, informational and analytical maintenance prove the need to develop fundamental strategic support for international human resources management that would fully meet the requirements of today's global market and its main development trends (Buzko, 2009; Buzko et al, 2016; Baklanova, Petrova, Koval, 2020; Sushchenko&Basyuk, 2019; Bacho et al, 2019; Mushkudiani et al, 2020).

The basis for ensuring the competitive development of maritime enterprises should be the stable human resource management system, which should function effectively and respond positively to the involvement of international human resources.

Thus, a necessary condition for the productive and competitive development of the companies in the maritime industry is the transformation of the human resources management system. Such a transformation involves adjusting to the level of high resilience and maximum use of the positive effects of environmental factors, such as environmental groups, organizational factors and productivity of maritime enterprises. Thus, let's present a model of competitive development of maritime enterprises based on the use of international human resources management system (fig. 2).

The developed model focuses on the sustainability of the human resources management system of maritime enterprises, focused on international human resources, preservation of their cultural values, traditions and creating appropriate conditions for their effective work in general, reducing conflicts, stressful situations, increasing productivity and efficiency of communication channels (Ustynov et al., 2019; Luchaninova et al., 2019).

Fig. 2. Model of ensuring the sustainability of the human resources management system

Source: prepared by the author

As already mentioned, the consistency principle allows us to form a procedure for making strategic decisions (Rachinskiy, 2012).

Since appropriate tools are needed to make reasonable strategic decisions, such a system of methodological and economic-analytical strategic decisions support is shown on the fig.3. It includes two blocks: methodological support and economic-analytical support.

The system of methodological and economic-analytical support of strategic decisions is a grouped system of scientific approaches, models and methods that create the necessary support for the formation of the necessary complete research base.

Fig.3. System of methodological and economic-analytical strategic decisions support

Source: prepared by the author

The block of economic-analytical support includes a set of scientific-methodological approaches to determining the indices in each of the studied groups of factors, the level of stability of the human resources management system, analysis of obtained values and identifying the reasons that led to such results.

As for the practical implementation of providing strategic decisions on the sustainability of international human resources management system, it can be represented as a dialectical combination of elements of methodological and economic-analytical support system of strategic decisions (Nikolaieva et al., 2019).

It should be noted that the effect of priority factors for each of the studied groups is considered in terms of their positive impact on the use of international human resources. They are integrated to achieve the main goal

of ensuring the sustainability of the human resources management system and the competitive development of the companies in the maritime industry.

To substantiate strategic decisions, appropriate methodological, informational, analytical support of the human resources management strategy has been formed (Oracle O, 2005; Mikhno, Koval, Kolesnikova, 2019).

The developed provisions for ensuring such decisions are based on the balancing principles of all the main elements, and consider the use of comprehensive analytical procedures, which mainly help to prepare a scientifically reasonable strategic decision. The factors that influence the implementation of international human resource management practices acquire the particular importance. The practical application of economic-analytical substantiation and support of strategic decisions on human resources management also requires the formation of a special procedure (fig. 4).

Fig. 4. The formation step sequence of strategic decisions to ensure the sustainability of the human resources (HR) management system

Source: prepared by the author

Such a procedure should have a logical sequence of appropriate steps in the development of strategic decisions in maritime HR management.

Thus, the established procedure of forming strategic decisions on maritime HR management has a clear logic that allows to achieve the most effective management decisions, using international human resources as well as the most productive usage of maritime enterprises in order to achieve goals and fulfill the tasks (Makarenko et al., 2015).

It should be noted that in the preparation process of decisions it can be influenced by lots of factors, it is advisable to use the examination methods (Ustinov, 2018). It is explained by the fact that in case of using incomparable factors of different groups of influence, it is a scientifically well-grounded examination that allows to collect and process the appropriate information as well as to obtain various information.

It is considered that, relying on the opinions of the experts, it is possible to get a real picture of a studied process, as the experts have a practical experience and theoretical knowledge in it. However, the usage of

expert methods and the involvement of the experts themselves is in general a complicated task (Solokha et al., 2018).

Despite a rather wide and frequent usage of these methods, nowadays there are no generally accepted classifications and it is difficult to find all-round recommendations how to use them in a particular situation. This statement refers to all areas, such as an enterprise, industry or a country. So, it can be confirmed, that the expert methods continue to develop, as the modern tasks have a definite tendency to be complicated and take a great responsibility for the consequences of such decisions. Expert methods also significantly reduce the statistics of errors in decision-making by people responsible for it, as the involvement of specialists from different levels of management, as well as external representatives of other enterprises, allows a fairly professional approach how to come up with the problem.

Expert evaluation methods include the following important components:

- task analysis based on intuition and logic: the experts are expected to have sufficient experience, knowledge of the issue and are endowed with the appropriate intuition for the phenomenon under study, so the requirements are high for the expert who is under assignment;
- conducting direct qualitative or quantitative evaluation and analysis and forming a solution to the research problem and analysis of expected results;
- processing of all results of assignments on the researched problem for the formation of generalization of expert opinions.

Thus, based on the review of the definite theory of expert research methods, it can be claimed that each specific situation, problem requires the use of a set of characteristic methods and approaches. For example, there are sometimes significant inconveniences to expert surveys and complications associated with the conditions of such expert surveys (Sotnichenko et al., 2019).

It is necessary to develop such a procedure of expert survey, which would fully meet the task of providing a strategic decision and would be convenient in practical use. This procedure will form the basis, information base for strategic decisions on the sustainability of the HR management system.

It should be noted that the complexity of the HR management process is related to the human resources in particular, its specifics and general trends in the industry. For example, the processes of internationalization, globalization, which occur when international resources are connected to the management in various functional areas. Therefore, it is necessary to deal with people's reaction to various strategic decisions (Makarenko et al., 2015). In addition, the turbulence of events taking place in the world and in the industry creates uncertainty in the information space, the difficulty of obtaining information. Under such conditions, an appropriate methodological appliance for conducting an expert survey is required, which in such a situation will reduce the risks of uncertainty and making erroneous decisions.

Thus, as shown by the theoretical and practical experience of expert surveys and processing of their results in each case requires an individual approach to the problem, taking into account its specifics and require scientific justification of the subject.

Providing strategic decisions with appropriate analytical procedures, the methods of expert assignments and technologies for processing the obtained results continue to become relevant, develop and improve. The set of elements that make up the procedure of forming strategic decisions for the sustainable operation of the HR management system of maritime transport enterprises is presented in Fig. 5.

Fig.5. Block complex of strategic decisions formation on sustainable functioning of the HR management system of maritime transport enterprises

Source: prepared by the author

There are four blocks in the developed complex. From these blocks the procedure of development of the strategic decision is built based on several alternative variants.

It is necessary to emphasize certain features that are related to the process of alternatives formation of the strategic decisions. It is proposed to immediately divide them into such groups as those solutions aimed at ensuring the sustainability of the human resources management system of maritime transport enterprises and solutions that relate to purely international level and comprehensive ones that cover the problem as a whole (Ustinov, 2018; Koval, Kotlubay, Gorbachenko, 2018).

Based on a thorough analysis of the most widely used in practice expert methods, as well as taking into account the specifics of decision-making in the field of human resources management, method of expert evaluation was developed in accordance with the situation of maritime transport enterprises. The basis of such

a symbiosis of expert assessments are some positive aspects of the Delphi method and the system of "assessment and study of events".

The procedure of such examination should take place in three stages.

The first and second stages focus on the opinions and experience of mainly practitioners, and the last one relies on the views and experience of senior management of maritime transport companies. The last one is the one who finally makes strategic decisions (Makarenko et al., 2019).

The third stage includes the examination procedure. Review of the assessments by experts should be noted as a circumstance. Each of them may not return to reviewing previously set points. However, in the event that an individual expert's grades fall out of the generally established intervals (such intervals will be obtained on the basis of all expert assessments), he must review his assessments to identify the reasons for the deviation.

Thus, each of the experts has the opportunity to adjust their assessments, based on the results of discussion of some issues with other experts and acquaintance with their point of view on the research question. In this way, the expert changes his mind and adjusts his assessments.

The senior management level of maritime transport enterprises should be able to scientifically substantiate and systematically approach decision-making to determine the strategic direction of work with human resources. This issue is particularly important for international human resources, as they have many specific factors that experts can assess and take into account in order to improve the efficiency of maritime transport enterprises (Onishchenko, 2018).

CONCLUSIONS

The system of interconnected methods, models, tools, information and analytical support allows to qualitatively form strategic decisions on human resources management, which are open for exchange of knowledge, experience, transformation of knowledge from the practices of foreign countries. Such a human resources management system will significantly increase the efficiency of all functional processes of maritime enterprises and make them competitive in the global market. In contrast to existing support systems, the current procedure focuses on a set of factors that determine the effectiveness of work with international human resources (external environment, organizational environment, productivity). The use of analytical mechanisms, models and methods allows to determine the quantitative relationships and between generalized indicators and factors.

It should be noted that in the preparation of decisions that take into account the influence of many factors, it is advisable to use methods of examination. Based on the review of the existing theory of expert research methods, it can be said that each specific situation and problem requires the use of a set of characteristic methods and approaches.

It is necessary to develop such a procedure of expert survey, which would fully meet the task of providing a strategic decision and would be convenient in practical use. An appropriate methodological apparatus for conducting an expert survey is needed, which in such a situation will reduce the risks of uncertainty and making

wrong decisions. The use of expert assessments in the development of strategic decisions makes it possible to systematically approach the assessment, to take into account the action of each individual environmental factor with the definition of possible directions for the maritime enterprises' events development. Therefore, in general, conditions must be created to ensure the sustainability of the human resources management system of maritime enterprises.

Conflict of interests

The authors declare no conflict of interest.

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STRATEGIC MANAGEMENT OF HEALTHCARE INSTITUTION DEVELOPMENT OF THE NATIONAL MEDICAL SERVICES MARKET

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ABSTRACT

The article reviews the current state of the market of medical services in Europe and comparatively results with the health care system in Ukraine. The main problems of reforming the health care system of Ukraine, which is characterized by the reduction of public health institutions, insufficient funding and an increase in the number of private clinics aimed at maximizing profits, are analyzed. On the one hand, this improves the quality of medical services, as private clinics, not having public funding, but financed by consumers purchase expensive equipment and make decisions in market conditions, which contributes to the introduction of new methods and innovative technologies, while on the other hand private medicine is inaccessible to the vast majority of the population of Ukraine due to the low economic status of citizens. The article considers the problem of remoteness of settlements from health care institutions and gives recommendations for further development and management of the health care system on the national market of medical services to reduce the risk of premature loss of population and improve the health of patients. The main reasons for the decline of the population of Ukraine are described and recommendations for the transition from public to public private medicine are provided. It was found that it is necessary to increase funding for public healthcare institutions and increase their total number to preserve the human potential of Ukraine. It was concluded that the strategic management of the development of the health care system should constantly monitor the effectiveness of implementation of changes, develop a flexible system of reform and control, which would take into account regional characteristics and mentality of the Ukrainian population. In order to increase the results of public medicine functioning and improve its availability and competitiveness, it is necessary to reorganize the system of control over the targeted use of monetary resources and develop a step-by-step strategy of Ukraine's development in all areas of the medical services market.

Key words: strategic management, healthcare institution, national market, medical services, human potential.

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INTRODUCTION

Regulation of national health policy is an extremely important factor in the existence of the state and an indicator of the quality of life. Proper management decisions in the health care sector contribute to strengthening and preserving the health of the working population of the country, solving the problems of demography, improving the quality of labor resources, increasing productivity, which is especially important for the development of the country's economy, increasing Gross Domestic Product (GDP) (Malyarets et al, 2019; Matyushenko et al., 2020).

In recent years, there has been an increase in morbidity in the working age of the population of Ukraine and an increase in immigration, which reduces the labor potential. The main world trends and directions of strategic management in health care are developed by the World Health Organization (WHO), however, each country has its own priorities and features that determine the general provisions and concepts that are considered by the state leadership. When developing a national program on safety and hygiene, goals and objectives should be formulated taking into account the stated priorities, developed means and methods of achieving them, as well as ways to assess the results achieved and general access of each citizen to information on changes and opportunities.

The quality of medical services determines the amount of expenses per capita and the quality of use of these funds. In Ukraine, health care costs are much lower than in European countries, which affects the quality of the health care system as a whole. The level of national spending on health care is a relative value calculated as a total amount of public and private spending on health care during a calendar year and is a reflection of the attitude of the state and society towards citizens' health (Andriyash, Malikina, Polyakova, 2019). The level of quality of health care services in Ukraine is much lower than in developed countries and the population health indicators in Ukraine have a negative trend. In Ukraine there is a lack of funding from the state for health care. This leads to an increase in the share of personal expenses for medical care. Taking into account the socio-political importance of health preservation of the population on the part of the state, the role and importance of the mechanisms of state management in the restructuring of health care systems is increasing (Shohet, 2006; Safonov&Borshch, 2019).

The purpose of the work

Taking into account the increase in morbidity of the population of Ukraine and the prevalence of population decline over the birth rate, the aim of the article is to analyze the current situation and strategic management of the development of health care institutions on the national market of medical services, which would contribute to the improvement of the quality of life of the population and increase in the human potential of the country.

Results

The main reasons for the decline of the population in Ukraine in 2018, according to the State Statistics Committee and other sources of information were diseases of the circulatory system (387029), neoplasms (77551) and injuries, poisoning (30718) and some other consequences of external factors (Ukrainian Center for Social Data, 2019). Such a reason of population decline as the old age is only 10% in Ukraine from other reasons, which indicates the possibility of improving the health care system and its unsatisfactory condition.

Since the existence of independent Ukraine, the structure of health care expenses has changed. In the Soviet Union, there was only state medicine, which was based on a system of national and municipal health care institutions that were accessible to every citizen.

The set of social needs and priority directions of development for each region were strictly regulated. Since 1991, private hospitals have appeared, the number of which is constantly growing in Ukraine, as well as the growth of private sector funding for health care (Fig. 1). All this contributes to the growth of responsibility of each person in relation to his or her health condition and reduces the influence of the state on the behavior of the actors. However, due to the low economic standard of living of the majority of Ukrainian citizens, private medicine is not available, so the existence of state free medicine is mandatory, its quality determines the labor potential of the country and sets the vector for future development.

Fig. 1. Total health care costs by funding organizations in Ukraine

Source: Ukrainian Center for Social Data (2019), State statistics service of Ukraine (2020)

From Fig. 1 we can see that in the time interval of 15 years the percentage of government funding for health care decreases, while the percentage of funding by the private sector increases. Total health care expenditures in dollar equivalent are also slowly growing, however, we see their decline in 2016 due to the introduction of new medical reform, changes in development strategies and the leadership of the Ministry of Health, along with the economic crisis and instability in Ukraine. The general trend in the majority of countries of the world and Ukraine contributes to the increase in the percentage of private sector funding for health care and the development of private or insurance medicine. Due to the decrease in funding for state health care institutions, their number is also decreasing in comparison with the number in the Soviet Union. The location structure of medical and health care institutions is also changing due to the outflow of citizens from urban-type settlements and towns to large cities.

As a result of urbanization, environmental changes and an increase in the morbidity rate are becoming a consequence, which increases the burden on hospitals in cities and reduces the flow of population to health care facilities in small communities (Koval, Mikhno, 2019; Sushchenko et al, 2019).

At the time of the planned economy, decisions on financing the health care system and regulating the number of health improvement measures and their activities were fully subordinated to the state authorities (Levashova, 2011; Ponomarenko&Gontareva, 2017). With functioning of the market system, the private sector accounts for a growing share of funds for health care development, which is becoming more powerful every year. The existence of grants and programs to support health care institutions is not sufficient for their full functioning, constant updating with respect to scientific and technological progress and maintenance in the number corresponding to 1990. Further preservation of the state monopoly is impossible, but in order to preserve the nation's health, the state must develop a clear strategy for further actions that would improve the quality of life of the population and be publicly available. Currently, all types and regional features of private medicine are considered as a single system that exists to generate a profit when investing private funds in business development. Regulation of private medicine is carried out by the Ministry of Health of Ukraine (2020), however, for compliance with standards and quality of services corresponds to an entrepreneur in a competitive environment (Lazarova, Zhelyazkova, Vazov, 2015).

On the one hand, this brings the modern medical industry to a better level through private investment, and on the other hand, makes it inaccessible to many segments of the population. The best option for the development of private medicine is to create conditions in which the health care system of Ukraine can get the maximum investment and build a system of independent institutions for the provision of medical services on competitive terms with the functioning of the free market (Naama, 2001; Sushchenko, 2016). However, this strategy is the best option in large cities where there is a constant flow of capital and the standard of living of the population is significantly higher than in the periphery. As for small communities, the national concept should be free and accessible medicine throughout the country.

From Fig. 2 we can see a decrease in the number of hospital institutions in Ukraine at the whole time interval from 3.9 thousand units (1990) to 1.7 thousand units. (2017). Although the territories of the Autonomous Republic of Crimea and part of Donetsk and Luhansk oblasts have not been taken into account since 2014, the total number of medical institutions is still declining. This is most often due to the reorganization of hospitals, their closure in small communities and the reduction of their total number in Ukraine due to insufficient funding. Trends in the reduction of health care institutions may hinder the health of citizens and significantly reduce the quality of life of the population. A large number of diseases, especially those associated with poor blood circulation and injuries require immediate hospitalization of the patient, and long distances between hospitals and poor road conditions cause an increase in population decline or deterioration. The number of hospital beds also decreases over time.

Fig. 2. Number of hospitals in Ukraine in the time interval

Source: Ukrainian Center for Social Data (2019), State statistics service of Ukraine (2020)

The main goal of creating a health care system is to improve the living conditions and healthcare of the population, promote a healthy lifestyle and increase the labor potential of the country, which will contribute to the reduction of possible health risks for citizens.

In the United States and a number of developed countries, there is insurance medicine, which depends on the accumulated deposits during the period of service. State insurance medicine does not cover all costs and is available in the areas specified in the contract. And although government spending on health care in developed countries is quite high compared to Ukraine, not all existing healthcare systems are more efficient. In particular, insurance medicine is a system that emerged during the period of the market system and has the influence of large pharmaceutical corporations and clinics, which can correct the actions of physicians and influence the market for medicines and services. An example would be the U.S. health care system, where it is difficult for the government to adjust prices for medicines and part of the population cannot afford quality treatment, while private medicine partially interacts with the government and has high prices for services compared to Ukraine. Not all employers buy the maximum insurance policy, what to say about the use of human resources and unwillingness of employers to take care of their employees, and the population is not able to buy enough drugs and medical services on their own (Nenkov, Sushchenko, Dyachenko, 2017). All this leads to increased morbidity and population decline. In addition to the high prices of health care products in the United States, there is a problem with the use of government programs. Many people are unable to formalize treatment or are unaware of its availability, while private medicine, with its strong advertising, generates a steady income to keep U.S. citizens healthy. The U.S. health care system cannot be successfully implemented in Ukraine

because of the lower economic standard of living, the developed shadow sector, where most people work without official registration, so employers will not buy insurance policies (Vazov, 2019). Another significant obstacle will be the introduction of family doctors and reduced access to narrow specialists due to the untimely provision of medical services and the availability of queues to specialized doctors in public health care institutions (Hutsaliuk, 2020).

In most countries of the world with market economies, there are new organizational forms of medical institutions, especially medical centers - universal or focused on a particular type of pathology, with different forms of funding, mostly private. In Ukraine such centers are becoming more and more popular and have a powerful material and technical base in comparison with the majority of state medical institutions, but financing in such centers is higher in price and therefore not affordable for most citizens of Ukraine.

The basis of the nation's health is also an extensive system of medical and preventive health facilities, the number of which is also constantly declining with the construction of private sanatoriums and resorts, which are aimed at maximizing profits.

Preventive measures are aimed at reducing risk factors that may affect the health of citizens and have an extensive system of health facilities, which since 1991 have been actively privatized or discontinued, resulting in a reduction in their number. The number of publicly funded children's health care institutions also continues to decline.

The average number of doctors in Ukraine is 440 people. per 100 thousand citizens, while Sweden (540 people), Austria (513 people), Norway (466 people) (World Health Organization, 2018). However, the incidence rate in Ukraine is significantly higher than in other European countries, due to lower economic levels, environmental problems and others (Naama, 2011).

The decline of Ukraine's population is quite high in comparison with developed countries (Fig. 3) for the negative impact of external factors on public health, in particular, low living standards with high negative environmental and physical stress (Koval et al., 2019; Koval et al., 2020). The existence of large factories that have obsolete equipment, non-compliance with environmental standards and high levels of corruption make Ukraine a country with an increased risk to life, and the failure to reform the health care system and reduce its funding is the reason for the country's shrinking population and aging nation.

From Fig. 3, we can see that population decline caused by cardiovascular diseases is increasing in the time interval, and the trend line has a positive tilt angle, which indicates negative trends in health care. The increased risk to public health is also due to the reduced availability of health facilities and medicines in Ukraine. At the same time, new technologies are being introduced in the world and new methods of treatment for many diseases are appearing. Scientific progress and development of information technologies should significantly reduce population losses and increase life expectancy, which is observed in developed countries, while in Ukraine life expectancy is growing slowly and is about 72 years, while in Switzerland, Spain, Australia, Singapore, France it is about 83 years (World Health Organization, 2018).

Fig. 3. Population decline in Ukraine in the time interval

Source: Ukrainian Center for Social Data (2019), State statistics service of Ukraine (2020)

Numbeo (2020) has compiled a list of countries by level of health care, which varies from 0 to 100. The higher the index, the better the quality of health care.

Fig. 4. Health Care Index by Country

Source: World Health Organization (2018), State statistics service of Ukraine (2020)

From Fig. 4, we can see that the indicator of quality of medical care in Ukraine is much lower than in developed European countries. In 2020, it was about 53, and in France it was about 81. In recent years, there

has been an improvement in the quality of medical care in Ukraine, which is due to the development of private medicine and the introduction of new methods of treatment. If we consider public health institutions, the situation is worsening. One of the main problems in Ukraine is the closure of medical facilities in small communities and reorganization, which contributes to the closure of medical facilities with a small workload.

One of the reasons for premature population decline in Ukraine is the untimely assistance in the development of cardiovascular diseases (Fig. 3). In case of liquidation of medical institutions in settlements with low population density and poor road surface, which is typical for the most part of Ukraine, the risk for the population increases.

The reforms that are currently being implemented in Ukraine contribute to the reduction of the quality of health care and create additional risk factors in the presence of diseases and the need for urgent hospitalization.

The map of the Ministry of Health of Ukraine shows the number of medical institutions (Fig. 5).

Fig. 5. Map of medical institutions of Ukraine

Source: Ministry of Health of Ukraine (2020)

From fig. 5, we see that in some settlements of the district significance there are less than 10 medical institutions and in many settlements there are no such institutions at all. Taking into account the terrain and quality of road surface, we can conclude that the health care system in Ukraine is in an unsatisfactory state. The situation is especially worsening in the mountainous areas of the Carpathians, where the distance between settlements is increasing due to the presence of serpentines, bridges and tunnels.

The time of access to medical care institutions in Ukraine shall not exceed the threshold values. Otherwise, health risks for citizens living in remote areas are growing, and the living standards of the population of Ukraine are decreasing, which affects the effective macroeconomic indicators.

Thresholds, in our opinion, should be the distances (for multidisciplinary medical institutions that can provide high-tech care), which can be reached by car in no more than 60 minutes in compliance with all established traffic rules. The second threshold value should be the distance to the nearest primary health care station. This distance should not be more than the distance that a person can walk 60 minutes, that is, no more than 7 km.

Fig. 6. Location of primary health care centers and distance from them to settlements

Source: prepared by the authors

Figure 6 shows the scheme of location of 3 primary care institutions - O_1 , O_2 , O_3 and location of settlements relatively to them. All settlements that are within a radius of 7 km (distance R , OC) are favorable for living. r - distance, which increases the risks caused by the remoteness of primary health care centers of 3.5 km. Localities that are in the second circle and have a distance greater than R and less or the one equal to $R + r$ (G , F) is an area of increased risk for living. The settlements located behind the circles and the distance from which to the nearest primary health care institution is more than 10 km are dangerous for living (Table 1).

These are points B , K , L . Moreover, every 1 km the risk of premature population decline due to untimely medical care increases by 0.6% for critically ill patients (calculated as the average according to the State Statistics Committee of Ukraine, 2020). The area between points D and E , painted yellow, is a territory that has a choice when it comes to providing primary health care, so favorable for living.

For hospitals, where there is an outpatient department, hardware and multidisciplinary specialists, the radius of accessibility R should be 60 km, and the distance $R + r$ should be 90 km. In this case, if the road surface is in poor condition, you should take into account the travel time. The maximum time for which the car should drive from the settlement to the hospital should be 1 hour. Otherwise, this area becomes a high-risk settlement.

Table 1. Risk of patients' health deterioration due to distance from health care facilities

<i>Type of medical institution</i>	<i>Distance to the settlement $R+r$</i>	<i>Excessive distance indicator r</i>	<i>Travel time</i>	<i>Degree of risk</i>
Primary care point	$R+r \leq 7$	0	Up to 1 hour on foot	Low. Up to 10%. Dependent on other factors.
Primary care point	$7 < R+r \leq 10$	≤ 3	Up to 2 hours on foot	Moderate. About 12%.
Primary care point	$R+r > 10$	> 3	More than 2 hours on foot	It grows every 1 km by 0.6% when the patient is in serious condition.
Polyclinic	$R+r \leq 60$	0	Up to 1 hour by car, taking into account all traffic rules	Low. Up to 10%. Dependent on other factors.
Polyclinic	$60 < R+r \leq 90$	≤ 30	Up to 1.5 hours by car, taking into account all traffic rules	Moderate. About 19%.
Polyclinic	$R+r > 90$	> 30	More than 1.5 hours by car, taking into account all traffic rules	It grows every km by 0.9% if the patient's condition is severe. Has a threshold value.

Source: prepared by the authors

From Table 1 we can see that the probability of complications due to the remoteness of medical care centers increases with the distance to the hospital. Most primary care facilities in Ukraine do not have the necessary equipment and can not provide assistance in full, so patients are transported to hospitals of district importance. With a bad roadway, part of which in Ukraine is about 70% more time to transport a patient, you need to take into account when calculating the risk arising from the remoteness of the settlement from medical care facilities.

Three key areas of management should be considered as the basis for the development of further health strategies: development of a network of health care and treatment facilities, creation of a material and technical base that would be modern, effective and accessible to the entire population, training and qualified personnel, including continuous professional training of employees and access to innovative methods and equipment. To improve health outcomes, the Ministry of Health and the World Health Organization have developed a system of competencies necessary for each worker to master. To improve the quality of medicine, the state should constantly conduct advanced training courses, facilitate the attendance of conferences by medical workers and the exchange of information between foreign and Ukrainian doctors. To form strategies in personnel management, it is better to use the methodology for identifying key competencies and their mastery and further development.

In the sphere of health care, the state should have a dominant role, control the availability of services, the quality of their provision and pricing policy in the sphere of health care, set a price ceiling for the provision of medical services in the sale of goods. Another important aspect should be the process of involving private non-profit structures, private commercial organizations, other organizational and legal forms in the management of health care in order to improve its functioning.

The development of private medicine should not be an obstacle to the functioning of public medicine and not be the only option for citizens that will make access to medical goods and services inaccessible to the majority of the population, so the basis of strategic management of health care should be free, accessible and high quality of service provision, which will help improve the country's labor potential. This will help reduce social payments for the population who loses their ability to work due to a decrease in their number, improve efficiency, which will increase Ukraine's GDP.

To improve adaptability in the strategic management of health care institutions will help to introduce the newest technologies along with increased motivation for medical personnel, which is primarily possible with the improvement of medical financing (Baklanova, Petrova, Koval, 2020; Petrova et al., 2020). In forming strategies for each region, such measures should be conducted (Buchbinder, Shanks, Kite, 2019):

1. Formation of an effective network of medical and health care institutions while minimizing the risk associated with the remoteness of communities from the places of medical care, which are available on the map with the specified characteristics and distance from the location of each citizen;
2. Formation of an innovative development strategy, taking into account the best practices of foreign clinics and specialists using the latest methods;
3. Structural transformation that will improve the quality of services provided;
4. Creation of systems of development, testing and implementation centers for knowledge-intensive projects financed both from the state budget and from private investments;
5. Compliance of competences specified in the Ministry of Health with the competences that employees of the health care sector have, creation of conditions for continuous improvement of service quality;
6. Organization of corporate relations and common information space with other medical institutions;
7. Formation of information-analytical strategic centers that provide training and decision-making of strategic decisions, search for innovative solutions and their dissemination among medical professionals, rapid response to situations that have developed;
8. Use of public medical education as a tool to improve the culture, responsible attitude towards their own health (taking into account regional specifics);
9. Formation of a medical system that is publicly available and free and has an upper limit on the basic medicines that population needs.

Reserves for increasing the life expectancy and improving the quality of life of the population lie in the area of their social and economic development, where the basis should be the maintenance of a healthy lifestyle, improving the living standards of disadvantaged segments of the population, employment programs and decent social security, prevention of aggressive behavior, combating extremist manifestations, increasing the level of education and improving financing of health care institutions simultaneously with the control over the use of funds and reducing the shadows effects on the activities of economic entities (Tumalavičius et al., 2017).

CONCLUSIONS

The health care system of Ukraine is under development and is in the process of transformation, which has led to disparities and reduced quality of medical services. To improve the functioning of the health care system, work should be done to increase the number of medical institutions and restore the system of public access. The basis for development should be measures to increase the country's labor potential and quality of life, restore human resources and reduce the aging of the nation, which has been observed over the past decades.

In health care institutions, every citizen should receive assistance upon request no later than 8 hours, if his condition is not serious, so the number of public funding institutions should be increased to avoid queues and complications of diseases.

Innovative development of the medical sphere, high technology should be supported and financed by the state, and the latest devices and drugs should be publicly available throughout the country in public medical institutions.

To improve the human resources potential of medical institutions, it is necessary to organize well-coordinated work of medical teams, access to information resources, continuous professional development and compliance of these professional competencies with the skills and interests of employees, to introduce mandatory foreign internships in leading medical institutions of the country.

In Ukraine, where there is political and economic instability, a flexible public health policy and adaptation of existing programs to regional specifics should be implemented, and the effectiveness of activities and changes should be constantly monitored.

In Ukraine it is necessary to balance state obligations to the population and the possibilities of their fulfillment, which would contribute to the improvement of the quality of life of the population and innovative development in the market conditions, where both public and private healthcare institutions would function successfully.

Conflict of interests

The authors declare no conflict of interest.

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Monograph Review

HUMAN CAPITAL OF POLISH AND UKRAINIAN ENTERPRISES IN THE VOLATILE ECONOMIC ENVIRONMENT

(Original title: ЧЕЛОВЕЧЕСКИЙ КАПИТАЛ ПОЛЬСКИХ И УКРАИНСКИХ
ПРЕДПРИЯТИИ В УСЛОВИЯХ ИЗМЕНЧИВОЙ ЭКОНОМИЧЕСКОЙ СРЕДЫ)

by author Ludmila Stemplewska

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The monograph HUMAN CAPITAL OF POLISH AND UKRAINIAN ENTERPRISES IN THE VOLATILE ECONOMIC ENVIRONMENT (Original title: ЧЕЛОВЕЧЕСКИЙ КАПИТАЛ ПОЛЬСКИХ И УКРАИНСКИХ ПРЕДПРИЯТИИ В УСЛОВИЯХ ИЗМЕНЧИВОЙ ЭКОНОМИЧЕСКОЙ СРЕДЫ) submitted for review is an interesting and valuable study which in a complex and in-depth manner deals with the question of human capital in the Polish and Ukrainian enterprises in a setting of volatile economic environment.

The monograph comprises a unique and creative achievement of the author and has a considerable impact on the state of knowledge and directions of further research on the influence of various factors on the level of human capital development in Poland and Ukraine. One interesting example is drawing attention to the impact of environmental factors on the development of human capital and establishing those having the greatest effect.

The theoretical portion of the monograph testifies to a very good substantive preparation, knowledge in the field of management and economics. A substantial part of the research is constituted by the analysis presenting the development trend of Poland and Ukraine based on economic data, thus showing the similarities and differences. Another substantial portion of the study is the inclusion of advanced research methods to obtain a model solution in the scope of:

- Assessment of the priorities of criteria for evaluating human development indicators.
- Selection of essential indicators from the set of all presented in the report “The Indices and Indicators of Human Development”.

- Assessment of selected indicators of the impact on the social, economic and innovative development of enterprises and the country.

It is an original concept that certainly reflects the high quality of the research.

It should be emphasized that the presented monograph combines three aspects: theoretical, empirical and applicative. The theoretical aspect includes an extensive analysis of the source literature. The empirical portion concerns the analysis of the obtained results related to the influence of various factors on the level of human capital development in Poland and Ukraine, with the help of knowledge, attitudes and opinions obtained both as a result of basic research, as well as due to research of respondents, and the application of T. Saati's system analysis of relative importance (meaning, advantages).

The monograph concerns the presented problem identification, appearing during implementation of managing employee development, and providing information, supplementing the previous experiences and helping to limit the number of errors in making decisions streamlining the management of employee development.

In my opinion, the academic quality is very high, which is proven by the following arguments, of which I shall recall a few:

1. The monograph contains the results of extensive scientific research, interesting, unique and inspiring to deepen studies towards determining the level of impact of various factors on human capital development not only in Poland and Ukraine, but also in other countries during 4.0 and COV 19.

2. The applicative dimension of this type of research has been clearly indicated, which allows us to expand our knowledge in the field of management and economics.

3. The research is perfectly embedded in the academic literature of domestic and foreign authors of scientific studies. This is reflected not just by the bibliography which contains over 300 sources of periodical and condensed nature, but also the creative use of the content of those publications in own theorems and explanations. The study fully reflects and summarizes the scientific achievements in the field of scientific interest.

4. The monograph was structured correctly in terms of methodology, and the results were discussed and analyzed with a high level of scientific competence.

5. The paper presents an innovative issue which is certainly a very valuable perspective at the issues concerning the level of influence of various factors on human capital development in Poland and Ukraine.

6. The high quality of the monograph is also reflected in the structured, logical and consistent arguments. The division into chapters and sub-chapters is correct, appropriate proportions, and the method of presenting analyses and thoughts is transparent and uses the accepted terminology. Owing to this, the study and its contents are easily understandable.

Summarizing the previous comments and partial classification, I would like to state that the submitted monograph has all the features of an innovative scientific research, prepared with the utmost care for the quality of scientific works. It comprises a unique and creative achievement of the Author and will have a considerable impact on the state of knowledge and the directions of further research in the scope regarding the level of impact of various factors on the development of human capital in Poland and Ukraine. The monograph is useful for scientists, PhDs and students in the analysis of managing development in enterprise employees in volatile conditions, as well as for a broad range of people interested in organization and business development.

In the light of the above, I would like to recommend this monograph for publication by a scientific journal.

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There is no charge of any amount, either in the submission or publication of articles. Editorial team don't receive any fee. In order to maintain this collaborative activity free of charge, we place the target 120 days from the time between the reception and the publication of the articles. For this we adopted the system of continuous flow of publishing with closing of the editions in the months of May, September and January.

Contribution to definition of authorship

The recognition of authorship is based on a substantial contribution, related to the following aspects: (i) designing and delineating the study, analysis and interpretation of the data; (ii) writing or critical review relevant to the intellectual content of the manuscript; (iii) final approval of the version to be published; and (iv) responsibility for all aspects of the work, including ensuring its accuracy and integrity. All those designated as authors must meet the four criteria for authorship, and all those who meet the four criteria should be identified as authors.

At the submission checklist, is required that everyone's participation in the preparation of the manuscript and publicly assume responsibility for its content. At the end of the text of the manuscript, a paragraph should be included with the information on the contribution of each author to its elaboration.

Throughout the text, the international system of units (IS) should be used to indicate measures. The article should have the following structure:

- a) Introduction;**
- b) Materials and Methods;**
- c) Results and Discussion;**
- d) Conclusion or Final Considerations;**
- e) References.**

Other sections and subsections are accepted, such as the Bibliographic Review, however, the above sections are mandatory. The availability of a template for submission aims to standardize the submission format text of the journal, reducing the publishing period, and making possible the scheduled periodicity. The list of references should be presented at the end of the text, in a specific section. Do not use footnotes!

General requirements for submission formatting

The language of the article: English.

The article should be prepared and submitted of the journal in word processing program Microsoft Office Word 2003, in ".doc" format, with tables and figures included in the body of the text.

Section headings should be set in bold.

METADATA

- the author's name, surname (it is obligatory to give the author's name and surname in English according to passport data or any other IDs);
- the author's information (place of work or study, city);
- the title of the article;
- the abstract;

- key words (should not duplicate words from the title of the article);
- [JEL Classification](#);
- e-mail;
- [Identifier ORCID](#);
- references.

REQUIREMENTS FOR THE TEXT FORMATTING

Requirements for the structure of the article (elements with text highlighting):

- general problem statement and its connection with main scientific and practical tasks (Introduction);
- analysis of recent researches and publications, which contain background for solution of the given problem and which the author relies on (Analysis of recent researches and publications);
- highlighting of previously unsettled problem constituent that is a part of the main problem, which the article is dedicated to (Previously unsettled problem constituent);
- formulation of the purpose of the article (Main purpose of the article);
- presentation of the main research material with full argumentation of received scientific results (Results and discussions);
- conclusions of the given research and perspectives for further researches in the given direction (Conclusions and further researches directions);
- References;

Requirements for the article formatting:

- the length of the article is from 10 to 15 pages (8000 words including spaces, but excluding an abstract and references)*;
- page format – A4 format (210 x 297 mm) page;
- page guidelines: top – 25 mm, bottom – 25 mm, left and right – 20 mm.
- Alignment Justify, Line Spacing Single, Paragraph Before 0 pt, After 0 pt, Indentation Right/Left 0 pt.
- Do not use the numbering of pages.
- the article font guidelines: font size – 11-point, font type - Times New Roman, 1,5 line spacing.

Requirements for formatting of the article structural elements:

- JEL Classification (without paragraph indent, semi-bold, centered-alignment): font size – 10-point, font type – Times New Roman;
- the author's name and surname (one line space, without paragraph indent, semi-bold, centered-alignment): font size – 12-point, font type – Times New Roman;
- job of author (without paragraph indent, in italics, centered-alignment): font size – 10-point, font type – Times New Roman, line spacing – 1,5;
- e-mail (without paragraph indent, in italics, centered-alignment): font size – 10-point, font type – Times New Roman;
- the title of the article (one line space, capital letters, without paragraph indent, semi-bold, centered-alignment): font size – 14-point, font type – Times New Roman, line spacing - 1;
- the abstract and key words (one line space, in italics, justified-alignment): font size – 10-point, font type – Times New Roman, line spacing - 1, paragraph indent – 1 cm;

* Exceptionally, a smaller volume is allowed for doctoral students, but at least 8 pages

- the text of the article (one line space, justified-alignment): font size – 11-point, font type – Times New Roman, line spacing – 1,5;
- references: font size – 10-point, font type – Times New Roman, line spacing - 1; Paragraph spacing: before 5pt, after 5 pt;
- identifier ORCID – end of paper (in about the authors), without paragraph indent, left-alignment: font size – 10-point, font type – Times New Roman;

Requirements for formatting the abstract and the author's resume in English (Abstract):

Abstract should be no longer than 250 words (not less than 2500 characters), arranged in one column 10 pt, font type – Times New Roman; line spacing - 1.

Background of the research should be explained in few sentences.

Objectives: Objectives of the paper should be clearly stated in 1-2 sentences.

Methods/Approach: Methods used in the paper should be explained in 1-2 sentences.

Results: Results of the research should be presented in 1-2 sentences.

Conclusions: Main conclusions should be debriefed in 1-2 sentences.

Requirements for formatting the references (References):

- REFERENCES are formatting according to international bibliographical standard APA-2010 style in accordance with the specimen and requirements set on the website of the Journal.
- References should include not less than 20 sources, covering important previous works realised in the given area of interest on an international scale. References covered by major citation databases are preferred (Scopus, Web of Science).
- The reference be listed alphabetically and names of all authors should be given. Do NOT use "et al." in the list of references!
- The titles of Cyrillic periodicals (journals, collections and others) are given by transliteration, and they are given in parenthesis in English;
- with obligatory citations in the text of the article, which are given in brackets in the text (alphabetically) and they appear in an order of citation or reference;
- references for the personal author's works or articles (self-citation) should not exceed more than 10% from the general number of sources.

Requirements for drawing tables, pictures and formulas:

- tables should have a serial number and a title in the middle (Table 1. Title): font size - 10, interline spacing - 1, font type - Times New Roman;
- text in table: font size - 9, font type - Times New Roman; interline spacing - 1;
- pictures/ drawings must have a serial number and a name in the middle (Figure 1. Title): font size - 10, interline interval - 1, font type - Times New Roman;
- drawings are made in graphic editors, compatible with Word in the format JPG with a resolution of not less than 300 dpi;
- mathematical formulas are provided using the built-in Microsoft Equation formula editor;
- Equations and formulas are arranged in the center of the line, the number of the formula (in round brackets, on the right-hand side of the page, separated by blank lines): font size - 10, interline spacing - 1, font type - Times New Roman.

Final provisions

At the end of data on affiliation of authors of the manuscript author must specify his/her ORCID ID number (for each of the authors ORCID personal number needed) to allow the readers of this article refer to authors' publications in other journals.

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