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Planning for Ensuring the Security of Sustainable Development of the Socio-Economic System in the Context of the Importance of the Knowledge Economy



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ABSTRACT

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The main purpose of the study is to plan the process of ensuring the security of sustainable development of the socio-economic system. The research methodology involves the use of the IDEF0 modeling technique, which made it possible to achieve all the goals. As a result of the study, a model was formed that will allow planning a system for ensuring the security of sustainable development of the socio-economic system. The focus of the article falls on the problems of planning to ensure the security of socio-economic systems. The theoretical contribution of the results obtained is presented by mapping the process of applying a methodical approach to the selected issue. The practical significance of the article is characterized by modeling for a specific socio-economic system. The innovations of the results obtained are presented in the form of a contextual model. The study has limitations, despite the fact that the model we have developed includes more unified elements, the vector of the study is limited to a specific socio-economic system Lidl, therefore, in subsequent studies, it is planned to adapt this model to other socio-economic systems.

1. INTRODUCTION

Sustainable socio-economic development today is one of the most important problems of mankind. The essence of "sustainable development" is to maximize the economic and social benefits from the process of developing the national economy while protecting the environment and ensuring the reproduction of natural resources in the long term. In the economic sense, sustainable development means not only the growth of the national economy and the growth of per capita income, but also the improvement of all elements of social security. Sustainable development must be accompanied by the necessary structural changes in the economic and social spheres.

Sustainable development is the most important characteristic of socio-economic systems operating in an unstable environment. If the socio-economic system is developing steadily, then it has a number of advantages over other socio-economic systems in attracting investments, loans, implementing performance results, choosing contractors, and selecting qualified personnel. At the same time, the socio-economic system does not come into conflict with the state, society and the ecosystem, since it pays taxes, payments, fees on time and in full, pays decent wages, dividends, and carries out environmental and resource-saving activities. The higher the level of stability of the socio-economic system, the more independent of unexpected changes in the external environment and, therefore, the lower the risk of bankruptcy

and complete cessation of functioning.

Under economic security in the context of ensuring sustainable development we mean the prevention of disruptions in the normal course of socio-economic processes in a country or region. At the same time, by the normal course of socio-economic processes, we will understand their course with development rates close to those of countries of a similar group, as well as the possibility of transition to groups of more developed countries at an increased pace and in compliance with environmental standards. Sustainable development of any socio-economic system associated with economic security. Let us accept the understanding of sustainable development as such development, at which the rates necessary for the existing generation are achieved without causing harm to the next generation. There is no sustainable development without economic security At the same time, a full-fledged, economically secure economy can only be created on the basis of sustainable development.

Planning plays an essential role in the sustainable development system. Today it involves intellectual and organizational activity to form options and find the best way to solve a particular political, scientific or economic problem. This tool is in demand in the formation of certain areas of development and security on the scale of the socio-economic system and the achievement of strategic priorities, since planning is an integral and increasingly important function for management. Today, the problem of security planning is very acute. Most socio-economic systems simply ignore the

planning process and do not take it seriously. In addition, there should be an appropriate graphic functional part for a better layout [1, 2].

The purpose of the article is the key stages of planning for ensuring the security of sustainable development of the socio-economic system. To do this, our study should be structured as follows: present a review of the literature and the main results of the analysis, discuss the results and compare them, draw conclusions.

2. LITERATURE REVIEW

In this regard, according to the modern vision of scientists [1, 2], "sustainable development" includes economic (quantitative growth and qualitative changes in the structure of the national economy), social (improving the quality of life of the population) and environmental (environmental protection and rational use) of natural resources) components. As part of the implementation of this concept, in accordance with the principles of humanism and democracy, equal satisfaction of people's needs in development and life, including the quality of the environment, the level of culture and education, as well as providing similar opportunities for future generations, must be ensured.

According to some scientists, the determining factor in ensuring the sustainable development of the socio-economic system is its innovative focus, based on the active use of knowledge and scientific achievements, stimulating innovation, creating a favorable investment climate, updating production facilities, and forming high-tech activities and sectors of the economy, improving the energy efficiency of production, stimulating balanced economic growth [3, 4].

At the same time, scientists determine that the basic functional components that determine the sustainable development of the socio-economic system at the macro level are the following: economic, scientific and technical, social and environmental [4-6]. The factors of the microenvironment reflect the dependence of the sustainable development of enterprises on internal factors formed as a result of its activities in previous periods. These factors are the most relevant. The criteria for achieving the goal of the developed mechanism were chosen as guidelines for the sustainable development of the socio-economic system, which are based on indices and indicators of sustainable development calculated both at the macro level and at the level of economic entities, in particular indicators of international ratings.

Most scientists come to the conclusion that the current state of society and its future is determined by a balanced solution of problems in three components of the concept of sustainable development: environmental, social and economic [7-9]. But is it possible to say that today, for example, economic recovery is more important, and the solution of issues of improving the welfare of the population and preserving the environment can be slowed down or focused mainly on environmental problems without developing economically and socially? The task of

long-term sustainable development must be addressed on the basis of an integrated, systemic, co-evolutionary and integration approach by establishing mechanisms for interaction between these three main components. The systematic implementation of the tasks of economic, social and environmental development in the concept of sustainable development implies the presence of feedback and the possibility of making informed management decisions.

As our scientific colleagues note [10-12], modern approaches to sustainable development require a new integrated approach to managing the process of implementing the developed strategy, which should be implemented at all interconnected levels of society: local, regional, national, global. We agree with this statement.

Despite the active attention among the scientific community to the problems of ensuring the security of sustainable development, the study of the planning process for this is still relevant and important. Planning a question is complex and requires the use of models and a systematic approach.

3. METHODOLOGY

Considering the methodology that was used in the process of the study, here, in our opinion, all methods should be divided into two groups:

The first group consists of theoretical methods of analysis, synthesis, generalization and systematization of literary sources selected for research, which are found in international scientific and metric databases, and whose authors have proven their competence in this area. The selected theoretical methods made it possible to fully form the theoretical basis for the further formation of the model.

The second group of methods is the IDEF0 modeling technique, which made it possible to fully demonstrate the process of ensuring the security of the socio-economic system.

The IDEF0 modeling technique is a methodology for describing processes using functional diagrams. It has a wide range of uses. It is used in almost all areas of the economy, regardless of the size and specifics of the socio-economic system and processes. Allows you to describe processes in detail.

The graphic representation of a business process allows you to analyze the task in more detail, analyze each element of the chain, and calculate the required resource. With the help of a graphical expression of the process, the relationship with the external environment is also depicted, which is important for achieving the result.

According to our theme, a complex socio-economic system should be chosen with its own security and planning department. One of these is company name Lidl.

Thus, according to the IDEF0 modeling technique paradigm, the first step will be the formation of a basic model for achieving the A_0 goal (planning the process of ensuring the security of sustainable development of the socio-economic system) in the socio-economic system of Lidl (Figure 1).

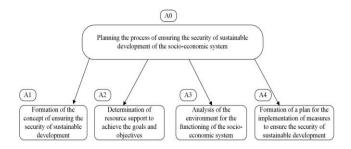


Figure 1. The basic model for achieving the A₀ goal (planning the process of ensuring the security of sustainable development of the socio-economic system) in the socio-economic system of Lidl

So, as we can see in Figure 1, the process of achieving the final goal A_0 in the socio-economic system of Lidl will occur through four key stages.

In order to fully understand all the elements necessary to achieve the final goal A_0 in the socio-economic system of Lidl, we have formed a comprehensive diagram of the main elements of achieving the final goal A_0 (Figure 2).

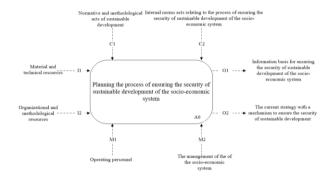


Figure 2. Comprehensive diagram of the main elements of achieving the final goal A₀ (planning the process of ensuring the security of sustainable development of the socioeconomic system)

For a better understanding of all inputs, outputs, controls and mechanisms, let's look at them in more detail:

- I₁ Material and technical resources. The system of this element includes the material resources possessed by the socio-economic system Lidl, its technological and technical potential, which, according to the planning process, will be involved in the process of ensuring the security of sustainable development.
- $\rm I_2$ Organizational and methodological resources. It represents all the methodological and organizational norms and measures necessary to ensure the security of the sustainable development of the socio-economic system Lidl both at the beginning of this process and during its implementation.
- M₁ Operating personnel. Includes employees of the socioeconomic system Lidl, whose activities include measures to ensure the security of sustainable development.
- M_2 The management of the of the socio-economic system Lidl. Includes the management team of the socio-economic system involved in planning and shaping the implementation strategy for ensuring the security of sustainable development.
- C_1 Normative and methodological acts of sustainable development. This element includes all legal support, recommendations and regulations for planning sustainable

development and maintaining an appropriate level of security of the socio-economic system Lidl.

- C_2 Internal norms relating to the process of ensuring the security of sustainable development of the socio-economic system Lidl. This element includes internal rules and regulations regarding the process of ensuring the security of sustainable development.
- O₁ Information basis for ensuring the security of sustainable development of the socio-economic system Lidl. The initial result of the implementation of this model. This information will be useful in further planning and implementation of the security system for the sustainable development of the socio-economic system Lidl.
- $\rm O_2$ The final result of the formed model. The current strategy with a mechanism to ensure the security of sustainable development.

So, in this section, we have identified the main steps in the process to achieve the A_0 final goal - «planning the process of ensuring the security of sustainable development of the socioeconomic system» of the socioeconomic system Lidl, as well as the main elements that are necessary for this. Based on the two formed models, in the next section we will form the final contextual model for achieving the ultimate goal A_0 (planning the process of ensuring the security of sustainable development of the socio-economic system).

4. RESULTS OF RESEARCH

The next step in our study will be the formation of the main contextual model for achieving the ultimate goal A_0 (planning the process of ensuring the security of sustainable development of the socio-economic system) (Figure 3).

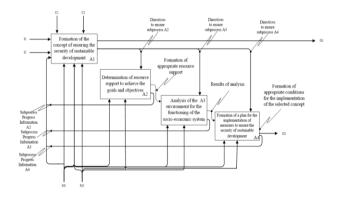


Figure 3. The final contextual model for achieving the ultimate goal A₀ (planning the process of ensuring the security of sustainable development of the socio-economic system) of the socio-economic system Lidl

For a better understanding of all the elements of achieving the A_0 goal (planning the process of ensuring the security of sustainable development of the socio-economic system) of the socio-economic system Lidl, let's consider their essence in more detail:

A₁ - Formation of the concept of ensuring the security of sustainable development. The concept of sustainable development reflects the understanding of the close relationship between environmental, economic and social problems of the socio-economic system and the fact that they can only be solved in a comprehensive manner, with close cooperation and coordination of the efforts of the functional

parts of the socio-economic system Lidl. One of these key elements is the component of sustainable development, without which the implementation of this process is simply impossible. The conceptual scheme for ensuring the security of the sustainable development of the socio-economic system Lidl as the basis for organizing the construction of social responsibility consists of external factors influencing the activities of the socio-economic system, including economic, social, environmental and moral-legal ones, as well as identical external factors - internal ones.

A₂ - Determination of resource support to achieve the goals and objectives. For effective planning of the sustainable development of the socio-economic system Lidl, one of the necessary conditions is the availability of resources involved in the process of the socio-economic system Lidl, which is no exception and a component of this process. Resources are a factor of internal reserves, the effective use of which makes it possible to meet both the needs of the socio-economic system in particular and the needs of activities in general. The value and influence of resources on the effectiveness of planning to ensure the security of sustainable development of an enterprise is determined by the role that a resource plays to achieve the goals of the socio-economic system Lidl, the possibilities of its replacement and is assessed by a system of indicators that characterize the efficiency of using the resources of the socioeconomic system and determine their impact on the final results of activities to ensure the security of sustainable development of the socio-economic system Lidl.

A₃ - Analysis of the environment for the functioning of the socio-economic system. The effective functioning of the socio-economic system Lidl is the stability of a dynamic type and is realized only with certain ratios of parameters and a certain environment that characterize the state and place of the socio-economic system in the national economy and the system of sustainable development. A change in any of these areas without corresponding changes in other areas can lead to a violation of dynamic equilibrium, to destabilization and, in certain cases, to complete degradation of the interaction. Therefore, for the science and practice of management, the issues of identifying threats and developing measures to ensure the effective functioning of consumer cooperation as a socio-economic system should become the subject of increased attention. Given this, the analysis of the environment for the functioning of the socio-economic system is critical in planning the system for ensuring the security of the sustainable development of the socio-economic system.

A₄ - Formation of a plan for the implementation of measures to ensure the security of sustainable development. The problem of ensuring the security of the sustainable development of the socio-economic system Lidl must be solved taking into account the state of the country's biological, geographical, economic and social objects (territory, industry, socio-economic system), as well as a combination of factors and environmental conditions. Given this, the formation of a plan for the implementation of measures to ensure the security of sustainable development is a critical issue. Solving global problems is impossible without coordinating actions and development strategies at all levels - from the level of the world community as a whole and the level of individual countries to the level of industry and specific socio-economic systems. The result of a systematic solution of economic, environmental and social problems at all levels will be sustainable development.

For a better understanding of the model that we have developed, we detail its individual stage. Given that the formation of the concept of ensuring the security of sustainable development of the socio-economic system is a complex and complex issue, in our opinion, it should be considered in detail. So, in Figure 4, the contextual model for achieving stage A₁ (Formation of the concept of ensuring the security of sustainable development) of the socio-economic system Lidl is depicted.

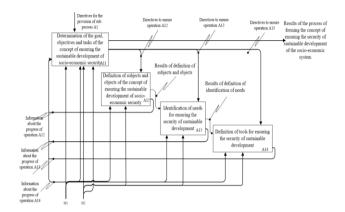


Figure 4. The contextual model for achieving stage A₁ (Formation of the concept of ensuring the security of sustainable development) of the socio-economic system Lidl

For a better understanding of all the elements of achieving the A₁ goal, let's consider their essence in more detail:

A₁₁ - Determination of the goal, objectives and tasks of the concept of ensuring the sustainable development of socio-economic security. The correct and precise formulation of all the necessary results, necessary and tasks that are set for the system of ensuring the security of the sustainable development of the socio-economic system Lidl. Such a clear formation will make it possible to understand all the necessary elements and resource support, which is necessary for this.

 A_{12} Definition of subjects and objects of the concept of ensuring the sustainable development of socio-economic security. When defining objects and subjects, there is a clear understanding of the number of participants in the process of ensuring the security of sustainable development of the socio-economic system. That is why the planning process is so important, and the formation of a concept and the definition of its main participants will rationally form and share all functional responsibilities and roles.

 A_{13} Identification of needs for ensuring the security of sustainable development. Determining the main needs arising from the implementation of the security system for the sustainable development of the socio-economic system Lidl during the planning and concept formation process allows you to fully understand the entire structure of the resource base and the mechanisms that will be used in this case.

A₁₄ Definition of tools for ensuring the security of sustainable development. Planning the use of the main tools of the system for ensuring the security of the sustainable development of the socio-economic system Lidl makes it possible to form a strategy for the implementation of this process, as well as intermediate and final results of this process. In addition, the correct definition of the tools of the system for ensuring the security of the sustainable development of the socio-economic system Lidl allows maximizing this process.

Thus, we have formed a planning model for the process of ensuring the security of sustainable development of the socio-economic system Lidl. It should also be noted that at this stage this model is purely theoretical and is the basis for the implementation of specific practical measures. In subsequent studies, the authors plan to introduce this model into the practical activities of the socio-economic system Lidl and modify it in accordance with the results of its implementation.

5. DISCUSSIONS

Discussing the results of our study, it should be noted that despite the existence of a significant number of such studies in the scientific field, ours differs from others in that it includes the use of the IDEF0 modeling technique. This difference is a significant advantage over other studies where all results are presented in the form of theoretical recommendations or complex tables.

Given the above, it is difficult to compare the study and results obtained with similar studies in this area.

Considering the issues of sustainable development of the socio-economic system, a large number of scientists consider this process without much attention to the security component [13-15]. In our opinion, insufficient attention to this component is erroneous, given that the safe existence and development of the socio-economic system today is a key factor in its survival and competitiveness.

Considering the issues of planning and ensuring the security of the sustainable development of the socio-economic system, certain groups of scientists determine that this process is based on a certain management system that allows a holistic, comprehensive approach to the process of interaction of various subsystems involved in management processes [16-18]. Thus, determining the importance of the planning process, in their studies, most scientists cite separate practical measures aimed in one way or another at ensuring the security of sustainable development of the socio-economic system. While our study states that the planning process, during which all the features of ensuring the security of the sustainable development of the socio-economic system, will be taken into account, is the key to this process.

Another group of scientists exploring the process of ensuring the security of sustainable development of the socio-economic system, based on significant analysis and research, provided effective and efficient measures to improve this process [19, 20]. But given that all these recommendations and improvements were presented in text or tabular form, they are difficult to understand, which means that their effectiveness is reduced. In our opinion, for such a complex process as ensuring the security of sustainable development of the socio-economic system, it is important to present it in a simple and understandable form. Given that our recommendations were presented in graphical form.

Thus, by comparing our study with others, we can state that this study is relevant and useful in theoretical and practical terms. Given the fact that the process of ensuring the security of the sustainable development of the socio-economic system is complex and complex, the planning of this process is no less problematic and difficult to understand both for the management team and ordinary workers in the socio-economic system. The use of such a methodology has a significant number of advantages, which determine the following in the context of our study: the staged implementation of the final

goal, systematicity and visibility, a significant level of coverage of the main and auxiliary elements, the possibility of forming new sublevels for the implementation of individual stages.

Discussing the results of our study, it should be noted that the novelty of the articlTABLEe is the presentation of a new methodological approach for this topic, which better reflects aspects of planning the provision of a particular process. It allows through blocks to convey the essence of how sustainable development can be done. The practical significance of the article is characterized by modeling for a specific socio-economic system. The innovations of the results obtained are presented in the form of a contextual model.

6. CONCLUSIONS

Summing up, in modern conditions of the market environment, planning and ensuring the security of sustainable development is one of the main priorities, providing for the effectiveness of the socio-economic system. This is due to the fact that it is the constancy of activity and a high level of security that provides a number of advantages, such as an increase in the level of organizational management and social responsibility, new market opportunities and an increase in investment attractiveness, innovation in production and management processes, minimizing risks and reducing costs, as well as creating favorable conditions for the development of future generations through the optimal distribution and use of resources.

Also it should be noted that planning for the sustainable development of the socio-economic system requires a balance and a systematic approach. The transition to sustainable development requires a deep analysis of problems and modeling of ways to solve them, which are based on the development of the enterprise's potential while ensuring the quality of related areas. Further research requires a deep diagnosis of the state of the socio-economic system itself, the definition of its mission with details on the goals of economic, social and environmental development, the development of scenarios for achieving targets, the choice of sustainable development tools and regular monitoring of the effectiveness and achievement of sustainable development indicators. As a result of the study, a model was formed that will allow planning a system for ensuring the security of sustainable development of the socio-economic system.

To achieve this goal, the IDEF0 modeling technique was used, which makes it possible to demonstrate the entire process of achieving the final goal in the form of an understandable model in which the elements are sequentially implemented, while indicating the place and role of each element and resources. For a better understanding of this process, we have chosen a system for ensuring the security of sustainable development of the socio-economic system Lidl.

The theoretical contribution of the results obtained is presented by mapping the process of applying a methodical approach to the selected issue. The practical significance of the article is characterized by modeling for a specific socioeconomic system. The innovations of the results obtained are presented in the form of a contextual model. The study has limitations, despite the fact that the model we have developed includes more unified elements, the vector of the study is limited to a specific socio-economic system Lidl, therefore, in subsequent studies, it is planned to adapt this model to other socio-economic systems.

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