



Public Administration of Planning for the Sustainable Development of the Region in the Context of Total Digitalization

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ABSTRACT

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The main purpose of the article is to form a mechanism for public administration of the planning system for the sustainable development of the region in the context of digitalization. To achieve the goals set, the method of graphical construction of the functional mechanism was used. The use of this technique made it possible to depict in detail the process of achieving the final goal. In addition, a significant advantage of this model is that the modeling system takes into account the functional relationships of the stages and the main elements of the system necessary to achieve the ultimate goal. The relevance of the study is given by the factor of active discussion of the public administration system and consideration of its significance for the sustainable development of the region. Based on the results of the study, the main functional mechanism of state management of the planning system for the sustainable development of the region in the context of digitalization is presented. With the help of the constructed mechanism of state management of the planning system for the sustainable development of the region, public administration authorities will be able to better plan their activities and increase the efficiency and speed of digitalization processes. The study has limitations and whether they are related to the narrowing of the analysis by focusing solely on the system of public administration in the region. Further research should be devoted to the problems of the direct implementation of this mechanism in the planning system for the sustainable development of the region.

1. INTRODUCTION

The global challenges of our time are formed as a result of total digitalization, especially in the context of the actualization of the issue of public administration, require a revision of traditional approaches to planning, primarily in the direction of reorientation to the development of strategic plans. for sustainable development of the basic units of planning, as well as the development of mechanisms for sustainable development based on publicity, dialogue and coordination of interests of all stakeholders. In this context, the issue of effective organization of the public administration system of sustainable development becomes a key factor in the development and management of the region.

The problem of management complicates the formation of a single vector of sustainable development at the regional level. This is due to the imperfection of the mechanisms for implementing the adopted management decisions, due to the low level of regional sustainable development and large regional differentiations and disproportions. The absence of an effective mechanism for the functional provision of conditions

for planning the sustainable development of regions is aggravated by organizational contradictions and an insufficient level of coordination of interests. This should be decided at the level of state administration of the regions.

Taking into account the increasing complexity of public activity as a result of total digitalization, the penetration of market mechanisms into all spheres of public life, including public administration, the strengthening of the processes of decentralization and democratization of management, the balanced, reasonable, and efficient use of strategic management and strategic planning is one of the important conditions for ensuring the sustainable development of any region [1].

Russo et al. [2] note that in order for regional planning of sustainable development of the region to become a full-fledged component of state regulation, it must receive clear regulatory support. In order to understand the features of the use of planning in the current conditions of sustainable development, it is necessary to have an appropriate functional mechanism.

In general, planning is an important tool for public administration of sustainable development of regions, which helps to determine the main goals and priority areas of regional development, maintain proportionality in the development of various areas of the region and ensure the interaction of various areas of activity (government, business, science and education, the public) and different industries to ensure the development of the region with the maximum use of its potential in the context of digitalization [3].

The main purpose of the article is to form a mechanism for public administration of the planning system for the sustainable development of the region in the context of digitalization.

The structure of the article includes an analysis of scientific and practical literature according to the research issues raised; clarification of the main aspects of the research methodology; presentation of the main results; discussion description; conclusions that can be drawn from the results of the study.

2. LITERATURE REVIEW

The key elements of planning for the sustainable development of the region are not uncommon among scientists and practical literature. For example, it is noted [4-6] that planning for the sustainable development of the region, being an organizational, economic, and informational analytical document embodies the provisions of the economic policy of the state including a system of targets and measures of local governments in order to achieve the goals in the corresponding forecast period. We partly agree with this, however, without a proper mechanism, the planning system will not work.

According to Chimhowu et al. [7], sustainable development planning is an instrument of state regulation of the economy that allows scientifically substantiating possible ways of developing a particular object of management for a certain period of time. Planning is based on predictive developments and a clear definition of sustainable development goals, which are achieved through a system of decisions, work and implementation of programs that contribute to the achievement of goals within the framework of available resources, deadlines, relevant performers and the goal of solving important problems of the development of the national economy, as well as issues of economic development at the regional level.

We agree with the opinion of the majority of scientists and practitioners [8-10] that a separate component of the planning system is planning for the sustainable development of regions, which is a civilized mechanism for the implementation of public regional policy and allows directing the interests of business circles and the public of a particular territory. It is a consequence of an objective process, the formation of regions of regional rank, determined by the dynamics of the development of productive forces, their concentration, specialization, integration, and differentiation. It is these processes that determine, on the one hand, the formation of regions of regional rank as separate parts of the country's socio-economic system, and, on the other hand, relatively independent political and economic territorial subsystems.

Also, a certain group of authors [11-13] notes that the main means of bringing the regional level of development closer to the average level is to increase the efficiency of using all the resources of the region, its demographic, natural, industrial and scientific and technical potential according to the laws of

the territorial division of labor and regional complex formation based on a rational combination of market and state regulators of sustainable development

It should be noted that agreeing with the opinion of the majority of scientists, we still have problems in the study of the public administration system for planning the sustainable development of the region. This issue is especially acute when we have a total era of digitalization. It is impossible to do without an effective functional mechanism.

3. METHODOLOGY

The method of functional graphic construction will allow better than other methods to represent the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization.

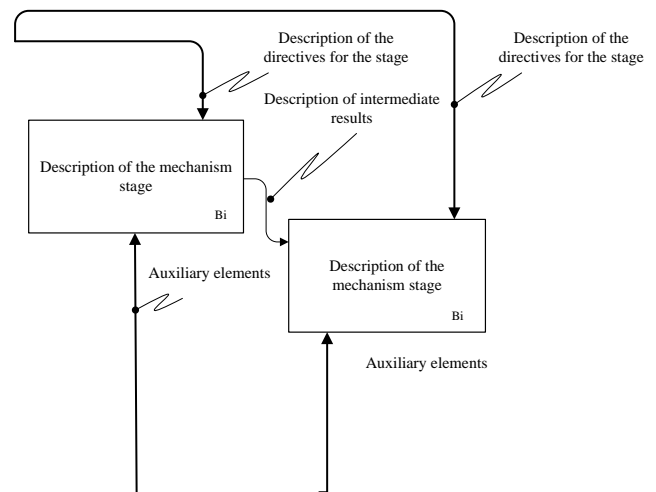


Figure 1. An illustrative example of the elements of the method of graphical construction of a functional mechanism (developed by the authors)

The main goal of the method of functional graphical construction is to identify the main task, the one and only function that the execution of the process solves. The method of functional graphical construction is especially important when laying out a joint view of the task being solved: what we need and in what quantity, what we will get as an output, who is involved in the process, what regulatory documents we need for a qualitative solution of the task.

The advantages of the method of functional graphic construction are as follows. It allows you to get a description of the modeled object, in particular complications, which improves and clarifies its understanding and presents such an organization of information that provides easier obtaining of the necessary information [14].

In general, as an example, graphic construction involves a number of parts, each of which has its own function and tasks. An illustrative example of the proposed method is shown in Figure 1.

All stages of formation of the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization should be simplified according to our methodology and the method of graphic identification should be applied. Thus, we denote conditionally each stage as B_i . The set of B_i stages must achieve the main goal, which we denote by B_0 (1):

$$[B_1, B_2, B_3, \dots, B_i] \in B_0 \quad (1)$$

A number of theoretical methods for analyzing scientific and practical literature should also be mentioned. An abstract method for better conclusion formation and definite results for discussion.

In general, the methodology should include the methods of formation and systematization of graphical models already known to science, but at the same time its peculiarity. The scientific novelty of any research may lie in the active application of existing methods to solve new problems.

4. RESULTS OF RESEARCH

In order to concretize our mechanism of state management of the planning system for sustainable development in the context of digitalization, we will select a specific region for clarity. The Marche region in Italy is best suited for this. The fact is that the Italian regions are actively entering the era of Industry 4.0 and for them, digitalization in most areas of activity is already practically the norm. However, the Marche region still lags behind its neighbors. A significant number

of shipbuilding companies and the active development of tourism require the digitalization of this region as soon as possible [15].

Separately, a concise model of the implementation of the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization should be graphically constructed. It will serve as the basis for further research (Figure 2).

As can be seen from Figure 2, we have graphic identifiers for elements that will indirectly influence the formation and implementation of the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization. Let's group them and explain each of the groups:

1. Group «R». This group of elements for our region should include the main regulators that directly influence how the public administration system will be implemented by the mechanism within the framework of current legislation and the formed strategy.

2. Group «D». Elements in the form of technical means and programs that can contribute to the effectiveness of the implementation of the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization.

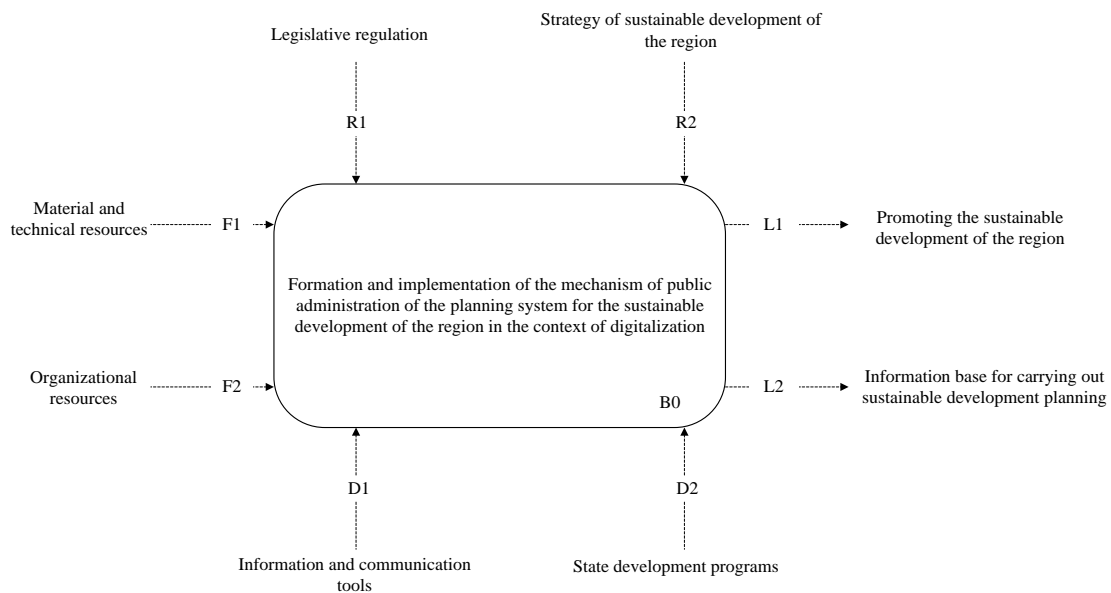


Figure 2. Concise model of the implementation of the mechanism (developed by the authors)

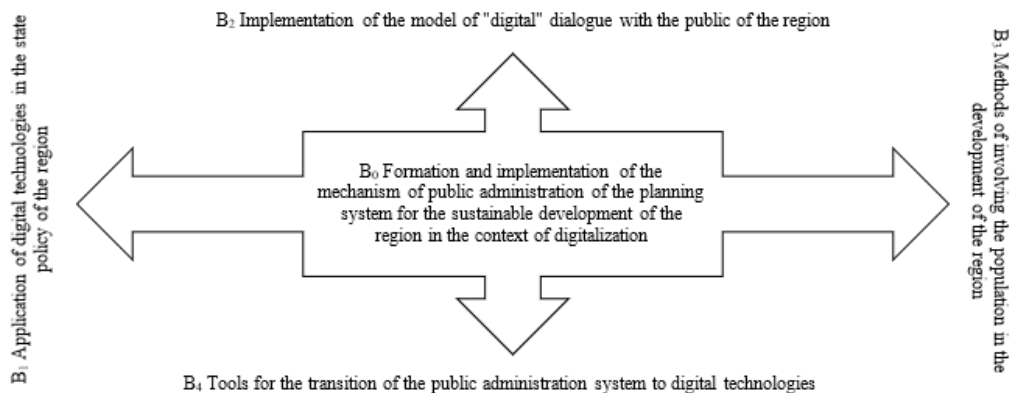


Figure 3. The main stages of the mechanism of the public organization of system planning for a sustainable development region in the context of digitalization (developed by the authors)

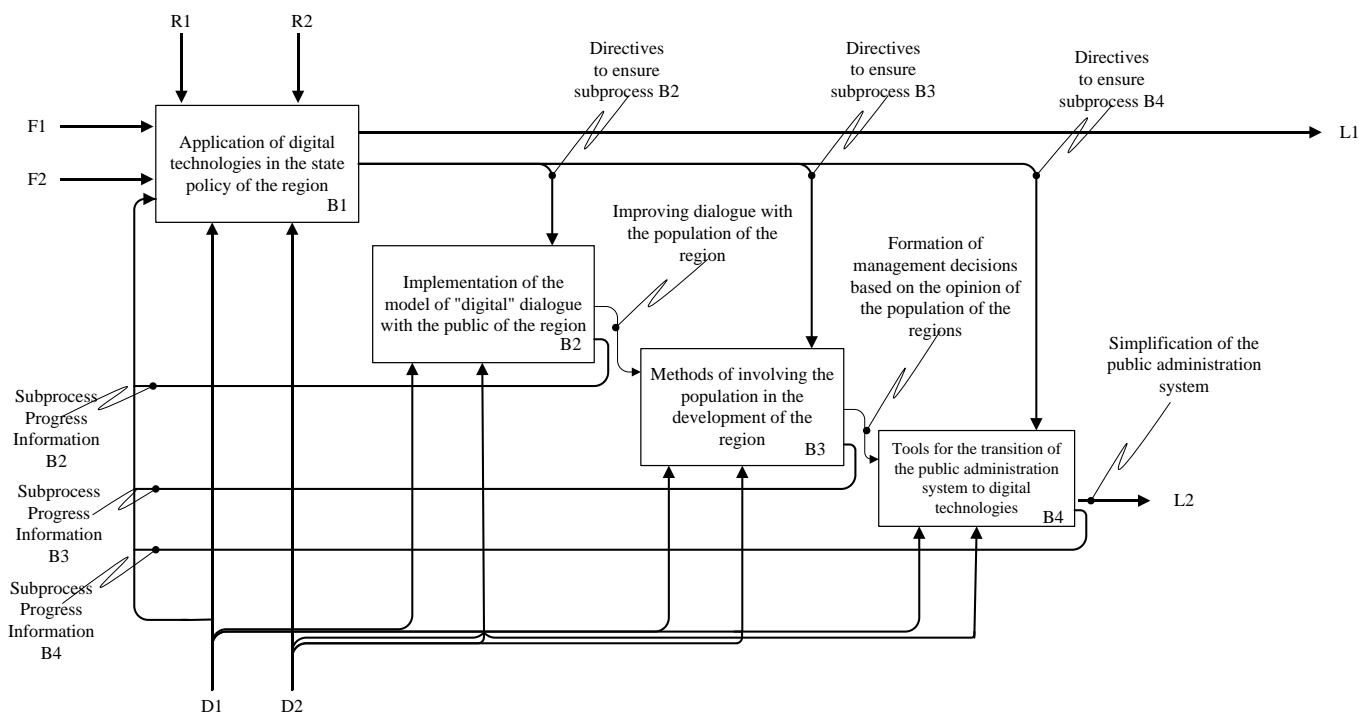


Figure 4. A graphical construction of the main functional mechanism (developed by the authors)

3. Group «F». It is the most important element for any mechanism, and resources. Without adequate resource provision, it is not possible to effectively implement the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization.

4. Group «L». Elements that can best be described as the desired result of the formed and implemented mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization.

The key stage is the presentation of the main stages of the mechanism of the public organization of system planning for a sustainable development region in the context of digitalization. Each of them will have its own identifier for the best graphical construction according to the research methodology presented above (Figure 3).

A graphical construction of the main functional mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization should be presented (Figure 4).

Consider each stage of the formation and implementation of the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization in more detail:

B₁ Application of digital technologies in the state policy of the region. The mechanism should provide for the use of digital technologies in the following areas of sustainable development of the region: broadband fixed and mobile (mobile) telecommunications infrastructure; digital television, radio and technological infrastructure for IoT projects; infrastructure for computing, virtualization and data storage (cloud and fog); cybersecurity infrastructure; specialized.

B₂ Implementation of the model of "digital" dialogue with the public of the region. A key factor in increasing the region competitiveness and ensuring the success of

reforming the public administration system is e-governance. A well-built e-governance system has a positive impact on the consequences and overall course of radical transformations in society: economic and social reform, development of a welfare state with influential civil society institutions. Through e-governance, the efficiency of the activities of e-government subjects is increased and the formation of relations between the authorities, society and the citizen is facilitated.

B₃ Methods of involving the population in the development of the region. To do this, the mechanism should work for the development of digital literacy in the region. The concept for the development of digital literacy of the inhabitants of the Marche region provides for an analysis of the state of digital literacy, the implementation of measures to develop the digital competencies of the population, the introduction of appropriate incentives for the digitalization of the public sphere, the awareness of existing challenges, the acquisition of digital competencies by residents, and the promotion of the use and consumption of digital technologies and electronic services.

B₄ Tools for the transition of the public administration system to digital technologies. A soft digital infrastructure should be formed: an infrastructure of identification and trust; open data; interoperability; blockchain infrastructure; electronic payments and transactions; e-commerce and online interaction of business entities; public services (e-governance); life support infrastructure (medicine, education, public safety, transport, etc.); geoinformation infrastructure; industrial digital infrastructures.

Each functional mechanism must go through its own life cycle, similar to those that exist for any socio-economic system. The mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization has its own life cycle, which should be presented in Figure 5.

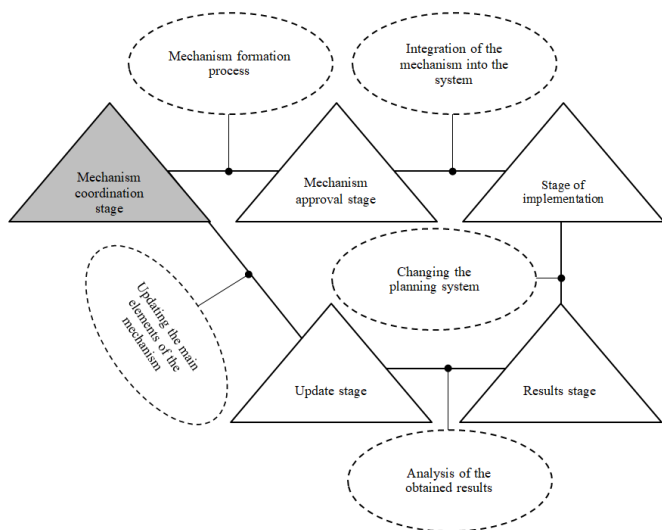


Figure 5. Graphical construction of the mechanism life cycle (developed by the authors)

It should be noted that the formation and implementation of the mechanism is a complex process that has its own stages and life cycle. We tried to demonstrate the methodological features of the graphic construction of the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization. As a result of the study and the use of graphical methods, we have described in detail all aspects of the formation of the mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization.

Thus, the presented mechanism of public administration of the planning system for the sustainable development of the region in the context of digitalization is innovative and can be called scientific novelty.

5. DISCUSSIONS

Discussing the results of the study, one should pay attention to the predecessors who had similar results on the selected issue in the subject of the article. It should be noted that we have chosen only a few for a clear example and clarification of the main differences.

As most scientists note, a characteristic feature of the modern practice of sustainable development policy at the global level is the growing interest in regional problems. At the present stage, many studies are being carried out [16-18], scientific conferences, laws are being adopted, interstate debates are being held, and political parties are being created with a claim to understanding regional problems, especially acute and relevant for planning the sustainable development of the region. We agree with this, however, we do not focus on the macro level and do not talk about global problems. Our goal is to help the public administration system cope with ensuring the sustainable development of the region in the context of digitalization.

You can often find scientific papers [19, 20], in which sustainable development is considered through the prism of regional targeted programs. According to most scientists, today the public administration system has high hopes for regional targeted programs, which, in conditions of financial

deficit, ensure the optimal inter-regional distribution of government appropriations and establish the regime of the greatest economic assistance. However, the practice has shown that these advantages do not yet guarantee the effectiveness of programs. Today it has become fashionable to solve this or that problem by promising to develop a separate program. In such a situation, the public administration system avoids confrontation and reduces tension in society. In our study, the issue of state management of the planning system for the sustainable development of the region in the context of digitalization is considered in the context of various aspects that make up its structural and functional base. Such accounting allows to optimize the work of public administration bodies to the maximum extent.

Comparing our study with its predecessors [21-24], I would like to emphasize once again that our mechanism for public administration of planning for the sustainable development of the region in the context of digitalization is a graphic design that serves as the basis for a methodological approach that should be used at this level of management in order to better understand the essence of the existing mechanism and its place in the overall system of sustainable development of a particular region.

6. CONCLUSIONS

In the context of the tightening of digitalization integration processes, significant changes are taking place at the regional level of public administration. Giving regions greater independence, delegating appropriate powers to organize the process of sustainable development increases the level of complexity of public administration of the region as a system. This requires the formation of such methods of public administration that would meet not only the new status of the region, but also the conditions of the external environment, characterized by a high level of instability. Consequently, the new status of the region determines the need for the formation of strategic management and planning methods that implement the function of a strategic vision of sustainable development of the region.

The processes of globalization of the world economy intensify competition between states and their territories. Today, public administration consists in the formation and implementation of a sustainable development strategy for the region based on continuous monitoring and evaluation of the changes taking place in its activities in order to maintain the ability of the territory to survive and ensure its effective functioning in a changing environment. The search for new ways to stabilize sustainable regional development and increase the competitiveness of territorial production is becoming increasingly relevant. Compliance with the implementation of the planning mechanism will ensure the effectiveness of the implementation of the composite plan and, in turn, the intensive sustainable development of the region.

So, the mechanism for managing the sustainable development of the region under the digital background is a system of means and methods of influence that change the parameters of the regional system, maintaining its dynamic balance and providing expanded reproduction to meet the growing needs of the population and improve living standards, while respecting the environment and preserving the resource base.

As a result of the study, the main functional mechanism of state management of the planning system for the sustainable development of the region during digitalization was presented. With the help of the built mechanism of state management of the planning system for the sustainable development of the region, government bodies will be able to better plan their activities and increase the efficiency and speed of digitalization processes. To achieve these results, the method of graphical construction of the functional mechanism was used. The use of this technique made it possible to depict in detail the process of achieving the final goal. In addition, a significant advantage of this model is that the modeling system takes into account the functional relationships of the stages and the main elements of the system necessary to achieve the final goal.

The study has limitations and they relate to the narrowing of the analysis by focusing exclusively on the system of public administration in the region. The practical significance of the results of the study lies in the fact that the existing mechanism has a strong methodological basis and has a high potential for practical application. Further research should be devoted to the problems of the direct implementation of this mechanism in the planning system for the sustainable development of the region.

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