

Formation of the scientific paradigm of the transformation of potential-forming space and logistics platforms of the regional economy

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Abstract

The article investigates the formation of the scientific paradigm of transformation of potential-forming space and logistics platforms of the regional economy. It is revealed that the leading modern trends related to the spread of globalization and regionalization, rapid development of information and communication technologies, diffusion of innovations accompany the transition from the industrial model to the post-industrial stage and its development, which leads to economic development of a number of new features. It is proved that under such conditions, the region as a key element of the economic system, acquires a leading role in achieving sustainable and balanced development. Within the limits of this research the essence, role, functions, structure, process of formation of a scientific paradigm of transformation of potential-forming space and logistic platforms of regional economy are opened. It is proved that the formation of the modern scientific paradigm of transformation of the potential-forming space of the regional economy and logistics platforms takes place in the context of building a post-industrial model of development, which is accompanied by consideration of the region as a spatial object plane to the spatial environment in which the development of human capital, innovation and self-development of the region. Taking into account the above, the article outlines the prerequisites and factors of formation of the scientific paradigm of transformation of the potential-forming space and logistics platforms of the regional economy.

Key words:

Regional economy, region, scientific paradigm, transformation of potential-forming space, logistics platforms.

1. Introduction

Due to the spread of modern leading trends related to the intensification of globalization and regionalization, the development of informatization, the spread of innovations that accompany the formation of post-industrial development and network economy, there is a need to use the potential of spatial potential-forming space of the region and logistics platforms, search for the latest tools, approaches and

mechanisms of their transformation. Changes that gradually permeate the economy and society lead to the formation of new relationships and connections that become free from the territorial factor of economic entities.

Thus, the application and implementation of a territorial approach to the processes of transformation of the potential-forming space and logistics platforms of the region in the era of post-industrialization and globalization becomes insufficient. Against the background of defining changes, there is a need for theoretical justification and determination of the process of formation and formation of the scientific paradigm of transformation of potential-forming space and logistics platforms of regional economy, the position of which will find effective methods and ways to improve.

The main task of this study is to study the spatial aspect of the regional economy, expand the theoretical foundations and methodological basis of the process of forming a modern scientific paradigm of transformation of potential-forming space and logistics platforms in the region and clarify the main prerequisites and factors.

2. Literature review

Leading scientists of domestic and foreign level have devoted their research to the development of the potential-forming space of the regions and the transformation of logistics platforms in modern conditions, including: Ayadi H. (2021) [1]; Bazhenkov I. (2021) [2]; Chobitok V. (2021) [3]; Demyanenko A.E. (2019) [4]; Derhaliuk M. (2021) [5]; El Midaoui M. (2021) [6]; Grosu V., Safonov Yu. (2021) [7]; Gui Y. (2021) [8]; Hou R. (2021) [9]; Khanin S. (2021) [10]; Kholiavko N. (2021) [11]; Kovalenko N. (2021) [12]; Kozlov A. (2021) [13]; Kravchuk N. (2021) [14]; Kychko I. (2021) [15]; Niu B. (2021) [16]; Popelo O., Garafonova O. (2021) [17]; Prajapati D. (2021) [18]; Ruiga I.R. (2020) [19]; Samiilenko H. (2021) [20]; Serikov S.G. (2019) [21];

Tsepelev O.A. (2016) [22]; Tulchynska S. (2021) [23]; Vovk O. (2021) [24]; Yalan Y., Wei T. (2021) [25]; Zhang H., Jin Y. (2021) [26]; Zhavoronok A. (2021) [27] and others.

The research [19] is based on the results of the analysis of the accumulated foreign experience and modern practice in assessing the cluster potential of the regions. The authors argue that the results of the study can be used by regional authorities to adjust existing legal and strategic documents in terms of aspects of state support for the industrial sector. The authors of the article [21] developed a method for assessing the investment potential of the region's economy by institutional sectors. Researchers have studied the investment potential of the regions in the context of institutional sectors with an emphasis on the shadow economy.

The purpose of the study [4] is to assess the development potential of the regional economy. Scientists use the strategy of supply chain management, study labor productivity in the regions and small business, analyze the natural and resource potential of the regions, taking into account the key characteristics of the potential of the regional economy. The article [22] develops and substantiates the procedure for assessing regional investment potential by institutional sectors. The approach proposed by scientists allowed to assess the overall investment potential and its individual elements, as well as to assess and analyze the level of its use.

Researchers [9] are investigating the impact of spatial distance benefits on the pricing strategies of two competing logistics platforms. The authors proved the feasibility of using two scenarios, namely the model of single placement and the model of competitive bottleneck. The article [6] is based on the analysis of problems and difficulties in the process of integration of all components and stakeholders of the logistics process. As a result, the supply chain management system is insufficiently efficient and transparent. In order to effectively assess and ensure traceability and transparency, the authors have developed an approach that involves the use of a blockchain that allows you to take into account all the necessary data.

The authors of the article [13] claim that one of the main trends in digital logistics is platform solutions, which have been replaced by specialized digital solutions. In the study, the authors proposed a three-level model of stakeholder interaction on a logistics platform. Scientists believe that it will become the basis of future platform solution architecture. Researchers [18] are analyzing the integrated problem of supplier selection, vehicle routing, and transportation with sustainability factors to design an e-commerce logistics network. The authors developed a model of mixed integer nonlinear programming that will minimize total transportation costs, penalties for late and

late delivery, as well as fuel costs with the optimal choice of supplier.

Scientists [26] combine machine learning algorithms to improve the neural network and build a credit system for a public information platform for smart logistics. The authors propose to use the process of analytical hierarchy to assess the credit ratings of logistics companies from the point of view of customers and managers of logistics companies. Researchers are confident that this will be more reliable and convincing for the evaluation results. The scientific work of researches [8] examines the investment strategy of the value-added service offered by the platform. The authors proved that in conditions when users live alone and the cost of investment is within a certain threshold, two platforms adopt the same investment strategy; when investment costs are not within the threshold, the strategy is adopted by one platform or two platforms.

3. Methodology

The methodological basis of this study were theories of regional economy and regional development, taking into account the spatial aspect, as well as such general and specific methods of scientific knowledge as analysis, synthesis, generalization, systematization, etc. Based on them the spatial aspects of regional economy were studied; principles of formation of the scientific paradigm of transformation of potential-forming space and logistic platforms of regional economy and the main preconditions and factors of its formation are outlined.

4. Results

While the main processes taking place in the world today are the rapid development of information and communication systems and technologies, the global Internet, the disappearance of barriers to international trade, international exchange, which leads to a large-scale combination of social and economic structures, to establish a high level correlations between the socio-economic development of certain countries and its individual regions. The leading modern direction in the field of economy is the transition from the national economy to the global one, against the background of which the regions acquire new meaning.

At the present stage of development, the potential-forming space of the region and its logistics platforms are significantly influenced by three leading processes that lead to its change in accordance with modern realities (Fig. 1).

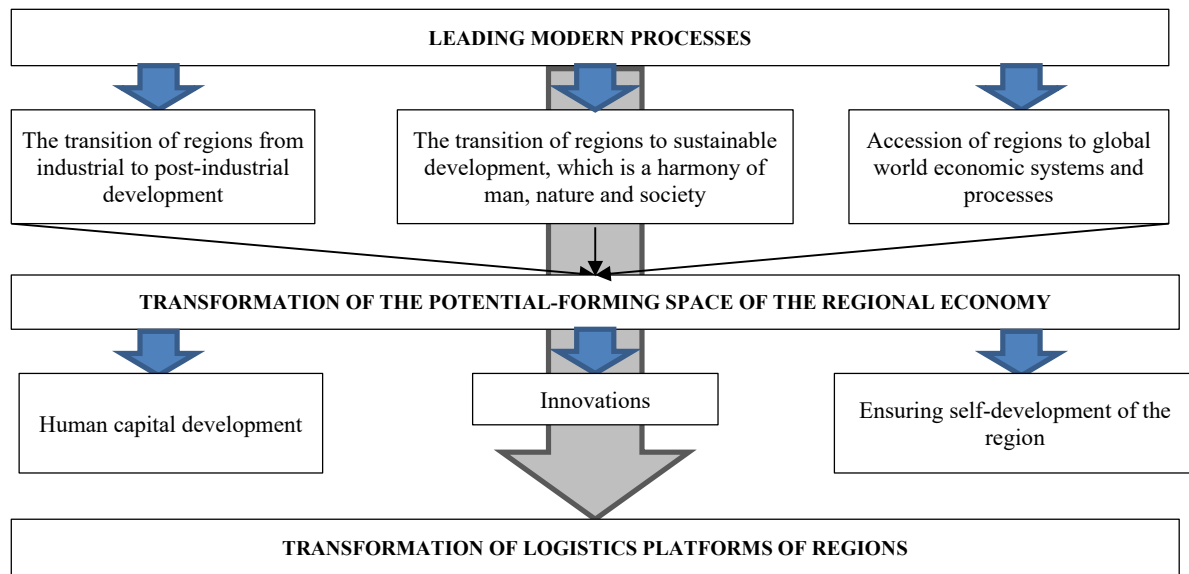


Fig. 1 The impact of modern processes on the transformation of potential-forming space and logistics platforms of the regional economy. Source: developed by the authors.

These transformations are caused by the increase of international economic relations, spatial changes in the system of the global world market and its potential. So, now we can talk about the development of post-industrial civilization, which is characterized by a many of transformational processes and crises of the world economic system, which requires a real, thorough study of spatial aspects and factors to find and implement new approaches to transformation and development of potential space, logistics platforms, as well as the formation of its theoretical and methodological basis and scientific paradigm.

The need for a paradigm of transformation of the potential-forming space of the regional economy and logistics platforms is a consequence of profound structural changes against the background of modern socio-economic spatial development.

At the present stage of development of economic thought, the scientific paradigm means a set of basic, leading theoretical views, the initial conceptual scheme, the model of problem statement and their solution, research methods prevailing in science, including basic assumptions, starting points, and techniques and approaches to solve the identified problems. At the heart of the scientific paradigm is the "scientific method of research", which is the unity of a set of methodological laws, principles, tools, etc. that form theories, concepts, and is seen as a set of knowledge, views, ideas, etc. that support a number of scientists and beliefs over a period of time.

Thus, the scientific paradigm is now a system, the theoretical reflection of which is a set of laws and concepts

that have been discovered and formulated through the use of various methods of cognition. The paradigm is based on a research methodology that meets the requirements of the time.

Combining different components of the concept into a certain structure, the paradigm performs such functions as methodological, methodical, etc. and reflects the meaning of a reasoned and formed system of scientific views. The structure of the paradigm is a common basis, a holistic basis, a generalized model of organization and use of the conceptual apparatus, which provides a clear correlation between facts, phenomena, events, the connection between which would seem to be completely absent. The role of the paradigm as a universal tool is to outline, provide, argue and adapt innovative ideas, methods and approaches to streamline and disseminate their application, which will fully reveal the essence of the proposed application based on well-known, clear examples.

The formation and further formation of a certain paradigm as the leading and priority causes the dominance of the actually chosen to research methodology, the formation of theoretical models of economic processes and phenomena, indicating the vector of movement and the corresponding leading nature of economic activity (Fig. 2).

This allows, firstly, a good understanding and thorough study of all aspects of socio-economic phenomena, to clarify and describe the characteristics, features and patterns of development of objective reality in order to form an effective strategic course of action in the future.

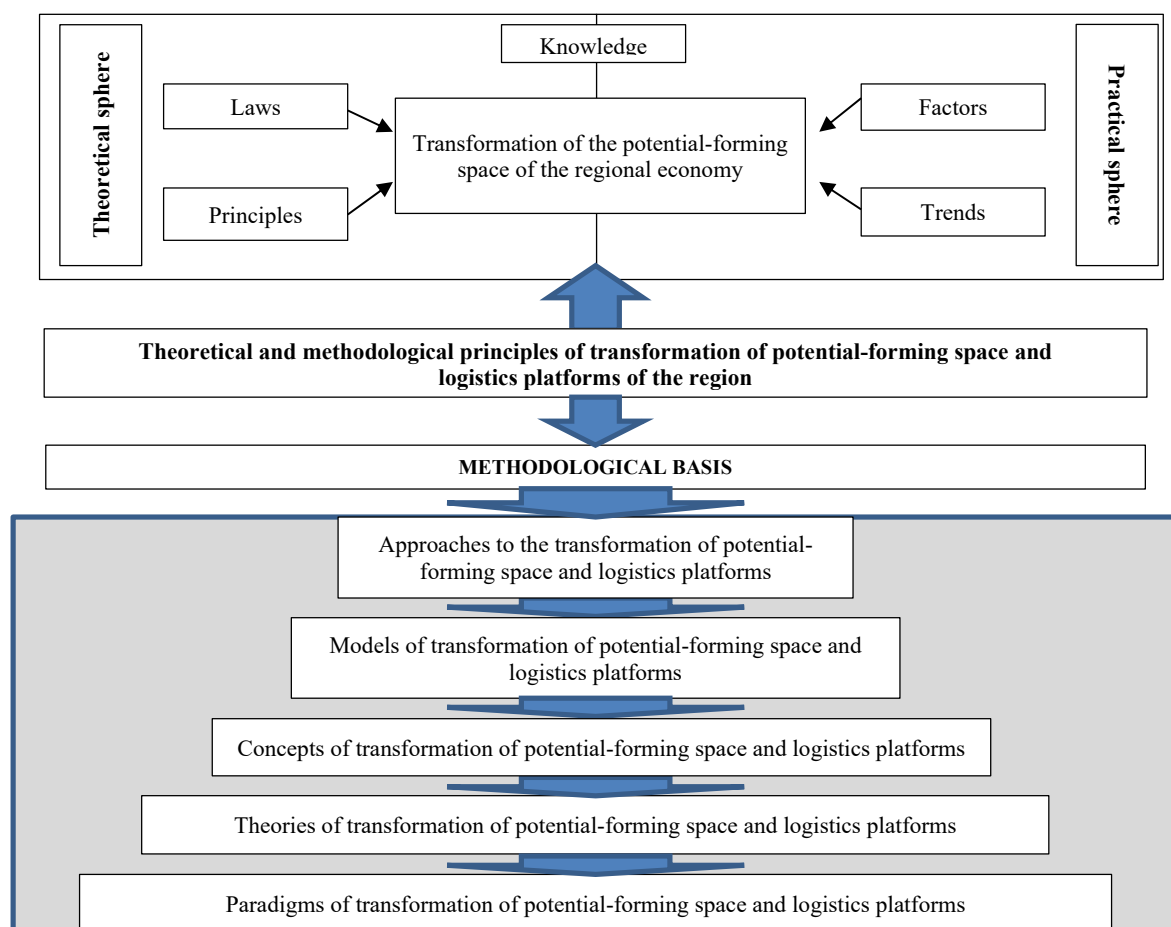


Fig. 2 The process of forming a scientific paradigm of transformation of potential-forming space and logistics platforms of the regional economy. Source: developed by the authors.

Secondly, this state of affairs makes it possible to draw sound conclusions, leading them to absolutism, and on their basis to provide theoretical and methodological recommendations, which allows to transfer empirical data to the plane of theoretical ideas with a certain, mostly far from specific practice. This affects the level and speed of transformation, updating knowledge about the current state and trends of the economic system. Leads to differences between theoretical developments, practical activities and empirical data.

The result is the inability of the leading paradigm to reflect a systematic, real and adequate representation of causation, factors and conditions of economic processes and economic activities, to develop policy documents and strategic directions aimed at improving socio-economic development. Thus, one dominant paradigm is replaced by another and its next stage is realized - formation.

Thus, the post-industrial model of development is based on such intangible, virtual resources as information, communication, innovation, intelligence, creativity, post-industrial social institutions. This leads to the fact that the

modern economic system acquires a number of new properties and attributes, which are to change the factors of production, the emergence and development of new management methods and organizational aspects of the business environment, the transformation of relationships and relationships between businesses. There is a coordination of these changes with globalization processes, and their success depends on the knowledge, skills, intellectual abilities of human capital. Human capital is becoming a leading component, a determining factor of the knowledge economy as an element of the post-industrial model of development, so for the potential-forming space of the regional economy and its transformational aspects the issue of creating an environment for human resources restoration and balanced development with natural resources. The process of infrastructure formation is accelerating, which has a positive impact on the processes of greening the activities of economic entities, informatization of management and business environment, capitalization of human resources and logistics development.

The above reveals the ineffectiveness of the territorial approach, which considered the region primarily as an object for the implementation of industrial processes. Current trends in world socio-economic development shift the emphasis of the region in the context of spatial development. Thus, in the modern post-industrial paradigm of transformation of the potential-forming space of the regional economy there is a significant revision of

the priority of factors of production, which generates changes in the functions of the territory: from the physical basis (location of material resources) to its perception as a spatial environment, development of human capital, innovations, logistics platforms, etc. Given the above, the main prerequisites and factors of the modern scientific paradigm of transformation of the potential-forming space of the regional economy are presented in Fig. 3.

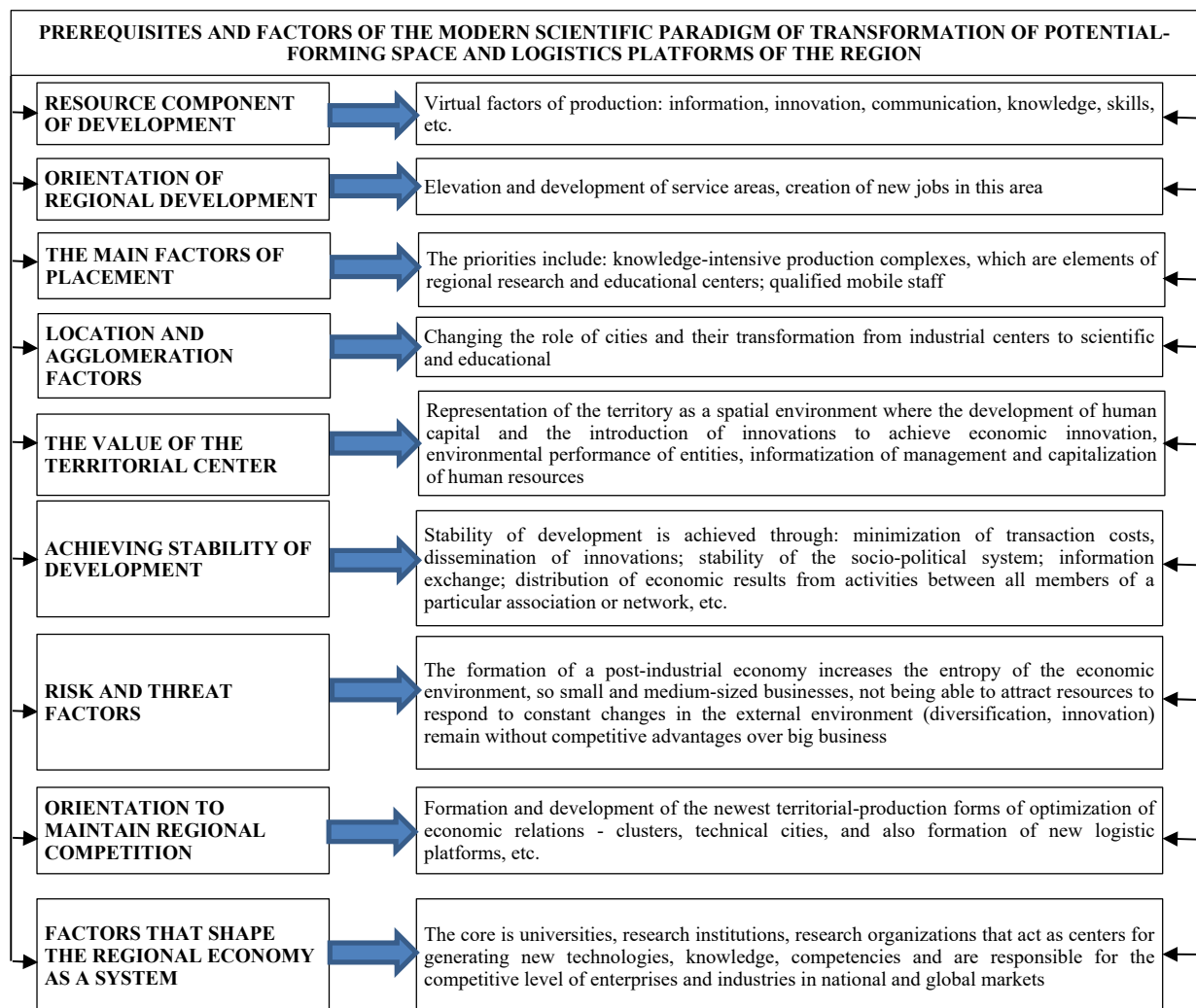


Fig. 3 Prerequisites and factors of formation of the scientific paradigm of transformation of potential-forming space and logistic platforms of the region.
Source: developed by the authors.

Transformations also require logistics platforms for the development of regional economic systems. Transformation of logistics platforms will contribute not only to the improvement of logistics activities of enterprises in the region in the direction of increasing efficiency in the transportation of products. And also provide:

- expansion and development of logistics processes of coordination of innovation activities and innovation decision-making;
- forecasting the demand for innovative products in the region, which can reduce the risks of innovation of regional economic entities.

This is due to the fact that logistics makes it possible to better meet the needs of consumers.

Transformation of logistics platforms is important at the regional level, as logistics provides spatio-temporal optimization of goods movement in the region, and also involves finding the most optimal solutions that allow to ensure the availability of a particular product in a particular place and time. Logistics platforms at the regional level provide synchronization of processes of delivery and sale of products, storage and inventory management. This is due to the introduction of effective resource management technologies to create a system of distribution of trade in the region and beyond.

Management of economic flow processes in logistics platforms is due to end-to-end analytical and organizational optimization of production, trade, procurement, financial, commercial, and other processes in the regional economy. Logistics platforms make it possible to meet customer demand in moving goods through logistics flows by optimizing the cost of resources of all spheres of economic activity and reducing time lag, which provides a positive result for all actors, including at the level of the regional economic system.

The development of logistics platforms in the region requires the establishment of closer relationships in cooperation between participants in innovation activities in the region, the establishment of a transparent, open information system with high quality data protection and the development of cloud services. Logistics platforms also provide a flow of not only goods but also innovations, which includes the flow of inventions, innovations, patents, licenses and more.

5. Conclusions

In the course of this research, the characteristic features of potential-forming space were outlined through a thorough study of approaches to the concept of space and it was found that they are inherent in the industrial model of development. The study of the main trends characteristic of the transition period and the formation of the post-industrial era made it possible to identify the leading processes that affect the transformation of the potential-forming space of the regional economy.

The study of such theoretical aspects of the paradigm as its design, functions, purpose, direction allowed to form the process of formation of the scientific paradigm of transformation of the potential-forming space of the regional economy. The study of modern dominant processes in both global and regional economic systems allowed to study and identify the prerequisites and factors of formation of the scientific paradigm of transformation of the potential-forming space and logistics systems of the region.

It is substantiated that the structure of the paradigm is a common basis, a holistic basis, a generalized model of organization and use of the conceptual apparatus, which

provides a clear correlation between facts, phenomena, events, the connection between which would seem completely absent. It is proved that the scientific paradigm is currently a system, the theoretical reflection of which is a set of laws and concepts that have been discovered and formulated through the use of various methods of cognition. The paradigm of transformation of potential-forming space and logistics systems of the region is based on a research methodology that meets the requirements of the time.

It is proved that logistics platforms make it possible to take into account regional specifics and optimize resource costs in various areas, to ensure customer satisfaction with time and cost optimization. The development of logistics platforms requires the development of cloud logistics technologies and the digital transformation of the regional economy.

Thus, the paradigm of transformation of the potential-forming space of the regional economy, according to the author, significantly increases the base of research, and understanding its main provisions provides opportunities for a thorough scientific analysis of the functioning and development of the regional economy in the context of its potential genesis, the current state on the basis of the methodological contour of the paradigm, which is, firstly, the use of the whole set of methods of spatial research, and secondly, the application of functional, structural, evolutionary directions of the system approach.

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