

4. РОЗВИТОК ПРОДУКТИВНИХ СИЛ І РЕГІОНАЛЬНА ЕКОНОМІКА

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THE ECONOMIC ESSENCE AND IMPORTANCE OF THE INFRASTRUCTURE SYSTEM AS THE DOMINANT REGIONAL DEVELOPMENT

The article is devoted to the theoretical substantiation of the place and importance of the infrastructure as a component of the regional economic system. The basic functions of the infrastructure are revealed: maintenance of continuity, continuity and reliability of economic interrelations and interaction of market economy subjects on the basis of regulation of information, commodity, and financial flows movement. It allows participants of market relations to realize their own interests, and the market – to realize the implementation of its functions. The infrastructure system of the region is a spatially defined set of objects and forms of economic activity that have a protective purpose in the processes of social production and consumption and create favourable conditions for the normal life of society. According to the factor-functional feature, four aggregate types of infrastructure have identified: industrial, social, market, and institutional, which perform their functions according to their purpose and create the appropriate conditions.

Key words: infrastructure, market infrastructure, regional development, region, industrial infrastructure, infrastructure potential, logistic concept, marketing concept.

Problem statement. The methodological aspects of the formation and development of infrastructure as an economic phenomenon are investigated, they allow defining the system of infrastructure provision of the region as a system of integrated elements of productive forces and industrial relations, which presents a spatially defined set of objects and forms of economic activity that harmonize the processes of social production and consumption and create favourable conditions for comfort and quality of life of the population.

On the basis of the definition of the infrastructure system and the study of the functional purpose of the infrastructure, we can emphasize that from a methodological point of view, the study of the territorial organization of the infrastructure complex should be carried out taking into account its territorial functions. Therefore, the methodology of the study of the impact of infrastructure functions on regional development needs to be deepened now.

Analysis of recent research and publications. The active study of the problems of infrastructure in mod-

ern times resumed in the 40 years of the twentieth century. Known studies of this period include the works of A. Youngson [1], H. Singer [2], P. Rosenstain-Rodan [3]. Notable results in this area are characterized by works by Y.B. Alayev [4], V.O. Zhamin [5], I.M. Mayergoz [6], V.P. Krasovskii [7], B. Kh. Krasnopolsky [8], A.E. Probst [9], and many others.

Depending on the tools used in identifying the essence and properties of the objects of the infrastructure complex, its structure and factors of influence, the following literature offers the following main approaches to the study of the category of «infrastructure»:

– political economy, philosophical-logical, and economical-theoretical (S. Mochernyi, B. Danylyshyn, M. Koretskyi, O. Datsii);

– chronological, structural-logical, genealogical, functional (I. Butyrskaya, O. Vasyliiev);

– political economy, economic, historical, geographic (S. Yurchenko).

We can't deny any of the approaches, although there are disputed moments in each such group.

The purpose of the article is the development of methodological and theoretical foundations of the process of formation and development of the infrastructure system of regional economic space.

Main results of the research. The infrastructure has a component and a territorial structure. Different countries, as well as regions, have certain peculiarities in the structural correlation of subsystems of infrastructure support. This is mainly due to economic development, territorial-natural conditions, regional specialization, and other factors. An important role for the region and the country as a whole is the morphology (configuration) of the infrastructure complex, which is determined by at least two main characteristics: the location of the object and the geography of service [10, p. 13].

The structural organization of the infrastructure system is represented by functional, sectoral, spatial, organizational, managerial, market, and social ties, which are oriented according to the target setting. The functional structure provides the movement of infrastructure services in accordance with the stages of production and commercial activities of economic entities. The sector structure organizes the types of infrastructure services and their material and technical base in accordance with the social division of labour, driven by the needs of economic entities.

The spatial structure reflects the territorial dispersion and use of infrastructure services and the placement of infrastructural support facilities. Organizational-management structure characterizes the administrative and economic structure.

The relationship between the structure and functional capabilities of the infrastructure support system can be formulated as follows: the more diverse the industry set of the infrastructure complex, the greater its functionality. If to determine the target function of infrastructure only as a provision of general (external and internal) conditions of economic activity of subjects of entrepreneurship, its structure will be determined by a set of enterprises and organizations that carry out infrastructure maintenance of the process of social production. If the purpose function is defined as the creation of general conditions for the functioning of the socio-economic system as a whole, then the internal organization of the infrastructure is expanding, and the traditional composition is supplemented by those areas, the presence of which requires a market environment or involvement which the enterprise deems appropriate, for example, information services, technical and technological studies and development, business services.

The variety of functions only emphasizes the importance of the role and place of the infrastructure system in modern economic relations. At the same time, excessive abstraction and the absence of a reasonable selection criterion and priority of implementation virtually eliminate the possibility of using the resulting classification of functions as an effective tool for optimizing the interaction of the infrastructure system and the regional economy.

In general, based on the analysis of the functional load of objects of the infrastructure complex, it should be emphasized that the infrastructure has its own genealogical characteristics that are objectively relevant to its morphological and economic content:

- firstly, it is a product of the development of productive forces of society;
- secondly, infrastructure is an integral and simultaneous precondition of industrial relations;
- thirdly, its content is determined by the unity of its forming branches and types of activity;
- fourthly, it is a reflection of those economic relations that have developed at this stage of the development of the economic system and are inherent in society;
- fifthly, the types of activity of the aggregate of infrastructural industries are determined by those functional assignments or priorities that determine the existing regional needs for production services.

When identifying an infrastructure, its typology and definition of elemental content, it should be based on the allocation of specific functions, the totality of which would be possible to attribute a certain type of economic activity, industry or subcontract to the system of infrastructure provision. Thus, objectively determined is the definition of the functional purpose of infrastructure in the system of social production. At the same time, such a sign is not the only one possible when substantiating the place and role of infrastructure in the economic system.

In the context of the generalization of the infrastructural support processes, without their adaptation to the conditions inherent in a particular regional economic system, we consider it necessary to establish the definition of the concept «infrastructure of the regional economy» as an integral part of social relations, the basis for ensuring the processes of life and creating conditions for sustainable development of the region on the basis of the extended reproduction of productive forces through the fulfilment of functions by social, institutional, production and market subsystems. This concept determines the scientific and methodological foundations of the phenomenon of infrastructure in modern conditions, while the concept of «infrastructure provision of the region» allows differentiating regional features and enabling their influence on the development of specific territories.

The interconnection of the main components of the infrastructure area of the regional economy (Fig. 1), the basic system components of which are infrastructure providers (which are operators of the infrastructure market, specialized infrastructure companies), and infrastructural facilities (material production sector, intangible and the social sphere).

The infrastructure is based on an integrated approach that fully implements the paradigmatic domains of infrastructure support and ensures the implementation of the concepts of regional development policy and includes a combination of the following approaches:

- Sectoral – diversified structure of the regional economy allows us to form our own infrastructure potential, which has the specific properties inherent in the specialization of the region and corresponds to social needs;

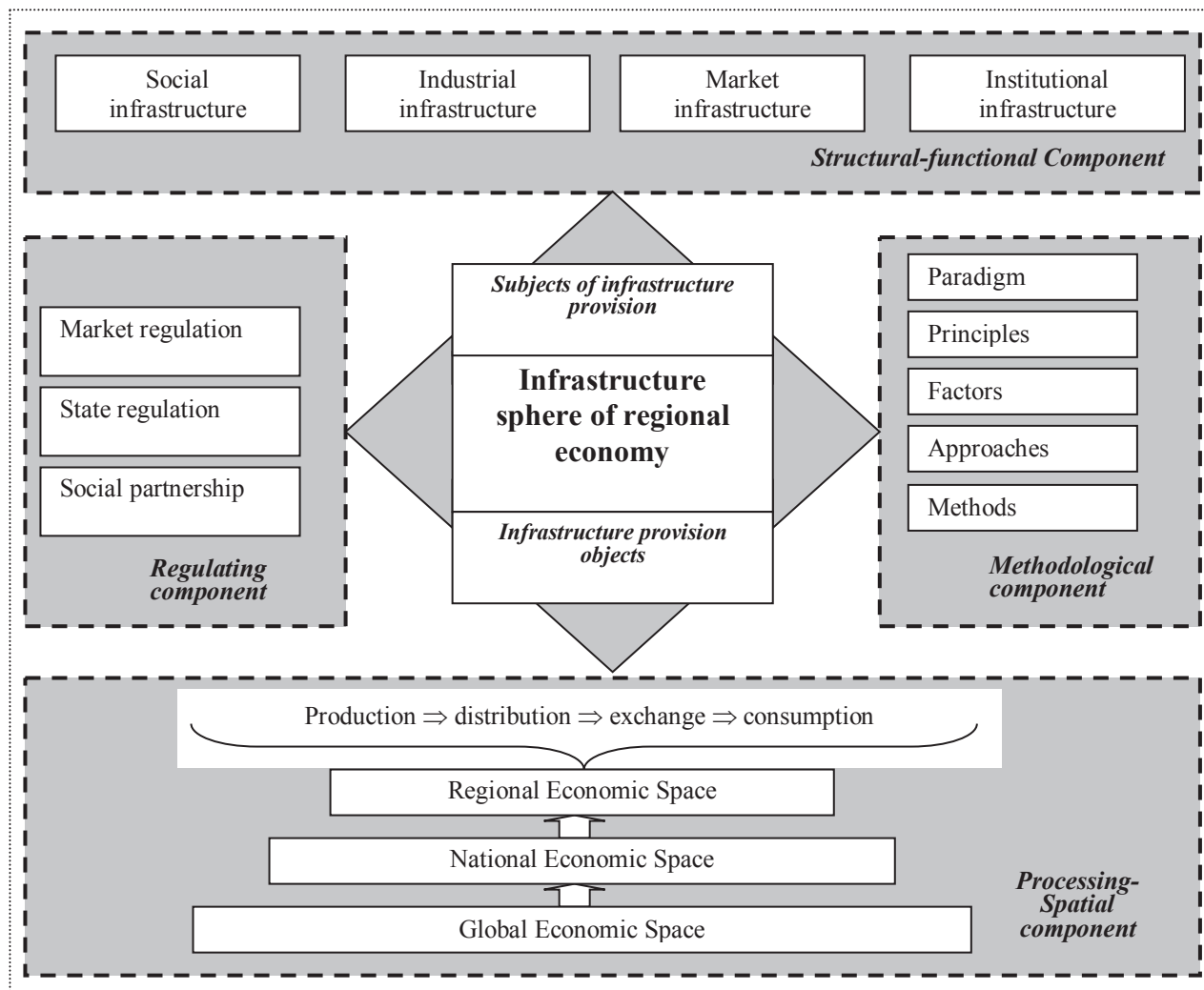


Fig. 1. Model of the infrastructural sphere of the regional economy

Source: designed by the author

– Territorial (spatial) – ensures the achievement of a uniform and balanced development of the territory, development of interregional cooperation, prevention of deepening socio-economic disparities by forming optimally dispersed infrastructure capacity, ensuring socio-economic unity and uniformity of development of regions;

– Differentiated administration – the use of differentiated approaches to the formation and implementation of infrastructure development policy at the regional level, taking into account the specific characteristics and uniqueness of the regions, along with the overall strategy for modernizing the national infrastructure environment and optimizing the territorial administration system.

The combined effect of the principles and factors led to the formation of the current level of infrastructure provision in the region, defined the basis for the functioning of the infrastructure sphere and outlined the directions for its further development (Table 1).

Ukrainian scientist P. Belenky proposed to narrow the range of problems related to the development of infrastructure to two groups [11, p. 55]:

– those concerning the underestimation of the role and place of infrastructure in the life of society;
 – which are caused by the multisectoral structure of the infrastructure complex.

Today, the fact that the effectiveness of social production is directly dependent on the level of infrastructure development is indisputable. Also, the proper condition of the infrastructure, its developed network is a factor in the investment attractiveness of the region and the inflow of manpower. However, further research is needed to justify a close connection between the cyclicity of infrastructure development and the laws of a regional or national economy as a whole. Let us note the existence of three dependencies: coherent, outdated, and late development, which led to the lack of a single scientific position regarding the role of infrastructure in regional and national development. There are opposing arguments in the scientific world [12, p. 9]:

1. The growth of infrastructure capacity contributes to economic development in general, including increasing labour productivity.

Table 1

Principles and factors of the formation, functioning, and development of the infrastructure

PRINCIPLES		
Lawfulness	realization of infrastructural support processes due to the Constitution and laws of the state, international agreements, etc.	
Parity	ensuring equal access for economical objects to infrastructure services	
Unity	each regional infrastructure system is represented as a part of the national infrastructure complex, which contributes to reducing the socioeconomic regional imbalance, ensuring the spatial, political, economic, and social integrity of the state	
Priority	the functioning and development of the infrastructure sphere are intended to ensure the implementation of priorities, benchmarks, and interests at both regional and national levels, has the purpose to increase the competitiveness of the state and its regions in the European spatial	
Complexity	the infrastructure manifests itself in the using all types of forms, methods, tools for the regulation of infrastructure functioning and development and takes into consideration the features and condition of the regional economy, as well as the mechanisms of regional and sectoral development	
Systemic	the infrastructure sphere must correspond the requirements of the system order and possess system properties, among them: purposefulness, integrity and unity, hierarchy, heterogeneity, adaptability, ability to self-organization, recovery, and self-development, etc.	
Proportionality	every component of the infrastructure must be coordinated with other components and elements of the regional economic system	
Concordance	interconnection and coherence of long-term strategies, plans, and development programs at the state, regional, and local levels	
Subsidiarity	decentralization of infrastructure development management, transfer of managerial functions to subjects at a lower level, which can realize them most effectively	
Equability	coordinated development of all components of the infrastructure in accordance with the needs of the regional economy	
Scientific validity	using the scientific methods during the formation of the system of infrastructure support and determination of directions of its development; based on the results of fundamental and applied research in the field of developing innovative infrastructural technologies, methods, and tools that stimulate infrastructure development	
Sustainability	the functioning and development of the infrastructure should provide a non-exhaustive, and efficient use of energy, material, natural, and other resources to fulfil the needs of the actual generation, taking into consideration the interests of future generations	
efficiency	achievement of a coordinated with priorities and interests of regional and infrastructural development; the transition of the infrastructure to a qualitatively new level on the basis of efficient using all types of resources	
FACTORS		
MEGATRENDS	NATIONAL	LOCAL (REGIONAL)
Globalization; Financialization; Socialization; Informatization; Intellectualization; Conflict of the real and virtual economy; Population growth; The appearance of new world centres of influence; Limited resources	Scientific and technological progress; Financial and economic; Political and executive; Spatial and territorial; Ethno-historical; Institutional; The structural transformation of the economy	Natural-climatic; Resources; Demographic and social; Geopolitical (including the development of interregional cooperation); Branches of the economic sector and industrial specialization of the region; Market conditions; Level of investment and innovation activity

2. Insufficient infrastructure development inhibits recovery processes and significantly reduces potential opportunities for socio-economic growth in the region (country).

3. The state of the infrastructure complex does not have a significant impact on economic development in general.

4. The reason for controversial findings was the attribution of researchers to the infrastructure of various industries and activities, as well as conducting research on the basis of countries and regions of the world, which differ significantly in the trends of economic growth. Considering the dynamics of fluctuations in the state of infrastructure, undoubtedly, is a prerequisite for planning the economic development of a region or country. However, the question of the unambiguous need for harmonization of cyclicality is controversial. To solve this problem, it is necessary

to differentiate objects of the infrastructure complex and to establish causal relationships between such categories: regional development, state of infrastructure objects, business climate, investment attractiveness. For border areas, it is expedient to add to this list still transit.

5. Undoubtedly, economic growth is impossible without infrastructure progress. So, W.A. Lewis, R. Nurkse, P. Rosenstein-Rodan argue the need for advanced transaction costs to provide intensive economic growth [3; 13; 14]. W. Rostow substantiated the triple effect of capital investment in infrastructure development, which manifests itself in reducing spending on exports, the rapid growth of export-import operations, and the formation of a basis for industrial development [15]. However, given national realities, there are doubts about the possibility of implementing this «ideal» model. The practice of accelerating

infrastructure development has not always justified itself from the point of view of economic feasibility on the territory of the USSR. So, in the context of rational decisions in the business sector and the desire for a quick return on investment, modern investors are not inclined to advance the conditions for the functioning of social production, while the production facilities themselves do not exist yet, and therefore, there is no demand for services.

The formation of infrastructure as a category and an independent economic taxonomic unit is due to the following factors, phenomena and trends with a global manifestation:

- division of labour – has caused the separation of services from the production and the emergence, directly, of the infrastructure;
- globalization and integration processes – outlined the contours of the infrastructure complex, formed a global infrastructure network;
- the presence of historically conditioned natural monopolies – the emergence of the need for state regulation of infrastructure development;
- activation of entrepreneurial activity – led to the formation and development of market infrastructure;
- acceleration of technological changes – separates into an independent subsystem and increases the role of innovation infrastructure;
- the need to optimize the ratio of market and state regulation – has strengthened the role of institutional infrastructure;
- the hierarchy and multicomponentness of the world economic system have led to the allocation of infrastructure levels that are localized at the regional level (tourist, market, social, etc.) or characterized by penetration from micro to macro level and are a part of the global infrastructure (transport network, telecommunications, innovation structures, etc.).

On the basis of the written before and generalized results of scientific researches of domestic and foreign scientists, we will determine the place and role of infrastructure in the national economic space and in the system of market relations. The study of methodological approaches to identifying the economic essence of the infrastructure and the features of introduction it into an independent economic complex gave us the opportunity to present it as a category that reflects a system of economic relations and provides interconnection with the productive forces (Fig. 2).

During the modelling of the infrastructure, it is necessary to consider that the regional reproduction process is carried out in the unity of intraregional and interregional ties (material, technical, financial, labour, and information), which provide a consistent system of its phases: supply, production, distribution, and consumption. Thus, the system of infrastructural provision of regional needs forms the infrastructure that is necessary for the normal functioning of the reproduction process and the connections of the region with the external environment.

Market mechanisms combine acts of exchange of products and services and require labour and logistics. Thus, the

infrastructure serves as a framework for productive forces and industrial relations, as well as the formation of territorial and structural boundaries of the consumer and labour markets, capital and facilities of production. The market should be equipped with its appropriate specific infrastructure, the functioning and level of development of which depends on the creation of a competitive market environment, the activation of entrepreneurship and the acceleration of social development in general.

The infrastructure system of the region is a spatially defined set of objects and forms of economic activity that have a protective purpose in the processes of social production and consumption and create favourable conditions for the normal life of society. In this regard, according to the factor-functional feature, we have identified four aggregate types of infrastructure: industrial, social, market, and institutional, which perform their functions according to their purpose and create the appropriate conditions.

Elements of the market infrastructure do not create a new product in its material-essential form but increase it in value terms, which within the national economy affects the growth of national income. By providing services, the infrastructure ensures the continuity of the circulation of all forms and parts of the aggregate social product, thus contributing to the normal functioning of the basic industries of the region's economy and the implementation of the principles of sustainable development. However, it should be noted that such a division is to a certain extent conditional since the technical infrastructure of the infrastructure complex, regional transport, communications, energy networks are common and used both for providing services for business and for the population.

The main result and product of the functioning of the infrastructure is a service, the economic meaning and functional capacity of which are due to the division of labour and is the result of the formed territorial resource potential and sectoral competencies. As a result of the «fuzziness» of the criteria for assigning the infrastructure, every component of the market infrastructure, determined on a factor-functional basis, can be attributed to a particular group of spatial or sectoral objects. The complex nature of the infrastructure explained in the fact that it concentrates on the basis of functional unity various industries, enterprises, and types of labour activity, providing a favourable development of the industrial and non-productive sphere and satisfying public needs.

The specialized infrastructure according to the object-industry characteristic contains the types that serve the needs of a particular industry, market or specific activity. For example, according to industry features, the infrastructure of industry, agroindustrial complex (AIC) and construction, by types of activity – foreign economic activity, transit, tourist, ecological, etc. Obviously, depending on the specialization of the region, the infrastructure that services the regional specialization is more explicit and developed.

Conclusion. The peculiarities of the regional development of the current period are derivatives of globalization trends that have embraced the global economic system.

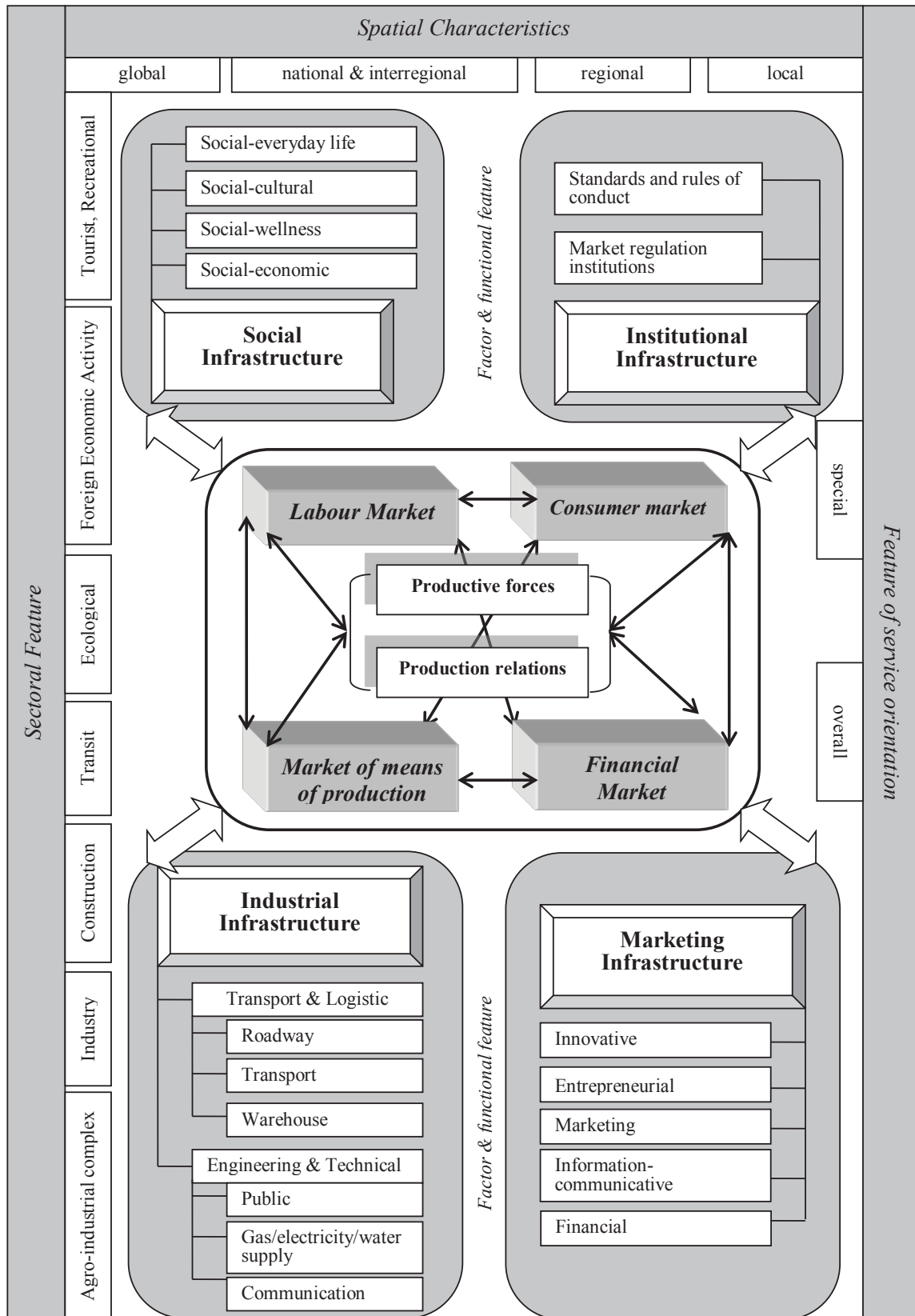


Fig. 2. The types of infrastructure

Classification of the infrastructure by spatial sign and coverage implies its division into global, national, regional, and local. At the same time, the system approach allows

combining hierarchically these types, when the lower level of the infrastructure complex is an integrating part, or subsystem of a higher level of the infrastructure system.

The conducted theoretical and methodological research of the process of formation of infrastructure as a scientific taxonomic unit allows us to generalize the common problems inherent to it in general at all levels:

1. The imperfection of existing mechanisms for ensuring coherent regional and infrastructure development.
2. Lack of an integrated approach to the planning and implementation of programs for the development of industrial infrastructure at all levels of management.

3. The residual principle of financing infrastructure development, imbalance in the allocation of funds for the development of material production and the field of production services.

4. Relationship of infrastructure objects to various industries, as a result – the lack of a single entity regulating their operation and development.

5. Barriers to entrepreneurial activity in the infrastructure sector due to the presence of natural monopolies and other compelling reasons.

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ЕКОНОМІЧНА СУТНІСТЬ ТА ЗНАЧЕННЯ ІНФРАСТРУКТУРНОЇ СИСТЕМИ ЯК ДОМІНАНТИ РЕГІОНАЛЬНОГО РОЗВИТКУ

Стаття присвячена теоретичному обґрунтуванню місця та значення інфраструктури як складової регіональної економічної системи. Дослідження генези категорії інфраструктури дозволило виявити множинність підходів до дефініції, до загальних позицій яких можна віднести визнання результатів функціонування інфраструктури як специфічного виду послуг та всеохоплюючого, наскрізного її характеру – від виробництва до споживання суспільного продукту. З метою угрупування видів інфраструктури застосовані теоретико-економічний, інституціональний, структурно-функціональний та комплексний підходи. Виявлено основні функції інфраструктури: забезпечення безперервності, безперервності та надійності економічних взаємозв'язків та взаємодії суб'єктів ринкової економіки на основі регулювання інформаційного, товарного та фінансового руху. Вона дозволяє учасникам ринкових відносин реалізувати власні інтереси, а ринок - реалізувати виконання своїх функцій. В роботі підкреслюється, що в основі функціонування інфраструктурної сфери лежить інтегрований концепт, який найповніше дозволяє реалізувати парадигмальні домінанти її функціонування та забезпечити реалізацію стратегії регіонального розвитку через поєднання таких підходів: секторального (галузевого) – диверсифікована структура регіональної економіки дозволяє сформувати власний інфраструктурний потенціал, який володіє специфічними властивостями, притаманними спеціалізації регіону, та відповідає суспільним потребам; територіального (просторового) – забезпечує досягнення рівномірного та збалансованого розвитку території, розвиток міжрегіонального співробітництва, запобігання поглибленню соціально-економічних диспропорцій; адаптивного

адміністрування – застосування гнучких підходів до формування і реалізації стратегії інфраструктурного розвитку на регіональному рівні, які б урахували специфічні властивості та унікальність регіонів. Регіональний відтворювальний процес здійснюється в єдності внутрішньорегіональних і міжрегіональних зв'язків (матеріально-технічних, фінансово-кредитних, трудових та інформаційних), які забезпечують послідовну систему його фаз: виробництво, розподіл, перерозподіл і використання. Таким чином, система інфраструктурного забезпечення регіональних потреб формує специфічний простір, необхідний для нормального функціонування відтворювального процесу та зв'язків регіону із зовнішнім середовищем. Інфраструктурна система регіону є просторово визначеним набором об'єктів і форм господарської діяльності, які мають захисне призначення в процесах суспільного виробництва і споживання і створюють сприятливі умови для нормального життя суспільства. Згідно з факторно-функціональною ознакою, виділено чотири сукупні типи інфраструктури: виробничу, соціальну, ринкову та інституційну, які виконують свої функції відповідно до своїх цілей і створюють відповідні умови.

Ключові слова: Інфраструктура, ринкова інфраструктура, регіональний розвиток, регіон, виробнича інфраструктура, інфраструктурний потенціал, логістична концепція, маркетингова концепція.

ЭКОНОМИЧЕСКАЯ СУЩНОСТЬ И ЗНАЧЕНИЕ ИНФРАСТРУКТУРЫ КАК ДОМИНИНАНТЫ РЕГИОНАЛЬНОГО РАЗВИТИЯ

Статья посвящена теоретическому обоснованию места и значения инфраструктуры как компоненты региональной экономической системы. Выявлены основные функции инфраструктуры: обеспечение непрерывности, устойчивости и надежности экономических взаимосвязей и взаимодействия субъектов рыночной экономики на основе регулирования движения информационных, товарных и финансовых потоков. Это позволяет участникам рыночных отношений реализовывать свои интересы, а рынку - реализовывать свои функции. Инфраструктурная система региона представляет собой пространственно ограниченный набор объектов и форм экономической деятельности, которые имеют обеспечивающее назначение в процессах общественного производства и потребления, а также создают благоприятные условия для нормальной жизни общества. Согласно факторно-функциональному признаку, определены четыре совокупных типа инфраструктуры: производственная, социальная, рыночная и институциональная, которые выполняют свои функции в соответствии с их назначением и создают надлежащие условия для регионального развития.

Ключевые слова. Инфраструктура, рыночная инфраструктура, региональное развитие, регион, промышленная инфраструктура, инфраструктурный потенциал, логистическая концепция, маркетинговая концепция.