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SCIENTIFIC AND THEORETICAL FOUNDATIONS FOR THE DEVELOPMENT OF REGIONAL INFRASTRUCTURE

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Annotation. The article summarizes the research of domestic and foreign scientists related to regional infrastructure. Also, from a scientific and theoretical point of view, its significance in the development of the regional economy is revealed. The aspects of its classification and its tasks are highlighted. Scientific proposals aimed at the development of regional infrastructure have been developed based on its specific aspects.

Key words: regional infrastructure; regional economy; infrastructure factors; infrastructure functions; innovative infrastructure.

Introduction

The aim of socio-economic development of the region is creating a better living standards for the population. This process involves a number of important issues such as increasing incomes and literacy level, improving health care, creating sufficient working conditions and also sustainable jobs. These criteria, in turn, are important indicators of sustainable development. These factors are believed through the main indicators of sustainable development too. It should be noted that creating new jobs is based on additional producing and resource consumption. In order to achieve it effectively is directly connected with well-organized infrastructure.

The economy of the region is a part of the national economic system and plays an important role in its effective functioning. The competitiveness of the country's economy depends on the sustainable and balanced development of the region. It is important that today the world is transitioning from a competitive national economic system to a competitive regional economy. At the same time, ensuring the unity of economic entities in the region and their effective functioning depends mostly on the availability and activity of infrastructure facilities.

As the President of the Republic of Uzbekistan Sh. Mirziyoev noted: “In the future, each village or mahalla will be developed based on its potential and “its growth points”. In this condition, we offer to create a regional infrastructure development fund worth 3 trillion soums next year. The funds will be used to co-finance infrastructure projects based on proposals from local councils” [1].

Infrastructure is considered as an important part of the region’s development strategy. Infrastructure development is a factor that ensures the competitiveness and stability of the region's economy. The production efficiency of the region also depends on the level of infrastructure development. The higher the level of infrastructure development in the region, there will be more investment, employment, economic development and as a result the level of lifestyle and healthcare of the population will increase.

Methodology

The development infrastructure in the region is so important that it ensures the efficiency of the activities of industries and sectors of the region so this makes it necessary to study the scientific and theoretical aspects of regional infrastructure. In the article, systematic, logical, structural approaches, as well as scientific generalization, comparative analysis, induction and deduction methods were used.

The study is focused on the specific characters of Khorezm region and there were identified the types of infrastructure that need to be developed in the region. Furthermore, on the basis of research, scientific and practical proposals for the development of infrastructure in the region have been developed.

Literature review

Special attention should be paid to the formation and development of infrastructure facilities in the regions in order to ensure the stability of the region's economy that provide material and intangible benefits. It is also important to establish sectoral facilities in the process of infrastructure development.

Many scientists believe that [2], the socio-economic efficiency and competitiveness of the region depends on the level of infrastructure development. Infrastructure significantly increases the region's investment potential. In turn, this will

ensure the sustainable and balanced development of the region, in other words, the expansion of production and service capacity.

Infrastructure is divided into international, national and regional types. In this case, the type of the region is vital. Regional infrastructure is a sector that creates organizational, economic, social, legal conditions for the effective functioning of the economy and ensures the quality of life of the population, based on the specifics of the regional economy [3].

Regional infrastructure, as an economic concept, represents the relationship between material elements and production, and creates general conditions for the development of the economy and the improvement of living standards of the population to the objects of production and service description [4].

The real sector infrastructure of the regional economy is an economic system, which provides the development of all market systems in the region, including the economic potential of the region and all the relations of market actors [5].

Regional infrastructure is a set of facilities and activities that create the necessary conditions for the effective functioning of material production in the region, the free movement of all goods and resources, as well as a sufficient standard of living [6].

Regional infrastructure is a material-technical and social system that aims at the production of material goods in a particular area and ensuring the social life of the population [7]. The infrastructure system is the integration of several infrastructure elements in this region [8].

The economic essence of regional infrastructure arises at the expense of the concentration of auxiliary production in the process of construction and implementation of basic production activities [9].

Regional infrastructure is a package of facilities and services that provide a better standard of living for the population, the free movement of all types of goods and services, the growth of material production [10].

Analysis and results

For the sustainable economic development of the region, the following features of infrastructure are highlighted: reproduction depends on the balance of infrastructure

activities in the region; the reduction in losses is related to infrastructure development; acceleration of the movement of working capital [11].

The direct link between the development of the regional economy and the development of infrastructure in the region has been studied by many economists [12]. Therefore, today it is impossible to ensure the stability of the region's economy and social life without the development of infrastructure. Infrastructure is also a link that ensures the efficient operation of many industries and sectors. As it stated above infrastructure is considered as an important part of any economic system.

It should also be noted that the development of regional infrastructure can be divided into exogenous and endogenous types. In the exogenous type, the availability of infrastructure is studied on the basis of the organization, expansion and development of industries and sectors in the region. At the same time, the expansion of industries and sectors will require additional infrastructure services and ensure the expansion of their activities on the basis of multiplier effect. In the endogenous way, the interconnection between infrastructure facilities ensures the expansion and development of the sector. In particular, the industry expands and develops due to the fact that one type of infrastructure requires another type of service.

Economic incentives to improve infrastructure will also increase investment in fixed assets and innovative development of the region. Infrastructure investment is a source of economic development and long-term economic growth in the region. More precisely, investments in the development of the industry will ensure the efficient allocation and rational use of available resources. Infrastructure investment is equally important not only for the region but also for the country.

Short-term and long-term goals are paid attention in accordance with the criteria of socio-economic development of the region [13]. In the long run, the sustainable socio-economic development of the region depends on its use of competitive advantages. At the same time, stability will be ensured through the use of internal-territorial and external-macroeconomic factors of economic growth.

In particular, the effective use of factors will ensure the sustainable development of the regions. Infrastructure is also an important factor in efficiency and regional

sustainability. Therefore, in the development of infrastructure, special attention should be paid to traditional factors of production. We divide them into external and internal factors of production. The use of internal resources and the involvement of external factors are often associated with the development of the competitiveness of the regional economy.

The following factors mostly influence on the region's activity: production factors, demand volume, industry support networks, development of the strategies [14].

Other authors cited population, entrepreneurship, small businesses, investors, and tourists as factors [15, 16]. Another group listed the economic, social, political, and other factors that affected them, as well as individual producers in domestic and foreign markets.

A number of researchers consider it appropriate to divide the factors into two groups [18]: factors related to the activities of economic entities (for example, investments in fixed assets) and factors not related to the activities of economic entities (e.g. geographical location, natural resource opportunities and etc.). Therefore, the competitiveness of the regional economy depends not only on its economic potential, but also on the state of the economic system as a whole.

Sustainable development of the regions is connected with competitiveness of individual sectors and the country's economy as a whole. In this regard, special attention should be paid to increase the efficiency of existing factors and their rational use to ensure macroeconomic balance and sustainable economic growth of the socio-economic system.

In another research three important factors of infrastructure are mentioned: the first direction includes competition, goods and services, capital, as well as other factors of economic growth; the second factor includes human capital; the third factor is the intensive development of fuel and raw material exports [19].

Kh.A Abdukodirov divides the factors influencing the development of production and market infrastructure into two groups. The first group includes factors that stimulate the development of infrastructure: economic entities that produce and

consume various goods and services; the existence of the private sector; the system of public administration related to macroeconomic issues of reproduction. The second group includes barriers: weak government support for market infrastructure; improper organization of the legal framework; high tax rates; the absence of a free price policy based on market relations [20].

The concept of "infrastructure" is emphasized in the work "Economics" by P. Samuelson and V. Nordhaus. The development of the economy in the field of infrastructure communications and transport, drinking water supply, which are affected by investment. They also believe that public investment is also an important factor in infrastructure. At the same time, R. Nurks, A. Hirschman, P. Rosenstein-Rodan, U. Rostow, H. Zinger also considered investment as a key factor in infrastructure [21].

Based on the above research, we define the factors of infrastructure as follows: existing industries and sectors in the region; geographical location and peculiarities of the region; local programs aimed at infrastructure development in the region; medium and long-term development strategies of the region; investments from the local budget.

This means that local authorities need to pay special attention to the development of infrastructure in the region. This is because the focus on infrastructure activities develops the regional economy in two ways, that is, directly or indirectly. In particular, under its direct influence, this object will affect the employment of production resources and the expansion of the services market, which will provide additional growth in GRP.

The indirect effect of the formation of infrastructure make industries and sectors lead to additional growth and expansion of activities due to the created conditions. In turn, this process will ensure the growth of GRP and sustainable development of the region due to the expansion of production. This means that the economic growth of the region depends not only on the availability of natural resources, but also on the development of the production base, the proper organization of the management process and the development of infrastructure that ensures the integrity of the region.

In order to study completely the impact of infrastructure on the economy, we need to explore its types and classification. Identifying the types of infrastructure allows to determine the impact on a particular sector of the economy.

The process of classifying infrastructure is complex, and a vertical and horizontal approach is used to address this issue [22]. The vertical analysis is based on the economic content of the infrastructure and is classified according to the level of functions in the economic system. The horizontal approach examines the relationship and interdependence of the elements under the infrastructure.

In the economic literature infrastructure is also classified by functional aspects [23]. In particular, it includes industrial, social, institutional, information and market infrastructure types. The production infrastructure includes service facilities that ensure the efficient operation of the material sector. Social infrastructure facilities provide a range of services aimed at improving the living standards of the population. The market infrastructure, on the other hand, provides its subjects with material, finance and information. In addition, the market infrastructure is a key component of the regional economy, creating and developing conditions for the effective functioning of market relations in the region [24].

In addition to the above, several studies have also been conducted on the classification of infrastructure on the basis of economic activities. These include industry, agriculture, wholesale and retail trade, financial activities, education, and health care.

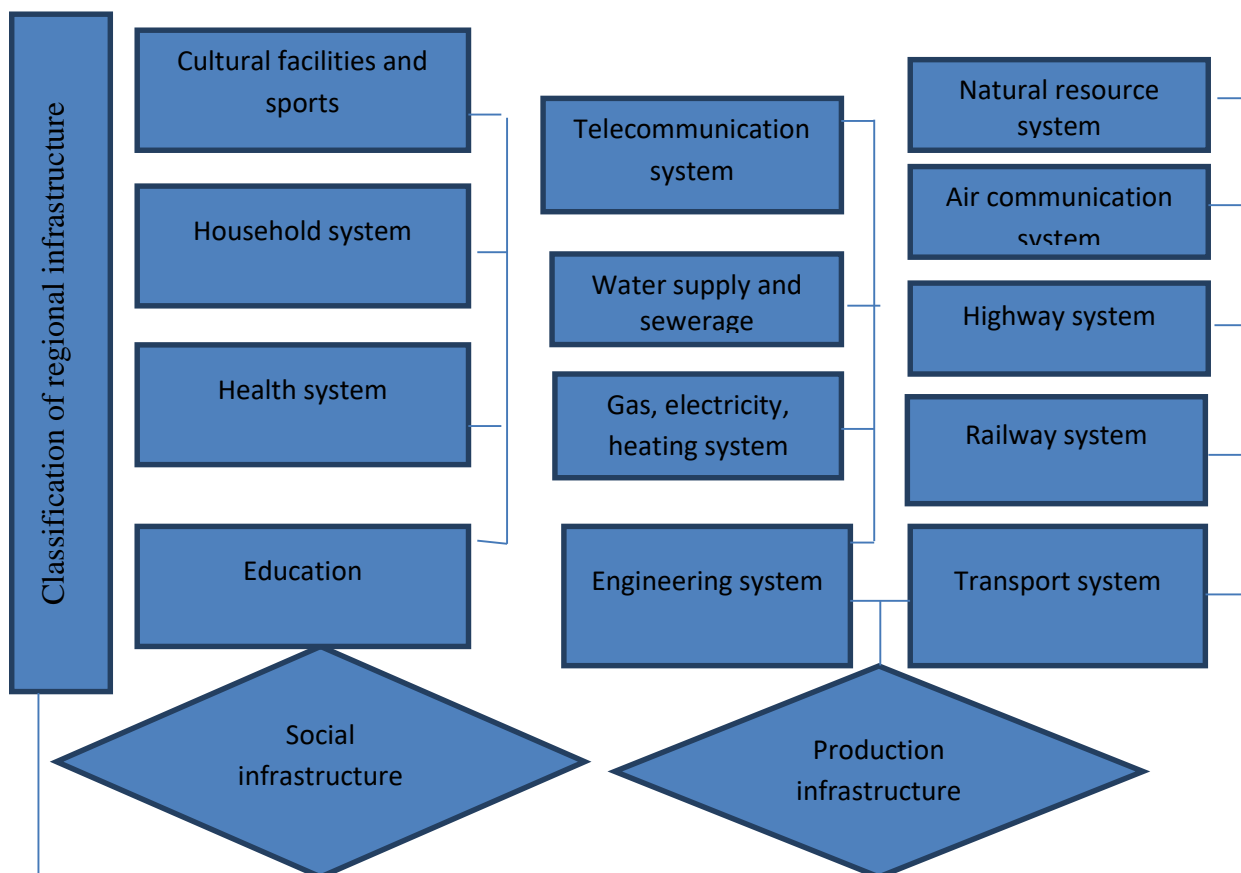
The infrastructure content of a region is a size that depends on the level of specialization, geographical area and location of the region. In general, this structure includes gas, electricity, water supply, transport systems and roads, financial institutions and banks, shops, consulting centers and advertising system, specialized legal service centers, wholesale trade institutions, stock exchanges, brokerage firms, financial institutions, the tax system are included.

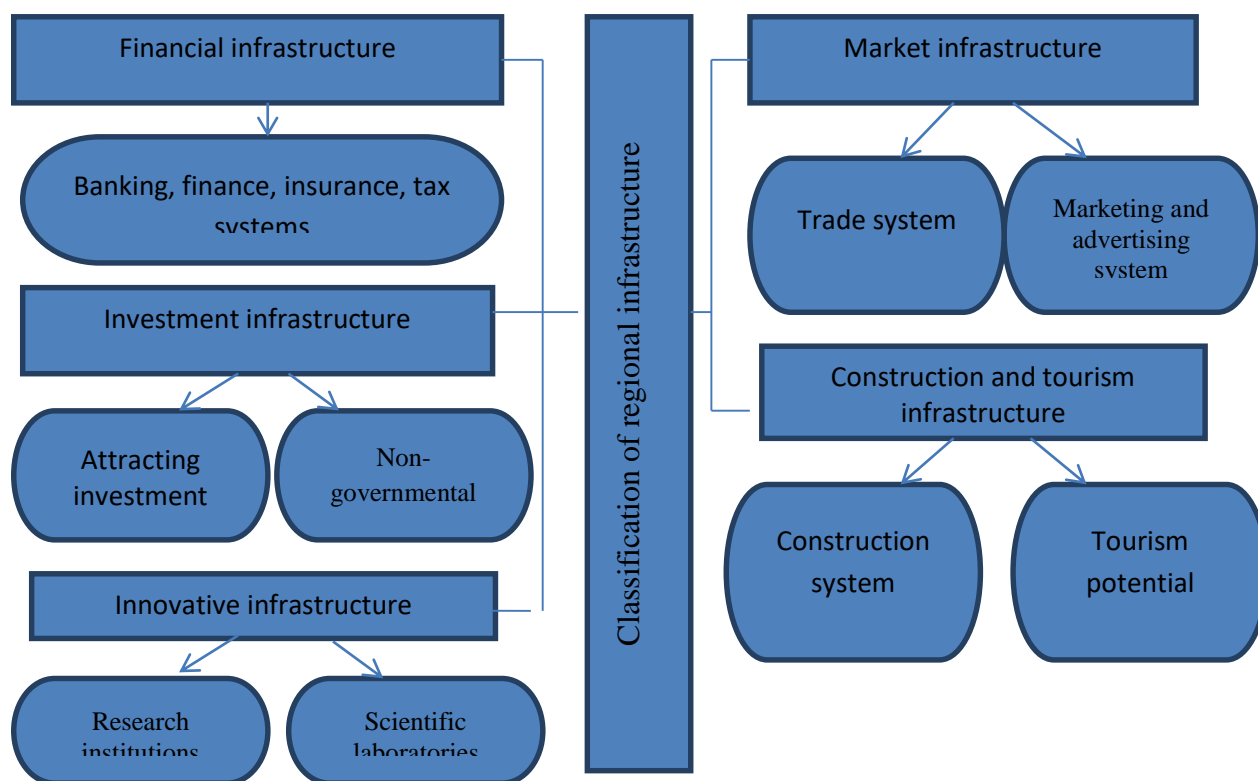
In general, taking into account the specifics of Khorezm region, we classify infrastructure facilities into production, social, financial, investment and innovation, market, construction and tourism types (Figure 1). The reason for this is the specific

potential of the region. In other words, Khorezm region has a high tourism potential within the country. This, in order to increase the tourist attractiveness of the region, requires not only the preservation of historical monuments, but also the adaptation of modern construction systems to them, ensuring their interoperability. In addition, the construction of a machine-building network in the region requires special attention to production infrastructure, development of engineering, reform of the railway and transport systems.

At the same time, the role of innovation and social infrastructure in the development of this new sector is also important. Also, the region's border with neighboring countries requires attention to market infrastructure, financial and investment types. Because the development of trade relations, the attraction of foreign investment is impossible without these infrastructure facilities.

The role of infrastructure in the sustainable development of the region's economy is also based on its characteristics. More obviously the identification of infrastructure features is important as it focuses on the self-development of the sector.



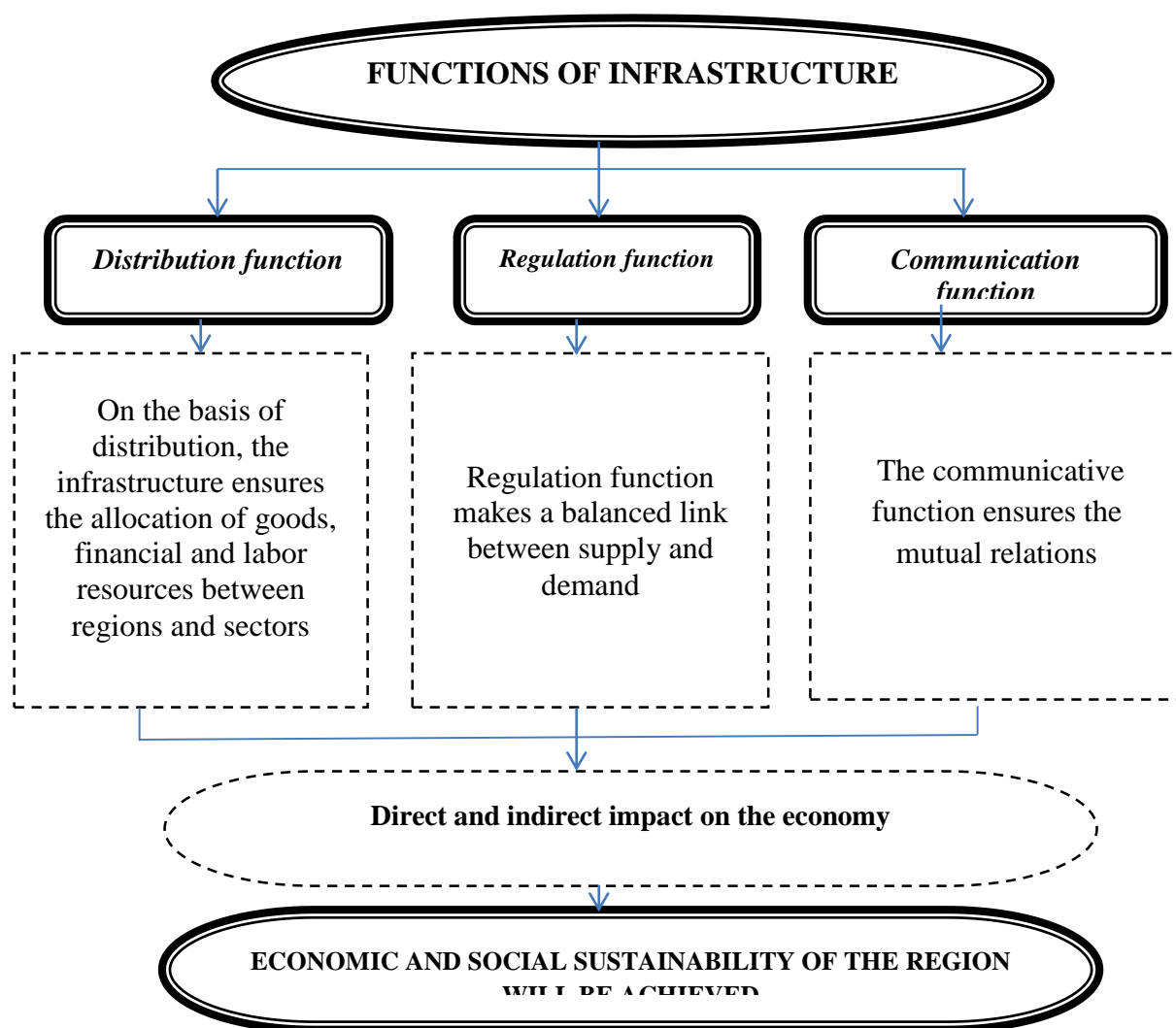


Source: Developed by the author

Figure 1. Classification of infrastructure facilities of the regional economy

From an economic point of view, infrastructure has several important features [26]. Firstly, not all of its founders create value, and the cost of creating infrastructure is only reimbursed once its manufacturing activity begins to create a product; secondly, production in the region will not be able to develop without the creation of regional infrastructure; thirdly, the level of infrastructure development determines the economic development of the region; fourthly, the state of infrastructure – this is a strategic tool for the development of the region.

Innovative infrastructure has the following features: 1) ensures the rational use of resources; 2) primarily supports innovative entrepreneurship; 3) organizes the system of implementation of a full cycle of innovative activities in the designated area; 4) is formed on the basis of state regulation; 5) the purpose of implementation on expansion of innovative activity of economic entities.



Source: Developed by the author.

Figure 2. Functions of regional infrastructure

In general infrastructure performs important functions and increases the efficiency of business entities. It also has a direct impact on improving working conditions and the development of the services sector.

Infrastructure also performs the following functions: facilitating the realization of the interests of economic entities; increase the efficiency of the subjects; formalization of organizational aspects of market relations; facilitating the legal functioning of the business process [27].

Infrastructure development in the region should be focused on the development of the national economy. Infrastructure is responsible for establishing and maintaining stable relationships between businesses in the region to expand production activities in the region.

The regional infrastructure provides distribution, interconnection, regulation, etc. (Figure 2). In particular, on the basis of distribution, the infrastructure ensures the distribution of goods, financial and labor resources between regions and sectors. The communicative function provides internal relations. In the regulatory function compliance of supply and demand is ensured.

Conclusions and suggestions

In conclusion, the infrastructure is an important link in the effective organization of the regional economy and the interaction of its subjects. In particular, infrastructure develops sectors and industries in the economy, expands production activities, provides their interaction. This means that infrastructure has a multiplicative and accelerating effect on the economy. Under the influence of multiplication, industries and sectors expand and new ones are formed, and the existing networks themselves, as a result of acceleration, are the basis for the development of infrastructure.

In general, special attention should be paid to infrastructure to ensure sustainable and balanced development of the region. It is necessary to develop this sector, increase the quality and efficiency of its services. In carrying out these activities, it is advisable to develop and implement local programs. Also, the main factor influencing the development of infrastructure is investment, and it is necessary to improve the system of financing the sector from the local budget.

Based on the above, the formation of infrastructure at the expense of the budget will expand entrepreneurship in the region. This will ensure the construction of the necessary infrastructure for the business itself on the basis of multiplicative effect. As a result, sustainable development in the region will be ensured.

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