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INFRASTRUCTURE FOR SUSTAINABLE DEVELOPMENT OF ENTERPRISES IN UKRAINE

ІНФРАСТРУКТУРА СТІЙКОГО РОЗВИТКУ ПІДПРИЄМСТВ В УКРАЇНІ

The article systematises the components of the infrastructure for sustainable development of enterprises in the context of globalisation by types, which include the subjects of logistics, transport, information, communication, energy, communal, consulting, financial, investment and innovation, institutional, social, production and technological, market and knowledge infrastructures. Identified entities for each type of infrastructure. The definition of the concept of infrastructure for sustainable development of enterprise has been clarified, which is proposed to be understood as an existing set of entities represented in the real and virtual environments, which, through effective interaction and cooperation, enable the enterprise to achieve the goals of sustainable development, which, unlike the existing ones, allows to focus on partnerships with all actors of the business environment, to raise the importance of infrastructure from the level of providing to the level of equivalent with other subsystems in the management of. This understanding of infrastructure and its components enables businesses to expand their operations, increase their efficiency, strengthen the sustainability of their operations in different markets, and identify new opportunities through interaction with new stakeholders. The classification of sustainable development infrastructure by territorial affiliation, industry and type has been expanded, which is the most meaningful and represents the full range of entities that can be used by enterprises for sustainable business development.

Keywords: infrastructure, influence, enterprise, sustainable development, economy.

Суб'єкти інфраструктури можуть суттєво вплинути на конкурентні позиції товаровиробника, темпи його діяльності, успішність на ринку тощо. Від їх якості і кількості залежить можливості реалізації потенціалу підприємства в повному обсязі. Це актуалізує теоретичну і практичну значущість дослідження інфраструктури в Україні. У статті: уточнено визначення поняття інфраструктури стійкого розвитку підприємства; систематизовано складові інфраструктури стійкого розвитку підприємств за видами (до яких віднесено: логістичну, транспортну, інформаційну, комунікаційну, енергетичну, комунальну, консалтингову, фінансову, інвестиційно-інноваційну, інституційну, соціальну, виробничо-технологічну, ринкову інфраструктуру та інфраструктуру знань); розширено класифікацію інфраструктури стійкого розвитку за ознаками територіальної приналежності, галузевої приналежності та за видами.

Ключові слова: інфраструктура, вплив, підприємство, стійкий розвиток, економіка.

General statement of the problem. Any business entity cannot survive in today's markets on its own – the help and support of partners and stakeholders is essential. Development of infrastructure and innovation is recognised as a precondition for economic progress in «17 Sustainable Development Goals» (Goals № 9 «Industry, innovation and infrastructure»), adopted by all UN member states in 2015 as part of the 2030 Agenda for Sustainable Development [1], which are also recognised in Ukraine. From the point of view of the state, the existence and effective operation of institutions that form the business infrastructure expands

development opportunities for individual business entities. So, the study of infrastructure is an urgent theoretical and practical task in the new economic environment.

Analysis of the latest research and publications. Different aspects of infrastructure have been studied by such scholars as: Voronchak I. O. [2], Matskiv R. T., Topolnytska T. B. [3], Melnyk M. I., Leshchukh I. V. [4], Sydorenko K. V. [5], Stetsenko B. S. [6], Omelyanenko V. [11], Kudrina O. [11; 12] and others. In particular, Voronchak I. O. notes that the activities of subjects are strengthened by the participation of enterprises,

organisations and institutions that have unique resources, experience in project implementation, provide and service business activities, the movement of social goods and information between subjects and objects and are able to increase the efficiency of their interaction, the effectiveness of cooperation between business and society [2].

The purpose of the article is aimed at clarifying the definition and components of the infrastructure for sustainable development of Ukrainian enterprises.

Summary of the main research material.

Relevant infrastructure allows businesses to reduce certain types of costs and time wastage, increase communication efficiency, maximise PR effect, ensure targeting of their contacts, set development priorities, secure support from professionals, and integrate into the necessary space (technical, technological, information, communication, etc.).

Sydorenko K. V. notes that the systemic approach allows to consider infrastructure as a complex set of its constituent elements and to identify various types of links between them, the presence of which makes the infrastructure a system and determines its internal dynamics [5, p. 54]. So, infrastructure is considered as a complementary element in the internal structure of enterprise management.

Matskiv R. T., Topolnytska T. B. note that in the economic literature, scholars characterise infrastructure as a set of industries that serve industry and agriculture. Its components are classified into production and non-production (or social) infrastructure [3]. In other words, infrastructure facilities only create the necessary conditions for enterprise (they are subordinate).

Scientists Matskiv R. T., Topolnytska T. B. define infrastructure as a set of elements that form it, and which is a mechanism for compensating for the disorder and heterogeneity of environmental influences on the activities of enterprises in order to increase their sustainability in the market and the effectiveness of reproduction processes [3]. So, in their opinion, infrastructure is not a supporting system, but an equal subsystem in the activities of enterprises.

A similar position is held by Stetsenko B. S., who in his monograph 'Institutional Financial Infrastructure: Global Imperatives and Ukrainian Realities' notes that the approach to defining infrastructure as a servicing, i.e. subordinate system is too limited and does not characterise the entire possible range of relations that are implemented through it [6, p. 17].

Tymoshenko A, Head of Infrastructure, Transport and Logistics at KPMG, also notes that the traditional definition of the infrastructure concept is changing and this will have consequences for all players in the sector – the state, business, society and investors. Infrastructure in Ukraine will inevitably be rebuilt in line with current global trends and modern technologies [7].

Lytovchenko L., Khloponina-Hnatenko O., Mykhailenko V., analysing the factors of influence on the activities of enterprises, note that the factor related to the degree of dependence of the enterprise

on infrastructure failures is of particular importance in the context of martial law [8], i.e., they raise the importance of infrastructure to a high level. We share this opinion of scientists and practitioners.

So, under the infrastructure of sustainable development of an enterprise, we understand such an existing set of entities represented in real and virtual environments, which, through effective interaction and cooperation, enable the enterprise to achieve the goals of sustainable development. This understanding, unlike the existing ones, allows us to focus on partnerships with all business entities, on raising the importance of infrastructure from the level of supporting to the level of equivalent to other subsystems in the management of the enterprise, which is important in the new conditions of development of the global and national economy.

Voronchak I. O. states that the combination of elements of social, institutional and information infrastructure creates a favourable environment for development, and proposes a system of infrastructure support that includes the following elements [2]:

- information infrastructure;
- institutional infrastructure;
- social infrastructure.

This list of types of infrastructure is clearly not sufficient to outline the full range of possible actors in this area. Also, we do not share the position of Voronchak I. O. regarding the term 'infrastructure provision', which levels the importance of infrastructure in modern conditions.

Matskiv R. T., Topolnytska T. B. in the study of market infrastructure, the following types of infrastructures are identified by other scholars [3]:

- industrial (engineering and technical));
- market (ensures the movement of goods, works, services);
- information (ensures the functioning of the information environment);
- institutional (provides economic management);
- social and production (or sanitary, which is a set of activities and material objects for nature protection and environmental rehabilitation);
- entrepreneurial (provides support and development of entrepreneurship);
- innovation (supports the implementation of innovative activities);
- environmental (ensures protection and improvement of the environment).

In the view of Matskiv R. T., Topolnytska T. B., such a detailed breakdown is inappropriate, and all types can be considered within the industrial or social infrastructure. In our opinion, detailed detail is still needed and its feasibility is based on the need for enterprises to take into account all the opportunities that open up to them in the new business environment and new markets.

Therefore, let us summarise the components of the infrastructure for sustainable development of enterprises in Ukraine by type and consider them.

The logistics infrastructure, given the broken supply chains and long and expensive logistics, is extremely important. It is aimed at fulfilling orders

of enterprises on an outsourcing basis. It includes warehouses, logistics centres, wholesale and retail bases, logistics firms, etc.

Transport infrastructure covers all types of transport (rail, road, air, pipelines, river transport, maritime transport, electric transport) and includes transport companies, ports, railway stations, etc.

Information infrastructure provides for the provision and processing of information (on markets, competitors, customers, current problems and needs, opportunities and areas of cooperation, etc.) It is represented in the real and virtual environment and includes a set of IT programmes, computer equipment, as well as news agencies, etc.

Voronchak I. O. notes that the information function of partner structures allows for a deeper understanding of the needs and interests of business stakeholders and integration of their goals into corporate governance practices as an element of the semantic and value level of organisational culture [2].

The communication infrastructure enables the company to establish communication and cooperation between partners, stakeholders and customers, and to broadcast and shape public opinion and public requirements for business. It is also represented in real and virtual environments and includes: means of communication between the enterprise and contractors, mass media, regional associations of entrepreneurs, regional chambers of commerce and industry, specialised public associations, advertising agencies, management technologies for business management that can optimise internal communications at the enterprise.

The energy infrastructure is branched out by type of energy (electricity, fuel, fuels, energy from alternative sources such as the sun, water, wind, bioenergy) and includes companies engaged in the production, transportation and sale of energy resources.

Communal infrastructure includes communal facilities ('communal companies', organisations, firms and enterprises) involved in the provision of all types of communal services.

The consulting infrastructure includes analytical and research centres; regional development agencies, human rights organisations, as well as all firms engaged in providing consulting services (legal, audit, analytical, etc.). It provides an opportunity for enterprises to delegate authority or jointly make decisions on problematic issues that cannot be resolved independently.

Financial infrastructure is necessary to ensure access to finance for business recovery and development, and includes the banking system, financial institutions and lending companies, etc.

Stetsenko B. S. defines financial infrastructure as a set of financial institutions that operate in the market of financial services and financial markets, performing functions of mobilisation, movement and investment of resources [6, c. 24].

Investment and innovation infrastructure includes investment funds, business angels, startup

accelerators, technopolises, innovation funds, venture capital funds, venture capital companies, etc.

The knowledge infrastructure includes scientific and educational institutions, higher education institutions, research institutes, and scientific institutions engaged in research and development; IPR (intellectual property rights objects); patenting system, etc.

Production and technological infrastructure is a system of production resources, as well as the development, production, sale and maintenance of technologies (primarily new ones): information, communication, cloud and other (including digital). Includes: resource firms, technology transfer centres, technology sharing centres, outsourcing firms, production workshops, etc.

Market infrastructure includes market research firms, ATL and BTL agencies, licensing, standardisation, certification, etc.

Matskiv R. T., Topolnytska T. B. note the transformation of market infrastructure from a passive to an equal partner for all sectors of economic activity, which provides an effective logistical, organisational, financial and economic basis for the development of the entire economy [3].

Stetsenko B. S. criticises the definition of market infrastructure as 'a set of special institutions that perform the functions of providing specialised services to business entities in order to create normal conditions for their functioning, for the best realisation of their interests and further integration into a single economic macro system'. He points to the servicing, supportive nature outlined in the definition, which is an outdated approach [6, p. 17].

The main purpose of market infrastructure is to provide a high concentration of supply and demand [9].

Institutional infrastructure demonstrates the extent to which the state is interested in supporting business in the country. According to Fenii N., the institutional environment creates the conditions for activity, affects the economic security of the enterprise, allows the enterprise to establish clear rules of the game, protect its rights and effectively interact with various branches of government [10].

The institutional infrastructure includes public authorities and local governments, regional and sectoral associations of enterprises, regional support funds, chambers of commerce and industry, representative offices of international organisations, etc.

Matskiv R. T., Topolnytska T. B. institutional infrastructure includes governmental, research, design and development institutions that are not directly involved in production [3].

Melnyk M. I., Leshchukh I. V. note that the existence of a developed, efficient and effective institutional infrastructure is an important factor in stimulating entrepreneurial activity and rapid adaptation of business entities to market conditions [4].

Social infrastructure includes social and cultural facilities that are necessary to ensure the socially-oriented activities of enterprises.

This systematisation of infrastructure entities allows enterprises to interact effectively with new stakeholders:

- strengthen the sustainability of their operations in different markets,
- identify new opportunities and develop new business areas,
- increase the efficiency of operations,
- expand and diversify activities in each market.

In Ukraine, the extensive network of infrastructure support for sustainable development of enterprises is structured according to the defined division into regions, territorial communities.

Sydorenko K. V. in a research study on the analysis of production infrastructure, notes that, given its systemic nature, production infrastructure can be viewed as a generalised element in the entire economic system or at different levels [5, c. 52]:

- of the business entity;
- country;
- a group of countries or a region of the world economy;
- global.

Matskiv R. T., Topolnytska T. B. the infrastructure of all types of markets is proposed to be classified by territory [3]:

- national – operates within the territory of the whole country;
- regional – operates within a single or several regions;

- local – applies to individual enterprises or groups of enterprises.

So, the division into global, national, regional and local infrastructures is the most meaningful.

There are also other approaches to the classification of infrastructure types. In particular, Matskiv R. T., Topolnytska T. B. point to the division by sector [3]:

- intersectoral, which serves many sectors of the economy (electricity and gas supply, transport, etc.);
- intra-industry, which serves one industry.

Therefore, the classification of the infrastructure for sustainable development of enterprises in Ukraine is schematically presented in Figure 1. This classification of infrastructure is the most meaningful and allows enterprises to get acquainted with the entire spectrum of entities represented in this market and build their own strategy of relations with them.

Conclusions and prospects for further research in this area. According to the results of the study: the definition of the concept of sustainable development infrastructure of an enterprise is clarified; the components of sustainable development infrastructure of enterprises are systematised by type; the classification of sustainable development infrastructure by territoriality, industry and type is expanded.

The actualisation of the importance of infrastructure in the management activities of an enterprise involves the use of a wide range of tools that affect both economic and social processes. Their analysis requires a separate study.

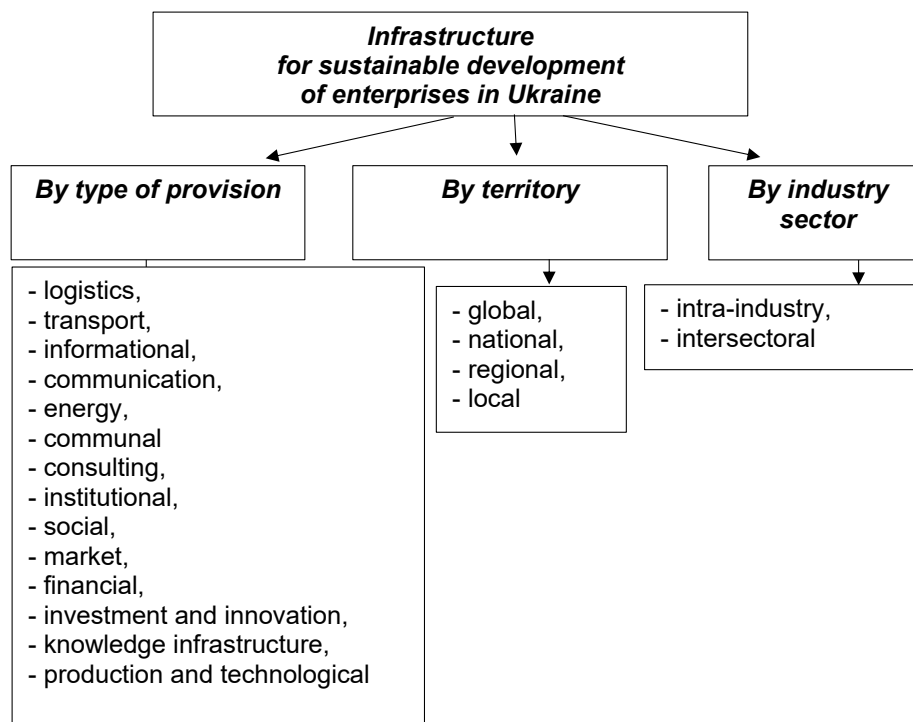


Figure 1. Classification of infrastructure for sustainable development of enterprises in Ukraine (prepared by the author)

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