

PECULIARITIES OF APPLICATION OF PUBLIC-PRIVATE PARTNERSHIP AS A MECHANISM FOR IMPLEMENTATION OF INNOVATION ACTIVITY

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Abstract. The *purpose* of the article is the theoretical justification and development of scientific and methodological provisions and practical recommendations for the development of public-private partnership in order to ensure the modernization of the economy on an innovative basis. The *methodological basis* is the general and special methods: historical method; method of scientific abstraction (in order to generalize the conceptual foundations of the study); methods of analysis and synthesis – in the study of the structure of the innovation system in public-private partnership; induction and deduction (to study approaches to the definition of innovation in public-private partnership); method of comparison (in order to justify the application of foreign experience of innovation in public-private partnership in our country); methods of grouping and systematization (in order to classify, identify factors of innovation development, factors of formation of the national innovation system); statistical methods (in order to analyze the dynamics of innovation in the economy of Ukraine, trends in the formation of innovation infrastructure). The *results* of the study showed that most accurately reproduces the meaning of the concept of public-private partnership, when public relations are actively involved in the relationship with the private sector, emphasizing the public focus. However, in countries with economies in transition, where institutions of civil society are underdeveloped, the term "public-private partnership" is most often used. Since the initiator of the vast majority of public-private partnership projects, the main actor is the state. The problems of formation and development of public-private partnership are currently paid considerable attention in foreign studies. The world practice has accumulated considerable experience in the implementation of public-private partnership in various areas and spheres of activity. In many countries, public-private partnerships have proven effective in modernizing the economy and have long been a domestic policy priority. The *practical significance* of the results is that the provisions, conclusions and recommendations have a practical orientation and can be used to improve the efficiency of regulation of innovation processes in terms of public-private partnership. *Value/originality.* The peculiarity of the proposed definition is that public-private partnership is an effective tool of state regulation only if conditions of competition between private sector entities for the right to participate in a particular PPP project are created.

Key words: innovations, innovative activity, public-private partnership, central executive institutions, regional executive institutions.

JEL Classification: O3, O31, O38, P43

1. Introduction

The innovation process can be considered as a set of sequential actions, as a result of which the innovation develops from an idea to a specific product and spreads in the process of practical use. The course of the innovation process, like any other, is determined by the complex interaction of many factors. The effectiveness of the innovation process is determined only after the implementation of the

innovation, when it becomes clear to what extent it meets the needs of the market.

An effective way to overcome the consequences of the financial and economic crisis is the transition of Ukraine's economy to an innovative model of development. It was the crisis that showed the danger and futility of focusing on the export of raw materials, and the transition to economic development on an innovative basis depends on

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the effectiveness of the efforts of both the state and individual companies. Innovative activity of domestic enterprises is insufficient, and its growth rate is low. Therefore, in the conditions of formation and development of economic, innovative, political, legal, social model of development of the state and its regions, cooperation of central and local authorities with private structures on realization of projects of social and economic development, attraction of investments and creation of developed infrastructure is especially important.

The problems of formation and development of public-private partnership are currently given considerable attention in foreign studies. The world practice has accumulated considerable experience in the implementation of public-private partnership in various areas and spheres of activity. In Western countries the public-private partnership has proven its effective role in the process of modernization of the economy and has long been a priority direction of domestic policy.

The category "public-private partnership" is widely used both in foreign and domestic theory and practice as a general term to denote the whole range of relations between the state and business. However, there is a special form of relations between the state and business, which reflects public-private partnership as a type of investment-public management, which has its own definition in different countries. For example, in the United Kingdom the term "private financial initiative" (PFI) is used to refer to public-private partnerships, in the United States, Canada and Australia – "public-private partnership" (P3 or PP partnership), in France – "public-private partnership contract" or "mixed economy community".

For the CIS countries, the term "public-private partnership" is translated as "NGO-government alliance" or literally "public-private partnership" (PPP). This is due to the fact that the category of "public partner" in most foreign countries has a broader meaning than "public". In foreign practice, public partners can often be not only public authorities, but also local self-government bodies, as well as public organizations and charitable foundations.

It should be noted that public-private partnership most accurately reproduces the content of the concept, where public relations are actively involved in the relationship with the private sector, while emphasizing the public orientation. However, in countries with economies in transition, where institutions of civil society are underdeveloped, the concept of "public-private partnership" is most often used. Since the state is the initiator of the vast majority of public-private partnership projects, it is the main actor. In addition, the state determines the priority sectors of the economy and invites business to participate in the project, which cannot be implemented only by the state. In such

conditions the term "public-private partnership" should be used in Ukrainian practice.

2. The essence of public-private partnerships

In a broad sense, public-private partnership is interpreted as any relationship between the public and private sectors. This approach does not reveal the essence of the category and features of public-private partnership as a separate economic category. In the narrow sense, public-private partnership is not understood as any form of interaction between the state and business, but only those that involve a partnership between the state and the private sector to implement a project with its own features. Features of public-private partnership are disclosed in the organizational and financial aspects. Organizational aspects concern the institutional basis of relations between the state and the private sector. Most of the authors, interpreting the public-private partnership, emphasize the distribution of risks between the participants of the partnership (Verkhovna Rada of Ukraine, 2010).

The subject area of public-private partnerships is the relationship between the state and business, and more specifically: the implementation of a project on the basis of public-private partnership (broader interpretation); the relationship between the state and business, in which the private partner assumes part or all of the public sector functions of design, financing, construction/modernization, operation and maintenance of public facilities or related services (narrower approach).

There is no consensus among scholars on the target focus of public-private partnerships. Most scientists, when defining the purpose of public-private partnership, focus on the solution of socio-economic problems in the implementation of the partnership between the state and the private sector. Researchers, when defining public-private partnership, indicate the goal, which is to solve socially significant problems in the sphere of public interests (tasks associated with the creation of public infrastructure and the provision of services on its basis). Thus, the purpose of public-private partnership is to solve public and socially significant tasks by implementing investment projects in respect of objects in the sphere of public interest and control, creating public infrastructure and (or) providing services on its basis, aimed at implementing state policy, meeting public needs, creating socially significant objects, protecting social, labor, other rights of citizens or solving other socially significant tasks (Savostenko, Gritsaenko, 2005).

Public-private partnership is a way to find a balance of forces between state and market regulation, to optimize the ratio of state and market principles in the reproduction process. Public-private partnership

is one of the directions of formation of social systems of mixed type, i.e., mixed economy, which is understood as intertwining of functioning forms of ownership, which provides the choice of the most effective ways of using both public and private property.

Public-private partnership is used in the following areas:

- Prospecting, exploration and extraction of mineral deposits, except for those carried out under production sharing agreements;
- Production, transportation and supply of heat, distribution and supply of natural gas;
- Construction and/or operation of highways, roads, railroads, airfield runways, bridges, overpasses, tunnels and subways, sea and river ports and their infrastructure;
- Mechanical engineering;
- Water collection, treatment and distribution;
- Health care;
- Tourism, recreation, recreation, culture and sports;
- Maintenance of irrigation and drainage systems;
- Waste treatment;
- Electricity generation, distribution and supply;
- Real estate management.

Public-private partnerships can also be used in other areas of activity, with the exception of economic activity, which, according to the law, is allowed only to state enterprises, institutions and organizations.

Within the framework of public-private partnerships, concession agreements, joint activity agreements and other agreements can be concluded (Table 1).

In a public-private partnership, both the state and business, interacting on the basis of partnership, pursue their own interest, which is beneficial to both of them in the future. The benefits from the implementation of public-private partnerships differ from each other due to the different goals pursued by the parties. Business, participating in partnership with the state, expects certain guarantees at the expense of administrative, material, financial and natural resources of the state. In addition, for the private sector, the benefit of participating in public-private partnerships is the guaranteed income over the long term, as well as the

opportunity to expand their activities. Partnering with business, as a rule, the state receives not only the opportunity to attract additional sources of funding for socio-economic project, which in turn reduces the burden on the budget, but also a more flexible and efficient system of economic management, thereby increasing the competitiveness of products and services on the domestic and foreign markets.

The hierarchy of subjects of innovation management in the framework of public-private partnership is presented in Figure 1.

Thus, within a partnership, both government and business have their own interests and seek to maximize each other's opportunities. The parties to the partnership are endowed with certain functions, which, when clearly divided, give balance to their relations and ensure long-term implementation. The state plays a key role in such interaction, since the object of the agreement is primarily state property, and the subject is the implementation of state functions.

The analysis of domestic and foreign experience resulted in the classification of forms of public-private partnerships (Table 2).

The desirability of expanding public-private partnership agreements is also due to the lack of an institutional environment of commodity-money relations and the incompleteness of classical principles of the basic attributes of a market economy, which requires direct participation of the state in the redistribution of individual assets owned by it or by the local community.

The implementation of projects on the basis of public-private partnerships is based on a set of principles which, in addition to obtaining commercial (economic) effect, also bring the domestic economy closer to the economic standards of highly developed countries and accelerate the greening of production. This is especially relevant for our country, which has a high level of anthropogenic and anthropogenic pressure on ecosystems. Such principles include openness, trust, payback, continuity and convergence of national and international accounting.

Table 1

Benefits of public-private partnerships

| Benefits for the state | Benefits for business |
|--|--|
| 1. Reducing the cost of providing services. | 1. Attracting public funds to the project. |
| 2. Increased infrastructure efficiency. | 2. Access to previously closed areas of the economy. |
| 3. Development of forms of project financing. | 3. Expansion of opportunities to obtain loans under state guarantees. |
| 4. Stimulation of innovative development of enterprises. | 4. Improved work with state permitting agencies. |
| 5. Equal dialogue between the state and business. | 5. Improvement of the project status due to the participation of the state partner in the project. |
| 6. Preservation and creation of workplaces. | 6. Positive image in the society. |
| 7. Activation of investment activity. | 7. Optimization of the project risk distribution |
| 8. Optimization of risk distribution. | |
| 9. Use of experience of private companies. | |
| 10. Savings of financial resources of the state. | |
| 11. Effective management of property. | |

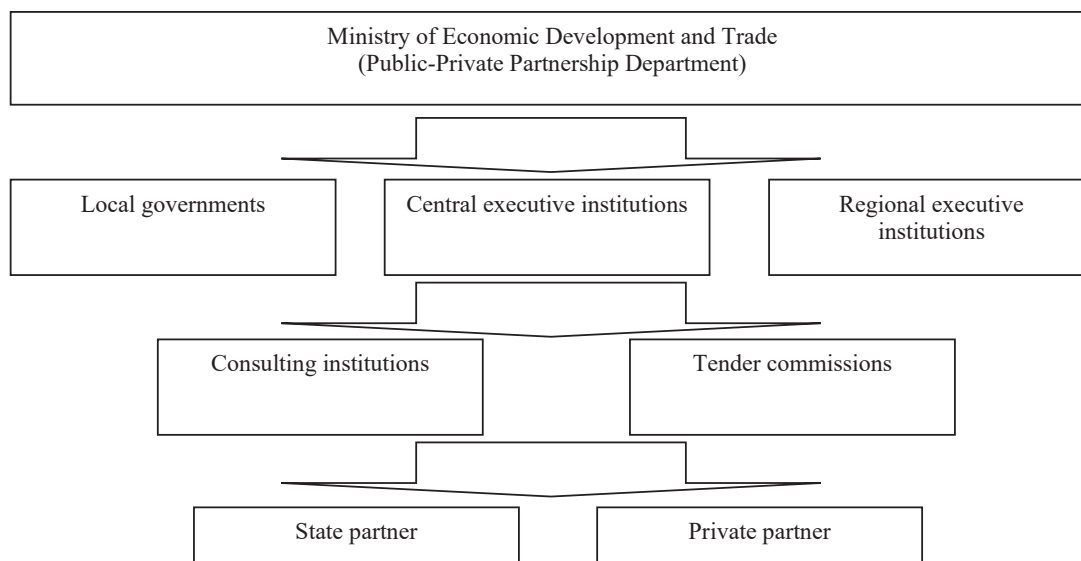


Figure 1. Hierarchy of subjects of innovative activity management in the framework of public-private partnership

Unfortunately, the domestic legal framework does not provide a sufficient basis for the spread of various forms of public-private partnerships in certain segments of the national economy. Moreover, the latency of the main provisions defining the scope of such interaction creates additional obstacles to the implementation of projects on the basis of public-private partnership, which does not contribute to the increase in the level of capitalization of state and municipal assets.

Based on the analysis, systematization and generalization of the approaches to the interpretation of public-private partnership existing in the world science, the main characteristics revealing its economic meaning as "the unity of all the components of the object, its properties, internal processes and relationships" (1), its inherent features are presented in Figure 2.

Public-private partnership as an economic category is a set of ownership, financial, economic, organizational, managerial and legal relations between the state and a private partner in the models of financing, ownership and management of participation in the system of coordinated activities to create value, which form a variety of forms of public-private partnership and are the basis for choosing a specific scheme of relations between partners in order to implement a particular project.

The economic essence of public-private partnership can be defined as an instrument of state regulation of the economy through a competitive admission of a private partner into the sphere of responsibility of the state and cooperation with it on the basis of pooling of resources and competencies, sharing of risks, obligations and benefits, provides the private partner with additional opportunities for a guaranteed profit and increased competitiveness, and the state – to conduct economic policy, to fulfil its traditional tasks, to increase efficiency, to meet public needs, to provide goods (services). The peculiarity of the proposed definition is that public-private partnership is an effective instrument of public regulation only if conditions are created for competition between private sector entities for the right to participate in a particular public-private partnership project.

Thus, we can conclude that public-private partnership should not be seen as a simple combination of state and business resources, but as a technology for the development of economic relations, which combines entrepreneurial activity and other corrective actions of the state with the ability to attract private investment and competencies of private business to solve socio-economic problems. The purpose of public-private partnership is to combine the capabilities of the state and the private sector to maximize the benefits of joint

Table 2

Classification of forms of public-private partnerships

| Form of cooperation | Ownership | Most of the risks | Length of time |
|---|-----------------|-------------------------|--------------------------------|
| Contracts for works (provision of services) | State | State | Short-term (1-3 years) |
| Contract for management | State | State | Medium-term (3-8 years) |
| Lease | State | Public / private sector | Long-term (8-15 years) |
| Concession | State | Private sector | Long-term (15-30 years) |
| Joint enterprises | State + Private | State + private sector | Long-term (more than 30 years) |

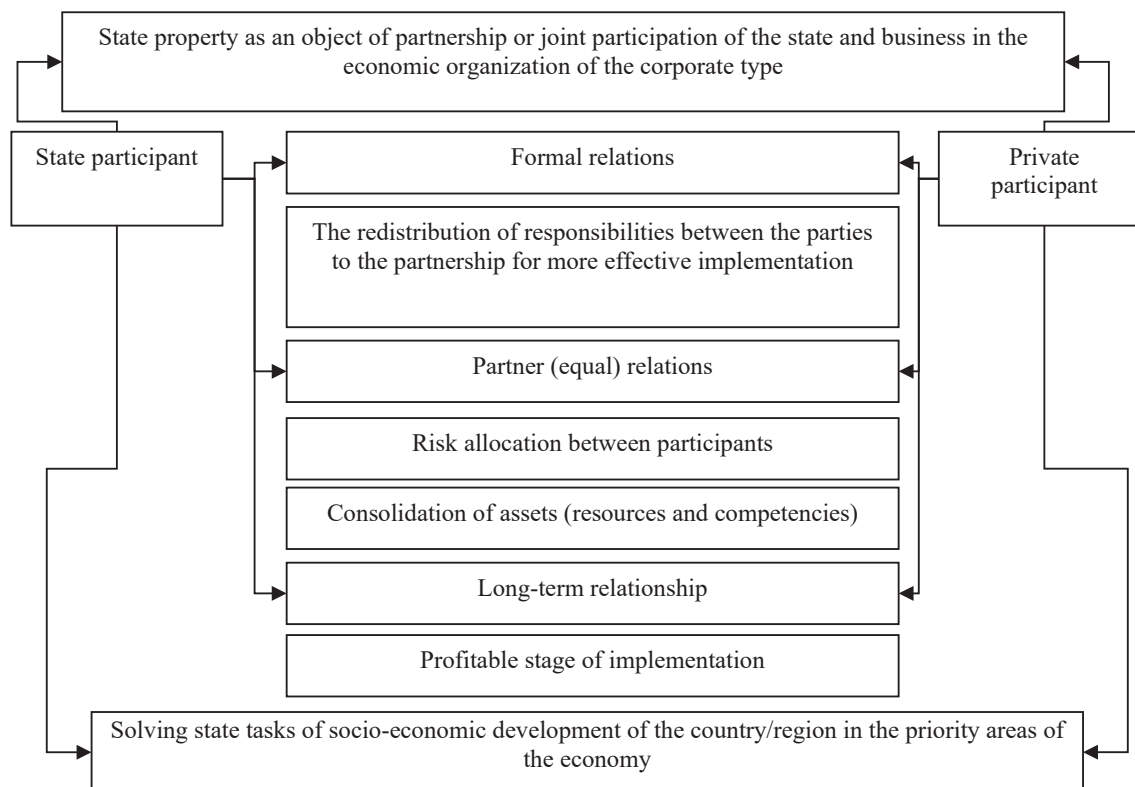


Figure 2. Components of the economic content of public-private partnerships

activities to solve public problems of socio-economic development of the country/region in the priority areas of the economy.

3. World experience in the implementation of the PPP mechanism

Public-private management is a widespread phenomenon in global business practice and is considered more effective than purely public management, examples of which can be found in many countries.

In developed countries the PPP mechanism is used in projects of construction of new production facilities, infrastructure development (road, transport, communications, information, etc.), geological exploration and mining, as well as in solving the problems of energy conservation, real estate management, modernization of housing and utilities, recycling of production and consumption waste, providing quality health services, water treatment and in the development of tourism.

In the vast majority of countries that have positive experience in implementing PPP projects, one of the defining features of public-private partnerships is that this mechanism is used to implement large-scale, national or international, socially significant projects.

Global experience shows that cooperation between the state and private business has the greatest effect, especially in infrastructure sectors, where there are historical preconditions, needs and opportunities for such cooperation in the implementation of large-scale socio-economic tasks.

More than 900 PPP projects have been signed in the UK, many of them in the social infrastructure sector. This reflects the priorities of the government, which seeks to solve problems through PPPs, particularly in the medical and educational sectors, but also in transport, prisons, waste management, the military and housing. Most of these projects are implemented by local governments (Rosenau, 2000).

The experience of PPP development in France is important for the Ukrainian practice of implementation. The latter has considerable experience in the field of public-private cooperation in the field of infrastructure, but mainly in the form of concessions. Today in France there are 73 projects worth 8.5 billion euros. One of the features of partnership in France is the balance between large and small public projects implemented by local authorities. The main area of public-private partnerships in the country are concessions for the construction of roads and water supply.

Over the past 10 years, Turkey has remained a leader among Eastern European and Central Asian countries

in working with the private sector through public-private partnership mechanisms, which has tripled its GDP by attracting \$115 billion in investments in 193 PPP projects. The main sectors of investment were energy (76 projects), roads and road infrastructure (29 projects), ports and port infrastructure (21 projects), airports (19 projects), and health (17 projects). It is worth noting that the use of PPP mechanisms can radically change the goals of the industry – in Turkey there are now more than 50 airports (including 21 international), and the share of private investment in the industry is 90%.

In general, concessions are the most developed progressive form of partnership between the state, local authorities and the private sector at the present stage. This form of public property management is widespread in more than 120 countries of the European Union, Central and Latin America, Asia, Oceania, as well as in Eastern Europe and the CIS (Hodge, Greve, 2007).

Examples of using public-private partnerships:

1. Implementation of infrastructure projects:

- Construction of roads, schools and hospitals (Great Britain, Spain, Finland, Canada);
- Construction of high-speed highways and railroads, subways and airports, stadiums (France, Austria, Portugal, Turkey and Greece);
- Construction of ferry crossings (Romania, Bulgaria, Greece);
- Construction of new and reconstruction of worn-out systems of urban transport and housing and communal services (Australia, the Netherlands and Ireland).

PPP in the water and sewage sector in the U.S. and Canada has reduced costs by 10-40%, in Scotland – by 20%, and in Ireland – by 25-30%. According to the European Commission, in the transport sector – by 10-17%. In the UK, the average savings for different sectors were 17%.

Involvement of private business by the state is one of the main global trends in the development of transport. This involvement comes in a variety of forms: from contracts for the management of existing facilities to the transfer to private companies of the entire cycle of construction and operation of new infrastructure. Successful examples of public-private partnerships are projects in the field of railway transport: Tunnel Rail Link (UK), high-speed HSL Zuid (Netherlands), Oresund line (Denmark – Sweden). Such complex projects as the Channel Tunnel, the Sydney Harbor Tunnel, the Confederation Bridge in Canada, the national airports in Hamburg and Warsaw, Central Park in New York, some branches of the London Underground have been completed using the public-private partnership mechanism and others.

2. Implementation of humanitarian projects:

- Improving the quality of education and health care (USA and Canada);

- Research (in particular, in Germany alone in 2012, private investment in research amounted to more than 50 billion euros).

3. Implementation of environmental protection projects (Canada).

4. Implementation of projects in the field of agriculture:

- Construction, operation and management of irrigation projects in Brazil, India, Peru, Morocco and Jordan;
- Construction and management of networks of cold chain companies in the Philippines, India, Mexico and Pakistan;
- Construction, maintenance and management of markets for the sale of local agricultural products in the Philippines, Jordan, etc.;
- Construction and operation of grain terminals in the seaports of the Philippines;
- Processing of agricultural waste (Moldova, Slovenia, Uganda, Mauritius, Brazil, etc.).

4. Material and methods

The objectives of the article are the theoretical justification and development of scientific and methodological provisions and practical recommendations for the development of public-private partnerships to ensure the modernization of the economy on an innovative basis.

The article used research methods: abstract-logical; economic-statistical (comparison, system and factor analysis, graphic), which are the basis of the analytical assessment of the results of innovative enterprises; calculation-constructive.

5. Findings

From this it can be concluded that PPP should not be seen as a simple combination of state and business resources, but as a technology of economic relations, combining the business activity of the state and other public corrective action with the ability to attract private investment and private business to solve socio-economic problems. Public-private partnership as an economic category is a set of property rights, financial, economic, organizational, managerial and legal relations between the state and a private partner in the models of financing, ownership and management of participation in a system of coordinated activities to create value, which form a variety of forms of public-private partnership and are the basis for choosing a specific scheme of relations between partners to implement a particular project.

6. Conclusions

Thus, it can be concluded that public-private partnership as an economic category is a set of property relations, financial, economic, organizational,

managerial and legal relations that develop between the state and a private partner in the models of financing, ownership and management of participation in a system of concerted value creation activities, which form a variety of forms of public-private partnership and are the basis for choosing a specific scheme of relations between.

The mechanism of public-private partnerships makes it possible to overcome the limited capacity of the state and regional bodies to finance social and infrastructure projects, transfer part of the risks to business and use private sector management skills and experience to improve the quality of social services and public infrastructure management. Analysis of foreign experience shows that the role of public-private partnership in innovation policy of regions and the country as a whole varies from country to country, but there is a clear trend to increase its influence on the process of increasing innovativeness.

The exceptional importance of public-private partnership as an effective tool for implementing innovation policy is determined by the development of innovation infrastructure, taking into account the interests of business and with its active participation; increasing the efficiency of public property and budget expenditures, including those aimed at supporting innovation; encouraging the private sector to develop business activities in areas with the greatest potential for quality economic growth. These areas are reflected in state budget expenditures, legislative initiatives, and the development of new programs in the area of innovation partnerships.

Innovation activation as a result of public-private partnership takes place at all stages of the innovation process. Factors of innovative activity are: exchange of knowledge, generation of ideas, co-financing of research and development. Partnership of the state and business

in the regions requires coordination of interests of these two main institutions of modern society and economy. Public-private partnership does not mean simply investing resources. Each side of the partnership has its own goals, solves its own specific problems, the parties have different motivations.

Today in the world practice has accumulated considerable experience in the implementation of public-private partnerships in various sectors and spheres of activity, which in Western countries is due to historical features. The analysis of foreign experience of financial stimulation of innovations revealed the following main directions of its implementation in domestic practice: 1) achievement of an optimal balance between direct and indirect instruments of regulation (experience of France, the USA and Canada); 2) concentration on stimulation of innovative activity of small and medium-sized enterprises (the Netherlands and Portugal); 3) the state should diversify methods of innovation regulation, taking into account the experience of transparency and openness in the use of financial instruments (Australia); 4) the introduction of full income tax exemption for enterprises engaged exclusively in research and development (Croatia); 5) further study of the prospects for the restoration of free economic zones, where innovative products are produced (Poland).

Ukraine needs a model of development of public-private partnership in the innovation sphere, which will ensure the continuity of the chain "business – science – government" and allow the formation of a national innovation system. Institutional support of public-private partnership processes will create conditions for the real involvement of private business in the innovation sphere and form the country's competitive advantages in the long term.

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