

**ЕКОНОМІКА ТА УПРАВЛІННЯ НАЦІОНАЛЬНИМ ГОСПОДАРСТВОМ**

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**PUBLIC-PRIVATE PARTNERSHIP IN THE FIELD OF INNOVATIONS AS AN EFFECT OF SOCIAL RESPONSIBILITY**

**ДЕРЖАВНО-ПРИВАТНЕ ПАРТНЕРСТВО У СФЕРІ ІННОВАЦІЙ ЯК ПРОЯВ СОЦІАЛЬНОЇ ВІДПОВІДАЛЬНОСТІ**

**Urgency of the research.** Public - private partnership (PPP) is now recognized as an important tool for promoting innovations. This is due to many reasons, among which: lack of budget resources, low level of commercialization of inventions of public research institutions, low level of cooperation between public and private research institutions, etc.

**Target setting.** In the conditions of a shortage of financial resources, one of the options for providing resources for innovations in both the economy and other spheres of economic life the use of private business opportunities in the form of public-private partnership (PPP) could be considered useful that is seen as a manifestation of social responsibility.

**Actual scientific researches and issues analysis.** The issues of PPP development as a form of effect of social responsibility in the field of innovations were studied by both native scholars (V. M. Heyets, O. M. Golovinov, A. F. Melnik, I. V. Mosiichuk) and foreign researchers (M. Geddes, M. Łakomy-Zinowik, N. Lee, P. de Witte) et al.

**Uninvestigated parts of general matters defining.** PPP in the sphere of innovations is a relatively new topic and the issue of seeking the ways for innovative development of the economy, based on social responsibility and cooperation between the public, business and society is not analyzed enough in the national scientific field.

**The research objective.** Analysis of peculiarities of introduction of innovations using the PPP mechanism on the basis of social responsibility.

**The statement of basic materials.** The article is focused on analysis of the usage of public and private business cooperation in the form of public-private partnership in sphere of innovations development. The PPP in the present research is defined as an innovative form of development of public infrastructure and the allocation of related services. The tasks that the public pursues via the usage of public-private partnership in the innovation sector are identified. The attention is paid to the role of PPP in the innovation field of particular countries.

**Conclusions.** The main purpose of the PPP in the field of innovations can be both the introduction of inventions into the market and their commercialization, the exchange of results of scientific researches between the public and private business, as well as increase of global competitiveness of the national economy.

**Актуальність теми дослідження.** Державно-приватне партнерство (ДПП) визнається сьогодні важливим інструментом просування інновацій. Пов'язано це з багатьма причинами, серед яких: брак бюджетних коштів, недостатній рівень комерціалізації винаходів державних дослідницьких інституцій, слабкий рівень співпраці між державними та приватними дослідницькими інституціями тощо.

**Постановка проблеми.** В умовах дефіциту фінансових ресурсів одним з варіантів ресурсного забезпечення запровадження інновацій як у економіку, так і інші сфери господарського життя, могло б стати використання можливостей приватного бізнесу у формі державно-приватного партнерства (ДПП), яке за своєю природою є проявом соціальної відповідальності.

**Аналіз останніх досліджень і публікацій.** Проблеми розвитку ДПП як форми прояву соціальної відповідальності у сфері інновацій розглядали як вітчизняні вчені (В. М. Геєць, О. М. Головінов, А. Ф. Мельник, І. В. Мосійчук), так і зарубіжні дослідники (М. Геддес, М. Лакоми-Ціновік, Н. Лі, П. де Вітте) та інші.

**Виділення недосліджених частин загальної проблеми.** Оскільки ДПП у сфері інновацій є відносно новою сферою, недостатньо дослідженим у вітчизняній науковій думці залишається питання пошуку інструментів інноваційного розвитку економіки на засадах соціальної відповідальності та співпраці держави, бізнесу та суспільства.

**Постановка завдання.** Аналіз особливостей запровадження інновацій з використанням механізму ДПП на засадах соціальної відповідальності.

**Виклад основного матеріалу.** Стаття присвячена використанню співпраці держави та приватного бізнесу у формі державно-приватного партнерства у розвитку інновацій. В роботі надана характеристика ДПП як інноваційної форми розвитку інфраструктури загального користування та надання пов'язаних послуг. Також, визначено завдання, які держава переслідує використанням державно-приватного партнерства в інноваційній галузі. Окрім того, проаналізована роль ДПП в інноваційній сфері окремих країн.

**Висновки.** Основною метою застосування ДПП в галузі інновацій може бути як виведення винаходів на ринок та їх комерціалізація, взаємообмін результатами наукових досліджень між державою та приватним бізнесом, так і підвищення глобальної конкурентоспроможності національної економіки.

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**Keywords:** public-private partnership (PPP); social responsibility; innovation; innovative PPP; "Green Growth"; "Green Growth Strategy".

**Ключові слова:** державно-приватне партнерство (ДПП); соціальна відповідальність; інновації; інноваційні ДПП; «Зелене зростання»; «Стратегія зеленого зростання».

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**Urgency of the research.** The factor of innovation, as noted by many scholars, in modern conditions is decisive in ensuring the prerequisites for economic growth, and hence – the competitiveness of the state. However, projects related to the implementing innovation at all levels of the economy, require significant financial resources for their implementation. There is a number of issues under investigation: the lack of funds for financing the implementation of the relevant projects; insufficient level of financing the science and commercialization research results carried out by state research institutions that indicate a low level in science and production; insufficiency of the support of the entrepreneurship by the state; low level of social business and government responsibility in the field of innovation.

**Target setting.** As the world experience shows, in a financial resource-constrained environment, one of the options for providing resources for innovation in both the economy and other spheres of economic life could be the use of private business opportunities in the form of public-private partnership (PPP), which, by its nature, is a manifestation of social responsibility. In general, the use of public-private partnerships on the principles of social responsibility in the sphere of innovation management will contribute to strengthening of the "science - production - the state" relationships, which in their turn is a key to economic growth. In solving the problem of the innovation activity intensification in Ukraine, the level of partnership among key stakeholders will be determined by the degree of their social responsibility.

**Actual scientific researches and issues analysis.** In the context of study of the partnership relationships formation between the state and business in the field of innovation, the researches of V. M. Heyets (2009), devoted to the partnership of the state and business in the process of relationships of science and production as subjects of innovation policy, is important. O. M. Golovinov (2010) investigated the role of public-private partnership in the innovation sphere. V. I. Dubnitsky (2012) determined the opportunities of innovation and marketing potential of territories in the context of PPP formation. A. F. Melnyk (2011) substantiated the use of public-private partnership in the system of institutional support of economic processes. Works of M. Geddes (2005, 2017) are devoted to the territorial and practical aspects of the implementation of PPP projects. The relationships between social responsibility of the business and its innovative activity are studied in the works of Yu. V. Chala (2014), I. V. Mosiychuk (2015), and M. Łakomy-Zinowik (2017).

**Uninvestigated parts of general matters defining.** PPP in the sphere of innovations is a relatively new topic and the issue of seeking the ways for innovative development of the economy, based on social responsibility and cooperation between the state, business and society is not analyzed enough in the national scientific field. PPP is able to ensure a combination of business profitability and usefulness for society within sustainable development. One of such instruments in the field of innovation development is public-private partnership.

**The research objective.** Analysis of peculiarities of introduction of innovations using the PPP mechanism on the basis of social responsibility.

**The statement of basic materials.** The practice of usage of PPP shows that such a cooperation plays a critical role in innovation introduction. Public-private partnerships expands opportunities for the innovation activities development beyond the state authorities institutions, allowing for innovation to flourish. According to M. Łakomy-Zinowik (2017), the use of PPP allows to involve a part body of skills, talents, qualifications, experience, as well as a more diligent and responsible culture of work in a government mechanism and to create a solid foundation for innovative thinking and creativity in society [1, c. 79-80]. On the other hand, public-private partnerships help private companies to encompass innovations in their activities and accumulate additional financial resources and business capital to favour the formation of new industrial clusters, thus contributing in such a way to the

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diffusion of innovation in an ever-growing competitive environment. Moreover, PPPs help private companies to engage in large-scale projects that go beyond their traditional capabilities.

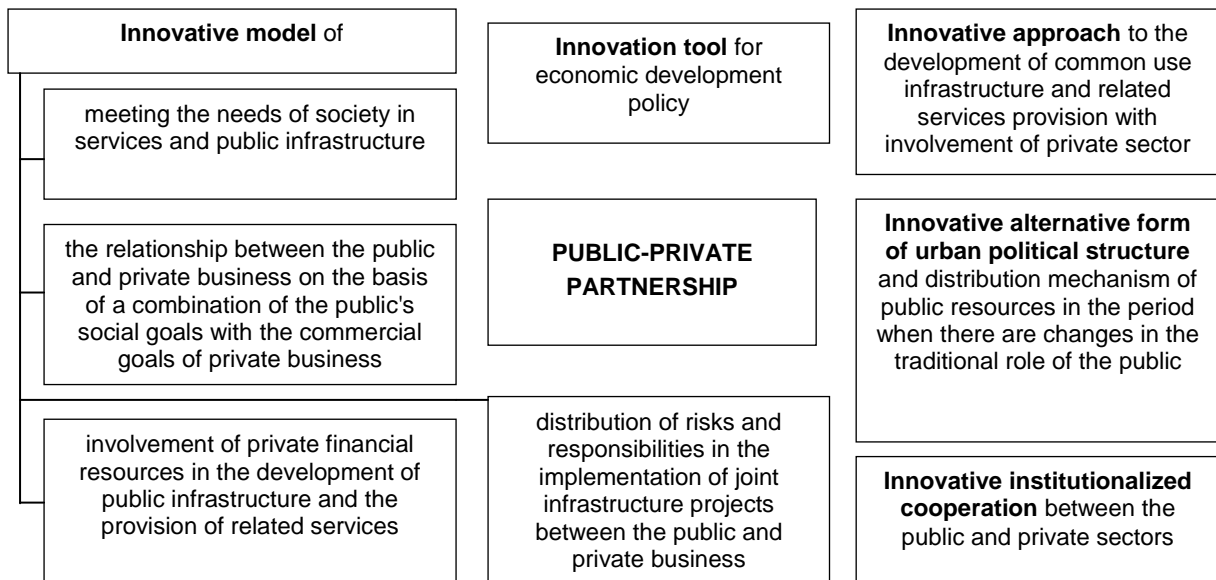
The PPP itself is innovative by its nature. First of all, this is organizational innovation, because it presumes a combination of goals of the state, which are primarily aimed at satisfying the social needs of the population, with the commercial goals of private business.

The innovativeness of this mechanism also emphasizes:

- transfer of performing of traditionally public functions to the responsibility of the private sector;
- concentration within the responsibility of a private market operator or consortium of companies the entire cycle of works: design, construction / renovation, financing, maintenance of infrastructure and infrastructure services provision;
- distribution of risks between the state and the private sector on the principle of the best managing of them, which will stimulate increase of efficiency of available resources usage;
- introduction of the principles of competition into the sphere of natural monopolies (provision of infrastructure services) by competitive selection of a private operator;
- involvement of private sector resources, primarily, financial ones, as well as management experience, technologies, consumer orientation to the common use infrastructure development and related services provision;
- participation of stakeholders in decision-making on launching a public-private partnership project and other issues of its functioning;
- whole life-time costing of the PPP project.

Based on the foregoing, public-private partnership in terms of its innovation can be expressed as follows (Fig. 1).

On the other hand, there is a constant evolution of models and forms of public-private partnership manifestation, so it can be argued about the existence of innovations within the PPP. This is due, first of all, to changing conditions of economic activity and the spread of public-private partnerships to other areas of public relations. In particular, according to the KPMG [2], governments try to introduce innovations in order to balance the unity of maximizing benefits and PPP models with reduced funding costs; the latter stimulates the introduction of innovations in the PPP itself.



**Fig. 1. The essence of "Innovativeness" of public - private partnership**

Source: created by the authors

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Today, the implementation of PPP projects, in general, and in innovation activities, in particular, goes beyond the national borders and becomes international by its nature. Thus, the most illustrative example of using the PPP mechanism in the innovation field at the interstate level is the implementation of the Green Growth Strategy, launched by the OECD in 2011 [3]. To date, "Green Growth" envisages ensuring economic growth and development in such a way that natural wealth would continue providing environmental resources and services, on which the welfare is based. This strategy must stimulate investments and innovations in order to maintain growth, contributing to the emergence of new economic opportunities [4].

Public-private partnership itself has become a popular concept for Green Growth projects. The attractiveness of the PPP is partly caused by such traditional benefits as financial value for taxpayers from diversification of risks, synergistic effects from knowledge transfer, increased accountability and transparency among stakeholders, etc. In addition, there are other advantages of raising private capital in the form of public-private partnerships for implementation of Green Growth projects.

Above all, the PPP plays an important role in stimulating the innovations (N. Lee, 2014) and further market formation (Kh. Almarri, B. Abu-Hijleh, 2013). The government may support research and development at an early stage through financial and non-financial assistance, promoting a technological breakthrough and reducing the risks of private sector investments [5-6].

Also, the PPP proved its efficiency in managing natural resources. With the help of quotas, distribution of access rights, and even more strict measures the government policy presupposes control over natural resources to prevent over-exploitation. According to J. Bouma, E. Berkhout (2015), such state approaches often do not provide the expected effect, mainly due to limited public monitoring and enforcement capabilities. The PPP, in its turn, can contribute to common understanding of the value of natural resources, which will allow to develop more effective management methods and private sector involvement [7].

Besides, the PPP is suitable for small-scale distributed investments into infrastructure through overcoming financial constraints for new markets development and for system weak links. Here such examples can be provided as irrigation systems for small-scale farmers, the development of infrastructure for the production and distribution of biodiesel fuel, the rural networks of renewable energy sources, etc. [4].

Another advantage is that PPPs can raise awareness of the public, which will lead to a broader range of stakeholders. At the same time, the environment where private sector would be interested in participating through the intensification of cash flows from loans and grants could be created. The results of the research by L. Witters, R. Marom, K. Steinert (2012) showed that private sector participation in Green projects contributes to the development of social responsibility of corporations and to the creation of a market of environmentally friendly products by means of using the best investment opportunities in the country [8].

Moreover, PPP reduces associated business risks, as it promotes joint development measures that satisfy both the public and private sectors. As such, large Green projects can be implemented in those cases where neither the state nor the private sector can separately achieve significant results due to their limited funding or technological capabilities. Consequently, the distributions of risks among all agreement parties will be more uniform [5; 7].

And, finally, if private sector experience is involved, foreign aid can be employed. As the PPP is capable of initiating and implementing large-scale projects, it is currently used to support Green Economy projects that are of particular interest to the private sector. Public-private partnerships are expected to ultimately improve business conditions by allowing companies to increase their representation in developing countries in case the obstacles hampering the PPP full potential are eliminated (J. Bouma, E. Berkhout, 2015) [7].

In addition to the Green Growth strategy, which incorporates a number of countries, each of them develops their own programs to promote innovations on the market making use of public-private partnership mechanism. The examples are the German National Platform for Electric Mobility (Nationale Plattform Elektromobilität) [9]; Tsukuba Innovation Arena, operating in Japan (Tsukuba

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Innovation Arena - abbreviated as TIA-nano) [10-11]; the Dutch "Top-Sector Policy" [12] and the Industrial Partnership Program [13], et al.

Thus, by exploiting the PPP mechanism, the Japanese TIA-nano establishes and promotes three types of platforms based on advanced equipment, long-term research results, intellectual property, know-how and human resources. They are system and integration platform, advanced material platform, and basic resource platform [11]. For this purpose, a variety of activities are held, such as national research projects performed by companies, technological research associations or consortia, as well as research collaboration, public research centers, research and technology training courses, lectures and summer schools [10-11].

Dutch Industrial Partnership Program (IPP), in its turn, is intended for the staff of the Fundamental Research of the Matter Foundation (FOM) to conduct long-term fundamental research in close cooperation with industry researchers in the areas with promising potential for innovation and complex scientific issues [13]. On January 1, 2017 FOM was converted into three parts. Granting became a part of Domain Science, the Netherlands Organisation for Scientific Research (NWO). Another part was joined to the Operations and Personnel Department providing support to the institutes (AMOLF, ARCNL, DIFFER and Nikhef). Meanwhile university working groups became NWO-I [13].

Dutch Industrial Partnership Program particularly aims at multinational firms that have their own research labs. IPP is funded jointly by FOM and industry partners; the latter provide at least 50% of costs. Scientific quality is the ultimate determining factor for financing the project. Firms "buy" their access to the knowledge accumulated by the Program, and they also gain access to the physical network. Conducting high-quality research and the opportunity to be published in peer-reviewed journals is the starting point for each IPP (P. de Witte, 2012) [14]. The IPP can be "open" or "closed". In the Closed Program, all projects have already been identified and the research consortium has been set up during application. In case of an Open Program, a program proposal is being written, after which a tender of project proposals is organized.

**Conclusions.** On the basis of application peculiarities of public-private partnerships in the innovation sphere and the analysis of foreign experience in this area, in order to stimulate such process in Ukraine, it is reasonable to take the following actions:

- developing a strategy and a strategy-based model of relations between the state and private business in the area of promoting innovations, their introduction to the market and commercialization;
- determining foreground directions of application of public-private partnership mechanism in innovation activity;
- elaborating the necessary stimulating tools to enhance the participation of private business in similar projects;
- developing the necessary institutional provision of PPP in the innovation sector: the authorized government body, non-governmental organizations for promoting the development of innovative PPPs, the mechanism of financing and risk insurance of relevant public-private partnership projects, etc.;
- elaborating and adopting of the relevant legal and regulatory framework;
- implementing pilot projects of public - private partnership in the field of innovation promotion;
- developing a formal mechanism for implementing PPP projects in the innovation sector;
- organizing implementation of the PPP development strategy in the field of innovation promotion.

The fulfillment of the proposed tasks will make it possible to improve the implementation of the innovative potential of Ukrainian economy and, thus, to increase the competitiveness of the country as a whole.

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