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SOME ASPECTS OF STATE SUPPORT OF INNOVATION PROCESSES IN THE REGION

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ДЕЯКІ АСПЕКТИ ДЕРЖАВНОЇ ПІДТРИМКИ ІННОВАЦІЙНИХ ПРОЦЕСІВ У РЕГІОНІ

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The development of innovative activity of economic entities is one of the main objectives of the state policy. State instruments for support and development of innovation activity should provide support at all stages of the innovation life cycle, from idea generation to successful commercialisation of innovative products, and the maximum effect will be achieved only taking into account the integration of all participants of the innovation process - from scientists and entrepreneurs-innovators to venture funds and innovative enterprises. The innovation economy, based on scientific knowledge and intellectual potential, is able to ensure the expanded reproduction of knowledge-intensive gross product of both the region and the country as a whole.

The development of innovation processes is impossible without the generation of new ideas, knowledge, project initiation at the initial stages of the innovation cycle, and without the use of venture capital investments at the final stages. This problem is most difficult to solve in the regions, due to significant differences in their socio-economic development, level of competence of scientific schools, sectoral specifics, level of concentration of industrial potential, including due to insufficient justification of the directions of further development of regions - innovation leaders. In order to support sub-processes related to resource provision, regional authorities can, on the basis of budgetary resources, form innovation infrastructure institutions, such as: business incubators, business accelerators, seed funds, technoparks, etc.; finance various innovation projects; invest in the development of human and intellectual capital - in education, for training personnel in innovation management, breakthrough scientific technologies, in the part of personnel training of the highest level.

At the same time, we need a promising model of long-term innovation development, which implies a gradual transition from state to market-based instruments of development and support of innovation activity, including innovation infrastructure functioning on market conditions.

***Keywords**: innovation processes, government programmes, support, region, development*

Introduction. At present, state support for innovation is caused by the weakening of the innovation market and market-driven innovation infrastructure due to Russian aggression. Consequently, there is an inability of the market to fulfil the functions of continuous promotion of an innovation project through all stages of its life cycle. Moreover, the availability of state support is characteristic not only of our country, but also of many other countries, including those in the group of innovation leaders. State programme-targeted management is actively used for these purposes in our country and abroad [4]. Socialisation of many industrialized countries is observed, when large projects are implemented for state support, the ultimate goal of which is not so much to obtain the results of such projects in the form of finished products or services, but the cumulative solution of problems of socio-economic development of specific regions and the country as a whole.

Analysis of basic research and publications. The issues of innovative economic development and formation of the innovation system are not new. The issues of legislative regulation of innovation activity, consideration of the functions of the state to stimulate and support the activities of enterprises engaged in innovation activity are considered in the works of numerous foreign and domestic scholars. In the works of Amosha O., Bilopolsky M., Bovin O., Voronko N., Galchynsky A., Datsiy O., Zhylianska O., Zakharchenko V., Ilyashenko S., Karminsky O., Lynch R., Motoriuk U., Mosiy O.,

Mukhamedyarov O., Pashuta M., Porter M., Reisberg B., Sukhorukov A., Fedulova L., Harrigan K., Cheberkus D., Shingur M., and many others paid attention to the formation of favourable conditions for the implementation of innovation activities within the national framework, theoretical justification of the need to use innovations and search for investments. Studies of the problems of introducing innovations into the activities of enterprises in certain industries are almost absent.

The **purpose** of this article is to analyse the level of state regulation of investment and innovation activity in Ukraine, and to identify problems of development of the innovation potential of industrial enterprises.

Materials and results of the study. An important task for the state and individual regions as investment entities is to create an attractive investment climate, ensure economic growth and improve living standards. In turn, one of the forms of successful investment activity is innovation, which is carried out with the aim of introducing the achievements of scientific and technological progress into production and the social sphere.

The generalisation of the regulatory framework, expert, practical and scientific materials allowed us to determine the following. The investment climate is a generalised set of social, economic, organisational, legal, political and socio-cultural relations that determine the attractiveness and feasibility of investment. The concept of investment climate includes a set of elements that foreign investors take into account when making decisions about making investments. In addition, important factors that adversely affect the investment climate and cause a high risk of foreign investment are the protracted and inconsistent nature of market-based economic reforms, legal, economic and political instability, imperfect financial, credit and tax systems, and a high level of economic shadowing.

Creating a favourable investment climate is a key task for the government, but not the only one, as investors have long been competing with each other for the right to invest in a "profitable" producer who can set up their own business and make it profitable. In other words, it is not enough to work out the investment - it needs to be earned. Let us present the main directions of state support of innovation activity in the region. To identify the integrated directions of public policy in the sphere of innovation activity support it is necessary to consider the innovation process, the necessary resources for its implementation, products (services) obtained in the course of the innovation process, the results of innovation activity for the population of the region, the role of regional authorities in innovation processes, ways of organising budgetary policy in the sphere of innovation and their relationship with market instruments of self-organisation of innovation processes [7]. Further, the innovation process is analysed within the boundaries of its main stages and phases: generation of ideas; technology transfer; bringing innovative products (services) to the market. The input of innovation processes are ideas or orders, also the process can be initiated by the market environment, scientist, entrepreneur, initiative group, potential customers - commercial or non-commercial organisations. Also, regional authorities act as customers, providing state support to the innovation process at this stage.

The output of the innovation process is the innovation product, which is the final fact in the innovation activity, represented in the form of products (services) both for final consumption and at the intermediate stage, as well as in the form of technologies. Innovative products are brought to the market to be sold to final consumers. Consumers of innovative products may be regional or state authorities.

The results of the use of innovative products (services), implementation of innovative technologies are an increase in the standard of living, as well as support from the regional authorities of innovators-producers, which is reflected by analysing the indicators of regional development. Improving the quality of life of the population in the region can be expressed in social, economic, environmental or cultural character. Thus, the innovation product represents the direct output of the innovation process, and its result is the indirect output.

In the implementation of innovation processes, resources are used, in which three groups are distinguished [9]:

Group I - is represented by labour or human resources;

Group II - represents financial resources;

Group III - represents infrastructure.

Each resource from these groups is provided by the market environment: human resources are hired in the labour market; financial resources function in the financial market; infrastructure is reflected in the market. market; infrastructure is reflected in the real estate and services market.

To support the sub-processes related to resource support, the regional authorities can, based on the use of budget funds, form innovation infrastructure institutions, such as: business incubators, business accelerators, seed funds, technoparks, etc.; finance various innovation projects; invest in the development of human and intellectual capital - in education, for training personnel in innovation

management, breakthrough scientific technologies, in the part for training of personnel of the highest level.

Management of innovation activity of the region depends on the stages and stages of innovation activity and is carried out in accordance with the current legislation, legal acts and regulatory documents in the field of innovation regulation [2]. At the stage of knowledge generation the process is managed by universities and scientific organisations; at the stage of technology transfer - by centres, technoparks, venture funds; at the stage of production expansion - by commercial organisations of various scales from small enterprises to large corporations.

Regional authorities regulate innovation processes through the formation of concepts of innovative development of the region's territories, territorial planning with the definition of innovative development zones, the development of a specialised set of measures or a programme for the formation of specialised bodies for the implementation of innovation policy.

It should be separately noted that nowadays regional policy pays special attention to the development of innovation infrastructure of the region, due to "which the unification of efforts of state authorities of all levels, organisations of scientific and technical, educational spheres of activity and the entrepreneurial sector of the economy is provided in the interests of accelerated use of achievements of science and technology in order to implement strategic national priorities of the country and the regional economy's entry into the trajectory of innovative growth" [4].

The policy of regions is aimed "at filling the missing or underdeveloped links of infrastructure support, organisation of their interaction, mainly financial institutions and infrastructure elements of regional innovation systems, which accumulate investment resources and form conditions for the market promotion of innovations"[6].

The analysis of the innovation process separately for each stage and each stage allowed us to identify all participants in the innovation process.

The analysis of the innovation process separately for each stage and each stage allowed to identify all participants of the innovation infrastructure of the region.

At the stage of knowledge generation, the region is supposed to have a developed basic science represented by a network of research institutes, higher education institutions, laboratories, as well as those elements of innovation infrastructure that stimulate economic contractors to search for innovative solutions and create conditions for their generation.

At the stage of technology transfer or the initial point of implementation of innovative projects, the main element is fundraising - the search for sources of project financing. The conditions for the implementation of this stage include analytical and technological base, as well as innovation infrastructure, which provides bringing scientific developments to their commercialisation, combining the structures of technology transfer, expertise, consulting, information and legal support.

At the final stage, when bringing innovative products to the market, it is necessary to have highly qualified personnel and high-tech material and technical base.

At the first stage of knowledge generation the following stages are implemented: fundamental and applied scientific research, creation of favourable environment for innovation activity. The participants of the presented stage at these stages are: scientists, scientific and pedagogical staff, research staff; scientific, laboratory and production base [2].

As a result of innovation activity at all stages, scientific schools are formed, intellectual property objects are created and new, breakthrough ideas are generated. Therefore, the effective implementation of the innovation process requires the formation of powerful scientific schools and scientific and production base for scientific research.

At the next stage, the stages of technology transfer are pre-seed, seed and venture stages. The pre-seed stage requires effective interaction between science and entrepreneurship, with the creation of a team for the implementation of the innovation project. A variant of interaction for the creation of teams is the so-called co-working centres, which represent a model of activity in which independent and free participants use a shared space to organise work, occupy an intermediate link between online work from home and offline work in a separate office. In the process of formation and diagnosis of the business model, "the project becomes interesting to business angels (an individual or legal entity that invests part of its own funds in innovative companies of the earliest stages of development), which are the main source of investment at this stage" [5].

An important participant of this stage is a mentor - a representative of the business community, who has considerable experience in forming and managing a company, who assists specific projects in the formation of a business model, its preparation for market entry, and the development of business contacts. It is believed that a regional innovation system should have at least five mentors per project.

The accelerator is also a direct participant of this stage of the innovative project implementation, which is necessary for quick entry into the market, providing the project with investment, infrastructure, information and expert support. Among the set of participants of the pre-seed stage of the project it is necessary to have a "packaging" organisation, which forms a package of required documents, material samples, digital data, justifying the possibilities of the innovative project for investment or motivation of the consumer to buy the project or product.

The main outcome of the pre-seed stage is the development of a proven business model, by studying the demand, needs and preferences of customers. Here it is important to carry out market research, investigate customer segments, present your positioning, identify problems that are solved by the product to be developed, form order channels, sales system, issues of protection from competitors, and so on. These functions belong to popular and mass crowdsourcing.

At the seed stage of the project, when a team has already been established to implement the business model, taking into account its testing, the main participants are collaborative (prototyping) centres and business incubators.

They are designed to provide consulting assistance to the project teams, provide premises for their functioning, as well as equipment and software for prototyping purposes. It should be further noted that seed funds have a large number of innovative projects as their essential needs, information on the leaders of these projects, availability of qualified labour force. labour force.

The following venture stage predetermines that the newly formed innovative enterprise will receive investments from venture funds and will stay in the technopark to develop technologies and create samples of innovative products.

At this stage, when bringing innovative products to the market, the first stage is analysed in more detail - the stage of providing products to the market, when the company does not yet have a sustainable profit, there is an increase in the number of customers, the search for investment is carried out, the staff of the company is recruited. The source of financial resources are private equity and venture capital funds. The final result of this stage is the creation of small-scale production of innovative products.

Conclusions and proposals. The development of an effective innovation market requires the implementation of a wide range of measures: providing funding for priority areas of scientific research, expanding sources of funding through special purpose and venture capital funds, creating mechanisms for government incentives for the effective use of private and foreign investment in knowledge-intensive industries and priority scientific and technological developments, reducing the economy's import dependence, and expanding forms of innovation market infrastructure (technology parks, technopolises, business centres, etc.). Measures to monitor the effectiveness of a regulatory act may include the collection and analysis of statistical data and opinion polls, and the analyst should always follow the basic principles of evaluation.

State regulation is necessary to achieve the following socially important goals: protecting the rights and freedoms of citizens; ensuring public safety and protecting the life and health of citizens; protecting the norms accepted in society; protecting the environment; ensuring the collection of taxes, fees and other mandatory payments; and promoting the efficient operation of the market.

Thus, the synthesis of the above gives rise to the following conclusions. Government regulation of the investment climate in a country is of great importance, but it is not decisive for each particular enterprise. It is necessary to take into account all the peculiarities of a particular enterprise. This should be the direction of further research.

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Клюс Ю.І., Фоменко Д.В., Ши Гуамін Деякі аспекти державної підтримки інноваційних процесів у регіоні.

Розвиток інноваційної діяльності суб'єктів господарювання є одним з основних завдань державної політики. Державні інструменти підтримки та розвитку інноваційної діяльності мають забезпечувати підтримку на всіх стадіях життєвого циклу інновацій, від генерації ідеї до успішної комерціалізації інноваційної продукції, причому максимального ефекту буде досягнуто тільки з урахуванням інтеграції всіх учасників інноваційного процесу - від науковців і підприємців-інноваторів до венчурних фондів та інноваційних підприємств. Інноваційна економіка, що ґрунтується на наукових знаннях та інтелектуальному потенціалі, здатна забезпечувати розширене відтворення наукомісткого валового продукту як регіону, так і країни в цілому.

Розвиток інноваційних процесів неможливий як без генерації нових ідей, знань, ініціації проектів на початкових стадіях циклу інновацій, так і без використання венчурних інвестицій на завершальних стадіях. Найскладніше це

завдання вирішується в регіонах, зважаючи на істотні відмінності в їхньому соціально-економічному розвитку, рівні компетенцій наукових шкіл, галузевій специфіці, рівні концентрації промислового потенціалу, зокрема через недостатнє обґрунтування напрямів подальшого розвитку регіонів - інноваційних лідерів. Для підтримки підпроцесів, пов'язаних із ресурсним забезпеченням, органи влади регіону можуть, на основі використання бюджетних коштів, формувати інститути інноваційної інфраструктури, якот: бізнес-інкубатори, бізнес-акселератори, посівні фонди, технопарки тощо; здійснювати фінансування різноманітних інноваційних проєктів; інвестувати кошти в розвиток людського й інтелектуального капіталу - в освіту, для підготовки персоналу з інноваційного менеджменту, проривних наукових технологій, у частині підготовки кадрів для вищої школи, в тому числі для підготовки кадрів для вищих навчальних закладів, в тому числі для вищих навчальних закладів, в галузі інноваційної освіти.

Водночас потрібна перспективна модель довгострокового інноваційного розвитку, що передбачає поступовий перехід від державних до ринкових інструментів розвитку та підтримки інноваційної діяльності, включно з інноваційною інфраструктурою, яка функціонує на ринкових умовах.

***Ключові слова**: інноваційні процеси, державні програми, підтримка, регіон, розвиток*

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