

SUBSTANTIATION OF THE NEED FOR STATE REGULATION OF ENTREPRENEURIAL NETWORKS IN THE ECONOMY

Olena Palyvoda

*Doctor of Economics, Associate Professor of the Department of
Management of Foreign Economic Activity of Enterprises National
Aviation University, Ukraine*



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Abstract. The article substantiates the reasons for the need for state regulation of entrepreneurial networks activity in the economy. The risks of reducing the effectiveness of state regulation of the development of network structures are identified and analyzed. The emergence of risks depending on the stages of the network structure formation is considered. A situational approach to

the development of measures of state support for the development of entrepreneurial networks in accordance with four possible scenarios, which are identified on the basis of key performance criteria of the network entrepreneurial structure: the number of participants, their innovation activity and the level of cooperation.

Key words: entrepreneurial network, cluster, state regulation, risks, network structure.

Introduction

In the modern economic space, various forms of entrepreneurial networks, which are based on the principles of complementarity, synergy, innovation activity and trust, are becoming increasingly active. The most common forms are clusters, logistics networks, innovation networks and the like. The vast majority of such network structures are focused on innovative development, which is possible only on condition that effective instruments of state support are developed and provided. The development of entrepreneurial networks is a logical process conditioned by the logic of technological and economic changes. This means that their emergence and functioning in the economy can occur naturally regardless of the state macroeconomic policy. In this regard, the question arises about the practicability, spheres and boundaries of state intervention in the formation of entrepreneurial networks.

Analysis of recent research and publications. Among experts on regional networks there is a widespread opinion about the inefficiency of the state policy of network structures regulation, based on a study of 700 clusters conducted by Van der Linde, which showed that only one cluster network (Hsinchu, Taiwan) was the result of targeted state policy [1]. From the point of view of Gilles Duranton, policy measures aimed at developing network structures, in particular clusters, should be considered secondary, since they are aimed at solving complex and poorly studied problems [2]. The study by a group of scientists led by Philippe Martin, which was conducted in regard to the growth of productivity of production factors of

companies resulting from the implementation of cluster policy in France, showed that over the period 1996-2004, the productivity decreased by 5% [3]. The obtained results were the basis for strengthening in the scientific environment of the skeptical attitude to the state activities in the field of regulation of sectoral and regional innovation networks, in particular clusters.

However, it should be noted that making such conclusions should be based on studies covering a much longer time period (several decades), because that is how much time is needed for the formation of innovative value chains of industrial importance. It is also necessary to take into account the complexity of assessment of network effects, because

they are multidimensional and cover not only the production, but also the infrastructure, education, science, social sphere and are situational, that is, determined by the conditions of the environment.

Purpose of the article. Given this, the purpose of the article is to substantiate the need for state regulation of entrepreneurial networks activity, identify its risks and develop state policy scenarios depending on the determined key performance criteria of the network entrepreneurial structure.

Main material of the study. Despite the existence of skeptical views on the positive impact of public authorities, it is worth noting that the state regulation of the development of entrepreneurial networks, especially innovation ones, is quite common in the world. This is due to the fact that support for breakthrough innovation in the economy is based on fundamental research, which is a recognized sphere of state responsibility. Nowadays, the share of the state in the cost of research and development is about 39%. The EU countries have accumulated significant experience in innovation policy, which provides tools for both direct and indirect stimulation of innovation activity in the economy, including through support for the development of network innovation structures, such as clusters.

Summarizing practical experience, it can be noted that the implementation of the policy of support for the development of entrepreneurial networks is reduced to finding and maintaining a balance between natural and consciously controlled processes. The best results, as a rule, appear where the state has identified and supported network structures with the greatest innovative potential [4, 5].

In general, the need for state intervention in the development of network structures is due to the emergence of economic imbalances, which are unable to be resolved by the "invisible hand of the market." According to E.S. Kutsenko, market failures in the field of formation and development of network structures include situations of two types: a) inadequacy of the territorial distribution of productive forces to the existing agglomeration effects; b) insufficient production of positive external economy by localized economic agents, conditioned by its incomplete reflection in the results of economic activity of these agents [6, p. 9].

The first of them is connected with the fact that the existing networks of interdependent companies, which have been formed and generate certain positive external effects for their participants, may lose this ability over time, due to economic and technological changes. This leads to the fact that companies have to either accept the decline in their own competitiveness, or migrate to other industries, sectors or even territories where a possibility of obtaining additional effects still remains.

However, even under perfect competition, the possibilities of capital flow to other sectors and regions are limited. Restrictive barriers are connected with the peculiarities of the previous development of companies, in particular such as investments in means of production and technology, limited information, existing regulations and obligations, geographic location and the like. They create a "path dependence" within which the company's activities develop. This pattern was described in the works of a number of authors and reflects the inertia of economic entities in the adaptation to organizational, technological and institutional changes. [6, 7].

The most important for the majority of entities are the innovative effects generated by entrepreneurial networks, in particular reducing the costs of access to new knowledge, the creation and diffusion of innovations, the growth of the speed of their implementation through the formation of an appropriate environment, increasing the innovation activity of participants, facilitating access to the financing of innovation projects and the like. But by their economic nature, innovative effects are quite short-term, and therefore need constant support. If such an effect in the network is exhausted, moving to other industries, sectors or more favorable regions for companies is accompanied by additional transaction costs, which shows the need for state support to such processes.

Another significant market imbalance in the development of entrepreneurial network structures is associated with insufficient generation of positive synergy due to the lack of sufficient incentives for business entities to create free benefits for third parties, as they are not sufficiently reflected in the final performance of economic management.

Thus, it is impractical to deny the role of the state in the formation of network structures, especially of the innovative

direction, since the provision of network effects, which are collective by their nature, can fully occur only with the financial, institutional, information, consulting, etc. participation of the state. The exclusion of the state from this process will lead to the inhibition of innovative development and fragmentarity in the formation of network relations [8].

Substantiation of the need for the regulatory role of the state in the formation of entrepreneurial networks involves the study of possible risks that may reduce the effectiveness of such regulation. Among the basic reasons for reducing the effectiveness of the state network policy are the following:

- the need to balance the conflicting interests of the network structure participants;
- the asymmetry of information between the authorities responsible for the implementation of the relevant policy and the groups of economic entities seeking support;
- the lack of sufficient level of economic trust between partners, which causes non-transparency of actions and incompleteness of information;
- the difficulty in evaluating synergistic effects and related difficulties in the identification of spheres with priority support;
- the situational nature of obtaining effective results from the development of the network structure, their dependence on the level and quality of organizational and managerial development of participants;
- the high dependence of the efficiency of functioning of the network structure on the quality of institutional environment: legal foundations of ensuring compliance with business agreements, the level of entrepreneurial culture, the quality of social capital;
- the rent-oriented behavior of government officials regarding the distribution of state support.

These problems give rise to a set of risks, which are the most common in the European and world economic practice of regulation of network relations (Fig. 1).

The risk of inadequacy of the measures of state regulation to the nature and needs of the development of network relations is most often associated with the attempt of the state to replace with its participation the natural way of formation of economic relations. Meanwhile, the task of the state is only mediation in simplifying the establishment of inter-company and inter-sectoral communications. The main danger is the possibility of companies losing the ability to compete due to the creation of "excessively favorable" conditions, which are conditioned by the provision of tax benefits, the use of increased tariffs for foreign competitors, guaranteed public procurement, the status of a natural monopoly. Such approaches, in case of their ill-considered application, bear the risks of reducing innovation activity in the long term. Excessive paternalism can cause companies to lose interest in searching for options for cooperation in the open market.

In addition, the risk of reducing the effectiveness of the state policy is predetermined by the need to apply an adequate set of tools and approach in each specific situation. This, to some extent, reduces the possibility of using previous experience of regulation that has been developed in other industries or regions.

With the involvement of public authorities in activities to support the development of network structures, there is always a risk of shifting the emphasis to the solution of narrowly sectoral or locally territorial problems. In addition, this trend can be amplified due to the lobbying their own interests by highly specialized groups. Therefore, there is a possibility that not the most promising market entities will be able to receive state support.

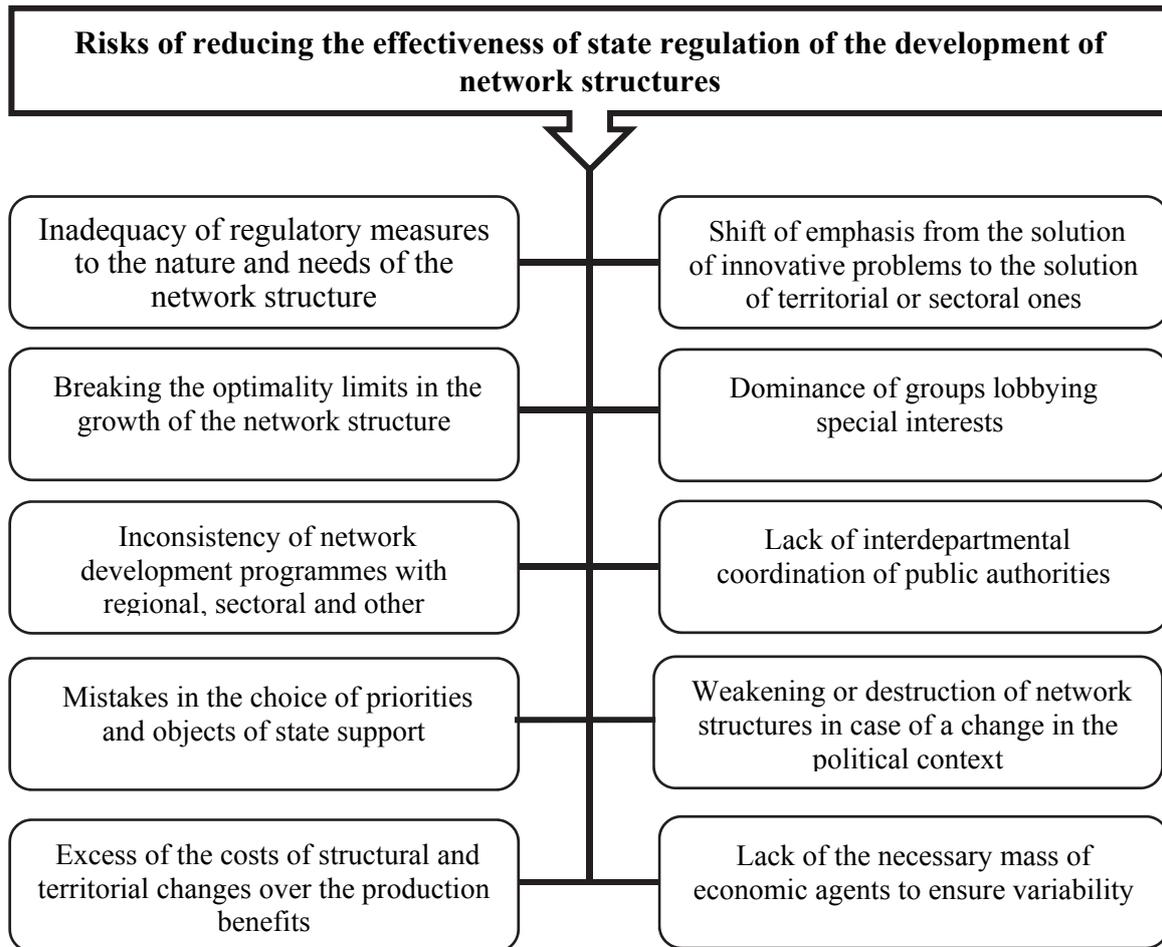


Figure 1. The set of risks of reducing the effectiveness of state regulation of the development of network structures

Source: [276]

Network synergistic effects are extremely difficult to identify and calculate, so there is a risk that the costs of ensuring that they are obtained may significantly exceed the final benefits. In addition, there is a risk of expanding the network beyond the optimal size, as a result of the intention to increase the possibilities of variability in the choice of partners through the increase in the number and diversity of network actors. Such a policy can lead to the increase in costs, for example, due to higher prices for remuneration of labor, rental property, lower prices for final products, etc. Exceeding the optimal size of the network can have the opposite effect – the loss of competitive advantages of its participants.

Quite relevant is the risk of choosing the wrong priorities and objects of support. Often based on past achievements, company executives, usually of traditional industries of economy, are trying to get state support for unpromising and decaying companies and industrial sectors. State support for such networks only draws resources off the

development of truly innovative companies and preserves the inefficient structure of industry.

There is also the risk of a misguided choice for state support of an entrepreneurial network that does not have a sufficient innovation and market potential for development. Such risks can be avoided by developing and using methodological approaches to the identification of network structures that are able to assess prospective and available opportunities for the development of a particular network formation.

It is worth noting the existence of the risk of choosing the priority and the object of state support under the influence of "fashion" trends without taking into account the specific territorial or sectoral conditions for its development. For example, networks in the fields of biotechnology, nanotechnology, information and communication technologies are extremely popular in many countries. Practice shows that sometimes the risk lies in

an attempt to cover an overly wide range of areas, resulting in a dispersion of financial and organizational resources.

The organizers of the entrepreneurial network always try to attract as many participants as possible to the cooperative interaction, which provides an opportunity, firstly, to increase the probability of finding the most optimal partner for cooperation by each entity, secondly, creates conditions for deepening the specialization of each participant and, as a result, increasing the efficiency of the entire network structure. However, as practice shows, excessive specialization can create certain traps, especially for the territories covered by regional networks. In situations of economic downturns or changes in technological trends, a slowdown in some parts of the network can lead to a chain reaction of spreading problems across the whole industry or region. Economic downturns in regions, the economy of which is covered by a dense net of networks, tend to be more prolonged and devastating in terms of economic and social consequences. That is why in developing programs for the development of entrepreneurial networks, in particular clusters, it is always advisable to foresee opportunities for the development of additional or alternative kinds of activities in the regions.

One of the conceptual principles of the formation of entrepreneurial networks is the preservation of competitive relations between

its participants. However, in practice, the coordination of market behavior often begins with price regulation agreements, the exchange of preferential terms between the participants, which actually leads to the conclusion of agreements, similar to cartel ones. Thus, there is a risk of local monopolization of markets, which in general can have a destructive impact on macroeconomic indicators. In order to avoid such a situation, it is necessary to intensify control over the economic activities of economic entities in the networks by the state anti-monopoly authorities and to adopt some amendments to the legislative norms that would regulate acceptable models of economic behavior.

The political risks that can negatively affect the effectiveness of state regulation of network structures include changes in the economic policy that cause the weakening of popularity of the idea of developing entrepreneurial networks, as well as changes in the territorial boundaries of the state that lead to the breakup of already formed network relations between companies. The study showed that the above-mentioned risks of the state economic policy in providing support for the development of entrepreneurial networks can also be ordered by stages of the network formation, which allows better understanding of the order of their occurrence and taking measures to neutralize them (Fig. 2).

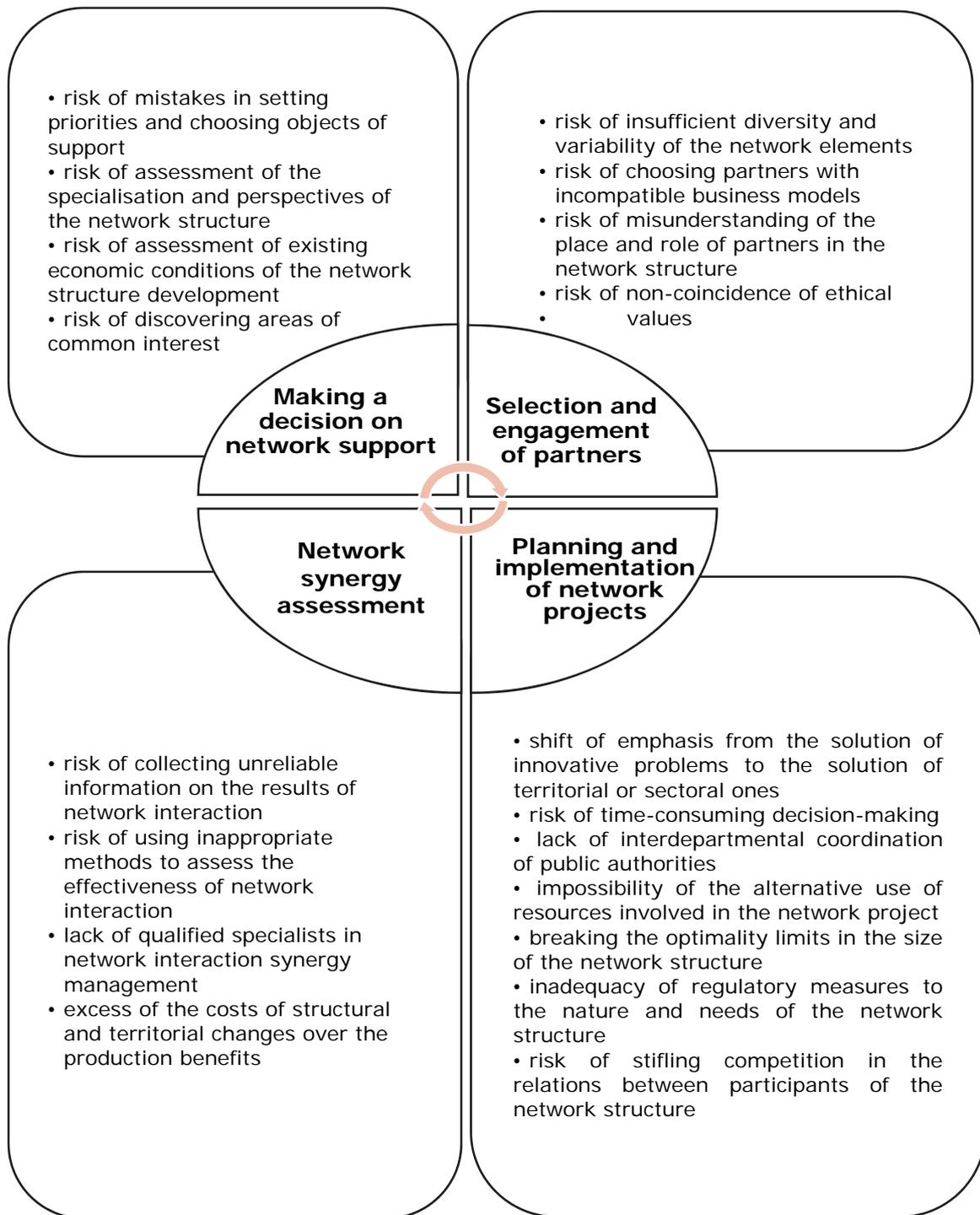


Figure 2. The distribution of risks of reducing the effectiveness of the state policy, depending on the main stages of the network structure formation.

Source: [232]

As mentioned above, network policy is situational by nature, which determines the application of specific mechanisms and tools, depending on a combination of certain factors. We consider it expedient to take into account the situational combination of three key criteria in the development of the relevant state policy:

1) the number of potential participants; 2) the innovative activity of potential participants; 3) the level of development of cooperative relationships between potential participants. The combination of these three criteria that characterize the state of development of the entrepreneurial network allows obtaining four situations fundamental for the state regulation (Fig. 3).

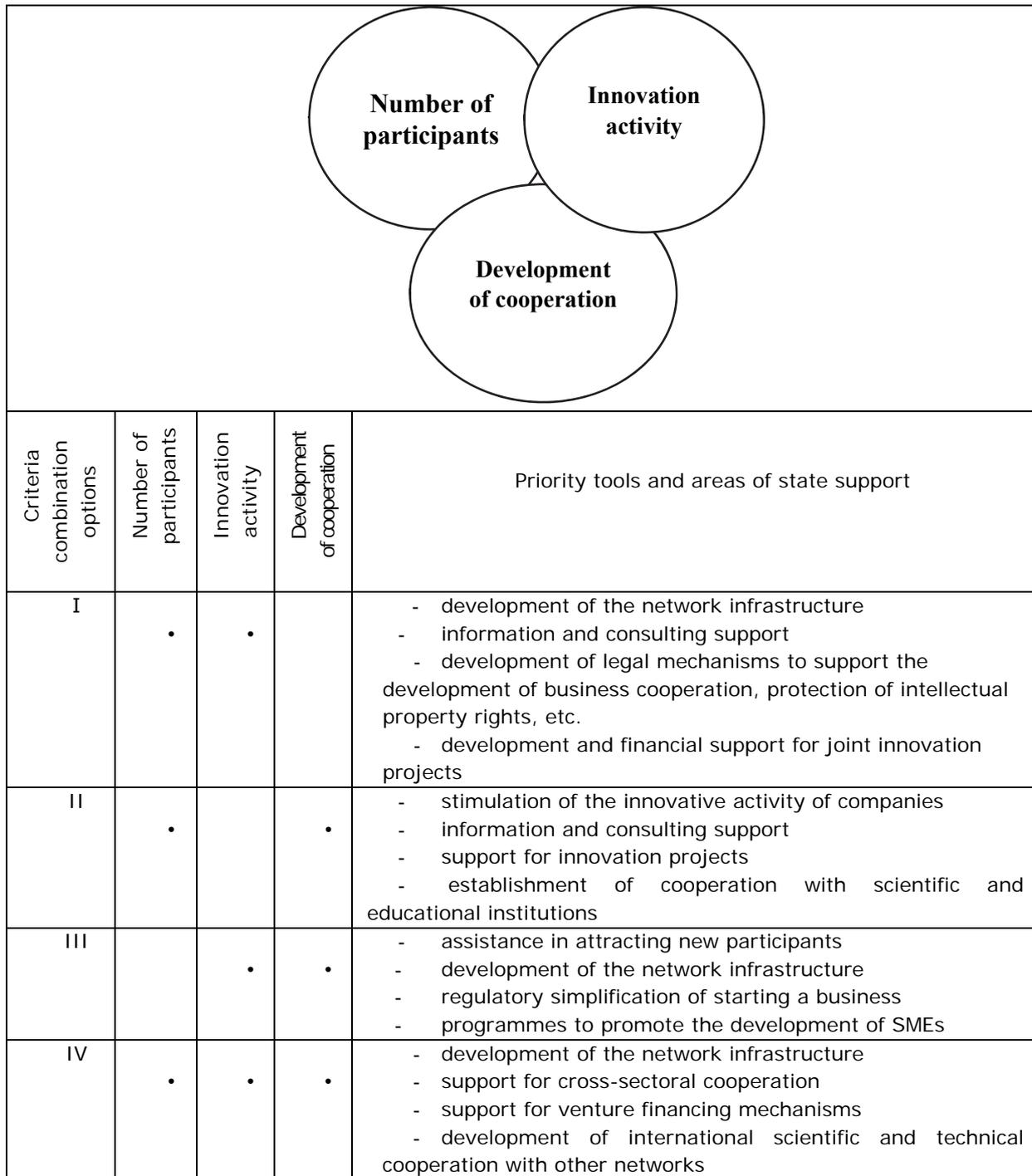


Figure 3. The options for a combination of criteria to select tools and areas of state support for entrepreneurial networks.

It is important to note that state support measures can only be applied if at least two criteria are present and combined. If the analysis of the sectoral or regional situation revealed the presence of only one criterion, it should be noted that there are no conditions for the development of the entrepreneurial network. The priority of state support should be given, first of all, to the networks with innovative potential. The identification and combination of the above-mentioned criteria

gives grounds to classify the conditions for the development of this type of network relations.

The combination of two or more criteria allows identifying four possible situations.

The first situation is characterized by the presence of a significant number of innovation-active companies that do not have close cooperative relationships with each other. Such conditions for the network formation, as a rule, arise in a situation of rapid growth of the number of companies in a

new promising market, where intermediary organizations for the establishment of cooperative relations are still rather poorly developed. Sometimes this situation may occur in the regions and industries, formed as a result of direct foreign investment and where cooperation with a foreign parent company replaces cooperation with horizontal and vertical partners, which determines the inexpediency of its organization.

The second situation is characterized by the presence of a significant number of economic entities that closely cooperate with each other. This situation, as a rule, is typical of traditional branches of industrial production. Companies in such industries occupy certain market segments, producing a fairly wide range of products, but do not have high rates of innovation activity [10].

The third situation is characterized by the presence of a small number of innovation-active companies that have well-established

cooperative relationships with each other. As a rule, such situations are typical for the periods of emergence and formation of network structures, when a small number of small and medium-sized innovative companies cooperate with each other to obtain some additional synergy from the interaction. In practice, this situation is most often in the sectors of providing services, where the organization of production on a large scale is impractical.

The fourth situation is the most optimal combination of criteria and shows the existence of a sufficiently high innovative and network potential in the network structure, for which the state support is planned. Such situations are favorable for the support of innovation networks, which can be formed on the basis of three types of companies: large high-tech companies, sets of companies of small and medium-sized innovative business, leading research and technology centers.

Conclusions and recommendations for further research

The choice of state policy tools should be differentiated depending on the combination of criteria that characterize the potential of the network structure. The most typical tools that can be used are shown in Figure 3. In general, the policy of supporting network structures implies keeping a balance between state and market regulatory mechanisms. At the same time, the network policy should be considered as a component of the innovation and structural policy of the state. The use of network tools without their coordination with financial, tax, regulatory and even legal tools will not be able to provide successful results. A sound state policy should be based on the principle of identification of characteristics specific to each network structure that cannot be resolved autonomously by participants and require joint efforts. Violation of this principle may cause a decrease in the effectiveness of the state policy of support for the development of entrepreneurial networks, as a form of activation of innovative processes in the economy.

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