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# FACTORS OF INFLUENCE ON THE FORMATION OF INNOVATIVE COMMUNITIES IN THE CONDITIONS OF SECURITY-ORIENTED SUSTAINABLE DEVELOPMENT OF ENTERPRISES IN UKRAINE<sup>1</sup>

## ФАКТОРИ ВПЛИВУ НА ФОРМУВАННЯ ІННОВАЦІЙНИХ СПІЛЬНОТ В УМОВАХ БЕЗПЕКООРІЄНТОВАНОГО СТАЛОГО РОЗВИТКУ ПІДПРИЄМСТВ В УКРАЇНІ

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The article is devoted to the identification and analysis of factors influencing the emergence and further development of innovative communities within both a separate region and the country as a whole. The article analyzes three types of economic development proposed by the World Economic Forum and identifies the main factors inherent in each of them. It is shown that the quantitative growth of innovations will not immediately lead to an increase in the competitiveness of innovative communities. This is due to the main two reasons: the need to adapt to the new order and the lack of market value of many modern innovative technologies. The authors analyzed statistical data on the complexity of innovative activity in Ukraine and revealed the unevenness of various types of innovation. It was established that in order to speed up the diffusion of innovations in society, a necessary condition is the readiness to accept them. In this regard, the needs of a modern innovator working in small and medium-sized enterprises as the main subjects of idea generation have been determined.

**Key words:** innovations, innovative communities, influencing factors, marketing innovations, types of economic development.

Теперішня ситуація, що склалась в економіці України та й в державі в цілому вимагає від суб'єктів господарювання пошуку нових шляхів нівелювання ризиків, стабілізації власного становища та можливостей для подальшого розвитку. З цією метою підприємства повинні розвивати свій інноваційний потенціал та підлаштовуватись під чинники впливу. Однак розвиток інноваційної діяльності підприємств на сьогодні складно уявити без активної взаємодії з органами влади, а також інноваційно-активним населенням. Така взаємодія влади, бізнесу та населення можлива за рахунок формування інноваційних спільнот в межах як окремого регіону, так і країни в цілому. І важливим аспектом в цьому питанні є виявлення та аналіз тих факторів що чинять вплив на появу та подальший розвиток таких спільнот, що і є метою даної статті. В статті проаналізовано три типи розбудови економіки, що пропонуються Світовим економічним форумом. Виявлено, що на початку розвитку будь-якої спільноти необхідними факторами є природні ресурси та некваліфікована праця, а також добре функціонуючі організації приватного та державного сектору, розвинута інфраструктура

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та більш менш стабільне макроекономічне становище. Для подальшого розвитку необхідними факторами є кваліфікована робоча сила, ефективні продуктивний, фінансовий та ринок праці, а також можливість використовувати переваги наявних технологій на внутрішньому та зовнішньому ринках збуту. В результаті узгодження своєї діяльності з усіма цими факторами спільноти можуть переходити на етап інноваційного зростання, коли факторами впливу є якість роботи навчально-дослідницьких установ, розмір витрат на НДДКР, рівень співпраці бізнесу, навчальних установ та вдали, рівень державних замовлень передових технологій та наявність висококваліфікованих спеціалістів. В роботі також показано, що кількісне зростання інновацій не призведе одразу до підвищення конкурентоспроможності інноваційних спільнот. Це пов'язано з головними двома причинами: необхідністю адаптації до нового порядку та відсутності ринкової вартості багатьох сучасних інноваційних технологій. Доведено, що на сьогодні суб'єкти господарювання повинні реалізовувати свою інноваційну діяльність комплексно, тобто виробляти та впроваджувати не лише технологічні, але й маркетингові та організаційні інновації. Авторами проаналізовано статистичні данні стосовно комплексності інноваційної діяльності в Україні і виявлено нерівномірність різних видів інновацій. Встановлено, що для пришвидшення дифузії інновацій в суспільстві необхідною умовою є готовність їх прийняти. В зв'язку з цим встановлено потреб сучасного інноватора, що працює на малих та середніх підприємствах, як головних суб'єктів генерування ідей.

**Ключові слова:** інновації, інноваційні спільноти, фактори впливу, маркетингові інновації, типи розбудови економіки.

**The problem.** The consequences of the corona virus epidemic, the military situation in the country and, in general, the unstable economic and political situation in the country are forcing business entities, households and the authorities to look for new ways to stabilize their own situation and its further development. Only by coordinating the interaction of all layers of the economy (government, business, population) will it be possible to improve the situation in each individual region, taking into account its specific features, as well as using the existing and innovative potential. Such interaction is possible due to the formation of innovative communities within the region, which would be able to level current obstacles and develop, adapting to modern factors of influence associated with the fourth industrial revolution.

**Analysis of research and publications.** The question of the importance of the formation and development of innovative communities has been raised by many scientists around the world, such as: Anthony S., Eyring M., Gibson L. [1], Bowonder B., Mani S. [2]; Cassiman B., Valentini G. [3], Chesbrough, H., Bogers M. [4], Dougherty D. [5], Lim M., Bee Yong Ong [6], Pouwels I., Koster F. [7], Power R. [8], Grimaldi M., Rogo F. [9], Coakes E., Smith P. [10], Omelianenko O.M. [11], Omelianenko V.A. [12] etc.

**Isolation of previously unresolved parts of the general problem.** However, in these works, the problems of the essence of innovative communities, their main characteristics and content are solved. But it is impossible to consider the successful activity of innovative communities without the influence of factors that contribute to it or hinder it.

Thus, **the purpose of the article** is to analyze and form a group of influencing factors on the successful formation and further development of innovative communities.

**Research results.** It is possible to talk about the sustainable development of territories only when there is a certain basis for development in general. The evidence in favor of this is a number of studies and publications of various global organizations, which have as their goal a constant analysis of the reasons for the success of innovative activities of both individual business entities and regions and countries as a whole. So, for example, according to the report on the global competitiveness index, which is published annually based on the results of the World Economic Forum, three types of economic development at the level of an individual country or region are distinguished:

– factor-driven economy – when the basis of development is available capital – unskilled labor and natural resources. Competitiveness typically depends on well-functioning private and public sector organizations, developed infrastructure, a stable macroeconomic environment, and a healthy workforce with at least a basic education.

As the competitiveness of the country/region increases due to the available capital, labor productivity will increase, and wages will increase at a faster rate. And when the quality of products increases due to the establishment of more efficient production at unchanged prices, then we can talk about the next stage of development.

– efficiency-driven economy – the main growth factors at this stage are: higher education

and advanced labor skills, efficient product markets, an efficient labor market, a developed financial market, the ability to take advantage of available technologies and a significant domestic and foreign sales market.

And for further growth in the standard of living of the population and, accordingly, wages, a necessary condition is the ability of the business environment to compete due to the use of the most complex production technologies and the generation of new innovative processes. Then we can talk about the next stage of growth.

– innovation-driven economy – the basis of which is the experience of the business environment and the focus on innovation, and the main factors of growth are: the quality of work of educational and research institutions, the size of enterprises' expenditures on R&D, the level of cooperation between educational institutions and industry, the level of state orders for advanced technologies, the availability of highly qualified scientists and engineers, and the level patent applications.

It is worth noting that the constant production of innovations and orientation towards their advantages for the development of the country's economy is not an end in itself. Business entities are forced to intensify innovative activities to win the highly competitive struggle to achieve effective sustainable development. Therefore, according to the results of last year's World Economic Forum, the ratio of weights of various factors of competitiveness and various types of development was presented, which can be fully included in proposals for the development of individual territories (Table 1).

As can be seen from the Table. 1, the focus on improving efficiency still has the greatest importance. Evidence in favor of this is the fact that various scientists point out that today's innovation boom will not lead to a rapid increase in competitiveness. It takes some time. This is due to two main reasons:

1. First, in order for the system under the influence of the fourth industrial revolution to work effectively, time is needed for its adaptation to the new order. After all, as a result of the impact of the digital revolution, a completely new system will be born, and not all subjects and people will benefit. So, for example, decades were needed in the past to ensure productivity growth from the electrification of production. For this, a number of additional innovations were introduced, such as the reorganization of production lines, etc.

2. Secondly, the advantages of digital services (including search engines, e-mail, digital maps, social networks, etc.) do not have a market value and are not recorded in the overall result of the activity and performance evaluations. Although all evidence suggests that they create overall value for end users.

Thus, it follows from the above that the prerequisites for the post-war sustainable development of territories are factors that meet not only the modern requirements of the development of industries 4.0, but also the basic factors of competitiveness. So, we should talk about the complexity of the activities of innovative communities within the territories. To analyze the complexity of innovative activity, we will analyze the innovative activity of business entities by types of innovation. According to the results of

Table 1

**Ratio of weights of factors of competitiveness and types of development**

Stage of economic development	Focus on factors	Transitional stage to the next stage	Orientation to efficiency	Transitional stage to the next stage	Focus on innovation
Type of development	Catching up		Leader		Outstripping
GDP per capita, USD USA	< 2,000	2,000-2,999	3,000-8,999	9,000-17,000	>
Weight of basic capital	60%	40-60%	40%	20-40%	20%
Importance of efficiency improvement	35%	35-50%	50%	50%	50%
The importance of innovation	5%	5-10%	10%	10-30%	30%

the analysis of the state statistics of Ukraine, the following conclusions can be drawn:

1. To date, only 8.4% of Ukrainian enterprises are engaged in innovative activities. In the countries of the European Union, this indicator is almost 50% on average.

2. In the last few years, the share of enterprises engaged in technological innovations is almost twice the share of those engaged in non-technological innovations (marketing or organizational). For the last analyzed period, their shares were 64.3% and 35.7%, respectively. Although in past years these shares were almost the same. If compared with the countries of the European Union, the share of enterprises with technological and non-technological innovations in them is almost the same.

3. Among the enterprises engaged in technological innovations, there is a clear trend towards the growth of those working with process innovations (in the last analyzed period their share reaches almost 50%) and the decrease of those working with product innovations (falling from 20% to 10%). Accordingly, the share of those enterprises that worked with both process and product innovations decreased somewhat. The share of enterprises with continued or interrupted innovative activities has fallen significantly.

It is also worth noting that recently the share of marketing and organizational innovations in the world has increased significantly. After all, consumer needs are growing, their nature is changing. Therefore, companies must constantly find new ways to promote their products and build loyalty to their products. And it is marketing innovations that allow them not only to maintain their positions, but also to stay ahead of their competitors.

If we analyze the innovative activity of enterprises by types of economic activity, we can see that both industrial enterprises and enterprises of the service sector are engaged in innovative activity to almost the same extent. This is a rather positive fact, because the post-industrial society that currently dominates in the economically developed countries of the world precisely presupposes the dominance of the third and fourth sectors of the economy. At the same time, the active development of the service sector is a necessary condition for the further development of the mining and processing sectors. It is also worth noting that among processing industrial enterprises there are more technological innovations than enterprises with non-technological innovations.

Although, as already mentioned, in the countries of the European Union, this division is more even.

For wide spread (diffusion of innovations) it is necessary that the population, government and business entities are able to accept them.

The process of demand formation requires a significant number of measures, which begin with convincing the population that the identified needs are really theirs, and the product/service offered can effectively satisfy these needs. From the beginning of the release of information about the innovation beyond the boundaries of the manufacturing enterprise, the process of diffusion of the innovation begins – the process of spreading the novelty in society. And the speed of this process depends on many factors, but to a greater extent on the readiness of the population to accept innovations.

Taking into account that the main subjects of implementation of innovative activities in the country are small and medium-sized enterprises (SMEs), we will dwell in more detail on the analysis of the representatives of the population who work for them. Therefore, according to the Annual Assessment of the Business Climate of Ukraine, today's portrait of SME representatives is as follows. The average age of representatives of SMEs is 45 years. At the same time, only 16% of the total number of young entrepreneurs aged 18–35 years. And as you know, they are the main generators of radical innovative ideas. Most of all, they are represented in the sphere of services, trade and repair, and are almost not represented in construction, agriculture, industry and transport and communications. Among the management staff of SMEs, 76% are men, 24% are women. Among the total number of interviewed representatives, 53% are men, 47% are women. At the same time, male managers rate their level of management skills better than women. Accordingly, women managers more often than men read professional literature and attend seminars in order to improve their qualifications as managers. In addition, women managers understand to a greater extent the importance of market factors for innovative development. In the opinion of almost 70% of the surveyed women, insufficient demand is the main problem for business development.

Today, the majority of SMEs work in local markets, only 12% are exporters to other countries. Although in the past period this indicator was 9%. At the same time, another

15% of SMEs plan to enter the EU market in the coming years.

As for the business skills of SME representatives, among all respondents, 44% consider their level of business skills to be sufficient. At the same time, managers of medium-sized enterprises consider themselves to be more experienced. As for the branches, representatives of the construction sector – 63% of all respondents, the service sector – 50%, the transport and communications sector – 48%, the agricultural sector – 46%, industry – 44%, IT sector – 39% consider themselves to have a sufficient level of business skills. and trade and repair – 33%.

In order to improve their business skills, SME managers most often:

- read professional literature, the press – 43%;
- cooperate or communicate with experienced managers – 35%;
- attend seminars, educational events – 24%;
- take online courses – 12%;
- obtain a higher, postgraduate or other education – 10%;
- do not improve their management skills at all – 7%.

What employees are needed according to SME managers for work: technical/labor specialties – 32%, specialists in communications

and product promotion on the market – 15%, economic specialties – 12%, managers – 10%, IT specialists – 9%, drivers /logistics, agricultural workers, sales consultants – 6%, lawyers – 5%, all are enough – 12%.

Today, only 15% of SMEs are members of at least one business association. Others do not join for the following reasons: they do not need it – 48%, believe that business associations protect the interests of a limited circle of people – 26%, do not see business associations that would meet their interests – 21%.

At the same time, the types of services that SMEs are interested in from business associations include: information services – 44%, legal assistance – 33%, training (trainings, seminars, etc.) – 33%, advocacy and advocacy – 28%, search for new trading partners – 27%, searching for new trading partners abroad – 20%, assistance in solving conflict situations during export/import – 13%.

**Conclusion.** Thus, it should be noted that in order to ensure the development of regions as well as the state as a whole, the creation of innovative communities is a necessary condition. From these positions, the government, business and population must adapt to modern challenges and, due to the activation of innovative activities, influence the development of the territory where they are located.

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