DOI: https://doi.org/10.32782/2521-666X/2024-85-23
UDC 338.931

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INNOVATIVE DEVELOPMENT AS A FACTOR OF ECONOMIC SECURITY OF ENTERPRISES IN THE PERIOD OF STRUCTURAL CHANGES

ІННОВАЦІЙНИЙ РОЗВИТОК ЯК ЧИННИК ЕКОНОМІЧНОЇ БЕЗПЕКИ ПІДПРИЄМСТВ У ПЕРІОД СТРУКТУРНИХ ЗМІН

The article studies the importance of innovation development as a key factor of ensuring economic security of enterprises in the context of structural changes. Attention is paid to the relevance of introducing innovations in the period of economic instability, which is due to the dynamism of market conditions, increased competition and the impact of crisis phenomena on the functioning of business. It is noted that innovations are a strategic resource that allows enterprises not only to adapt to external challenges but also to create competitive advantages. The main theoretical aspects of economic security of enterprises are considered, including its essence, components and factors of influence. The role of innovations in the formation of long-term sustainability and stability of enterprises, as well as their ability to provide an effective response to changes in the internal and external environment is highlighted. Particular attention is paid to structural changes that occur in times of crisis and their impact on economic security. The study emphasises the need for a systematic approach to managing innovation processes, including planning, implementation and monitoring of innovations. It analyses modern methods of supporting innovative development, such as attracting investment, digitalising business processes and developing partnerships. It also outlines potential risks associated with the introduction of innovations and ways to minimise them. Thus, structural shifts in innovation activity can be of different directions, so they require management interventions to improve the efficiency of innovation activity of economic systems by increasing the sustainability and security of development in the long term. The practical significance of the work lies in the proposed approaches to improving the economic security of enterprises by strengthening their innovation potential. The results of the study can be used to formulate strategies for the development of enterprises focused on long-term sustainability in a dynamic market environment. Thus, the article emphasises the importance of integrating innovations into the business strategies of enterprises as a means of ensuring their economic security and increasing their competitiveness in the face of modern challenges.

Key words: *economic security, innovative development, structural changes, enterprises, crisis, level.*

У статті досліджується значення інноваційного розвитку як ключового чинника забезпечення економічної безпеки підприємств в умовах структурних змін. Увага приділяється актуальності впровадження інновацій у період економічної нестабільності, що зумовлено динамічністю ринкових умов, загостренням конкуренції та впливом кризових явищ на функціонування бізнесу. Зазначено, що інновації є стратегічним ресурсом, який дозволяє підприємствам не лише адаптуватися до зовнішніх викликів, але й створювати конкурентні переваги. Розглядаються основні теоретичні аспекти економічної безпеки підприємств, включаючи її сутність, складові та фактори впливу. Виділено роль інновацій у формуванні довгострокової стійкості та стабільності підприємств, а також їх здатність забезпечувати ефективне реагування на зміни у внутрішньому та зовнішньому середовищі. Особлива увага приділена структурним зрушенням, які виникають у період кризових явищ, і їхньому впливу на економічну безпеку. У дослідженні наголошується на необхідності системного підходу до управління інноваційними процесами, що включає планування, впровадження і моніторинг інновацій. Аналізуються сучасні методи підтримки інноваційного розвитку, такі як залучення інвестицій, цифровізація бізнес-процесів та розвиток партнерських відносин. Також окреслюються потенційні ризики, пов'язані з впровадженням інновацій, та шляхи їх мінімізації. Таким чином, структурні зрушення інноваційної діяльності можуть бути різного напрямку, тому для підвищення ефективності інноваційної діяльності господарських систем за рахунок зростання стійкості і безпеки розвитку в довгостроковому періоді вони потребують керуючих впливів. Практична значущість роботи полягає у запропонованих підходах до підвищення економічної безпеки підприємств шляхом посилення

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інноваційного потенціалу. Результати дослідження можуть бути використані для формування стратегій розвитку підприємств, орієнтованих на довгострокову стійкість у динамічних умовах ринку. Таким чином, стаття підкреслює важливість інтеграції інновацій у бізнес-стратегії підприємств як засобу забезпечення їх економічної безпеки та підвищення конкурентоспроможності в умовах сучасних викликів.

Ключові слова: *економічна безпека, інноваційний розвиток, структурні зміни, підприємства, криза, рівень.*

Formulation of the problem. The study of structural shifts in the transformational economy and the formation of an innovative type of development is determined by the need to modernise the implemented market model, to restructure the domestic economy in the context of overcoming the global financial and economic crisis and in line with the trend of updating the structure of the economy on the basis of advanced achievements observed in highly developed countries.

Integral systemic qualities change as a result of crisis situations under the influence of many factors, among which structural shifts, which are not well understood, play a significant role. This means that structural shifts accompanying the implementation of innovative activities can be considered as carriers of the impulse for the transition of economic systems to a new level in the process of their development.

Analysis of recent achievements and publications. A large number of domestic and foreign scientists have been and continue to be engaged in researching the problems of innovative development of regional enterprises under the influence of various transformations at different levels [1–19]. However, in our opinion, insufficient attention has been paid to the impact of structural changes during the crisis on these processes.

Based on the above, we can formulate the **purpose** of the study, which is to consider structural changes as a basis for innovative development of regional enterprises in the crisis period.

Presentation of the main material. Any structure is always characterised by parts of old relationships and the beginnings of future ones. Various structures coexist with each other in the process of innovation development and adoption of innovative solutions. All of this affects the development of the economic system, shapes its features and determines the complex of managing its industrial innovation risks.

In the foreign economic literature, there is a concept of «restructurations», which literally means structural alterations, changes [5]. In Ukrainian, this concept is equivalent to the word «restructuring», which means planned structural changes in economic systems of different levels. Any structure is characterised by such processes as adjustment and transformation. At the first stage, the emergence of new structures is cyclical, because over time, when a new integrity emerges, the links are transformed and everything repeats from the beginning. At the same time, there is a change in the security of the system, the nature of which is determined by both the state of the system itself and the related features of its structural development processes.

Structural shifts are manifested in economic systems of different levels: at the level of the individual and household (nano-level), enterprise and firm (micro-level), industry and region (meso-level), national and global economy (macro-level) [6]. In the context of post-conflict transformation, the article pays special attention to the reproductive structure of the economic system (covering the relations of production, distribution, exchange and consumption), the structure of production assets, labour resources, domestic consumption (especially in terms of the security of innovative reproduction), savings, investments made in the economic system under consideration.

It is necessary to highlight the category of «structural change» among similar and related concepts. The perception of a structural shift in the economy as a dynamic process can be compared with other changes of a similar nature that occur in the economic system: cycles, fluctuations, disturbances.

The very life of the system, its existence in the external environment leads to the emergence of fluctuations and disturbances, which in the course of development over time develop into changes of a deeper level and lead to the transformation of the system, the emergence of new qualities, and a structural shift [3]. The nature of each stage is strongly influenced by the external environment and the outcome of the previous dynamic process. This is clearly reflected when considering the algorithm for changing the sustainability of an innovative economic system in the process of its structural transformation. Initial perturbations and fluctuations with a sufficient level of security of innovative development will allow the system to maintain its innovative characteristics.

Their transition to the internal environment of the organisation under an effective management system will lead to the beginning of the formation of a new quality of sustainability by improving the innovative characteristics and safety indicators of the innovative activity of the production and economic object. The formation of new links and emergence of transitional structural forms will not reduce innovation characteristics only if the management system has adaptation mechanisms to reduce the negative effects of disturbances arising from these structural processes. At the same time, the initiation of changes in integrated and technologically related associations will lead to a synergistic effect from the structural shift by increasing the security of

the innovation activities of the entire association and creating conditions for further development.

In addition, the fundamental difference between structural changes and the above processes is the presence of a resultant (static) component and the fact of changes in the system of relations, the needs of business entities and the allocation of production resources. The latter quality is not characteristic of protests and superficial fluctuations. We offer the following classification of economic structural changes in the crisis period:

1. Grouping of structural changes by history – at each stage of history, there are economic structural changes inherent in it (for example, changes in the emergence and flourishing of feudalism or capitalism in the economy).

2. By geographical segmentation, shifts are subdivided into changes in the economic structure of different regions and other geographical units (with their territorial and administrative arrangements). Structural changes, like the structure of the economy itself, are characterised by a spatial aspect.

3. Nano-, micro-, meso-, and macro-shifts are distinguished by the scope of elements of the economic system.

4. External and internal structural changes can be distinguished in relation to a particular economic system. In the current conditions of internationalisation and globalisation of economic life, the interconnection, interaction, interpenetration and mutual flow of these structural changes in the system of integrated associations, national economies, transnational corporations and international property is becoming increasingly important.

5. According to the pace, use of time, scale of change and depth of action, there is a classification into evolutionary and revolutionary shifts. Since economic activity is continuous, the essence of structural adjustments and shifts has two aspects: on the one hand, continuity, and on the other hand, separation into stages and stages.

The content of structural changes in the economy can be expressed through their functions:

– through the implementation of the mechanisms of structural changes, a qualitative transition in the development of economic systems occurs due to the formation of a new level of their innovation sustainability;

– through structural changes, the law of rising needs is implemented, which at the present stage of development is supplemented by the law of their internationalisation (the need for security of innovative development of economic systems as a basis for achieving the efficiency of their innovative activity is finally established);

– one of the most important functions of structural changes is the distribution and redistribution of resources (capital, labour force, etc.) between different sectors of the economy (in modern conditions this is related to the efficiency of innovation activity, which is determined by the level of security of innovation development of economic systems);

– Structural shifts in the economy perform the function of reconciling the structure of consumption, which reflects changes in the system of growing needs, and production, which expresses the structure of allocation and distribution of limited resources (production factors) between different sectors of the economy. The largest economic systems in competitive areas have great opportunities to improve innovation sustainability;

– Structural changes in the economy form the main natural and material and cost proportions of reproduction and create external conditions for the formation of the level of effective innovation development based on the principles of innovation sustainability;

– Structural shifts are used to introduce the achievements of scientific and technological progress into the economy, and to introduce innovations whose effectiveness is determined by the ability of systems to create qualities for the expanded reproduction of innovations.

As mentioned above, the structural shifts in the innovation economy have a twofold nature. On the one hand, according to the object of study, they are a process driven by an unmet need, and the underlying unrealised interest of economic systems to increase innovation sustainability. On the other hand, they are the result of the development of the system structure, reflecting a certain level of efficiency of innovation development.

This potential level is the outcome of development and a certain starting point for further progress. This means that all systems, depending on the nature of development and the perception of structural change (direct or indirect), can be divided into systems of direct influence (initiating systems) and systems of indirect or indirect influence (perceiving systems). At the same time, one and the same system can experience both direct and indirect impact of a structural shift.

This duality of structural changes determines their special place among other economic phenomena in the context of innovative changes and post-conflict transformations and allows a comprehensive study of the dynamic state of stability and resilience of the economic system in the process of implementing safe innovation activities. Thus, any structural changes in the economic system can be characterised in terms of the scale, direction, speed and intensity of the impact on the economic system in the process of innovation development.

In the modern economy, there are several approaches to identifying the causes of structural changes. For example, according to the theory of Ukrainian economist Yuriy Yakovets, any changes in the economy are based on cyclical dynamics [7]. Undoubtedly, innovation development is based on cyclicality, however, the nature of economic structural changes is rather non-cyclical. The structure of the cycle in the primary economy is characterised by nonlinear structural dynamics. Therefore, the completion of structural changes leads to the transition of economic systems, subject to effective management, to a qualitatively new level by changing their innovative properties, which leads to increased stability and resilience of the systems.

Structural changes are undoubtedly transformative. In the context of innovation activities, this leads to the fact that uncontrolled structural shifts may not lead to further intensification of innovation development, but, on the contrary, may lead to its attenuation or curtailment due to the emergence of strong disturbing effects that reduce the effectiveness of innovation.

In this regard, it is possible to identify the general features of structural changes that are the impetus for further innovative development, where they acquire certain specifics:

1. Comprehensiveness or involvement of changes in all elements of a given production system, and the changes that take place should generally increase the innovative potential of the system, creating a basis for further innovative development.

2. Scale, which means that the consequences of the shift will spread over time beyond the boundaries of the system in question, restructuring higher-level systems, giving them the character of innovation and changing the innovation sustainability and, as a result, the effectiveness of innovation activities of both individual economic systems that initiate the shift and the entire national system as a whole.

3. The transformational nature of the shifts, which shows that structural shifts occur in the process of system development, leading to a change in its structure, the emergence of new elements and/or new laws of their interrelations. In this case, the change in structure forms a new approach to the organisation of innovation processes, the formation of an innovative culture of economic systems and channels for the distribution of innovative products and technologies, which contribute to the growth of innovation receptivity and increase the innovation activity of systems.

4. The quality of the changes is determined by the presence of new systemic integral qualities (innovation sustainability, resilience) arising in the process of transformation of the system structure, which should lead to a two-level increase in the innovation susceptibility of the studied production system: as a result of the structural change itself and due to the overall increase in the innovation susceptibility of higher-level systems.

Thus, structural shifts in innovation activity can be of different directions, so they require management interventions to improve the efficiency of innovation activity of economic systems by increasing the sustainability and security of development in the long term. In the long run, with the creation of such management and maintaining the growth rate of their efficiency, structural processes allow to form a self-developing innovative economic system.

Structural shifts can be classified into innovative, neutral and regressive according to the nature of their consequences. Neutral structural changes are those changes in the internal structure and quality of the system that lead to the preservation of the existing level of its innovative stability. Regressive ones, in their turn, lead to the loss of existing results of innovation activity and the curtailment of the system's innovation potential.

In the framework of the study, the category of innovative structural shifts includes such changes in the internal structure of economic systems of different levels that are a transformation of the existing laws of interrelations between its elements, and lead to the emergence of qualitatively new integral system qualities (including innovation sustainability), increase the pace and efficiency of innovation development of the system. In this regard, innovative structural shifts acquire the following specific features: irreversibility, evolutionary nature, and outstripping development. In the process of innovation activity, an irreversible transformation of systems takes place, which is consolidated and ends with a change in structure, the emergence of systems of a new qualitative level. Changes in the innovation potential of the system and its further development on the basis of structural changes form the evolutionary nature of the shifts, and the ability to create an impetus for further innovative development of the system determines its leading character.

Thus, structural changes initiated by innovations have an innovative character at their inception, which can lead the economic system to a new level of innovation sustainability.

The process of innovation implementation in the course of its life cycle forms the preconditions for the next change in the structure. The level of existing innovation sustainability and resilience of the economic system sets the vector of its development in the process of structural change, creates conditions for preserving the innovative nature of further development. In general, the process of innovation activity of an economic system is a set of innovation cycles of individual products, which are implemented through selected or developed innovation projects.

The nascent stage of innovation is, in fact, the process of implementing an already realised structural shift, since the implemented innovation process requires the system to restructure its structure and develop new qualities (the level of innovation sustainability and resilience, which is formed on the basis of the existing one due to the system's transition to a new structural form). This process develops at the stage of the initial spread of innovation in the economic space.

But at the same time, the preconditions for the next structural shift begin to form, the basis for its implementation is being laid, and the nature of future changes in innovation sustainability and the viability of the economic system is being determined. The stage of intensive diffusion of innovation is already a stage of active formation of conditions for the implementation of the future structural shift (finalisation of the innovation sustainability and resilience of the economic system), in the process of which the constraints within which the future change in the structure of the system will take place are formed.

At the stage of innovation maturity, the system realises the need to implement structural changes and begins to look for new organisational forms for its implementation, relying on the existing level of innovation sustainability and resilience. Thus, preparations are being made for the start of the next structural shift. Routinisation of an innovation means that it becomes a traditional process for the system. At this stage, the system must achieve a certain level of competence and innovation sustainability (with a certain level of resilience) to overcome internal resistance and start a structural shift.

The process of displacement of an old innovation by a new product coincides with the emergence and spread of an innovation and is both the final realisation of an overdue structural shift and the emergence of a new innovative level of the economic system. Thus, the process of innovation itself creates the conditions for further progressive development, but the impact of the external environment and internal resistance of the systems themselves dampens the innovation impulse, leading to a decrease in the effect and the formation of regressive trends. These phenomena are overcome by management based on the innovative sustainability and resilience of the economic system, which are transformed in the process of further structural changes. In addition, it is worth noting that structural shifts arising within the framework of innovation activities in the course of their development initially lead to an increase in entropy. Management influence is comprehensively, consistently and timely exercised in the process of transformation of structural changes, taking into account the existing level of innovation sustainability and resilience of the economic system, which allows to effectively implement the transition to its new level, leading to increased organisation and efficiency of all processes and a decrease in the level of entropy.

Conclusions. Thus, in the framework of innovative development of economic systems of different levels, there is an objective need to develop new approaches to managing structural shifts in innovation activity. The nature and direction of these shifts, formed by means of management, should lead to the achievement by the economic system of a new level of innovation sustainability and resilience, in order to increase the efficiency of innovation activity.

All of the above makes it possible to distinguish innovative structural shifts into a special category, which includes such changes in the interrelationships of the elements of the economic system that allow it to achieve a new level of systemic qualities and ensure the continuity of its innovative activity. In this regard, the structural changes that occur in the process of innovation activity of economic systems acquire the following specific features: irreversibility, evolutionary nature, and outstripping development. This requires special approaches to the creation of a management system to improve the efficiency of implemented projects on the basis of increasing the innovation sustainability and resilience of economic systems formed in the conditions of safety of their innovation activities.

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