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MODELING INNOVATION RESULTS WHEN DEVELOPING DIAGNOSTICS MECHANISM OF THE ENTERPRISE ECONOMIC SECURITY

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The article deals with the theoretical and methodological foundations of modeling the results of innovation processes when developing the enterprise economic security diagnostics mechanism in the spectrum of implementing and using methods of system-comprehensive as well as structural and functional diagnostics when controlling the generalized condition of the business protection in the context of ensuring security of innovative, financial and credit, and investment activity.

Key words: innovation process, innovations, enterprise, economic security diagnostics, system-comprehensive diagnostics, structural and functional diagnostics.

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МОДЕЛЮВАННЯ РЕЗУЛЬТАТІВ ІННОВАЦІЙНИХ ПРОЦЕСІВ ПРИ РОЗРОБЛЕННІ АПАРАТУ ДІАГНОСТИКИ ЕКОНОМІЧНОЇ ЗАХИЩЕНОСТІ ПІДПРИЄМСТВА

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Розглянуто теоретико-методологічні засади моделювання результатів інноваційних процесів під час розроблення апарату діагностики економічної захищеності на суб'єкті господарювання відповідно до спектра запровадження та використання методів системно-комплексної та структурно-функціональної діагностики при контролюванні узагальненого стану захисту підприємницької діяльності стосовно забезпечення захищеності інноваційної, фінансово-кредитної та інвестиційної діяльності.

Ключеві слова: інноваційний процес, нововведення, підприємство, діагностика економічної захищеності, системно-комплексна діагностика, структурно-функціональна діагностика.

Problem statement

Innovation processes are known to occur in the space of any modern enterprise and are always connected with qualitatively new changes in technologies, organization of production or promote some

progressive changes of effective character, for example, concerning improvement of the methods of evaluation of their relevant spectrum of protection of economic activity. In other words a wide range of innovations should be considered the result of innovation processes at enterprises. In our case it concerns the problem of modeling and optimization of a number of innovations and the possibility of their use when developing system diagnostics' mechanism of such feature of an enterprise as economic protectability that will promote the achievement of more accurate results of its diagnostics and the formation of efficient approaches regarding their further control in the process of the evaluation of intermediate state of achievement of integrated economic security on the example of business entity.

Analysis of recent research and publications

Investigation of the latest scientific sources concerning applied use of the results of innovation processes in activity of an enterprise let us draw the conclusion about their versatility and differentiate their applied aspects. Most scholars such as Alekseev I.V., Amosha O.I., Zakharchyn H.M., Ilyashenko S.M., Krykavsky Ye.V., Kuzmin O.Ye., Lapko O.O., Moroz L.I., Petrovych Y.M., Serbenivska A.Yu., Chukhray N.I. and others have a great experience concerning the thorough analysis of innovation processes and further managing them as a part of the innovation development of enterprises under conditions of both pre-crisis and post-crisis economy.

Innovation development of enterprises – it is always a complicated process of formation and achievement of improved results in entrepreneurial activity that is aimed at the future. Serbenivska A.Yu. has her own interpretation of the innovation process in economic environment with which it is quite possible to agree, in her view “innovation process – is a set of sequential actions of intellectual creativity and human activities, aimed at adding worth and value to obtained final result with clearly specified parameters that are oriented at a long-term outlook” [1].

Further innovation development of an enterprise which should be understood according to [2, p. 23] as the process of a long management and introduced innovation methods of its evaluation, forecasting which rely on non-stop search for and use of new ways and spheres of implementation and protection of the potential of an enterprise in constantly changing conditions of internal and external environments within the formation and diagnostics' mechanism of economic protectability of business entity, depends on the quality of the final result.

Objectives

The purpose of the article is devoted to the disclosure of theoretical and methodological foundations of modeling of the results of innovation processes, their optimization and efficient use while developing diagnostics' mechanism of economic protectability of an enterprise in the spectrum of further control of the system of providing full economic protection at business entity when purposefully allocating on it an intermediate state of achievement of economic security, that is economic protectability of innovation, finance and credit and investment activity.

Materials

As it is known, all innovation processes in activity of an enterprise are initiated by certain branches of science: mathematics, computer science, physics, philosophy, etcetera, and are completed in the sphere of production, promoting various progressive changes of the development of entrepreneurship. It was determined that any innovations at business entities are born primarily by the needs of society and are the result of scientific researches using national and international experience in different spheres relying on technical, technological, organizational, economic, social and other innovations.

Creation of new and improvement of existent diagnostics' mechanisms of economic protectability of an enterprise as a part of system mechanism of the development of its diagnostics is the result of innovation processes that plunged into the formation of the condition of a long-term conservation of economic protection of business entity.

We can assume that the general condition of economic protectability of an enterprise is an integrated value, which reflects the level of protection of the state of competitiveness, liquidity, solvency, creditworthiness at once, fixing the performance of the properties of efficiency, reliability, flexibility, capacity, stability and sustainability that is correlated by systematic and nonsystematic types of risks of arrival of threats, the total value of which characterizes the quantitative measurement of possible deviations from the expected result – the acceptable level of economic protection on the basis of conformity of performance of the above mentioned properties taking into account controlled and uncontrolled factors, which act continuously on the part of the core activities of production and economic structure.

However it was investigated that the degree of protectability of an enterprise will grow rapidly, if on it there is observed the high efficiency of innovation processes, which along with their effective innovations positively influence the development and further expansion of innovation activity of business entity that, in fact, becomes one of the most important factors of increase of the level of competitiveness of industrial structure and its economic security in general [3].

Therefore, it must be assumed that the economic protectability of an enterprise – it is economic category that characterizes at the corresponding business entity a certain economic property that is based on the degree of absence of negative consequences of influence of threats or destabilizing factors of internal and external environments on its basic financial and economic results in terms of operational, financial and investment spheres of activity reaching in future an integrated level of economic security. This is enterprise's ability to minimize external and internal impact of threats on the preservation of a balance between its economic properties through which its stable normal functioning is achieved.

Condition of economic protectability always correlates with a satisfactory or unsatisfactory financial state of an enterprise that is reflected in the degree or level of its economic protection [4]. Like any other property of business entity, "economic protectability" being dynamic in time requires constant necessary diagnostics that is the development each time of the system of more innovation evaluative measures aimed at absolutely precise determination of the value of deviation of fixed current protection from permitted level of general condition of economic protectability of an enterprise under conditions of its normal further existence.

In general, diagnostics is the process of recognition and determination of negative (crisis) phenomena in the activity of an enterprise on the basis of noticed local changes, established dependences as well as especially notable phenomena of current entrepreneurial activity [5].

By itself the diagnostics of economic protectability of an enterprise is an innovation process, which is one of the branches of general innovation process of economic diagnostics (in connection with the specification of introduced category "economic protectability") that can be already regarded as competently independent guiding element of effective diagnostics of economic security of business entity under conditions of its innovation development.

The structure of generalized phased innovation process of diagnostics of economic protectability at an enterprise is shown in fig. 1.

The need for a diagnostics of "economic protectability" for an enterprise arises when there is set the primary objective, which lies in the establishment of quantitative and qualitative characteristics of the economic protection at a fixed time of functioning of business entity since it is known that both the condition of economic security, according to [6, p. 10] and its lower hierarchical section– condition of economic protectability - have dynamic character that is constantly changing depending on the counteraction to various threats that are recorded by a number of financial and economic indicators.

It was determined that it is easier to diagnose the condition of economic protection of an enterprise which is characterized by "self-regulating system of factors of production, financial and social character, that is capable regardless of external affects and internal condition of business entity, at the expense of mutual optimization of internal structure and internal ties, to provide a steady financial and production and technological activity in order to meet civil and social needs of both a team of certain enterprise and society as a whole" [7].

The problem of diagnostics of economic protectability of business entity lies in the fact that all threats that affect the change of its condition are eliminated or at least partially neutralized with a different speed since they spontaneously and quite randomly in a certain time period "bombard" in market conditions the financial and economic condition of an enterprise. These threats are recorded with difficulty even at the stage of detection and substantiation of certain economic crimes in production and economic structure.

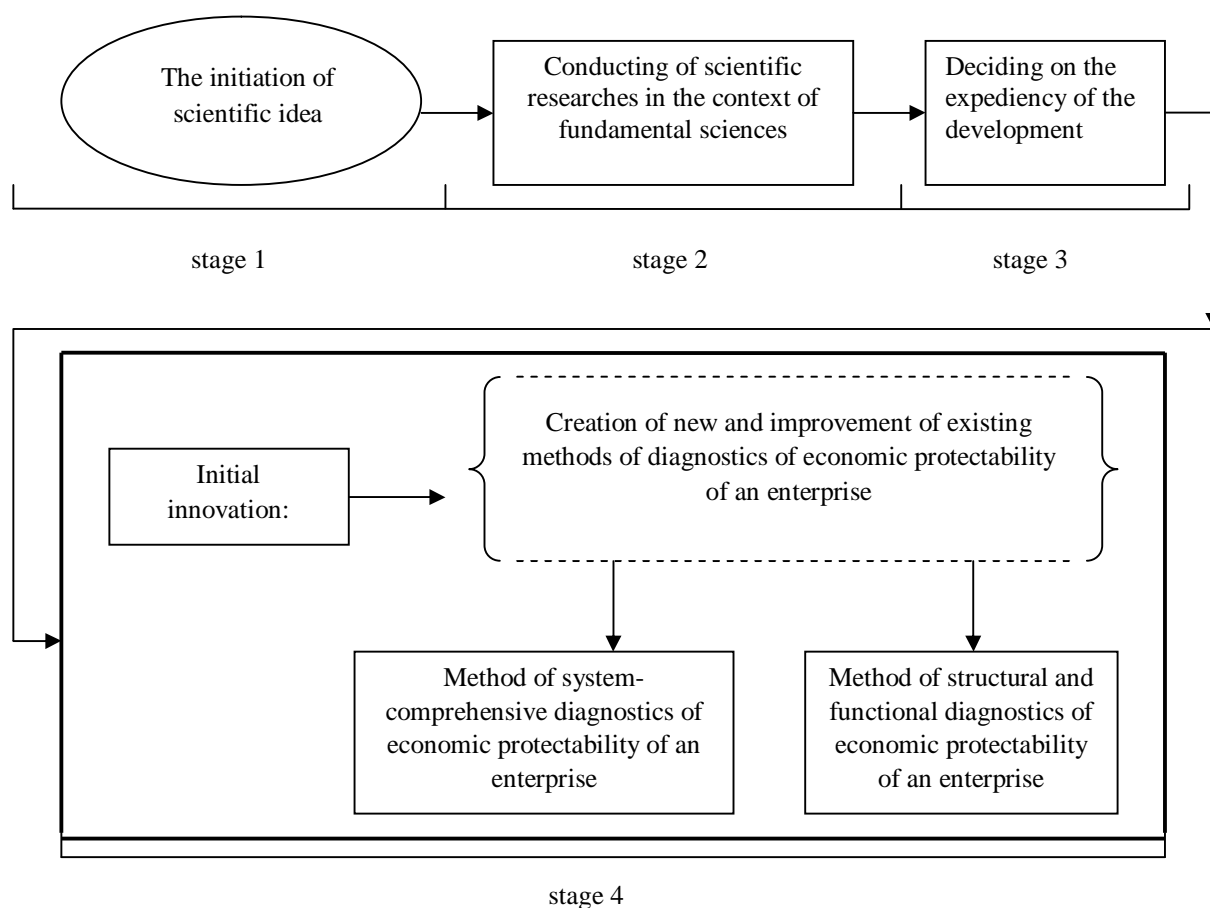


Fig. 1. The structure of phased innovation process when developing diagnostics of economic protectability of an enterprise

Therefore in our case, two methods of diagnostics of condition of economic protectability should be considered the result of innovation processes when developing diagnostics' mechanism of economic protectability at an enterprise, that is innovations (fig. 2): method of system-comprehensive and method of structural and functional diagnostics, allowing you to update an existing system of diagnostics of business entity in a narrower direction of the objective itself of economic diagnosing concerning the evaluation of intermediate state of achieving economic security [8, p. 284–298, p. 346–355].

In general the system diagnostics of economic protectability of an enterprise must be performed in such a way that even at early stages (due to systematic verification) by purposefully introduced functional components of economic protection it would be possible to detect (identify) and as quickly as possible to eliminate the negative impact of various types of destructive factors and, according to [9, p. 52], to take the necessary measures to prevent their harmful effect and causing economic losses to an enterprise.

As the researches show, the diagnostics can have three main functions: evaluation, diagnostic and searching [10], therefore the need for diagnostics of economic protectability of enterprise lies in the following tasks:

- recognition (evaluation) of the condition of economic protectability (vulnerability) of business entity on the basis of evaluative factors and introduced criteria of protection as a part of the process of control of ensuring economic protectability of an enterprise;
- detection of trends of possible changes of the condition of economic protectability on the basis of the diagnosed level of economic protectability;
- formation of the system of measures concerning recovery of the condition of economic protectability in the process of evaluation of the degree of “problematical character” of an enterprise by diagnosed level of economic protectability.

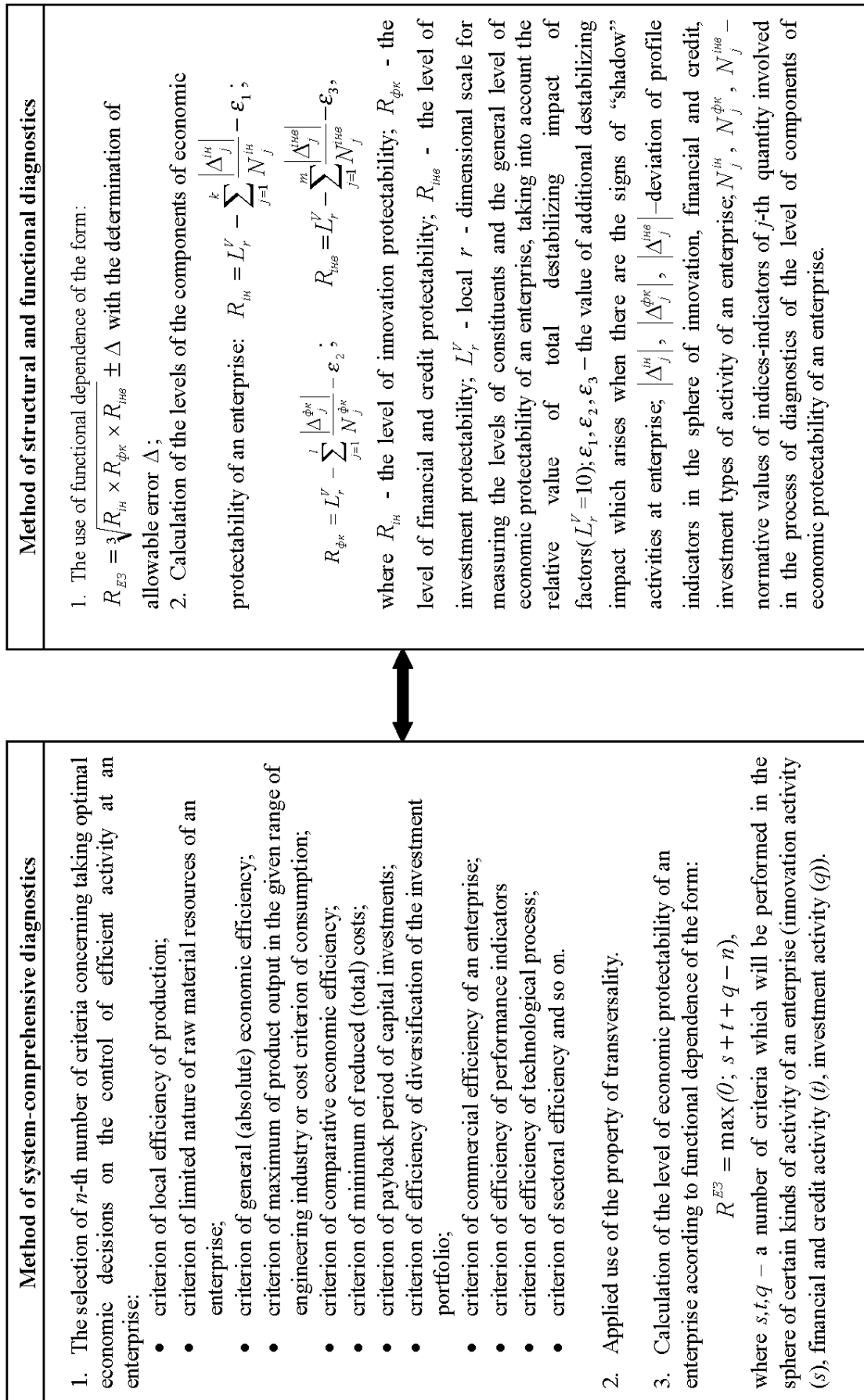


Fig. 2. Modeling of results of innovation processes when developing diagnostics of economic protectability of an enterprise

The notion “economic protectability” closely corresponds with the need for its diagnosing in the structure of financial and economic analysis of economic activity of a modern enterprise in the system of general economic diagnostics. This allows us to give the following definition of diagnostics of economic protectability of an enterprise. Diagnostics of economic protectability of an enterprise – is the process of detection and qualitative and quantitative evaluation of the value of confrontation to an impact of negative phenomena on financial and economic results of entrepreneurial activity owing to the developed control systems. They are based on system-comprehensive and structural and functional methods of recognition of compliance with the criteria (principles) of economic protection of an enterprise or deviation of profile indices-indicators from the allowed range of normative values in a complex system of differentiated components of an integrated economic protection in the structure of the course of both legal and illegal kinds of entrepreneurial activity. Significant deviations of financial and economic indicators from normative values can initially cause ordinary economic damage and gradual decrease of the level of economic protectability and later a complete loss of the integrated economic protection if the measures of neutralization of an impact of negative factors on the financial and economic activity of an enterprise are ineffective.

Conclusions

Thus, the innovations, namely the elements of the modeling of method of system-comprehensive and method of structural and functional diagnostics should be considered the results of innovation processes when developing diagnostics’ mechanism of economic protectability of an enterprise. Each of these methods can exist independently or complement each other forming system diagnostics of the intermediate state of the achievement of economic security of an enterprise simultaneously clarifying all the previous results of economic diagnostics. The use of system diagnostics as a consequence of modeling of innovation processes of evaluation and control of continuous state of economic protectability at an enterprise is always expedient when deeply analyzing the protective functions of business activity of any business entity.

Prospects of further researches

The expansion of the range of the results of innovation processes when developing diagnostics’ mechanism of economic protectability of an enterprise with additional modeling of priority measures of neutralization of business conflicts in the business environment is the prospect of further researches in the given direction. The application of these measures can timely affect the strategic settlement of the situation concerning the recovery of allowable state of economic protection of an enterprise.

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