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Тези доповідей

матеріали V науково-практичної конференції

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У збірнику наведено матеріали V науково-практичної конференції «Економічний розвиток і спадщина Семена Кузнеця». Представлено теоретичні та практичні результати наукових досліджень і розробок вчених щодо проблем економічного розвитку, циклічної динаміки соціально-економічних процесів, модернізації системи освіти, соціального розвитку суспільства, використання сучасних інформаційних технологій в управлінні системами, моделювання бізнес-поцесів.

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ADVANTAGES AND DISADVANTAGES OF USING INNOVATIVE RISK ASSESSMENT METHODS

When designing and implementing innovative projects, the enterprise is faced with uncertainty caused by the risk factors of the external and internal environment of the enterprise. In order to improve the effectiveness of strategic planning for enterprise development, it is necessary to pay attention to the evaluation of available information, which can lead to a risky situation. These situations are associated with the emergence of innovative projects, on the one hand, the loss of the effects of innovation and potential losses, and on the other hand, can lead to additional competitive advantages in the future and growth of the enterprise. This information is corroborated by research from consulting companies. For example, according to a research by The Standish Group International (the research analyzed 7,400 innovation and investment projects), 31% of projects ended or were out of time, or overruns planned resources, 53% of projects failed and goals were not met or modified. Only 16% of all projects can be considered successful, completed on time and without exceeding budget [1].

The improvement of theoretical, methodological and applied aspects of risk has been the subject of research by such world-renowned scientists as F. Knight, J. Neumann, G. Markovitz, O. Morgenstern, F. Modigliani, F. Ruth, J. Tobin, J. Hicks, V. Sharp and more. Nowadays, such scientists as O. Algin, I. Balabanov, I. Blank, E. Brigham, V. Vitlinsky, B. Gardiner, P. Grabovy, V. Granaturov, I. Ivchenko, S. Ilyashenko I. Zhuravleva, R. Kachalov, V. Kovalev, V. Lukyanova, Z. Lytvyn, A. Matviichuk, L. Rishchuk, L. Taranyuk, O. Ustenko, V. Cherkasov, D. Stefanych, O. Yastremsky and others pay attention to risk issues.

Risk assessment is one of the steps in the risk management process. It lies in the quantitative or quantitative estimation of the possible losses and the possibility of their occurrence. Qualitative risk assessment is carried out by predominantly expert methods in the minds of uncertainty and is used when comparing a limited number of alternatives to the decisions taken. Quantitative risk assessment involves a mathematical assessment of the degree and extent of risk. The acquired knowledge is included in the calculation that substantiates the economic effectiveness of the approved decisions.

The advantages of qualitative risk assessment include: providing visibility and a simplified understanding of the risk ranking process; finding a solution that takes into account the opinion of each expert; no need for accurate primary data, the ability to use it to solve all kinds of problems. However, the methods of qualitative risk assessment have their disadvantages, which should be attributed: the results are subjective and depend on the qualifications of the expert group created; low accuracy of calculations regarding the magnitude of the risk and the likelihood of their occurrence, which may lead to the choice of an inefficient method of risk management.

In turn, quantitative risk assessment methods make it possible to evaluate the mathematical assessment of the extent and degree of risk that can be used in further developing risk management; are more accurate than qualitative risk assessment methods. However, calculations using quantitative risk assessment methods are quite complex and time consuming; some methods require a large amount of accurate statistical information that can not always be used to assess the risks of innovation.

Let us consider in more detail the characteristics of qualitative and quantitative risk assessment methods, as well as the advantages and disadvantages of using them [2; 3; 4].

Method of brainstorming is used to generate possible solutions to problems by stimulating creative activity (separated from criticism). Among the advantages can be distinguished search for non-standard approaches, generate many options for solving the problem. Among the disadvantages can be distinguished the complexity of selecting the right expert team.

Methods of expert assessments is used to use the experience of experts in the risk analysis process, considering the impact of various factors. Among the advantages can be distinguished estimates of those types of risk that cannot be estimated by other methods, calculation percentage, no need for accurate primary data. Among the disadvantages can be distinguished that the results obtained are subjective, the accuracy of the estimate is low.

Methods associations and analogies is used to generate new ideas and suggestions by comparing the object under study with similar. Among the advantages can be distinguished utilization of the previous experience of operation in the absence of a clear base for comparison, used to assess the risks of a recurring project. Among the disadvantages can be distinguished ignoring the fact of development of any activity, low accuracy, a large database of information about previously started projects.

Delphi method is characterized by the anonymity of the findings of the members of the expert group and the managed feedback. Among the advantages can be distinguished that you make forecasts for which there is not enough theoretical basis at the time of making forecasts. Among the disadvantages can be distinguished processing a large volume of questionnaires, takes a long period of time.

Method of control questions is used to activate the creative process by answering pre-made questions. Among the advantages can be distinguished the versatility

of the method. Among the disadvantages can be distinguished that the results obtained are subjective, the accuracy of the estimate is low.

Method of morphological analysis is used to generate ideas for possible solutions. Among the advantages can be distinguished possible structural relationships and relationships between constituents are considered a system. Among the disadvantages can be distinguished that the results obtained are subjective, the accuracy of the estimate is low.

Method of critical values is used to calculate project critical values. Among the advantages can be distinguished identification of risk factors that bring the calculated value of the corresponding value of the performance criterion to the critical limit. Among the disadvantages can be distinguished the need for accurate primary data.

Sensitivity analysis (vulnerability). The impact of each risk factor on the performance criterion used is considered. It allows you to analyze what the risk will be under the influence of various factors. It is not possible to estimate what the value of the risk really is.

Monte Carlo method is a synthesis of the methods of sensitivity analysis and script analysis. It allows you to consider the distribution of the likely outcomes of the project. Among the disadvantages can be distinguished complexity of calculations, computer realization only.

Scriptanalysismethodisadevelopmentofthetechnique of sensitivity analysis of the project. Among the advantages can be distinguished an opportunity to evaluate the impact of a project on the possible simultaneous change of several variables due to the probability of each scenario. Among the disadvantages can be distinguished complexity, it takes a long time.

Analytical method is based on calculation of payback period, rate of return, profitability index and further comparison of projects by calculated indicators. Among the advantages can be distinguished the possibility of conducting a factorial analysis of parameters that affect risk and identifying the most influential.

Method of using decision trees. Possible scenarios are considered as the probability of certain situations occurring sequentially. It allows you to view and analyze different scenarios events. Among the disadvantages can be distinguished complexity of estimation of probability of origin of unfavorable minds, possibility of wrong choice of scenario of development of events.

Method for assessing financial stability is oriented to the identification of potential zones of financial stability and the corresponding risk zones in the sphere of production and financial activity of the enterprise. It allows one to enter one of the zones of financial stability and the corresponding risk. But it does not consider the impact of specific risk factors on the growth or reduction of the degree of project risk.

Normative method is based on the calculation of the system of financial ratios (autonomy, coverage, liquidity, etc.). It is easy to calculate and prompt. But it does not allow to take into account the nuances of a specific situation.

Method of using analogues is based on comparison with similar projects. Among the advantages can be distinguished utilization of the previous experience of operation in the absence of a clear base for comparison. Among the disadvantages can be distinguished ignoring the fact of development of any activity, low accuracy.

Statistical method is based on the theory of probability distribution of random variables. Among the advantages can be distinguished the possibility of obtaining the most complete picture at risk level. But the sources of risk origin are not analyzed, a large amount of static information is required, the accuracy of estimates is low, the complexity of calculations.

It should be noted that although most risk assessment methods can be used at all stages of the innovation project lifecycle, however, they may not produce the intended results and can only be used as one of the risk assessment steps at the relevant stage. Quantification methods, in their turn, cannot be used in the first stages of the life cycle of an innovation project (fundamental research, applied research and development work), since they require a large amount of accurate primary information for calculations, which is almost impossible to develop. innovative project. It should also be noted that although we can theoretically use methods to quantify the risks of innovation in the next stages, it is significantly dependent on the innovation project and how similar the next stages of this project will be to similar projects already implemented by a particular enterprise. Therefore, the feasibility and effectiveness of using each of the methods considered depends significantly on the characteristics and features of the particular innovation project.

It can be concluded that the use of different methods of assessing the risks of innovation, depending on the stage of the life cycle of innovative projects will increase the efficiency of the risk assessment process in enterprises implementing innovative projects.

References

[1] Exceeding value (chaos report). The Standish Group International Inc., 2014. [Online]. Available: http://www.standishgroup.com/sample_research_files/Exceeding%20Value_Layout.pdf. Accessed on: October 25, 2019).

[2] М. Балджи, *Економічний ризик та методи його вимірювання*: *навч. посібник*. Харків, Україна: Промарт, 2015.

[3] І. Доценко, "Методичні основи оцінки ризиків підприємницької діяльності як складової системи управління економічною безпекою підприємства", *Вісник Дніпропетровського університету. Серія* "*Економіка*", № 5 (4), с. 171-176, 2011.

[4] Т. Баталічева, "Аналіз методів кількісної оцінки ризиків", *Управління розвитком*, № 8, с. 106-108, 2014.

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