

Management Decisions as a Factor of Prevention and Mitigation of Internal Risks

Svitlana Yatsyshyn[†], Dmytro Kabachenko^{††}, Oleksandra Korchynska^{†††}, Olena Churikanova^{††††}, Lidiya Seniv^{†††††}

[†] Department of Accounting and Taxation, Faculty of Finance and Accounting, West Ukrainian National University, Ternopil, Ukraine

^{††} Department of Economics and Economic Cybernetics, Faculty of Finance and Economics, Dnipro University of Technology, Dnipro, Ukraine

^{†††} Department of Administrative and Financial Management, Institute of Administration and Postgraduate Education, Lviv Polytechnic National University, Lviv, Ukraine

^{††††} Department of Economy and Economical Cybernetics, Finance and Economic Faculty, Dnipro University of Technology, Dnipro, Ukraine

^{†††††} Department of Theoretical and Applied Economics, Lviv Polytechnic National University, Lviv, Ukraine

Abstract

In the current trends of uncertainty in the operating environment, companies should not only promptly respond to changes in external and internal factors affecting its competitive position, but also be able to assess their own reserves and potential for solving possible problematic issues objectively. Internal risks of the organization can become a significant obstacle to effective and profitable business. Regulation and prevention of internal risks is an integral part of effective management. Entrepreneurship is always associated with risks due to a number of factors. Their impact on performance cannot be accurately determined in advance. Modern project and program management methodology offers different approaches to risk management as a separate field of knowledge. Change management issues are mostly solved in the process of making effective management decisions to overcome them. Crisis management in all fields of knowledge is considered as an important component of the company management process. The aim of the article is to assess the role of managerial decisions and to clarify the peculiarities of their adoption and implementation as factors in preventing internal risks. Methodology. In the course of writing the paper, a number of analytical methods were applied in processing the content of scientific sources on the prevention and mitigation of internal risks. In addition, an online survey was conducted for a practical study of certain aspects of management decision-making in terms of preventing internal risks of the organization. Results. The performed analysis enabled us to find out the peculiarities of the impact of management decisions on the quality of internal risk prevention process.

Keywords:

internal risk management, risk prevention, effective decision-making, ways to reduce risk, measures to prevent the negative impact of risks.

1. Introduction

The current state of the political, economic and legal environment of projects and programs that are carried out on the basis of enterprises, organizations and institutions in various sectors of the economy is changeable. The high level of uncertainty in both the internal and external environment of economic structures means that the project manager has to manage the project in conditions of high risk and constant change, quickly solve problems, manage conflicts and resolve crisis situations.

The quality of decisions made in the process of internal risk management largely determines the success of the organization as a whole.

In the theoretical part of this study, the concept, types and main stages of internal risk management of the organization are substantiated, and the decision-making process is considered in terms of its importance for the prevention of this type of risk.

The practical sections of this work contain an analysis of the consideration in the scientific literature of methods of risk analysis of organizations. The most effective methods of qualitative analysis of internal risks, the priority of paying attention to the work with internal risks at certain stages of management decision-making are investigated here. Moreover, ways to reduce internal risks are identified, and the most promising areas in which there is a need for scientific study of management decisions in terms of preventing internal risks are defined.

The analysis of the survey allowed establishing that, according to the respondents, today the main methods of risk analysis, which are focused on in the scientific literature, are quantitative methods, the purpose of which is to assess the degree of impact of potential risk on the company. At the same time, the most effective methods of qualitative analysis of internal risks are methods based on the assessment of available information and methods of

modeling the organization's activities. According to the survey, most attention, effort and time in making management decisions to prevent internal risks should be paid to the stages of risk analysis and assessment. At the same time, the ways to reduce internal risks, according to the survey participants, are diversification and effective targeted business planning. According to the survey participants, the most promising areas in which there is a need for scientific study of issues related to management decisions and their role in preventing internal risks are risk modeling and analysis of initial assumptions, as well as risk assessment and priority setting.

2. Literature review

As a socio-economic category, risk is an integral part of production relations and an organic part of the economic mechanism. In general, risk is characterized as a measure of the possibility of an adverse event or a certain combination of several such events. The manifestation of a risk situation is the deviation of actual values of critical indicators from normal, stable, average or alternative levels [1].

Risk is an element of the result of any management decision, since uncertainty is an inevitable condition of business, while risk is a consequence of uncertainty. First of all, the emergence of uncertainty is due to the fact that most of the processes associated with entrepreneurial activity are initially non-deterministic (it is almost impossible to determine the pace and direction of scientific and technological development, changes in the market, consumer preferences, the occurrence of certain natural and climatic phenomena, etc. in advance) [2].

It is worth noting that the main purpose of risk management is to reduce or eliminate possible losses from risks. Its main purpose is to prevent the occurrence of risk, minimize its damage and maximize the additional profit that the company receives from risk management [3].

Studies prove that existing theoretical approaches to the definition of risk management do not fully characterize it. Most views define risk management as a process characteristic of such management, when they consider the process of influencing the object of management in order to find ways to reduce rather than prevent risk. This creates significant problems with avoiding future risks and leads to significant losses of resources and deterioration of the company's financial results [4; 5].

There are five main stages in risk management, namely:

- 1) Identification of the risk with an assessment of the probability of occurrence and the magnitude of the consequences;
- 2) Development of a risk management strategy to reduce the probability of its occurrence and minimize possible negative consequences. Analytical and statistical information is collected and an acceptable level of risk is determined;

3) Selection of methods and tools to combat the identified risks. Performance indicators of management decisions are calculated;

4) Direct risk management. An action plan for management is developed taking into account risk factors;

5) Evaluation of the achieved results and adjustment of the risk strategy [6; 7].

One of the most important components of the risk management process is the decision-making process based on risk analysis [8].

A critical phase of the risk management process is the selection of the optimal solution. This stage begins with determining the level of risk, followed by an assessment of the economic costs and alternative solutions to reduce the risk, while also calculating the possible economic benefits [9].

A decision is then made to take risk reduction measures or to monitor them further. Monitoring is possible if there is a high degree of uncertainty associated with the current level of available information and therefore risk reduction is not possible at the time of the decision-making [10].

Risk management is based on the principles of feedback (reactive strategy) or predictive feedback (proactive strategy). Proactive strategies are designed to anticipate challenges, threats and opportunities. This approach is aimed at planning in advance. In addition, it helps to identify and avoid potential hazards before they occur [11].

Organizations that focus on a proactive approach are often more effective in resolving problems quickly. The result of each stage of risk management is a decision [12].

When the risk is acceptable and not insignificant whereas the profit potential is significant, a contingency plan is usually used to mitigate it. Contingency plans are developed for residual risks that cannot be effectively mitigated by countermeasures [13]. The risk management process involves the following stages of work on risk prevention: risk identification, risk analysis, risk assessment.

3. Aims

The aim of the study is to find out the position of managers and scientists who study the issues of management theory on certain issues of the impact of management decisions on the prevention of internal risks.

4. Materials and methods

A practical study of current trends in the possible impact of management decisions on the prevention of internal risks was conducted by interviewing 211 managers, as well as 71 scientists working and conducting research on management theory in Lutsk, Rivne, Cherkasy, Vinnytsia,

Kyiv and Chernihiv (Ukraine). Simpoll service was used to organize the research.

5. Results and Discussion

According to the participants of the survey, nowadays, in the conditions of increased uncertainty of the environment of organizations' activity, the main methods of risk analysis, which are focused on in the scientific literature, are (Figure 1):

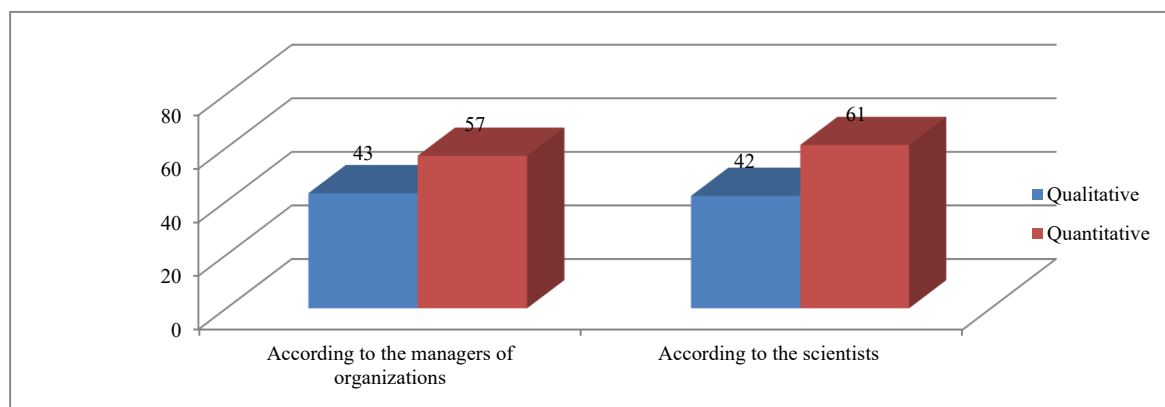


Fig. 1 Priority of consideration of risk analysis methods within organizations' activities in the scientific literature, %
Source: constructed by the authors.

As can be seen from Figure 1, quantitative methods are most fully considered in scientific research on this issue, the purpose of which is to assess the degree of impact of potential risk on the company.

At the same time, qualitative methods of risk assessment are being actively studied. The purpose of such analysis is to identify sources and root causes of risks.

During the survey, respondents identified the following most effective methods of qualitative analysis of internal risks (Figure 2):

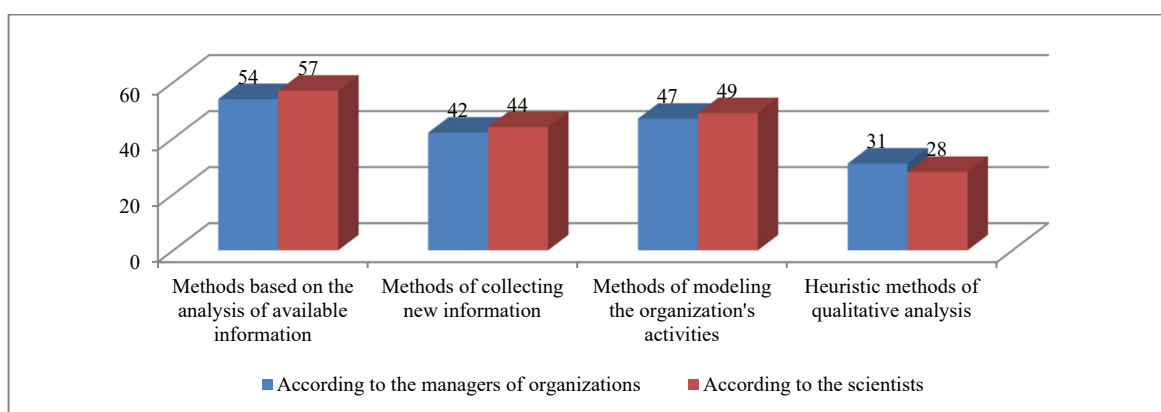


Fig. 2 The most effective methods of qualitative analysis of internal risks, %
Source: constructed by the authors.

As can be seen from Figure 2, the most effective means of qualitative analysis of internal risks are methods based on the assessment of available information and methods of modeling the organization's activities.

During the study, the respondents' point of view on the priority of paying attention to the work with internal risks at certain stages of management decision-making was studied (Figure 3).

According to the survey, most attention, effort and time in making management decisions to prevent internal risks should be paid to the stages of risk analysis and assessment. Ways to reduce internal risks, according to the survey participants, are (Figure 4):

- diversification;
- business planning.

In the course of the study, respondents were asked to name the most promising areas in which there is a need for

scientific study of issues related to management decisions and their role in preventing internal risks (Figure 5).

These areas are risk modeling and analysis of initial assumptions, along with risk assessment and prioritization. In modern economic conditions, the efficiency of business units is always associated with risks and possible losses. Therefore, a certain mechanism is needed that will provide the most rational consideration of risks and minimize losses

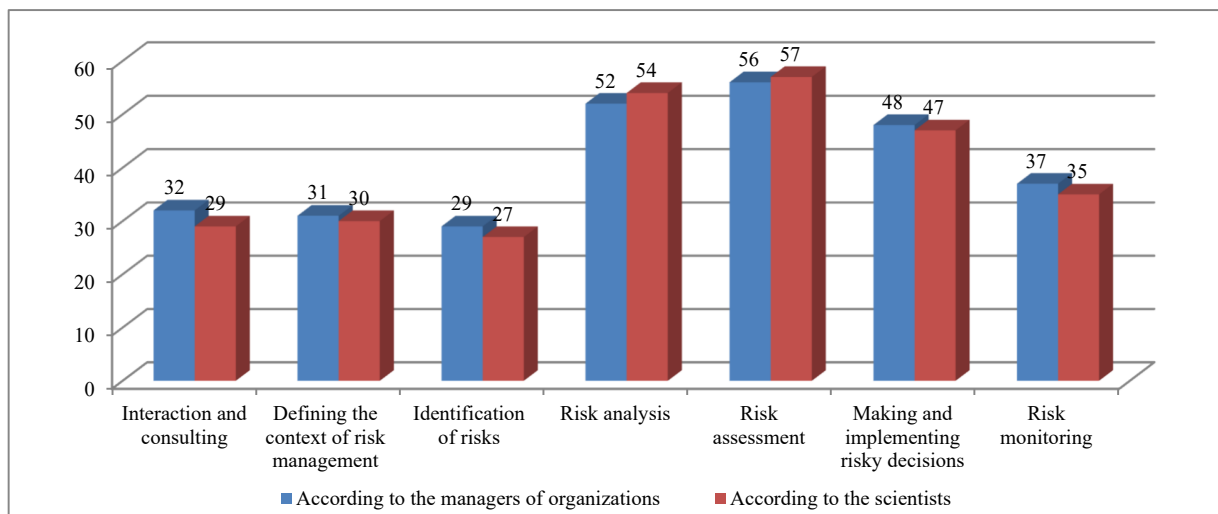


Fig. 3 Priorities of paying attention to the work with internal risks at certain stages of management decision-making, %
Source: constructed by the authors

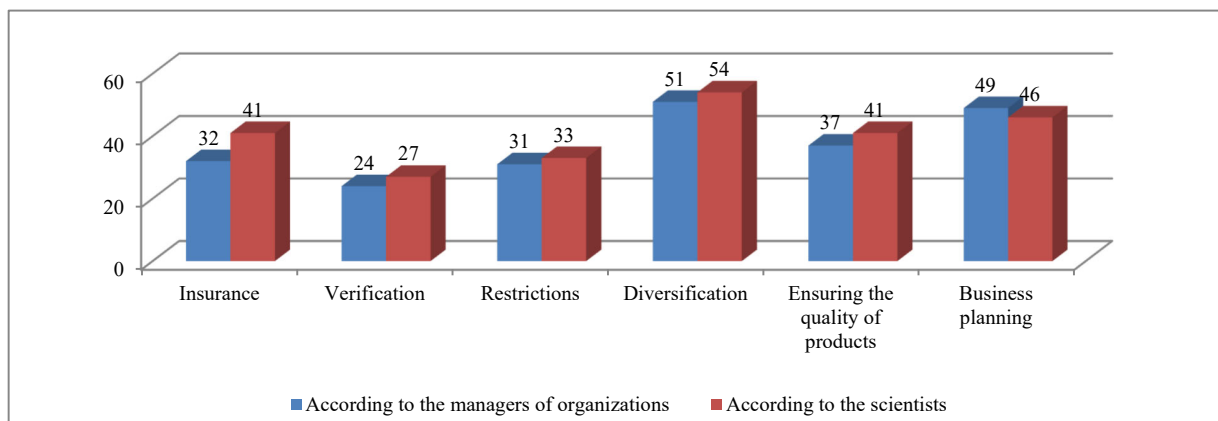


Fig. 4 Ways to mitigate internal risks, % Source: constructed by the authors.

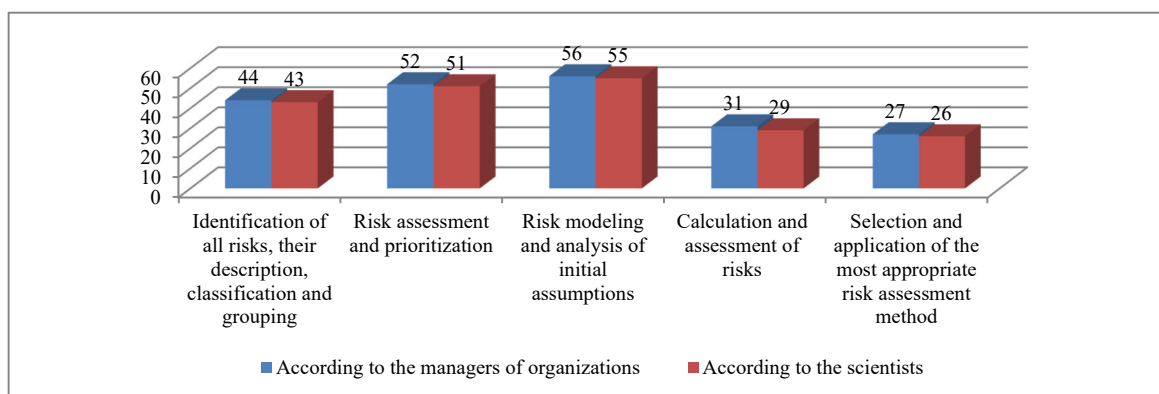


Fig. 5 The most promising areas in which there is a need for scientific study of issues related to management decisions in terms of preventing internal risks, % Source: constructed by the authors.

One of such mechanisms is risk management. Risk management in the system of market relations is an objectively necessary task, the solution of which requires new approaches to improving the theoretical and methodological foundations and expanding the practice of risk management. Risk management to ensure the profitability and efficiency of the company is a continuous process that allows coordinating and guiding the development of the main activities (Park, Nam & Yeo, 2019).

Scientists dealing with risks and their consequences agree that many companies still lack an effective risk management system. The problem is that their managers do not work on risk prevention systematically, do not try to identify their causes in time and eliminate them only when undesirable consequences for the company occur. One can often observe excessive trust in established procedures and generally accepted forecasts (economy, market, finance, personnel). In this case, the company and its employees have no choice but to eliminate the consequences of various undesirable events that may not have occurred at all. Moreover, naturally, it is always much more expensive and time-consuming than prevention (Prakash, Kumar, Soni, Jain & Rathore, 2020).

The use of economic analysis in the process of risk management makes it possible to obtain quantitative and qualitative characteristics of risks and their consequences, reduce the level of uncertainty, justify the optimal method of risk management, and provide information about risks to stakeholders. To this end, the article investigates the information support of economic analysis as an effective risk management tool (Sarkar & Biswas, 2021). One of the most important stages of the methodology of economic analysis is the formation of an information base that determines the possibility and effectiveness of applying a particular qualitative and quantitative method of risk

analysis. The formation of the information base involves the identification and systematization of information objects that are directly related to risks. Creation of a rational information base, integration of external and internal information flows is the basis for building a system of indicators that characterize the effectiveness of the risk management process based on economic analysis (Schauer, Polemi & Mouratidis, 2019).

Information used for risk management is the basis for decision-making, with the help of which the subject of management (for example, a risk manager) influences the objects of management (risks). Each tactical and strategic decision made by management has to reach those who directly affect management's objectives accurately and timely. In turn, signals from the bottom should quickly reach the top, so that you can respond to them in time and adapt managerial decisions timely (Senna, Reis, Santos, Dias & Coelho, 2020).

Any industrial enterprise should plan its activities for the efficient use of available resources in an unstable environment. There are also measures that can prevent the negative impact of risks on the activities of companies: risk avoidance; risk minimization; risk diversification; risk mitigation (Shareef, Dwivedi, Kumar, Hughes & Raman, 2020).

Planning work on risk prevention in the activities of the enterprise can reduce uncertainty; eliminate the risk of loss of corporate profits. Moreover, it allows for developing and making more effective management decisions on the activities of an industrial enterprise. Additionally, it may help with optimizing available resources and financial stability of the enterprise, and, accordingly, increasing its competitiveness in the market (Li, 2017).

Conclusions

Risk management is the process of determining the losses faced by the company in the course of its activities and the degree of their impact in order to choose the most appropriate method of managing each type of risk. Avoiding risks and reducing the damage caused by their impact leads to the sustainable development of the company. Risk management is therefore one of the most important areas of company management. It allows us to reduce production costs and mitigate or avoid potential problems that may affect the success of the organization. According to the research findings, the main aspects of work on the prevention of internal risks of the organization were clarified and the most promising directions of scientific developments in this area were identified.

References

- [1] Sutton, R., Pincock, D., Baumgart, D., Sadowski, D., Fedorak, R. & Kroeker, K., (2020). An overview of clinical decision support systems: benefits, risks, and strategies for success. *npj Digital Medicine*, 3, 17. <https://www.nature.com/articles/s41746-020-0221-y>
- [2] Howlett, M., C., Leongb, Kuan, L., Sahu, S. (2022). Managing internal policy risk: Australia, the UK and the US compared. *Policy Design and Practice*, 5, 2, 152-163. <https://www.tandfonline.com/doi/full/10.1080/25741292.2022.2065716>. <https://doi.org/10.1080/25741292.2022.2065716>
- [3] Taylor, C. et al. (2019). Environmental Regulation in Transition: Policy Officials' Views of Regulatory Instruments and Their Mapping to Environmental Risks. *Science of The Total Environment*, 646, 1 January 2019, 811-820. <https://www.sciencedirect.com/science/article/pii/S0048969718327086?via%3Dihub>. doi:<https://doi.org/10.1016/j.scitotenv.2018.07.217>
- [4] Hermoso-Orzáez, M. J. & Garzón-Moreno, J. (2022). Risk management methodology in the supply chain: a case study applied. *Annals of Operations Research*, 313, 1051-1075. <https://link.springer.com/article/10.1007/s10479-021-04220-y>
- [5] Alora, A., & Barua, M. K. (2020). Development of a supply chain risk index for manufacturing supply chains. *International Journal of Productivity and Performance Management*. <https://doi.org/10.1108/IJPPM-11-2018-0422>
- [6] Díaz Córdova, J. F., Coba Molina, E. & Navarrete López, P. (2017). Fuzzy logic and financial risk. A proposed classification of financial risk to the cooperative sector. *Contaduría y Administración*, 62(5), 1687-1703. <http://www.cya.unam.mx/index.php/cya/article/view/1843>. <https://doi.org/10.1016/j.cya.2017.10.001>
- [7] DuHadway, S., Carnovale, S. & Hazen, B. (2019). Understanding risk management for intentional supply chain disruptions: Risk detection, risk mitigation, and risk recovery. *Annals of Operations Research*, 283, 1-2, 179-198. <https://link.springer.com/article/10.1007/s10479-017-2452-0>. <https://doi.org/10.1007/s10479-017-2452-0>
- [8] Felfel, H., Ben, W., Omar, Y. & Faouzi, A. (2018). Stochastic multi-site supply chain planning in textile and apparel industry under demand and price uncertainties with risk aversion. *Annals of Operations Research*, 271, 2, 551-574. <https://link.springer.com/article/10.1007/s10479-018-2980-2>. <https://doi.org/10.1007/s10479-018-2980-2>
- [9] Fernando, Y., Walters, T., Ismail, M.N., Seo, Y.W. & Kaimasu, M. (2018). Managing project success using project risk and green supply chain management: A survey of automotive industry. *International Journal of Managing Projects in Business*, 11(2), 332-365. <https://www.emerald.com/insight/content/doi/10.1108/IJMPB-01-2017-0007/full/html>. <https://doi.org/10.1108/IJMPB-01-2017-0007>
- [10] He, B. & Yang, Y. (2018). Mitigating supply risk: An approach with quantity flexibility procurement. *Annals of Operations Research*, 271, 2, 599-617. <https://link.springer.com/article/10.1007/s10479-018-2840-0>. <https://doi.org/10.1007/s10479-018-2840-0>
- [11] Khalilzadeh, M. & Derikvand, H. (2018). A multi-objective supplier selection model for green supply chain network under uncertainty. *Journal of Modelling in Management*, 13, 3, 605-625. <https://www.emerald.com/insight/content/doi/10.1108/JM2-06-2017-0062/full/html>. <https://doi.org/10.1108/JM2-06-2017-0062>
- [12] Lo, A. & Tang, Z. (2019). Pareto-optimal reinsurance policies in the presence of individual risk constraints. *Annals of Operations Research*, 274(1-2), 395-423. <https://link.springer.com/article/10.1007/s10479-018-2820-4>. <https://doi.org/10.1007/s10479-018-2820-4>
- [13] Machado Nardi, V.A., Auler, D. P. & Teixeira, R. (2020). Food safety in global supply chains: A literature review. *Journal of Food Science*, 85(4), 883-891. <https://ift.onlinelibrary.wiley.com/doi/10.1111/1750-3841.14999>. <https://doi.org/10.1111/1750-3841.14999>
- [14] Li, X. (2017). Optimal procurement strategies from suppliers with random yield and all-or-nothing risks. *Annals of Operations Research*, 257(1-2), 167-181. <https://link.springer.com/article/10.1007/s10479-015-1923-4>
- [15] Park, B., Nam, T., & Yeo, G. (2019). Study on location selection of integrated depot of warehouse stores utilizing AHP method. *Journal of Digital Convergence*, 17(2), 135-144. <http://koreascience.or.kr/article/JAKO201912937050203.page>. <https://doi.org/10.14400/JDC.2019.17.2.135>
- [16] Prakash, S., Kumar, S., Soni, G., Jain, V., & Rathore, A.P.S. (2020). Closed-loop supply chain network design and modelling under risks and demand uncertainty: An integrated robust optimization approach. *Annals of Operations Research*, 290(1-2), 837-864. <https://link.springer.com/article/10.1007/s10479-018-2902-3>. <https://doi.org/10.1007/s10479-018-2902-3>
- [17] Sarkar, B., & Biswas, A. (2021). Pythagorean fuzzy AHP-TOPSIS integrated approach for transportation management through a new distance measure. *Soft Computing*. <https://link.springer.com/article/10.1007/s00500-020-05433-2>. <https://doi.org/10.1007/s00500-020-05433-2>
- [18] Schauer, S., Polemi, N., & Mouratidis, H. (2019). Correction to MITIGATE: A dynamic supply chain cyber risk

assessment methodology. *Journal of Transportation Security*. <https://link.springer.com/article/10.1007/s12198-018-0197-x>. <https://doi.org/10.1007/s12198-018-0197-x>

- [19] Senna, P., Reis, A., Santos, I.L., Dias, A.C. & Coelho, O. (2020). A systematic literature review on supply chain risk management: Is healthcare management a forsaken research field? *Benchmarking*. <https://www.emerald.com/insight/content/doi/10.1108/BIJ-05-2020-0266/full/html>. <https://doi.org/10.1108/BIJ-05-2020-0266>
- [20] Shareef, M. A., Dwivedi, Y. K., Kumar, V., Hughes, D. L., & Raman, R. (2020). Sustainable supply chain for disaster management: structural dynamics and disruptive risks. *Annals of Operations Research*. <https://link.springer.com/article/10.1007/s10479-020-03708-3>. <https://doi.org/10.1007/s10479-020-03708-3>



Svitlana Yatsyshyn is Candidate of Economic Sciences, Associate Professor, Doctoral Student, Department of Accounting and Taxation, Faculty of Finance and Accounting, West Ukrainian National University, Ukraine

Sphere of scientific interests: organization and methodology of accounting policies of domestic and foreign economic entities in the conditions of risk-oriented management; problems of formation of consolidated financial statements; Foreign experience and domestic practice of applying international accounting and financial reporting standards.



Dmytro Kabachenko is Candidate of Economic Sciences, Associate Professor, Faculty of Finance and Economics, Department of Economics and Economic Cybernetics, Dnipro University of Technology, Ukraine.

Associate Professor of the Department of Economics and Economic Cybernetics, Faculty of Finance and Economics, Dnipro University of Technology, Scientific activity is related to the study of modern technologies of economic analysis and systems of management decision -making in the areas of investment and innovation activity of enterprises.



Oleksandra Korchynska is PhD in Economics, Associate Professor, Department of Administrative and Financial Management, Institute of Administration and Postgraduate Education, Lviv Polytechnic National University, Ukraine.

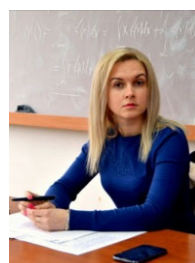
Oleksandra Korchynska is the Creative Spark coach and mentor

Her research interest includes management processes in the organization, formation of conditions of innovative development of individual industries and spheres of activity; Technologies for the development and implementation of startups.



Olena Churikanova is Doctor of Economic Science, Associate Professor, Department of economy and economical cybernetics, Finance and economic faculty, Dnipro University of Technology, Ukraine.

Scientific interests: economic and mathematical modeling, electronic economy, sustainable development, regional economy, circular economy.



Lidiya Seniv is PhD, Associate Professor, Docent Department of Theoretical and Applied Economics, Institute of Administration and Postgraduate Education, Lviv Polytechnic National University, Lviv, Ukraine.

Scientific interests: Investigation of market behavior of business entities in the field of public administration and administration