METHODOLOGY OF FINANCIAL AND ECONOMIC ANALYSIS OF INNOVATIVE ACTIVITIES OF ENTERPRISES IN THE CONDITIONS OF THE DIGITAL ECONOMY

Abstract. The relevance of the study is due to the need for a systematic study of the issues of methodological support for the analysis of innovative activities of enterprises in the context of the development of the digital economy. It has been established that a feature of the information and analytical system for managing innovation is the use of a set of methods: statistical, economic and mathematical and specific methods for predicting the results of innovation. At the same time, the system of methods and techniques for analyzing innovation activity significantly differs from the traditional toolkit, since in most cases the object of management is unique in its kind, and the subject of an innovative project (innovative product), as a rule, has no analogues.

The article substantiates the need to apply analytical procedures at all stages of the implementation of innovative projects. It is proposed to conduct the process of assessing the effectiveness of the implementation of an innovative project in the following stages: monitoring the external environment, determining the innovative potential of an enterprise, studying the effectiveness of an innovative project, quantitative and qualitative analysis of the risks of innovation, economic analysis of innovation, development of an innovation strategy.

A method is proposed for determining the price of innovative products as an important component of assessing the effectiveness of an innovative project, and the main indicators of the effectiveness of innovative activities are highlighted. The results of the calculation of certain indicators form the basis for making decisions on the administration of innovative activities, and their factor analysis will determine the unused reserves of growth in the efficiency of the enterprise’s innovative activities.

It was found that in the digital economy, classical methods of economic analysis of innovation activity are complemented by innovative ones, such as simulation modeling, decision tree, sensitivity analysis, correlation-regression and variance methods, probability method, analog method, SWOT-analysis, PEST-analysis, SNW-analysis, R-analysis.
It has been determined that the analysis of innovation in the digital economy provides for the creation of a fundamentally new information model using modern technical and technological means of collecting and processing significant data sets, the functioning of which should be based on the principles of «consistency» and «communication».

**Keywords:** economic analysis, innovation, innovative project, the digital economy, methods of analysis, information and analytical support.

Formulas: 3; fig.: 1; tabl.: 1; bibl.: 38.

**Osadcha O. O.**
dоктор экономических наук, профессор, профессор кафедры обліку і аудиту, Національний університет водного господарства та природокористування, Рівне, Україна; e-mail: o.o.osadcha@nuwm.edu.ua; ORCID ID: 0000-0003-1314-3281

**Ляшенко О. М.**
dоктор экономических наук, профессор, профессор кафедры управлінських технологій, ВНЗ «Університет економіки та права «КРОК», Київ, Україна; e-mail: lan911@ukr.net; ORCID ID: 0000-0001-7114-4501

**Павелко О. В.**
kандидат экономических наук, доцент, доцент кафедры обліку і аудиту, Національний університет водного господарства та природокористування, Рівне, Україна; e-mail: o.v.pavelko@nuwm.edu.ua; ORCID ID: 0000-0002-2483-2245

**Марков Р. В.**
kандидат экономических наук, докторант, ВНЗ «Університет економіки та права «КРОК», Київ, Україна; e-mail: Markov_R@ukr.net; ORCID ID: 0000-0002-8150-8249

**Юрків Н. Я.**
dоктор экономических наук, профессор, радник дирекції, Національний інститут стратегічних досліджень, Київ, Україна; e-mail: yurkiv_n@ukr.net; ORCID ID: 0000-0003-4434-6698

**МЕТОДИКА ФІНАНСОВО-ЕКОНОМІЧНОГО АНАЛІЗУ ІННОВАЦІЙНОЇ ДІЯЛЬНОСТІ ПІДПРИЄМСТВ В УМОВАХ ЦИФРОВОЇ ЕКОНОМІКИ**

**Анотація.** Актуальність дослідження зумовлена необхідністю системного дослідження питань методичного забезпечення аналізу інноваційної діяльності підприємств в умовах розвитку цифрової економіки. Установлено, що особливістю інформаційно-аналітичної системи управління інноваційною діяльністю є використання комплексу методів: статистичних, економико-математичних і специфічних методів прогнозування результатів інноваційної діяльності. При цьому система методів і методик аналізу інноваційної діяльності значно відризняється від традиційного інструментарію, оскільки здебільшого об’єкт управління є унікальним у своєму роді, а предмет інноваційного проєкту (інноваційний продукт), як правило, не має аналогів.

У статті обґрунтовано необхідність застосування аналітичних процедур на всіх етапах реалізації інноваційних проєктів. Запропоновано проводити процес оцінювання ефективності реалізації інноваційного проєкту за такими етапами: моніторинг зовнішнього середовища, визначення інноваційного потенціалу підприємства, вивчення ефективності інноваційного проєкту, кількісний і якісний аналіз ризиків інноваційної діяльності, економічний аналіз інноваційної діяльності, розроблення інноваційної стратегії.

Запропоновано методику визначення ціни інноваційної продукції як важливу складову оцінювання ефективності інноваційного проєкту, а також виокремлено основні
Introduction. The economic analysis toolkit is constantly updated and improved under the influence of the transformation of the conditions for the functioning of business entities, a change in the sectoral structure of the economy, the development of digital culture, changing the socio-cultural vectors of the development of society. Digitalization as a concept of economic activity, which is based on digital technologies, is widely implemented in all countries of the world without exception.

In the digital economy, a key factor of economic activity is large amounts of data in digital terms. The value system of the modern business environment is incomplete without a high-quality digital existence, which is changing the previously widespread management practices, from strategic planning to operational decisions in the field of communications and marketing.

The analytical substantiation of management decisions is carried out in new conditions, because the composition of users of accounting information and the requirements for the results of the analyst’s work change, the method of communication between the user of analytical data and the analyst specialist, objects of economic analysis are transformed, new phenomena and processes of economic activity arise that require the use of an updated analytical instrumentation.

We can argue that the methodology of economic analysis needs modernization, since the modern conditions for the functioning of progressive sectors of the economy and types of economic activity require sound scientific and methodological support of management. The need for further development of theoretical and practical developments in the field of economic analysis in recent years is due to the requests of enterprises that are interested in using scientifically based methods of financial and economic forecasting of the efficiency of using available resources, primarily intellectual, social, communicative and natural for commercial purposes.

The digital economy is developing through the intensification of innovation, development, implementation and commercialization of innovative products. Insufficient involvement of enterprises in innovation processes is associated with a high degree of uncertainty in the return on investment and a significant risk of financial losses. The lack of scientifically substantiated information and methodological support for forecasting the effectiveness of innovative activities significantly slows down the flow of resources and capital into the high-risk sphere.

Analysis of research and problem statement. In our opinion, insufficient attention is paid to the systematic study of the issues of methodological support of the analysis of innovative activities of enterprises in the context of the development of the digital economy. As basic scientific research in the field of theory and methodology of economic analysis of innovative activity, the scientific works of Birman G. and Schmidt S. [1], Plaskov N. S. [2], Gerasimova E. B. [3], Dutta S., Lanvin B., Wunsch-Vincent S. [4], Marmier F., Gourc D., Laarz F. [5]. In order to assess the level
of information support of economic analysis, the scientific potential of such accounting scientists was used: Osadchey O. A. [6; 7], Maksimova V. F., Lokhanova N. A. [8], Carlsson-Wall M., Kraus K. [9], Dainienė R., Dagilienė L. [10]. The following domestic and foreign researchers paid attention to the theoretical aspects of innovative activity: Buttice V., Caviggioli F., Franzoni C., Scellato G., Stryszowski P., Thumm N. [11], Alcácer J., Beukel K., Cassiman B. [12], Mensch G. [13], Prodanova N., Plaskova N., Samusenko A., Abdulrahman T., Polyanskaya T., Cernostana Z. [14], Demidenko D., Dubolazova J., Malevskaya-Malevich E. [fifteen]. The peculiarities of the influence of digital culture on the functioning of a modern subject of economic activity, issues of digitalization of the economy are discussed in the works of Mayer-Schoenberger V. [16], Ivanova V., Malinetskiy G. [17], Ben Youssef A., Boubaker S., Dedaj B., Carabregu-Vokshi M. [18], Richardson L. [19].

The scientific potential of these scientists became the theoretical basis for further research and contributed to the development of certain organizational and methodological provisions of the economic analysis of innovation activity, but the methodological aspects of a comprehensive analysis of innovation activity in the digital economy remain insufficiently studied.

The results of the research. The peculiarity of the information and analytical system for managing innovation is the use of a set of methods: statistical, economic and mathematical and specific methods for predicting the results of innovation. At the same time, the system of methods and methods of analysis differs significantly from the traditional tools of economic analysis, since in most cases the object of management is unique in its kind, and the subject of an innovative project (innovative product), as a rule, has no analogues. Note that qualitative methods based on expert assessments are quite common and should be converted into quantitative indicators to obtain parametric data and their inclusion in the general system of digital identification of objects, processes, factors and the results of their influence on the level of innovation efficiency.

In the digital economy, classical methods of economic analysis of innovation activity are supplemented, such as: simulation modeling, decision tree, sensitivity analysis, cluster method, method of few sets, method of equivalents, scenario method, correlation-regression and dispersion methods, probability method, analogue method, SWOT analysis, PEST analysis, SNW analysis, R analysis, heuristic methods, etc.

To implement an integrated approach, the economic analysis of innovation should be applied at all stages of the implementation of innovation projects. We propose to carry out the process of a comprehensive assessment and substantiation of the effectiveness of the implementation of an innovative project by a business entity (for product innovations) in the stages shown in Fig.

A significant contribution to the development of the theory of innovation belongs to the German scientist G. Mensch, who considered the reasons for the introduction of innovations. The scientist was the first to classify innovations in relation to scientific and technological progress into basic, improving and pseudo-innovations. According to G. Mensch’s classification, basic innovations can lead to the emergence of new industries; when implementing new improving innovations, qualitative changes occur in existing products, technologies, processes of organizing production and sales, and the way of life as a whole. According to the scientist, pseudo-innovations are differentiated products that are not significant and do not have qualitative novelty [13].
Fig. The process of a comprehensive assessment and substantiation of the effectiveness of the implementation of an innovative project of an enterprise

For product innovations, an important criterion in the planning of an innovative project is the fulfillment of the break-even conditions, while the determination of prices for an innovative product depends on the nature of the innovation.

For basic innovations, the price is determined by the formula (1):

\[ P = \frac{Pr + (Q \cdot AVC + FC + RC)}{Q} \]  

where \( P \) — is the price of a unit of innovative products; \( Q \) — is the volume of innovative products produced during the period of implementation of the innovative project; \( AVC \) — is the average variable cost of producing a unit of innovative products; \( FC \) — fixed costs for the production of innovative products; \( Pr \) — is the planned financial result from the implementation of innovative products; \( RC \) — research and development costs associated with the use of the research innovation project.

For borrowed innovations, the price is calculated using the formula (2):
where \( P_3 \) — is the price of a unit of production in the market of borrowed innovation; \( Q_{\text{product}} \) — the volume of products sold in the market of borrowed innovation; \( Q_{\text{buyer}} \) — is the number of buyers in the borrowed innovation market; \( Q_{\text{pl,product}} \) — planned volume of sold innovative products; \( Q_{\text{pl,buyer}} \) — the planned number of buyers of innovative products; \( \bar{I}_{\text{pl}} \) — average income level of potential buyers of innovative products; \( \bar{I} \) — is the average income of buyers in the market of the involved innovation.

To determine the price of a product by improving innovations, the method of integral assessment of the potential of an innovative product is used, which takes into account the current market situation with respect to the base product and allows us to identify the price at which the implementation of an innovative product will not lead to a decrease in demand. In this case, the price of an innovative product is determined by the formula (3):

\[
P = P_6 \cdot \frac{C}{C_6}
\]

where \( P_6 \) — is the average unit price of the basic product; \( C \) — integral assessment of the potential of innovative products; \( C_6 \) — integral assessment of the base product potential.

The above methodology for determining the price of innovative products for improving innovation involves the following steps:

1) determination of parameters for assessing the potential of innovative products and development of a price formation algorithm;
2) assessment of the parameters of basic innovative products by an expert group;
3) assessing the potential of innovative products: on the basis of indicators and their significance, an integral assessment of the potential of basic and innovative products is determined;
4) formation of the price of innovative products in the course of calculating the multiplicity factor of the potentials of basic and innovative products.

It is advisable to carry out a retrospective comprehensive analysis of innovation activity based on the results of several years, because during this period the practical implementation of innovations takes place, and therefore the economic analysis can become the basis for the formation of an enterprise’s innovative strategy (Table).

| № | Index | Characteristic | Net profit from the sale of innovative products | The total costs of implementing an innovative project |
|---|---|---|---|---|
| 1 | The profitability of an innovative project | The effectiveness of innovative activities based on the results of the implementation of an innovative project | | |
| 2 | Cost-effectiveness of innovation | Ratio of implemented innovations and costs of innovative activities | Number of implemented innovations | Innovation spending |
| 3 | Indicator of innovative activity | The level of attraction of the enterprise to innovation activity | Innovation spending | Total expenses of the enterprise |
| 4 | Profitability of innovation | The level of commercial efficiency of innovation | Profiability of an innovative project | Indicator of innovative activity |

Source: compiled by the authors based on [14; 20—38].

The results of calculating the proposed indicators form the basis for making decisions on the administration of innovative activities, and their factor analysis will determine the unused reserves of growth in the efficiency of the enterprise’s innovative activities.
It should be noted that the analysis of innovation in the digital economy provides for the creation of a fundamentally new information model using modern technical and technological means of collecting and processing significant data sets, the functioning of which should be based on the principles of «consistency» and «communication».

The implementation of the principles of «consistency» and «communication» in the practice of information flow management is extremely difficult, because it presupposes a fundamentally different methodological base on which information systems serving modern innovative enterprises are based.

Implementation of an information management system based on the principles of «consistency» and «communication» has a number of advantages that allow:

• to combine all the functions of enterprise management into a single information structured field;
• promptly receive management reporting information of any level with the required degree of periodization and detail;
• carry out daily monitoring of the fulfillment of the necessary indicators of the business plan and compliance with internal standards with a given degree of detail in the context of management functions, business processes, with the decoding not only of deviations, but also measuring the influence of factors on effective performance indicators;
• substantiate the system of internal regulations and standards for the use of enterprise resources for the formation of realistic strategic, current, operational budgets with interrelated indicators, etc.

Conclusions. The activation of innovation activity is largely determined by the possibility of developing and implementing methodological tools for a system of high-quality information and analytical support of management functions at all stages of the innovation process. To implement an integrated approach, the economic analysis of innovation should be applied at all stages of the implementation of innovation projects. The process of assessing and substantiating the effectiveness of the implementation of an innovative project by a business entity is proposed to be carried out in the following stages: monitoring the external environment, determining the innovative potential of the enterprise, studying the effectiveness of an innovative project, quantitative and qualitative analysis of the risks of innovation, economic analysis of innovation, development of an innovation strategy. It has been found that in the digital economy, classical methods of economic analysis of innovation are complemented by innovative ones, such as simulation modeling, decision tree, sensitivity analysis, the method of few sets, correlation-regression and dispersion methods, the method of probabilities, the method of analogs, SWOT-analysis, PEST-analysis, SNW-analysis, R-analysis.

A method for determining the price of innovative products is proposed as an important component of assessing the effectiveness of an innovative project, and the main indicators of the effectiveness of innovative activities are highlighted, which serve as the basis for building an enterprise’s innovative strategy.

Література
1. Бирман Г., Шмидт С. Економічний аналіз інвестиційних проектів : пер. с англ. Москва : ЮНИТИ, 2004. 236 с.
2. Пласкова Н. С. Розвиток методології економічного аналізу в цифровій економіці. Учет, анализ и аудит. 2018. № 2. Т. 5. С. 36–43.
3. Герасимова Е. Б. Аналіз діяльності економічного суб'єкта в цифровій культурі. Мир новейшей экономики. 2019. № 2. С. 111–120.
4. Dutta S., Lanvin B., Wunsch-Vincent S. Global innovation index 2020. Who will finance innovation? 2020. URL: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf.
5. Marmier F., Goure D., Laarz F. A risk oriented model to assess strategic decisions in new product development project. Decision Support Systems. 2013. Vol. 56 (2). P. 74–82.
6. Левицька О. О. Методика здійснення комплексного аналізу ефективності впровадження інноваційних проектів. Вісник Національного університету водного господарства та природокористування. Економіка. 2008. Вип. 4 (44). Ч. 2. С. 294–299.
7. Осадчя О. О. Вплив елементів методики бухгалтерського обліку на результативність аналізу формування і використання прибутку. Наукові записки. Економіка. Острог : Вид-во «Національний університет “Острозька академія”», 2013. Вип. 22. С. 115–118.
8. Максімова В. Ф., Лоханова Н. О., Артюх О. В. та ін. Облік і контроль в управлінні економікою стійкістю підприємств в умовах глобалізації: монографія / за ред. В. Ф. Максімової. Одеса: ОНЕУ, 2014. 397 с.
9. Carlsson-Wall M., Kraus K. Opening the black box of the role of accounting practices in the fuzzy front-end of product innovation. *International Marketing Management*. 2015. Vol. 45. P. 184—194.
10. Dainiené R., Dagiliené L. Accounting-based Valuation of Innovation: Challenges and Perspectives. *Procedia-Social and Behavioral Sciences*. 2014. Vol. 156. P. 589—593.
11. Butticé V., Caviggioli F., Franzoni C., Scelatto G., Stryszowski P., Thumm N. Counterfeiting in digital technologies: An empirical analysis of the economic performance and innovative activities of affected companies. *Research Policy*. 2020. Vol. 49 (5).
12. Alcacer J., Beukel K., Cassiman B. Capturing value from intellectual property (IP) in a global environment. *Location and Strategy*. 2017. P. 163—228.
13. Mensch G. Stalemate in Technology: innovations overcome the depression. Cambridge, Mass : Ballinger, 1979. 241 p.
14. Prodanova N., Plaskova N., Samusenko A., Abdulrahman T., Polyanskaya T., Cernostana Z. Influence of innovations on economic development: views of academic economists. *Journal OPCIÓN*. 2019. № 23. P. 11—28.
15. Demidenko D., Dubolazova J., Malevskaya-Malevich E. Economic model of an innovative enterprise in the digital economy. *SHS Web of Conferences*. 2018. Vol. 44. P. 1—7.
16. Майер-Шенбергер В. Большее данные. Революция, которая изменит то, как мы живем, работаем и мыслим. Москва : Манн, Иванов, Фербер; 2014. 132 c.
17. Ivanov B. V., Malinetskyi G. І. Цифровая экономика: от теории к практике. *Інновации*. 2017. № 230 (12). C. 3—12.
18. Ben Yo. A., Boubaker S., Dedaj B., Carabregu-Vokshi M. Digitalization of the economy and entrepreneurship intention. *Technological Forecasting and Social Change*. 2020.
19. Richardson L. Digital and Platform Economies. *International Encyclopedia of Human Geography*. 2020. P. 317—321.
20. Filatov E. A., Nechayev V. B. Problem-Solving in Deterministic Factor Analysis. *Marketing and Management of Innovations*. 2019. № 4. P. 336—352.
21. Akimova L. M., Akimov O. O., Lzyhovich O. O. Державне регулювання зовнішньоекономічної діяльності. *Науковий вісник Полісся*. 2017. № 4 (12). Ч. 1. С. 98—103.
22. Якимчук А. Ю., Акімова Л. М., Сімчук Т. О. Прикладний проектний підхід у національній економіці: практичні аспекти. *Науковий вісник Полісся*. 2017. № 2 (10). Ч. 2. С. 170—177.
23. Якимчук А. Ю., Валюх А. М., Акімова Л. М. Регіональна інноваційна економіка: аспекти економічного розвитку. *Науковий вісник Полісся*. 2017. № 3 (11). Ч. 1. С. 170—177.
24. Якимчук А. Ю., Акімов О. О., Семенова Ю. М. Дослідження основних тенденцій залучення водних ресурсів у господарський оборот. *Науковий вісник Полісся*. 2017. № 1 (9). Ч. 2. С. 70—75.
25. Akimova L. M., Osadcha O. O., Akimov O. O. Удосконалення організації обліку за допомогою технології бінчмаркінгу. *Фінансово-кредитна діяльність: проблеми теорії та практики* : збірник наукових праць. Харків : ДВНЗ «Університет банківської справи». 2019. № 3. С. 351—36.
26. Liubkina, O., Murovama, T., Magomedova A., Sisko, E. & Akimova, L. Financial Instruments of Stimulating Innovative Activities of Enterprises and Their Improvements. *Marketing and Management of Innovations*. 2019. № 4. P. 336—352.
27. Akimova L. M., Akimov O. O., Lykhovich O. O. Державне регулювання зовнішньоекономічної діяльності. *Науковий вісник Полісся*. 2017. № 4 (12). Ч. 1. С. 98—103.
28. Якимчук А. Ю., Акімова Л. М., Сімчук Т. О. Прикладний проектний підхід у національній економіці: практичні аспекти. *Науковий вісник Полісся*. 2017. № 2 (10). Ч. 2. С. 170—177.
29. Якимчук А. Ю., Валюх А. М., Акімова Л. М. Регіональна інноваційна економіка: аспекти економічного розвитку. *Науковий вісник Полісся*. 2017. № 3 (11). Ч. 1. С. 170—177.
30. Якимчук А. Ю., Акімов О. О., Семенова Ю. М. Дослідження основних тенденцій залучення водних ресурсів у господарський оборот. *Науковий вісник Полісся*. 2017. № 1 (9). Ч. 2. С. 70—75.
31. Akimova L. M., Osadcha O. O., Akimov O. O. Удосконалення організації обліку за допомогою технології бінчмаркінгу. *Фінансово-кредитна діяльність: проблеми теорії та практики*. Харків, 2018. № 1 (24). С. 64—70.
32. Harafonova O. I., Zhosan G. V., Akimova L. M. The substantiation of the strategy of social responsibility of the enterprise with the aim of providing efficiency of the activities. *Marketing and Management of Innovations*. 2017. № 3. P. 267—279.
33. Kalyayev A., Efimov G., Motorny V., Dzianyr R., Akimova L. Global security governance: Conceptual approaches and practical imperatives. *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision 2020*. 2019. P. 4484—4495.
34. Mishchuk H., Bilan S., Yurchyk H., Akimova L., Navickas M. Impact of the shadow economy on social safety: The experience of Ukraine. *Economics and Sociology*. 2020. № 13 (2). P. 289—303.
35. Kostiukevych R., Mishchuk H., Zhidebekkyzy, A., Nakonieczny, J., & Akimov, O. The impact of European integration processes on the investment potential and institutional maturity of rural communities. *Economics and Sociology*. 2020. № 13 (3). P. 46—63.
36. Andros S., Akimova L., Butkevich O. Innovations in management of banks deposit portfolio: structure of customer deposit. *Marketing and Management of Innovations*. 2020. № 2. P. 206—220.
37. Akimova L. M., Reinska B. V., Akimov O. O., Karpa M. I. Податкові пільги та їх вплив на інвестиції в Україні. *Фінансово-кредитна діяльність: проблеми теорії та практики*. Харків, 2018. № 3 (26). С. 91—101.
38. Bilan Yu., Mishchuk H., Samoliuk N., Mishchuk V. Gender discrimination and its links with compensations and benefits practices in enterprises. *Entrepreneurial Business and Economics Review*. 2020. № 8 (3). P. 189—204.
39. Bilan S., Mishchuk H., Samoliuk N., Ostasz G. Effectiveness of Social Dialogue in the System of Sustainable Economic Development Factors. Paper presented at the Proceedings of the 34th International Business Information Management Association Conference, IBIMA 2020: Vision 2025: Education Excellence and Management of Innovations through Sustainable Economic Competitive Advantage. 2019. Р. 13303—13313.
40. Bilan S., Mishchuk H., Bilan Yu, Mishchuk V. Empirical Study of Migration Caused by Well-being in Living and Working Environment. Paper presented at the Proceedings of the 34th International Business Information Management Association Conference, IBIMA 2020: Vision 2025: Education Excellence and Management of Innovations through Sustainable Economic Competitive Advantage. 2019. Р. 11159—11169.
41. Bilan Yu., Mishchuk H., Roschchy I., Kmeceva I. Analysis of Intellectual Potential and its Impact on the Social and Economic Development of Europe. *Journal of Competitiveness*. 2020. № 1. Р. 22—38.
42. Bilan Yu., Mishchuk H., Samoliuk N., Yurchyk H. Impact of Income Distribution on Social and Economic Well-Being of the State. *Sustainability*. 2020. № 12 (1). Р. 429.

Стаття рекомендована до друку 02.12.2020.
References

1. Birman, G., & Schmidt, S. (2004). *Ekonomsicheskij analiz investicionnyh proektov* [Economic analysis of investment projects]. Moscow: YnITI [in Russian].

2. Plaskova, N. S. (2018). Razvitie metodologii ekonomicheskogo analiza v cifrovoj ekonomike [Development of the methodology of economic analysis in the digital economy]. *Uchet, analiz i audit — Accounting, Analysis and Audit, 2* (5), 36—43 [in Russian].

3. Gerasimova, E. B. (2019). Analiz deyatel’nosti ekonomicheskogo sub’ekta i cifrovoya kul’tura [Analysis of the activity of an economic entity and digital culture]. *Mir nowoj ekonomiki The world of the new economy, 2*, 111—120 [in Russian].

4. Dutta, S., Lanvin, B., & Wunsch-Vincent, S. (2020). Global innovation index 2020. Who will finance innovation? URL: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf.

5. Marmier, F., Gourc, D., & Laarz, F. (2013). A risk oriented model to assess strategic decisions in new product development project. *Decision Support Systems*, 56 (2), 74—82. doi: 10.1016/j.dss.2013.05.002.

6. Levytska, O. O. (2008). Metodyka zdisnennia kompleksnoho analizu efektyvnosti vprovadzhennia innovatsiyh proektiv [Methodology of complex analysis of efficiency of implementation of innovative projects]. *Visnyk Natsionalnoho universytetu vodonoho hospodarstva ta pryrodokorystuvannya. Ekonomika — Bulletin of the National University of Water Management and Environmental Economics, 4* (44), 2, 294—299 [in Ukrainian].

7. Osadcha, O. O. (2013). Vplyv elementiv metodyky bukhhalterskoho obliku na rezultatyvist analizu formuvannia i vykorystannia prybutku [The influence of elements of accounting methodology on the effectiveness of the analysis of the formation and use of profit]. *Naukovy zapysky. Ekonomika — Proceedings. Economy, Vol. 22, 115—118*. Ostrh: Vydavnystvo «Natsionalny universytet “Ostrozka akademiia”» [in Ukrainian].

8. Maksimova, V. F., Lokhanova, N. O., & Artiukh, O. V. (et. al.), (2014). *Oblik i kontrol v upravlinni ekonomichnoiu stiikistiu [Accounting and control in the management of economic stability of enterprises]*. Odessa: ONEU [in Ukrainian].

9. Carlsson-Wall, M., & Kraus, K. (2015). Opening the black box of the role of accounting practices in the fuzzy front-end of product innovation. *Industrial Marketing Management, 45*, 184—194. doi:10.1016/j.indmarman.2015.01.007.

10. Dainienė, R., & Dagilienė, L. (2014). Accounting-based Valuation of Innovation: Challenges and Perspectives. *Procedia-Social and Behavioral Sciences, 156*, 589—593. doi:10.1016/j.sbspro.2014.11.246.

11. Butirci, V., Caviggioletti, F., Franzoni, C., Scclato, G., Stryszowski, P., & Thumm, N. (2020). Counterfeiting in digital technologies: An empirical analysis of the economic performance and innovative activities of affected companies. *Research Policy, 49* (5). doi:10.1016/j.respol.2020.103959.

12. ALCÁCER, J., BEUKEL, K., & CASSIMAN, B. (2017). Capturing value from intellectual property (IP) in a global environment. *In: Geography, Location, and Strategy*, 163—228.

13. Mesch, G. (1979). Stalemate in Technology: innovations overcome the depression. Cambridge, Mass: Ballinger.

14. Prodanova, N., Plaskova, N., Samusenko, A., Abdulaevahman, T., Polyanska, T., & Cernostana, Z. (2019). Influence of innovations on social-economic development: views of academic economists. *International Encyclopedia of Human Geography, 44*, 1—7. doi:10.1016/k.eshcog.2018440025.

15. MAIER-SHENBERGER, V. (2014). Bol’shie dannye. Revolyuciya, kotoraya izmenit to, kak my zhivem, rabotaem i myslim [Big data. A revolution that will change the way we live, work and think]. Moscow: Mann, Ivanov, Ferber [in Russian].

16. Ivanov, V. V., & Malineckij, G. G. (2017). Cifrovaia ekonomika: ot teori k praktike [Digital economy: from theory to practice]. *Innovacii — Innovation, 230* (12), 3—12 [in Russian].

17. Ben, Yo., A., Boubaker, S., Dedaj, B., & Carabregu-Volski, M. (2020). Digitalization of the economy and entrepreneurship: technological forecasting and social change. doi:10.1016/j.techfore.2020.120043.

18. Richardson, L. (2020). Digital and Platform Economies. *International Encyclopedia of Human Geography, 317—321*. doi:10.1016/978-0-08-102295-5.1053-5.

19. Filatov, E. A., & Nechayev, V. B. (2014). Problem-Solving in Deterministic Factor Analysis. *Middle-East J. Sci. Res., Vol. 19* (5), 723—728. doi:10.5829/idosi.mejars.2014.5.21022.

20. Zahorskyi, V. S., Lipentsev, A. V., Yurystovska, N. Ya., Mazii, N. H., & Akimov, O. O. (2019). Finansovo-upravlinni aspekti rozvytku maloho pidpryiemstva v Ukraini [Financial and managerial aspects of small business development in Ukraine]. *Finansovo-kreditna diialnist: problemy teorii ta praktyky — Financial and credit activities: problems of theory and practice, 3*, 351—36 [in Ukrainian].

21. Liubkina, O., Murovana, T., Magomedova A., Siskos, E., & Akimova, L. (2019). Financial Instruments of Stimulating Innovative Activities of Enterprises and Their Improvements. *Marketing and Management of Innovations, 4*, 336—352. doi:10.21272/mmi.2019.4-26.

22. Akimova, L. M., Akimov, O. O., & Liakhovych, O. Y. (2017). Derzhavne rehuliuvannia zovnishnoekonomichnoi diialnosti [State regulation of foreign economic activity]. *Naukovyi visnyk Polissia — Scientific Bulletin of Polissya, 4* (12), 1, 98—103 [in Ukrainian].

23. Yakymchuk, A. Yu., Akimova, L. M., & Simchuk, T. O. (2017). Pryklyadni proektnyi pidkhid u natsional’ni ekonomistiv: pratychni aspekty [Applied design approach in the national economy: practical aspects]. *Naukovyi visnyk Polissia — Scientific Bulletin of Polissya, 4* (12), 2, 170—177 [in Ukrainian].

24. Yakymchuk, A. Yu., Vuliukh, A. M., & Akimova, L. M. (2017). Rehionalna innovatsiyh ekonomika: aspekty ekonomichnoho rozvytku [Regional innovation economy: aspects of economic development]. *Naukovyi visnyk Polissia — Scientific Bulletin of Polissya, 3* (11), 1, 170—178 [in Ukrainian].

25. Yakymchuk, A. Yu., Akimova, O. O., & Semenova, Yu. M. (2017). Doslidzhennia osnovnykh tendentsii zahliadennia vodonoyh resursiv u hospodarskyi oborot [Investigating key trends of water resources attraction into economic turnover]. *Naukovyi visnyk Polissia — Scientific Bulletin of Polissya, 4* (9), 2, 70—75. doi:10.25140/2410-9576-2017-2-1(9)-70-75.

26. Akimova, L., Osadcha, O., & Akimov, O. (2018). Udoskonalennia orhanizatsii obliku za dopomohoou technolohii benchmarkinhu [Improving the organization of accounting using benchmarking technology]. *Finansovo-kreditna diialnist: problemy teorii ta praktyky — Financial and credit activities: problems of theory and practice, 1* (24), 64—70.
28. Harafonova, O. I., Zhosan, G. V., Akimova, L. M. (2017). The substantiation of the strategy of social responsibility of the enterprise with the aim of providing efficiency of its activities. *Scientific journal Marketing and management of innovations*, (3), 267—279.

29. Kalyayev, A., Efimov, G., Motorny, V., Dzianyy, R., & Akimova, L. (2019). Global security governance: Conceptual approaches and practical imperatives. *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision 2020*.

30. Mishchuk, H., Bilan, S., Yurchyk, H., Akimova, L., & Navickas, M. (2020). Impact of the shadow economy on social safety: The experience of Ukraine. *Economics and Sociology, 13* (2), 289—303. doi:10.14254/2071-789X.2020/13-2/19.

31. Kostiukevych, R., Mishchuk, H., Zhidebekkyzy, A., Nakonieczny, J., & Akimov, O. (2020). The impact of European integration processes on the investment potential and institutional maturity of rural communities. *Economics and Sociology, 13* (3), 46—63. doi:10.14254/2071-789X.2020/13-3/3.

32. Andros, S., Akimova, L., & Butkevich, O. (2020). Innovations in management of banks deposit portfolio: structure of customer deposit. *Marketing and Management of Innovations*, 2, 206—220. doi:10.21272/MMI.2020.2-15.

33. Akimova, L. M., Reinska, V. B., Akimov, O. O., & Karpa, M. I. (2018). Podatkovi pilhy ta yikh vplyv na investytsii v Ukraini [Tax benefits and their impact on investment in Ukraine]. Tax preferences and their influence on the investment in Ukraine. *Finansovo-kredytna diialnist: problemy teorii ta praktyky — Financial and credit activities: problems of theory and practice, J* (26), 91—101 [in Ukrainian].

34. Bilan, Yu., Mishchuk, H., Samoliuk, N., & Mishchuk, V. (2020). Gender discrimination and its links with compensations and benefits practices in enterprises. *Entrepreneurial Business and Economics Review, 8* (3), 189—204. doi:10.15678/EBER.2020.080311.

35. Bilan, S., Mishchuk, H., Samoliuk, N., & Ostasz, G. (2019). Effectiveness of Social Dialogue in the System of Sustainable Economic Development Factors. Paper presented at the Proceedings of the 34th International Business Information Management Association Conference, IBIMA 2020: Vision 2025: Education Excellence and Management of Innovations through Sustainable Economic Competitive Advantage.

36. Bilan, S., Mishchuk, H., Bilan, Yu., & Mishchuk, V. (2019). Empirical Study of Migration Caused by Well-being in Living and Working Environment. Paper presented at the Proceedings of the 34th International Business Information Management Association Conference, IBIMA 2020: Vision 2025: Education Excellence and Management of Innovations through Sustainable Economic Competitive Advantage.

37. Bilan, Yu., Mishchuk, H., Roshchyk, I., & Kmecova, I. (2020). Analysis of Intellectual Potential and its Impact on the Social and Economic Development of European Countries. *Journal of Competitiveness, 1*, 22—38. doi:10.7441/joc.2020.01.02.

38. Bilan, Yu., Mishchuk, H., Samoliuk, N., & Yurchyk, H. (2020). Impact of Income Distribution on Social and Economic Well-Being of the State. *Sustainability, 12* (1), 429. doi:10.3390/su12010429.

*The article is recommended for printing 02.12.2020.* © Osadcha O., Liashenko O., Pavelko O., Markov R., Yurkiv N.