

**Tetiana Portovaras**, Candidate of Economic Sciences,  
Doctoral Student,  
*<https://orcid.org/0000-0002-2939-5101>*  
West Ukrainian National University, Ternopil

## **COMPUTERIZATION OF ANALYSIS FOR MANAGEMENT NEEDS: PROBLEMS OF CHOOSING THE OPTIMAL SOFTWARE PRODUCT**

### *Summary*

Modern challenges of the market environment require business entities to conduct a comprehensive analysis of their activities in order to develop business plans for the future and implement quality management. In this regard, there was a need for more active use of existing, as well as the development of new programs for the automation of economic analysis, which will allow to quickly and qualitatively assess the financial and economic condition of the business entity with the help of modern technologies and to make effective management decisions on its future development.

The purpose of the article is to substantiate the expediency of choosing modern software products from the point of view of optimality of their application in the process of conducting economic analysis, finding the best automation algorithm taking into account the specifics of the financial and economic activity of the business entity, and solving the problem of identifying tasks for the development of new software products or their applications.

In the course of the conducted scientific research, the identification of the software of the business entity was carried out and the task of automating the economic analysis was determined, taking into account the modern challenges. The classification of the types of information influence on the creation and selection of software products, which will provide the most complete analysis based on the management requirements of managers, has been carried out. The main types of software tools for solving problems of economic analysis from the point of view of increasing the level of management decision-making in modern conditions are proposed on the basis of a critical evaluation of their characteristics. The algorithm of software product selection was determined, which allows to choose the optimal program for automation of the business entity processes for the purpose of qualitative economic analysis. According to the results of the conducted research, the requirements for the technology of continuous analysis of reporting from the point of view of its users are proposed, which will allow high-quality and effective analytical assessment of economic entities.

Prospects for further research include the development of measures to ensure the security of entity's financial data and programs to automate economic analysis.

*Keywords:* analysis, automation, software product, computerization, security, business entity.

*Number of sources – 23, number of tables – 2, number of drawings – 4.*

## References:

1. Bahrii, K.L. (2016). The importance of conducting an analysis of economic activity in making management decisions by business entities. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 2 (62), pp. 136–143. URL: [http://herald.chite.edu.ua/content/download/archive/2016/v2/NV-2016-v2\\_15.pdf](http://herald.chite.edu.ua/content/download/archive/2016/v2/NV-2016-v2_15.pdf) (Accessed 16 February 2024) (in Ukr.).
2. Vechtomova, I.I., Nitsenko, V.S. (2016). Ways of development of economic analysis in modern conditions. *International scientific journal*, vol. 7, pp. 185-187. URL: [http://nbuv.gov.ua/UJRN/mnj\\_2016\\_7\\_42](http://nbuv.gov.ua/UJRN/mnj_2016_7_42) (Accessed 15 February 2024) (in Ukr.).
3. Hryhorkiv, V.S., Buiak, L.M., Verstiak, A.V., Hryhorkiv, M.V., Savko, O.Ya. (2018). Implementation of information systems of management of production enterprises: applied analysis. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 1-2 (69-70), pp. 142–151. URL: <http://herald.chite.edu.ua/content/download/archive/2018/23.pdf> (Accessed 27 February 2024) (in Ukr.).
4. Zhuk, N., Zhukevych, S., Farion, M. (2023). Analytical support of the financial strategy of security-oriented management. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 3 (91), pp. 66–87. URL: <http://herald.chite.edu.ua/content/download/archive/2023/v3/5.pdf> (Accessed 16 February 2024) (in Ukr.).
5. Zadorozhnyi, Z.-M. V., Ometsinska, I.Ya. (2020). Internal economic reporting in the enterprise management system. *Visnyk Ternopilskoho natsionalnoho ekonomichnoho universytetu [Herald of the Ternopil National Economic University]*, vol. 4, pp. 169–184 (in Ukr.).
6. Zaruslo, A.P. (2016). Modern information technologies for the analysis of economic activity of enterprises. *Ekonomichniy visnyk [Economic Herald]*, vol. 4(04), pp. 82-86 (in Ukr.).
7. Kovalchuk, T.M. (2009). Analysis as a management function: theory and methodology. *Ekonomika APK [Economy of agro-industrial complex]*, vol. 12, pp. 14–21 (in Ukr.).
8. Kolberh, K. (2008). *Biznes-analiz za dopomohoiu Project Expert [Business analysis using Project Expert]*. Viliams, 448 c.
9. Kupalova, H.I. (2008). Theory of economic analysis. URL: <https://westudents.com.ua/glavy/24775-32-osnovn-vidi-ekonomchnogo-analzu-ta-h-klasifikatsya.html> (Accessed 17 February 2024) (n Ukr.).
10. Luchyk, S.D., Bahrii, K.L. (2020). The use of correlation-regression analysis in assessing the solvency of a business entity. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 3 (79), pp. 189–200. URL: <http://herald.chite.edu.ua/content/download/archive/2020/v3/15.pdf> (Accessed 19 February 2024) (in Ukr.).
11. Oliinyk, O.I. (2016). A system of analysis in enterprise management aimed at achieving economic security. *Efektivna ekonomika [Efficient economy]*, vol. 6. URL: <http://www.economy.nayka.com.ua/?op=1&z=4156> (Accessed 11 February 2024) (in Ukr.).
12. Pererva, I.M. (2021). Advantages of implementing a process approach to enterprise management. *Ekonomika ta suspilstvo [Economy and society]*, vol. 29, pp. 1–8 (in Ukr.).
13. Sokolova, H. N. (2012). *Informatsiini tekhnolohii ekonomichnoho analizu [Information technologies of economic analysis]*. LIBRA, Kyiv, 320 p.
14. Spivak, S., Didyk, I., Skurskyi, T., Zhytko, O. (2021). The role of computer programs for analyzing the financial and economic condition of the enterprise. *Sotsialno-ekonomichni problemy i derzhava [Socio-economic problems and the state]*, vol 2 (25),

pp. 702-707. URL: <http://sepd.tntu.edu.ua/images/stories/pdf/2021/21ssmsgsp.pdf> (Accessed 22 February 2024) (in Ukr.).

15. Synkevych, N., Krauze, O. (2023). Economic analysis: prospects for development in the conditions of digitalization of the economy. *Halytskyi ekonomichnyi visnyk [Galician Economic Herald]*, vol. 2 (81), pp. 7-15. DOI: [https://doi.org/10.33108/galicianvisnyk\\_tntu2023.02.007](https://doi.org/10.33108/galicianvisnyk_tntu2023.02.007) (in Ukr.).

16. Ursakiy, Yu.A. (2015). The role of information technologies in increasing the economic potential of enterprises. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 1 (57), pp. 204-211. URL: [http://herald.chite.edu.ua/content/download/archive/2015/v1/NV-2015-v1\\_27.pdf](http://herald.chite.edu.ua/content/download/archive/2015/v1/NV-2015-v1_27.pdf) (Accessed 15 February 2024) (in Ukr.).

17. Popova, V.D. (2016). Information support of the management decision-making process: relationship between accounting and analytical procedures. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 3-4 (63-64), pp. 291-299. URL: [http://herald.chite.edu.ua/content/download/archive/2016/v3-4/NV-2016-v3-4\\_32.pdf](http://herald.chite.edu.ua/content/download/archive/2016/v3-4/NV-2016-v3-4_32.pdf) (Accessed 20 February 2024) (in Ukr.).

18. Raikovska, I.T. (2016). Modular structure of the system of computerization of economic analysis: functional composition. *Problemy teorii ta metodologii bukhhalterskoho obliku, kontroliu i analizu [Problems of the theory and methodology of accounting, control and analysis.]*, vol. 1(13), pp. 338-359. DOI: [https://doi.org/10.26642/pbo-2009-1\(13\)-338-359](https://doi.org/10.26642/pbo-2009-1(13)-338-359) (in Ukr.).

19. Khorunzhak, N.M. (2020). Computerization of the analysis process: problems and challenges. *Stan i perspektyvy rozvytku oblikovo-informatsiinoi systemy v Ukraini [The state and prospects of the development of the accounting and information system in Ukraine]*. Mat. Conf. Ternopil, Ukraine, pp. 149-151 (in Ukr.).

20. Khorunzhak, N.M. (2022). Analysis in conditions of digitization: problems and prospects. *Naukovi chytannia profesora Hryhoriia Herasymovycha Kireitseva (do 90-richchia vid dnia narodzhennia) [Scientific readings by Professor Hryhoriy Gerasimovich Kireitsev (for his 90th birthday)]*. Kyiv, Ukrainy, pp. 307-310 (in Ukr.).

21. Khytrova, O.A., Kruhlianko, A.V. (2018). The effectiveness of the application of complex information systems in enterprise management. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 4 (72), pp. 58-66. URL: <http://herald.chite.edu.ua/content/download/archive/2018/v4/7.pdf> (Accessed 23 February 2024) (in Ukr.).

22. Chaplinska, A.A., Andrukhiv, M.P. (2017). The importance of information support in conducting economic analysis. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 1-2 (65-66), pp. 189-198. URL: [http://herald.chite.edu.ua/content/download/archive/2017/v1-2/NV-2017-v1-2\\_20.pdf](http://herald.chite.edu.ua/content/download/archive/2017/v1-2/NV-2017-v1-2_20.pdf) (Accessed 18 February 2024) (in Ukr.).

23. Shuprudko, N.V. (2020). Basics of managing information processes at the enterprise. *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu [Bulletin of Chernivtsi Trade and Economic Institute]*, vol. 4 (80), pp. 163-180. URL: <http://herald.chite.edu.ua/content/download/archive/2020/v4/12.pdf> (Accessed 22 February 2024) (in Ukr.).