

Profitability and financial liquidity of enterprises in the context of economy development programs: Conditions of the Polish Deal

Summary

The aim of the monograph is to identify the possibility of using economic analysis tools when assessing the profitability and financial liquidity of enterprises in the context of economic development programs in the conditions of the Polish Deal.

The monograph concerns economic analysis. This means that it does not aim to find answers to normative questions, i.e. to decide what should be. In the context of the Polish Deal, we do not aspire to decide how good this development program is. However, it aims to answer positive questions relating to the possible effects of its implementation on the financial condition of enterprises.

The research problem was to determine whether the previously used tools of economic analysis, especially financial analysis, can be modified in terms of recognizing the impact of government development plans on the profitability and financial liquidity of enterprises.

The main idea of the study is based on the belief that by extending the approach to the economic analysis of enterprises it is possible to recognize the strength and direction of the impact of government development programs on the profitability and financial liquidity of enterprises.

The time scope of the research covers the years 2003–2021. It allowed for good recognition of changes in the profitability and financial liquidity of enterprises, which was important for the methodological aspect of the monograph.

Research on changes in profitability and financial liquidity in enterprises in the analysed period was based on data from companies registered in Poland. Of the data from over 682 thousand companies, the analysis covered those enterprises for which it was possible to obtain a set of financial data needed to calculate selected profitability and financial liquidity indicators. The size of the research sample was determined in accordance with basic statistical requirements, taking into account 21 sections of the Polish Classification of Activities (PKD). The sample size of the study was approximately 6,300 enterprises.

The increasingly common use of non-deterministic learning systems in financial analysis prompted the authors to propose the use of the neural network method in research on the impact of the implementation of development programs on the financial condition of enterprises. It was recognized in the monograph that neural networks inspired by the structure of the human brain offer a more flexible and adaptive approach to analysing the impact of the Polish Deal on the profitability and financial liquidity of enterprises.

Based on literature studies and empirical research using financial analysis methods, the problem of assessing profitability and financial liquidity in enterprises in Polish conditions is presented in five chapters. The first chapter concerns the characteristics of the Polish Deal development program. The second chapter deals with the possibilities of using micro and macro data in identifying the situation in terms of profitability and financial liquidity of enterprises. Research on profitability in enterprises in 2003–2021 is the subject of the third chapter. The fourth chapter presents the possibilities of using financial analysis methods to identify the impact of the Polish Deal on the financial situation. In the fifth chapter the possibilities of using financial analysis methods to identify the impact of the Polish Deal on the financial situation are presented. A neural network was used in the data analysis process.

The research has shown that the Polish Deal has the potential to make the country's economy more dynamic. This is not only a program relating to taxes, but also and primarily to such elements as health, the situation of employees, the size of investments, the quality of life of Polish families, the situation of farmers, the development of education and culture, development opportunities of enterprises, climate protection and environment, development of digital services, situation of seniors.

Its implementation may affect the profitability and financial liquidity of enterprises in various directions. Enterprises wishing to achieve the expected profitability and maintain the ability to settle liabilities at an appropriate level should take actions aimed at capturing value in a manner appropriately adjusted to the assumptions of the Polish Deal.

However, a more specific identification of the relationship between changes in macroeconomic factors and the profitability and financial liquidity of enterprises requires the use of micro and macro data. The catalog of macroeconomic variables specified in the context of the Polish Deal shows that there are many variables at the level of the entire economy that can be analysed in connection with specific strategies / plans / development programs for the economy. At the micro level, we should refer to data from the reporting of the enterprises in question.

The basic method of assessing profitability and financial liquidity in an enterprise is ratio analysis. In the financial analysis of enterprises in the context of development programs, it is important to present changes in profitability and liquidity from an *ex post* perspective, both in order to determine what situation we are dealing with in enterprises in terms of economic efficiency and the ability of enterprises to settle liabilities, and what is creating the possibility of using methods to identify the impact of the implementation of development programs on the financial condition of enterprises. The conducted research showed the profitability and financial liquidity of the companies in question in the period under study.

The monograph shows that neural networks are a useful tool in considering changes in the financial situation of enterprises as a result of the implementation of economic development programs. In the conditions of the Polish Deal the advantages of this method were highlighted, which allows for the analysis of

complex, non-linear dependencies occurring in data sets representing the actual economic situation.

Keywords: profitability, financial liquidity, Polish Deal, ratio analysis, neural networks.