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System of Indicators for the Financial Analysis of Public Sector Entities

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Introduction

Financial analysis is a study of financial results and conditions of an economic entity to assess its achievements and prospective, as well as to provide qualitatively new information to financial managers that will enable them to make sound decisions. Financial analysis involves the forecasting, planning, accounting, and control of certain economic activities. Nevertheless, financial analysis is most often associated with private sector entities. The issues of financial analysis of public sector entities are examined in fragments in scientific works.

Research object: the financial analysis of public sector entities. The purpose of the research is to establish a unified and modified model of the system for conducting the financial analysis of the public sector entities. Tasks: to describe the logical sequence of financial analysis after analysing and summarising the theoretical and practical aspects of the analysis of the financial position of public sector entities; to identify and group indicators for analysing the financial position of the public sector. Research methods: analysis of scientific works, methods of information grouping, comparing, detailing, generalizing, and one-dimensional statistics.

1. Theoretical assumption for financial analysis of public sector entities

Financial analysis, as an independent science, is discussed by several foreign authors (Brag, 2013; Brealey et al., 2003; Van Horne, Wachowicz, 2005; Borodin, Mityushina, et al., 2021; Popa, et al., 2021; et al.) and Lithuanian authors (Bagdžiūnienė, 2013; Džikevičius, Jonaitienė, 2015; Mackevičius, 2009; Mackevičius, Valkauskas, 2012, 2015, 2016; Mackevičius, Valkauskas, Bachtijeva, 2020; et al.). Nevertheless, the concept of financial analysis is usually associated with the analysis of information presented in the financial statements of business entities. However, the examination of the issues of financial analysis of the public sector entities is analysed rather fragmented. The analysis of scientific works (Bunea-Bontas, Petre, 2009; Beckett-Camarata, 2009; Steiss, Nwagwu, 2001; Rivenbark, Roenigk, Allison, 2010; Villis, Kazlauskienė, 2012; Kazlauskienė 2012; Rudžionienė, 2009) displays that the unified approach to public sector financial analysis is still not present. The active reform of public sector accounting over the last decade has provided a basis for modernizing financial accounting and standardizing financial, and other reports. However, financial analysis is usu-

ally associated with the analysis and assessment of the financial health of the public sector, with the aim of adapting the framework of indicators for analysing the financial health of business entities to public sector entities. The following interrelated reasons have prompted the debate on the consistency, scope, and method of financial analysis of public sector entities as well as the attention to the results of the financial analysis and the decisions to be taken on the increasing demand for public services and the growing need for the resources needed to provide them; the public's negative perception of public sector entities as unduly spendthrift; and the desire to adopt innovative forms of management, organization, and control of business entities in the public sector. Financial information users have developed a need not only to understand the accounting information describing public sector entities, but also to compare the data of different public sector entities with each other, and to compare and evaluate the statements of financial position of public sector entities in different countries (Bikienė, 2011). The results of the financial analysis provide a basis for retrospective assessment of the entity's situation and for planning various levels and scopes of opportunities, as well as for arguing current and future strategies and decisions. Public sector entities are focused on providing public administration services and satisfying the public interest. One of the most important aspects of these entities is that their activities are financed from the state or the municipal budgets. Both internal and external information users are interested in receiving information that is as objective, complete, and relevant as possible. They are not only interested in financial performance results, but also in the economy, efficiency, effectiveness, and productivity of the public sector entities. In the year 1992, INTOSAI (International Organization of Supreme Audit Institutions) established the need for standards for internal planning, implementation, and evaluation in the guidelines for the public sector internal control standards. These standards are the basis for the 3E concept. According to Hrunza (2013), the 3E concept can be taken as a starting point for analysing public sector finances. Cost-effectiveness is about reducing the cost of resources and is linked to the ability to save. The resources used must be available on time, ensuring the best quantity, quality, and price. Efficiency can be defined as the attempt to maximize benefits by making the most efficient use of limited resources. According to Puškorius (2014), efficiency is the relationship between the desired performance outcome and the complex resources, inputs, costs, and other resources used to achieve that outcome. Effectiveness refers to the relationship between objectives or goals and the outcome. Performance measurement assesses the extent to which policy objectives have been achieved in terms of the products (services) produced. Productivity, according to Krugman (1990), is the most important indicator for quantifying the economic progress of a society. M. Jackson and Petersson (1999) define productivity as the ratio of the period of time during which a certain amount of added value has been created to the time taken to create that value. It is therefore the ratio of the results achieved to the total time needed to achieve those results (Vanagas, 2008). Public productivity is the ratio of public services provided by state and municipal authorities (public sector entities) to the resources consumed in providing those services. Given the specific nature of public sector activities and the fact that the main 'customer' of these entities is the public, four areas of activity can be distinguished: finance, administration, public interest, and development. The total productivity of public sector entities can be calculated as the sum of the results of each of the four performance areas multiplied by the corresponding weight.

2. Content and logical sequence of financial analysis

Given the particularities of the public sector, it is appropriate to start the financial analysis of public sector entities from the analysis of the financial situation and to carry it out in a consistent manner: starting from horizontal and vertical analysis, moving to relative analysis, and completing it with factorial analysis (Kazlauskienė, 2012). Scientific literature provides many examples of financial indicators and their grouping in the financial analysis of public sector entities.

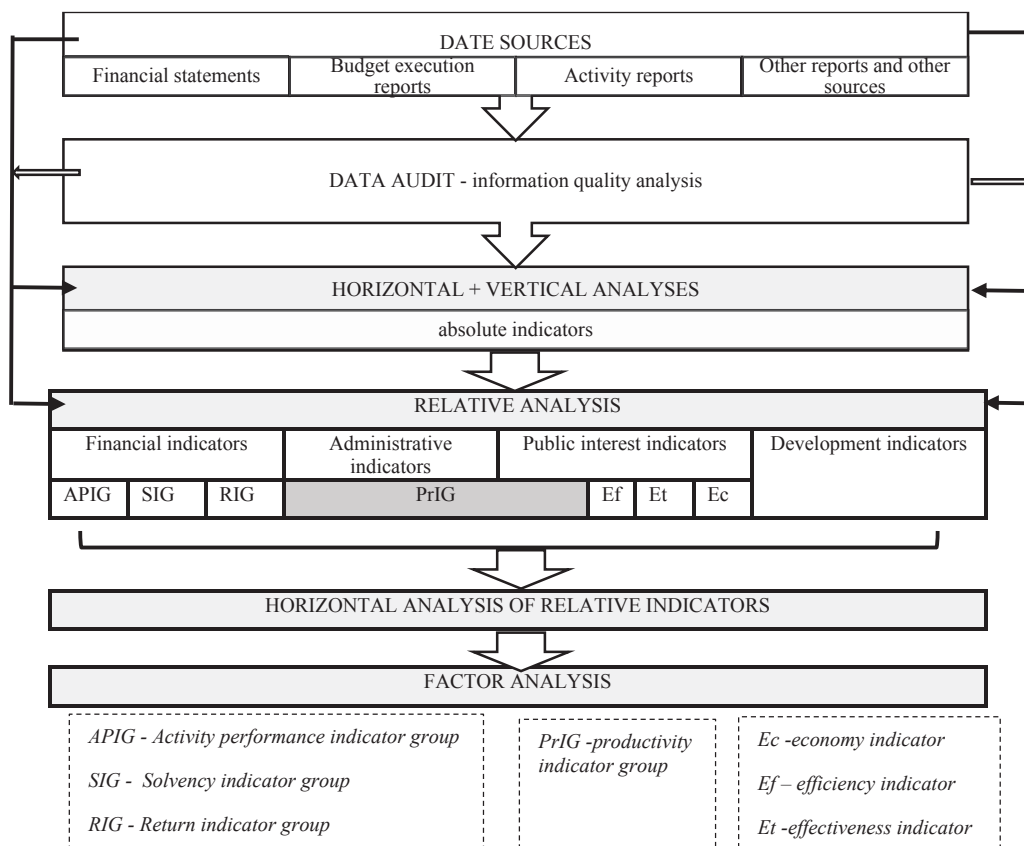


Figure 1. Structure of the system of financial analysis of public entities.

Source: compiled by author

The authors (Rivenbark et al., 2010; McKinney, 2004; Chaney, 2005; Brown, 1995; Rudžionienė, Juozapavičiūtė, 2013; Jusytė, Kamarauskienė, 2014; etc.) mention various groups of relative indicators in their works: liquidity, income and expenses, solvency, etc. McKinney (2004) presents the Financial Health Monitoring System, which includes 36 financial indicators. Brown (1993) The Municipal Financial Health Methodology includes ten indicators grouped into four categories (revenue, expenditure, current position, and debt indicators). The expert model (Chen et al. 2012) includes 14 indicators grouped into three groups (revenue, expenditure, liability indicators). Kamarauskienė and Jusytė (2014) in their work distinguish 18 indicators grouped into three groups (performance, solvency and return indicators). Kazlauskienė (2012) identifies 11 indicators grouped into five groups (liquidity, turnover, income-expenditure, debt and return indicators).

However, there is no well-established, unified system of public sector indicators and their grouping. The person carrying out the financial analysis of the entity shall select, considering the needs of the users of the information, the system of indicators best and most accurately reflecting the objectives of the analysis. Therefore, in the opinion of the author of the work, it is appropriate to group the indicators according to the activities of the public sector entity: groups of indicators of finance, administration, public interest, and development, selecting or setting indicators corresponding to each group.

It is worth noting that although there is a large number of relative indicators, they are all calculated and analysed based on the same sources of information: data from financial statements, budget execution reports, activity reports, and other reports. In line with the provisions of the Law on Public Sector Financial Reporting of the Republic of Lithuania (note: the current version will enter into force on 1 January 2022), the data from the operational and the financial reports must be correlated. Thus, a well-established system of sources of information will ensure unified data.

Conclusions

The increased need for analysis of the activities and financial situation of public sector entities is due to the reform and results of the public sector administration and the public sector accounting as well as financial reporting. It should also be noted that there is an increased demand from users of financial information to understand and compare accounting information describing public sector entities, to assess the state of the entity and to plan for different levels and scopes of opportunities, and to argue for current and future strategies and decisions.

The analysis of the literature has shown that there is still no unified approach to the financial analysis of public sector entities. There is still a lack of more comprehensive, in-depth scientific, and practical research on these issues. In particular, the work of Lithuanian authors does not give sufficient attention to the financial analysis of public sector entities.

Having summarised the methods and indicators of financial analysis of public sector entities presented in the works of foreign and Lithuanian authors, as well as evaluated the specifics of the activities of public sector entities and the specifics of the sources of information, it is proposed:

- start the financial analysis of public sector entities by evaluating the reliability of the content of information sources – data audit. The subsequent course of the study should include horizontal, vertical, relative and factor analysis.
- grouping the indicators to be used for the analysis of entities in the public sector by area of the entity's activity: financial, administrative, public interest, and development indicators. For each group, choosing or defining relative indicators corresponding to it.

The practical application of the financial analysis system provided, the setting of thresholds and targets for specific indicators, is the subject of further research by the author.

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