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INSTITUTIONAL RESILIENCE OF A NATIONAL INSTITUTE IN SERBIA

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Abstract

This study examines the financial and operational performance of an institute of national importance in the Republic of Serbia during the period 2020–2025 The analyzed institution is a Serbian public research institute of national importance, engaged in mining, metallurgy, environmental protection, and related engineering sciences, with activities including research, projects, laboratory testing, technology development, and collaboration with industry and the public sector. Drawing on data from the Serbian Business Registers Agency (SBRA) and internal datasets, the analysis compares business income, expenses, net profit, and efficiency indicators, including return on assets (ROA), return on equity (ROE), and asset turnover ratio. The findings reveal notable fluctuations in profitability, followed by a strong recovery after 2023, driven by asset expansion and equity growth. The alignment of the analyzed indicators confirms the reliability of financial reporting, while the observed recovery trends demonstrate the Institute's long-term economic sustainability and resilience.

Keywords: *institutional resilience, financial performance, sustainable growth, risk management*

1. INTRODUCTION

As an institution of national importance in Serbia, the Institute, whose name is not disclosed for data protection reasons, operates through a combination of public funding and project-based income. From 2020 to 2025, the Institute experienced structural reclassification—from a small to a medium legal entity—and notable fluctuations in profitability and liquidity. This paper provides a comparative assessment of financial indicators based on internal datasets and official financial notes (SBRA), aiming to ensure methodological coherence and transparency. Strategic risk management has emerged as a critical dimension of institutional resilience and governance. Kaplan and Mikes emphasize that while preventable risks can be managed through rules-based approaches, strategic risks require open and explicit discussions to be effectively addressed [1]. Building on this perspective, Frigo and Anderson argue that developing strategic risk management processes and capabilities provides a strong foundation for enhancing enterprise risk management and governance. Together, these frameworks highlight the importance of integrating risk awareness into organizational strategy, ensuring both sustainability and long-term competitiveness [2]. Research and innovation (R&I) are recognized as key drivers of sustainability and competitiveness in Europe. According to the European Commission (2023), strengthening research and innovation

within a comprehensive policy framework can improve overall performance, stimulate private investment in R&D, reduce disparities between regions, and help bridge the technological gap with global competitors [3]. The analysis of financial indicators in the Institute of National Importance for the Republic of Serbia clearly demonstrates institutional resilience and adaptability, confirming that strategic risk management and investment in research and innovation represent key factors of sustainable growth and competitiveness. In line with OECD (2020), the governance and performance of public research institutions are essential for ensuring resilience and competitiveness, reinforcing the importance of strategic risk management and investment in research and innovation [4].

2. EXPERIMENTAL

2.1. Data Sources and Methodology

The empirical foundation of this study is based on the official notes to the financial statements for the period 2020–2025, which comprise annual records of business income, expenses, net profit, number of employees, wages and salaries, total assets, equity, and efficiency indicators such as return on assets (ROA), return on equity (ROE), and asset turnover ratio. To ensure methodological rigor and transparency, the research design integrates several analytical techniques: Comparative tabulation: Internal dataset values were systematically compared with data from SBRA to confirm consistency in net profit, equity, and capital structure. Ratio analysis: Key financial ratios (ROA, ROE, asset turnover) were calculated to evaluate profitability, efficiency, and institutional resilience across the observed period. Cross-validation: Net profit and equity values were cross-checked between internal records and SBRA data from 2020 to 2025, ensuring methodological coherence and eliminating discrepancies. Trend analysis: Longitudinal tracking of business income, expenses, and profitability was conducted to identify fluctuations between 2020 and 2025, with emphasis on periods of decline (2020 to 2023). During the period 2020–2023, the impact of the COVID-19 pandemic on the Institute's operations was clearly evident, followed by a recovery phase in 2024–2025. Contextual integration: Financial indicators were interpreted within the broader framework of strategic risk management (Kaplan & Mikes, 2012; Frigo & Anderson, 2011) and research and innovation policy (European Commission, 2023; OECD, 2020), linking empirical results to institutional governance, sustainability, and competitiveness. This methodological framework enables a robust comparative assessment of institutional performance. By combining internal datasets with official financial notes, the study ensures transparency, credibility, and accuracy. Furthermore, embedding financial analysis within established theoretical frameworks of risk management and innovation policy provides a holistic perspective on institutional resilience, adaptability, and sustainable growth.

3. RESULTS AND DISCUSSION

Table 1. *Financial Indicators of the Institute in the Period 2020–2025 (in thousand RSD)*

Year	Business income (1)	Business expenses (2)	Business results (3) = (1)-(2)	Financial income (4)	Financial expenses (5)	Financial result (6)= (4)-(5)	Other income (7)	Other expenses (8)	Other result (9) = (7)-8)	Net profit
2020	624,090	550,325	73.765	88	493	-405	773	84	689	10,264
2021	558,624	619,087	60,463	63	18	45	489	0	489	4,503
2022	701,521	691,610	9,911	0	59	-59	128	527	-399	1,457
2023	799,068	798,310	758	4	127	-123	447	127	320	955
2024	1,025,586	1.007,299	18,287	0	91	-91	498	0	498	18,741
2025	1,056,657	1.027,576	29,081	0	685	-685	555	134	421	30,024

Source: SBRA's data for the period 2020 to 2025 and authors' calculation

Table 1 summarizes the Institute's business and financial results for 2020–2025, expressed in thousands of RSD. The analysis highlights several key trends. Business results were positive in 2020 but declined sharply in 2021, reflecting increased operating costs, followed by stagnation in 2022–2023. A recovery phase began in 2024, with results improving further in 2025. Financial results remained negative throughout, indicating persistent pressure from financial expenses, particularly in 2025. Other income and expenses fluctuated yet contributed positively in 2024 and 2025. Net profit was stable in 2020 but fell significantly in subsequent years, reaching its lowest in 2023. A strong rebound followed, with net profit rising sharply in 2024 and 2025, confirming the Institute's transition into sustainable growth. Overall, the findings illustrate three phases: initial stability, a crisis period marked by stagnation and declining profitability, and a post-pandemic recovery characterized by improved efficiency and resilience.

Figure 1 shows the trends in business income and business expenses over 2020–2025. Both categories increased, with income rising from 624,090 to 1,056,657 thousand RSD. In 2021 expenses exceeded income (business result −60,463), and in 2023 the margin narrowed to only 758, while from 2024 the gap widens again, confirming the recovery of operating profitability.

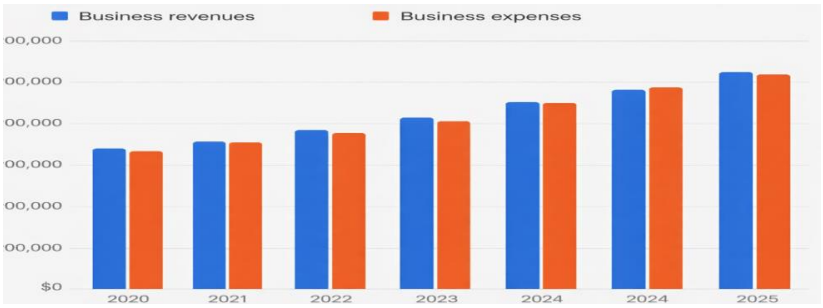


Figure 1. *Business revenues and expenses of the Institute, 2020–2025 (in thousand RSD)*
Source: SBRAs' data for the period 2020 to 2025 and authors' calculation

Table 2. *Overview of Financial Performance and Workforce Indicators of the Institute in the Period 2020–2025 (in thousand RSD)*

Year	Number of employees	Wages and salaries expense	Total Assets	Equity	ROA in %	ROE in %	Asset turnover ratio in %
2020	223	379,507	58,646	122,282	17.5	8.39	0.14
2021	230	391,997	67,075	132,546	6.71	3.39	0.11
2022	232	438,321	82,013	138,506	1.78	1.05	0.12
2023	246	527,010	79,074	138,762	1.21	0.69	0.16
2024	259	627,740	110,069	156,267	17.03	11.99	0.16
2025	263	681,722	142,590	174,492	21.06	17.2	0.19

assets, equity, and key efficiency indicators are presented over a six-year period. The analysis highlights several important trends: Employees and wage expenses: The number of employees increased from 223 in 2020 to 263 in 2025, indicating a gradual expansion of institutional capacity. Wage and salary expenses show continuous growth, rising from 379,507 in 2020 to 681,722 in 2025, consistent with both the increase in staff and the overall expansion of business activities. Assets and equity: Total assets nearly doubled, from 58,646 in 2020 to 142,590 in 2025, reflecting the strengthening of the resource base. Equity grew steadily, from 122,282 in 2020 to 174,492 in 2025, confirming the Institute's long-term sustainability and financial resilience. Profitability indicators (ROA and ROE). ROA (Return on Assets): Declined from 17.5% in 2020 to a minimum of 1.21% in 2023, followed by a strong recovery to 21.06% in 2025. ROE (Return on Equity): Exhibited a similar pattern, decreasing from 8.39% in 2020 to 0.69% in 2023, before rising to 17.2% in 2025. These indicators clearly illustrate a crisis period from 2021 to 2023 and a post-pandemic recovery from 2024 to 2025. Asset turnover ratio: The ratio ranged between 0.11 and 0.19, with a modest increase in the final years. Stabilization at 0.16 to 0.19 in 2024 to 2025 indicates improved efficiency in utilizing assets to generate revenue.

Figure 2 illustrates the trends in net profit (blue line) and equity (orange line) for the period 2020–2025. Net profit (blue line): A noticeable decline is observed from 10,264 in 2020 to its minimum of 1,457 in 2022 and 955 in 2023, followed by a strong increase to 18,741 in 2024 and a record high of 30,024 in 2025. This trajectory clearly illustrates the impact of the crisis period and the subsequent recovery phase. Capital (orange line): Capital demonstrates steady growth throughout the observed period, rising from 122,282 in 2020 to 174,492 in 2025, with accelerated expansion in the final two years. This trend confirms the Institute's long-term financial resilience and capacity for sustainable development.

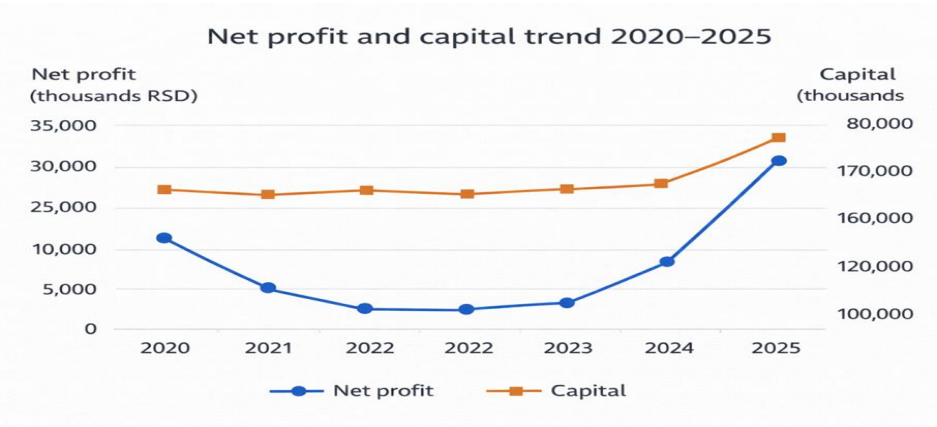


Figure 2. *Net profit and capital trend of the Institute, 2020–2025 (in thousand RSD)*
Source: SBRAs' data for the period 2020 to 2025 and authors' calculation

4. CONCLUSION

The comparative analysis of internal datasets and official financial statements confirms the reliability of reported figures. Despite temporary declines in profitability between 2021 and 2023, the Institute achieved strong recovery in 2024–2025, driven by asset growth, strengthened equity, and improved efficiency. Alignment of indicators from SBRA and internal records demonstrates institutional resilience, enabling sustainable growth and reaffirming national importance. While limited to one institution and a six-year horizon, the study offers insights for future comparative research and provides decision-makers with evidence to enhance financial planning, strategic risk management, and long-term sustainability of public research institutes.

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