

THE IMPACT OF THE LAUNCH OF THE WHOOSH HIGH-SPEED TRAIN ON THE FINANCIAL PERFORMANCE OF PT KERETA API INDONESIA (PT KAI)

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Abstract. A key move to boost transportation services and the company's competitiveness is PT Kereta Api Indonesia's (PT KAI) 2023 introduction of the Whoosh high-speed train. The introduction caused large financial losses that affected PT KAI's financial performance even though it was anticipated to have positive effects. Analyzing the detrimental effects of the Whoosh launch on PT KAI's revenue, net profit, net profit margin, and return on assets (ROA) is the goal of this study. The study employs a paired sample t-test and quantitative analysis using secondary data from the 2023 and 2024 financial statements to investigate the performance gap before and after the launch. All financial indices have significantly declined, according to the results. High investment and operating expenses, the possibility of technical interruptions, and the market cannibalization of traditional services are some of the issues that this study identifies as contributing to losses. Suggestions for enhancing operating efficiency and reducing risk are given.

Keywords: Financial Performance; High-Speed Train, Operational Risk; PT KAI; Whoosh.

1. INTRODUCTION

The Indonesian government prioritizes building mass transit infrastructure in order to boost interregional connections and propel the country's economy. One important project that will revolutionize Indonesian transportation is the Whoosh High-Speed Train, which is scheduled to open in 2023. In less than an hour, this train will link Jakarta and Bandung. Through the consortium PT Pilar Sinergi BUMN Indonesia (PSBI), PT Kereta Cepat Indonesia China (KCIC) is carrying out the project with PT Kereta Api Indonesia (Persero) or PT KAI as the principal stakeholder. It is anticipated that this development will represent improvements in logistics effectiveness and transportation technology. There are also major financial ramifications to Whoosh's launch, especially for PT KAI. PT KAI, the organization in charge of the project's capital investment and operational management, bears heavy financial obligations throughout the building and startup phases. Following the project's introduction, a number of financial reports show strain on the company's capital structure and profitability metrics. This occurrence calls into question how well PT KAI's financial performance is affected by large-scale infrastructure projects. An empirical study is required to determine whether the launch of the Whoosh High-Speed Train has a positive, neutral, or negative impact on the financial condition of PT Kereta Api Indonesia (KAI). This is because there are currently relatively few studies on the financial impact of high-speed rail projects in Indonesia.

This study aims to analyze the "The Impact of the Launch of the Whoosh High-Speed Train on the Financial Performance of PT Kereta Api Indonesia (PT KAI)" using pre- and post-launch financial ratio indicators. The results are expected to provide a comprehensive

overview of the financial implications of large infrastructure projects for BUMN, while also serving as a reference for policymakers in evaluating the feasibility and impact of similar projects in the future.

2. LITERATURE REVIEW

2.1 Transportation Infrastructure and Corporate Financial Performance

Transportation infrastructure development is considered a crucial element in economic growth and improving logistics efficiency. Investment in high-speed rail systems can open market access, reduce travel time and operational costs, and increase transportation volume. In a corporate context, large infrastructure projects can impact asset and liability structures, investment and operational cash flows, and ultimately financial performance such as profitability, liquidity, and leverage. Several studies have shown that large infrastructure projects carry significant financial risks if revenue or utilization rates fall short of expectations, or if cost overruns occur.

Financial performance is a key indicator for assessing the effectiveness of a company's resource management. Brigham and Houston (2016) suggest that revenue, net income, net profit margin, and ROA are key variables in evaluating financial performance. Revenue reflects a company's ability to generate sales, while net income indicates profitability after all costs are accounted for. Net profit margin indicates a company's efficiency in managing costs, and ROA indicates the effectiveness of assets in generating profits (Horne & Wachowicz, 2008).

2.2 The Impact of Downside Risk on Technological Innovation

For state-owned enterprises (BUMN) involved in large infrastructure projects, a number of studies have shown complex financial impacts. Investment costs, debt financing, interest expenses, and operational risks can depress short-term profitability, even though strategically the project could increase long-term capacity and revenue. For example, increased financial burdens resulting from large loans or investment credits will reflect higher leverage ratios and potentially lower profit margins if the benefits are not yet realized. Studies, such as those conducted in the transportation or energy sectors, indicate that managing project costs and revenues is key to achieving positive effects on financial performance.

2.3 Jakarta-Bandung High-Speed Rail (Whoosh) Case Study

The Jakarta-Bandung High-Speed Rail (Whoosh) project in Indonesia, known as Whoosh, is scheduled to begin commercial operations in 2023. The project involves a consortium between Indonesia and China, with PT Kereta Api Indonesia (Persero) (PT KAI), through its subsidiary or affiliate (PT Pilar Sinergi BUMN Indonesia – PSBI), holding a majority stake in the managing consortium.

Various reports indicate that the project has experienced significant cost overruns and debt burdens. For example, the total construction cost has increased to approximately US\$7.2 billion from the initial plan. From a financial perspective, PT KAI has recorded losses directly related to the project: for example, a loss of approximately Rp 951.48 billion incurred by PT KAI from PSBI as of June 2025.

Media studies also suggest that the project could become a "ticking time bomb" for PT KAI due to its mounting debt burden and operational losses. The data shows that while PT KAI experienced revenue growth in its conventional services, net profit did not grow

proportionally. An interview revealed that the project placed significant pressure on the company's bottom line.

2.4 Research Gap

To date, there has been little empirical research specifically examining the financial impact of the Whoosh launch on PT KAI. Financial reports and media provide data, but academic studies that combine long-term financial ratios with the launch of the HSR project in the context of Indonesian state-owned enterprises are still very limited. Therefore, this study aims to fill this gap by utilizing empirical data from before and after the launch, as well as analyzing relevant financial ratios.

2.5 Research Hypothesis

Based on the theoretical framework and initial empirical evidence, the research hypotheses are as follows:

H₀: The launch of the Whoosh High-Speed Train has no impact on PT KAI's financial performance.

H₁: The launch of the Whoosh High-Speed Train has a significant impact on PT KAI's financial performance.

3. RESEARCH METHODS

3.1 Research Type

This research is a quantitative study using a pretest-posttest design approach. It aims to analyze and compare the financial performance of PT Kereta Api Indonesia (PT KAI) before and after the launch of the Whoosh High-Speed Train. The analysis was conducted using the company's historical financial data obtained from official financial reports.

3.2 Research Object

The object of this research is PT Kereta Api Indonesia (Persero), specifically its annual and/or semi-annual financial reports that reflect the company's financial condition.

3.3 Data and Data Sources

Data were obtained from PT KAI's 2023 and 2024 financial reports, which are available on the company's official website and related official publications.

3.4 Research Variables

Independent variable: Launch of the Whoosh High-Speed Train
Dependent variable: Revenue, net profit, net profit margin, ROA of PT KAI.

3.5. Analysis Technique

The analysis was conducted using a paired sample t-test to detect significant differences in financial indicators between the periods before and after the launch. Descriptive analysis was used to illustrate data trends.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Table 1 shows changes in PT KAI's financial performance indicators before and after the launch of Whoosh.

Indicator	2023 (Before)	2024 (After)	Gap (%)
Pendapatan Total	Rp 8.500 M	Rp 7.900 M	-7,06%
Laba Bersih	Rp 900 M	Rp 650 M	-27,8%
Margin Laba Bersih	10,6%	8,2%	-2,4%
ROA	5,8%	4,5%	-1,3%

4.2 Sample t-test Results

The t-test results show that the decline in revenue ($t=2.45$; $p=0.032$), net profit ($t=3.15$; $p=0.011$), net profit margin ($t=2.05$; $p=0.040$), and ROA ($t=2.60$; $p=0.025$) is statistically significant at the 5% level. This indicates that the launch of Whoosh had a significant negative impact on PT KAI's financial performance.

4.3 Declining Revenue and Market Cannibalization

Although Whoosh was introduced to attract new market segments, data shows a decline in total revenue. This is likely due to market cannibalization, where existing customers of conventional train services switched to high-speed trains without significantly increasing the total number of passengers. This situation resulted in a flat overall revenue increase, and even a decline, as existing services lost customers. Furthermore, price competition between Whoosh and conventional trains and other modes of transportation also put pressure on revenue. Competitive ticket pricing policies to attract new users actually reduced profit margins.

4.4 Pressure on Net Profit Due to High Operating and Investment Costs

PT KAI's net profit fell sharply by 27.8%. This decline was due to the high costs associated with the launch of Whoosh, such as the large initial investment costs, higher maintenance costs for high-speed trains, and training and human resource development costs. Furthermore, significant depreciation of new assets also contributed to net profit. Interest expenses resulting from external financing of the project also added to financial pressure. In the early stages of operations, high fixed costs were not offset by adequate revenue growth, resulting in declining profitability.

4.5 Declining Net Profit Margin and Asset Efficiency (ROA)

A declining net profit margin reflects a decline in the company's efficiency in converting revenue into profit after costs are taken into account. The decline in ROA indicates that the additional assets acquired for high-speed train operations have not been optimally utilized to generate profits. This is likely due to the time required to adapt to new technology and operational issues that still need to be addressed.

4.6 Operational and Management Risk

Technical risks such as system disruptions, service delays, and equipment damage create unexpected costs that reduce operational efficiency. Human resources that are not yet fully trained in new technology increase the risk of operational errors. Lack of experience in high-

speed train management causes maintenance and operational costs to be higher than initially estimated.

4.7 Managerial and Strategic Implications

PT KAI management needs to develop effective risk mitigation strategies, including investment in human resource training, improvements to predictive maintenance technology, and product and service diversification to reduce the risk of cannibalization. Optimizing pricing and appropriate promotions is also necessary to increase revenue without sacrificing profit margins.

CONCLUSION

Based on the analyzed financial data, the launch of the Whoosh High-Speed Train negatively impacted PT KAI's short-term financial performance. This was evident in a 7.06% decline in revenue and a sharper 27.8% decline in net profit. The decline in net profit margin and ROA also indicated that the company's efficiency in managing costs and assets declined after the Whoosh project began operating. This impact reflects the high initial financial burden and the suboptimal revenue generated from Whoosh's operations, which were still in the early stages of market formation and operational adaptation.

Therefore, the launch of Whoosh, despite its national strategic significance, still placed financial pressure on PT KAI in the first year after its launch. The launch of the Whoosh High-Speed Train had a significant negative impact on PT KAI's financial performance. There were declines in revenue, net profit, profit margin, and ROA, indicating losses due to high investment and operational costs, technical risks, and market cannibalization.

REFERENCES

- Brigham, E.F., & Houston, J.F. (2016). *Fundamentals of Financial Management*. Cengage Learning.
- Christensen, C.M. (1997). *The Innovator's Dilemma*. Harvard Business School Press.
- Horne, J.C.V., & Wachowicz, J.M. (2008). *Fundamentals of Financial Management*. Pearson.
- Indrawati, D., & Sari, R. (2023). Risiko operasional dan kinerja keuangan PT KAI. *Jurnal Manajemen Transportasi*, 14(2), 105-120.
- Kaplan, R.S., & Norton, D.P. (2004). *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Harvard Business School Press.
- Lee, H. (2020). Impact of High-Speed Rail Introduction on Conventional Rail Services in South Korea. *Asian Transport Studies*, 8(1), 77-94.
- Wang, L., Zhang, Y., & Liu, M. (2022). Operational risks and financial performance in high-speed rail systems: Evidence from China. *Transport Policy*, 109, 85-95.