International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 06 Issue 08 August 2023
DOI: 10.47191/ijcsrr/V6-i8-03, Impact Factor: 6.789
IJCSRR @ 2023
www.ijcsrr.org

Financial Feasibility Study in the Construction of the "Katering Nusantara" Project in the New National Capital of Indonesia (IKN) PT. XYZ

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ABSTRACT: The development of an Indonesia new national capital requires a significant workforce, with over 260,000 construction workers needed for the phase 1 construction between 2022 and 2024. To support this massive undertaking, PT. XYZ received an opportunity to provide catering services for 4,500 employees involved in building the nation's capital, known as Katering Nusantara. Recognizing the potential of the catering industry as a stimulant for corporate growth, PT. XYZ expanded its product line, from only focusing on inflight catering to remote industrial catering. While the inflight catering business relies on flight availability and aviation infrastructure, the industrial catering segment offers more flexibility and opportunities for growth through participating in tenders at various factories across Indonesia. As part of the study, a financial feasibility analysis will be conducted to evaluate the investment in Katering Nusantara, considering factors such as investment costs and overall feasibility. Financial feasibility study conducted in this project to allow PT.XYZ assess the potential risk and return associated with the Katering Nusantara project. The investment of Katering Nusantara will cost Rp5,275,990,000 and will be funded using debt and equity. In the research reveal that the payback period 3.82 years, with a Net Present Value (NPV) of Rp. 11,647,468,485, a profitability index 2.21, and Internal Rate of Return (IRR) of 45%, which surpasses cost of capital 14.38%. This suggests that PT.XYZ should proceed with the implementation of the Katering Nusantara project. At the same time, it is important to note that the project's financial performance is sensitive to changes in catering sales prices, emphasizing the need for cost optimization and alternative pricing strategies to mitigate potential fluctuations.

KEYWORDS: Capital Budgeting, Corporate Catering, Financial Projection, Financial Feasibility Study, Risk Analysis.

INTRODUCTION

On January 18, 2022, the President of the Republic of Indonesia, Joko Widodo (Jokowi), decided to move the State Capital of Indonesia (IKN) from Jakarta to North Penajam Paser Regency and Kutai Kartanegara Regency which is located in East Kalimantan Province. The background of the National Capital City construction is one of the government's strategies in distributing the development of the Republic of Indonesia, which has only focused on the island of Java. In constructing a new national capital covering an area of approximately 250 thousand hectares, many workers are needed to build and succeed in the development plans for the archipelago's national capital. The construction of phase 1 in 2022-2024 will require more than 260,000 construction workers. With details, in 2022, as many as 30,000 people are needed, and in 2023 some 123,000 people. And in 2024, around 107,000 people. The increasing need for employees to build the nation's capital city and the lack of existing facilities at the project construction site required support from third parties to meet the food needs of employees working there for phase 1 of development. On this opportunity, PT. XYZ received an offer to make catering to meet the needs of 4,500 employees working in developing the nation's capital, called Katering Nusantara.

BUSINESS ISSUES

PT. XYZ increased the company's product line assessing the prospects for the catering industry to become an engine to boost corporate growth. PT. XYZ has two business segments, namely inflight catering and remote industrial catering. In proportion, the inflight catering business line is still dominant compared to the industry. Opportunities for business growth in the industrial segment are more flexible so that corporations do not need to depend on third parties. The inflight catering market is assessed to rely on the availability of flight slots at airports and aviation infrastructure. In contrast, the growth of the industrial catering business does not depend on these components. It depends on the company's level of aggressiveness in participating in tenders at many factories in Indonesia. Parallel with the construction of the IKN, PT. XYZ received an offer to become tender for catering service providers for

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4,500 employees working on national capital development. In this study, calculations will be carried out on the financial feasibility study on investment in the development of Katering Nusantara. From the calculation results, the research can help to conclude whether the Katering Nusantara project is feasible with the conditions, the amount of investment, and the existing market share. This study aims to calculate the financial feasibility study of Katering Nusantara by PT. XYZ to do catering in the capital city of the new nation, assess the results of the project, whether it is profitable or not if it is beneficial, what can be done to expand to meet the needs of employees in the new capital city with a larger quantity.

METHODOLOGY

Developing a new corporate project must demonstrate financial feasibility to consider investing in a new investment initiative. The invested capital should produce an economic return for investors that is at least comparable to other investments with equivalent degrees of risk. This benchmark guarantees that company have a compelling reason to direct their resources toward the proposed project. It emphasizes the importance of undertaking a thorough financial feasibility assessment to assess the potential returns and risks associated with the investment [1]. Capital budgeting is the process by which a company examines potential big investments or projects. Such initiatives include establishing a new manufacturing site or investing considerably in a third-party firm. Before deciding whether to approve or reject proposed investments, companies must conduct capital budgeting studies to determine their viability and expected returns [2]. The time value of money has significance in financial feasibility studies because organizations make investment decisions that involve allocating funds to projects, expansions, acquisitions, or equipment purchases. Project investments necessitate an initial financial outlay, and it may take several years before project implementation returns positive cash flows. As a result, company must assess the value of future cash flows in proportion to the initial investment. Businesses can measure the current worth of future cash flows by evaluating the time value of money, considering factors such as inflation, opportunity cost, and investment risk. Financial management in companies takes place in an uncertain external environment factor that can affect the company financial performance. Within this context, forecasting emerges as a fundamental and vital function of business operations [3]. The purpose of forecasting is to provide a starting point for effective planning, with the primary objective of reducing risk in decision-making processes. Forecasting helps identify potential risks and project-related uncertainties in a financial feasibility study [3]. Risk analysis is one important key in a financial feasibility study, due to its ability to identify and resolve any risks and uncertainties that could have an impact on the project's financial performance and viability. As the level of risk connected with a planned project rises, so must the rate of return in order to effectively compensate for the inherent risk involved. This risk-return relationship emphasizes the importance of undertaking extensive risk assessments and applying risk mitigation methods into capital investment decision-making [3]. To be able to carry out this financial feasibility study, several data must be collected, which are primary and secondary data. The data analysis method used in this study are Discounted Cash Flow (DCF) refers to a method of valuation that calculates an investment's value based on its forecasted future cash flows, Net Present Value (NPV) is the value of a project's future cash flow, discounted to today's value, Payback period (PBP) is referring to time takes to repay the cost of an investment, the Internal Rate of Return (IRR) is a metric used to calculate the profitability of potential investment, the profitability Index (PI) is a ratio between the present value of the future cash flows and the company's expenditure, a company's Weighted Average Cost of Capital is a measure of its total cost of capital, including debt, common shares, and preferred shares. Each sort of capital's cost is multiplied by how much of the total capital it makes up, and sensitivity analysis is a financial tool that evaluates the impact of changes in input variables on target variables. Adjusting a specified set of factors enables analysts to predict alternative outcomes.

RESULT AND DISCUSSION

Based on the outcomes of the discussions held with the one of the directors and finance manager from PT.XYZ that Katering Nusantara will build a kitchen with a production capacity of 4,500 serves per serving and is expected to be operational in 2023. To facilitate the construction of Katering Nusantara requires a capital of Rp. 5,275,990,000, compromising of Rp.3,128,000,000 for capital expenditure in the constructing the Katering Nusantara kitchen and Rp. 2,147,990,000 for working capital. To obtain the required fund, PT.XYZ obtain 40% of the capital from its parent company, PT.ABC, and addition required fund from loan to cover the remaining 60%. In the present scenario, the financial feasibility analysis undertaken for investment in Katering Nusantara yielded a positive result. The analysis includes numerous key financial feasibility metrics, including Net Present Value (NPV), Internal Rate

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of Return (IRR), Payback Period (PBP), and Profitability Index (PI). The NPV, IRR, and PBP values are calculated from the Free Cash Flow (FCF), whereas the PI is calculated from the NPV. Katering Nusantara's financial feasibility analysis provides the following results:

Table 1. Result of Financial Feasibility Study (Author,2023)

NPV	Rp. 11,674,468,495	Positive	**Acceptable**
IRR	45%	Higher than Cost of Capital	**Acceptable**
PBP	3.82 Years	Less than Contract of Project	**Acceptable**
PI	2.21	Higher than 1	**Acceptable**

Based on the table above the net present value with a weighted average cost of capital of 14.38%, the results obtained are that the internal rate of return value of Katering Nusantara is 45% greater than the weight average cost of capital of 13.48%. Which means that the proposed investment of Katering Nusantara can be accepted. The payback period is calculated to show that the company's investment in Katering Nusantara will be fully recovered within 3.82 years. This result implies that the initial investment will be repaid in an acceptable amount of time. Katering Nusantara's financial examination reveals that the profitability index at 2.21, above the threshold of 1. This signifies that the present value of future cash flows created by the investment outweighs the initial investment significantly. The financial feasibility of the Katering Nusantara project will be evaluated using sensitivity analysis under various scenarios and variable adjustments. This analysis will examine many elements in both optimistic and pessimistic scenarios to determine the project's viability. Each variable's impact on major financial indicators such as NPV, IRR, and Profitability Index will be evaluated. Among the variables to be analyzed are catering sales, catering sales price, direct food cost growth, inflation rate, and labor wages. This sensitivity analysis will provide a full understanding of how various variables effect the project's financial feasibility.

Table 2. Sensitivity Analysis Change in NPV (Author,2023)

Variable	**Current Assumption**	**+10% Swing**	**-10% Swing**	**Current NPV**	**+10% Swing NPV**	**-10% Swing NPV**	**Percentage +% Swing NPV**	**Percentage -% Swing NPV**
Catering Sales	100%	110%	90%	Rp.11,674,468,495	13,394,571,074	5,312,491,682	15%	-54%
Catering Sales Price	100%	110%	90%	Rp.11,674,468,495	125,149,919,240	-68,214,424,811	972%	-684%
Direct Food Cost Growth	4.20%	4.62%	3.78%	Rp.11,674,468,495	8,863,351,696	14,585,125,819	-24%	25%
Inflation Rate	4.20%	4.62%	3.78%	Rp.11,674,468,495	10,601,186,322	12,746,813,732	-9%	9%
Labor Wages Growth	8%	8.8%	7.2%	Rp.11,674,468,495	10,549,823,784	12,769,519,784	-10%	9%

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Table 3. Sensitivity Analysis Change in IRR (Author,2023)

Variable	Current Assumption	+10% Swing	-10% Swing	Current IRR	+10% Swing IRR	-10% Swing IRR	Percentage +% Swing IRR	Percentage -% Swing IRR
Catering Sales	100%	110%	90%	45%	52%	30%	15%	-41%
Catering Sales Price	100%	110%	90%	45%	112%	n.a	148%	n.a
Direct Food Cost Growth	4.20%	4.62%	3.78%	45%	40%	49%	-11%	23%
Inflation Rate	4.20%	4.62%	3.78%	45%	43%	47%	-4%	9%
Labor Wages Growth	8%	8.8%	7.2%	45%	43%	47%	-4%	8%

Table 4. Sensitivity Analysis Change in PI (Author,2023)

Variable	Current Assumption	+10% Swing	-10% Swing	Current PI	+10% Swing PI	-10% Swing PI	Percentage +% Swing PI	Percentage -% Swing PI
Catering Sales	100%	110%	90%	2.21	2.43	1.05	10%	-57%
Catering Sales Price	100%	110%	90%	2.21	23.72	-12.93	972%	-155%
Direct Food Cost Growth	4.20%	4.62%	3.78%	2.21	1.68	2.76	-24%	65%
Inflation Rate	4.20%	4.62%	3.78%	2.21	2.01	2.42	-9%	20%
Labor Wages Growth	8%	8.8%	7.2%	2.21	2.00	2.42	-10%	21%

The sensitivity analysis on the Katering Nusantara project demonstrates that changes in important variables such as catering sales, catering sales price, direct food cost, inflation rate, and labor costs have a substantial impact on its financial feasibility and profitability. Increases in catering sales and pricing have positive effects on the project's financial statistics, while decreases have the reverse effect. The analysis also underlines the significance of cost reduction, particularly direct food expenses, in order to increase profitability. Furthermore, changes in the inflation rate and labor pay can have an impact on the project's financial performance, with higher rates having a negative impact on profitability. Overall, the sensitivity analysis provides light on the project's financial sustainability and emphasizes the importance of smart decision-making to maximize profitability.

CONCLUSION

Based on the financial feasibility study conducted for the establishment of Katering Nusantara to cater to 4,500 blue-collar workers in Indonesia's new capital, the conclusion reached is that the project is considered feasible. The feasibility calculation is based on an analysis of the cash flow projection, which is made to produce a positive NPV value of Rp. 11,674,468,495. Then, the internal rate of return is 45% above the weighted average cost of capital. The anticipated payback period is 3.82 years, indicating a reasonable timeframe for recovering the initial investment. Lastly, the profitability index is at 2.21, which is higher than 1. These findings provide considerable evidence for the feasibility and profitability of Katering Nusantara's business sustainability. The sensitivity analysis reveals for the financial feasibility study of Katering Nusantara indicates that the increase and decrease of catering sales, direct food cost growth, inflation rate, and labor wages growth already analyzed in project is feasible. Because Katering Nusantara is very dependent on single revenue from catering sales, the increase and decrease in prices on the catering sales price are sensitive to project feasibility. The 10% decrease in sales price, which significantly affect the financial performance and impacted the financial feasibility project not feasible. To address this challenge, Katering Nusantara needs to develop strategies to optimize costs, streamline operation, and potentially explore alternative pricing approaches to mitigate the adverse effects of sales price fluctuations.

RECOMMENDATION

A. Theoretical Implication

This research supports the theoretical implications of the financial feasibility study and profitability of the Katering Nusantara project, reinforcing the understanding of financial indicators such as net present value, internal rate of return, payback period, and profitability index. Additionally, the sensitivity analysis demonstrates the impact of various variables on the project's financial feasibility, contributing to the understanding of how changes in sales, costs, inflation, and wages affect the project's performance.

B. For Managerial Implication

The practical implication of the financial feasibility study results is that the Katering Nusantara project is feasible and has the potential for profitability. This research help PT.XYZ informed decisions based on the positive NPV, IRR, and profitability index, indicating the project's financial viability. The sensitivity analysis also highlights the importance of monitoring and managing the sales price to ensure the project remains feasible. The results guide practical actions, such as optimizing costs, improving operational efficiency, and considering alternative pricing strategies, to enhance the project's overall financial performance.

C. For Future Research

For future research is advised that future study address this issue by doing a more extensive analysis that incorporates a broader variety of variables and additional risk assessment methodologies, such as Monte Carlo simulation. More holistic assessment of the project's feasibility can be done by broadening the scope of the research, considering elements other than financial aspects, and adding advanced risk analysis methodologies.

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Cite this Article: Daffa Adiyatama Sutejo, Raden Aswin Rahadi (2023). Financial Feasibility Study in the Construction of the "Katering Nusantara" Project in the New National Capital of Indonesia (IKN) PT. XYZ. International Journal of Current Science Research and Review, 6(8), 5364-5368