

Integrated Feasibility Studies: A Tool for Sustainable Development for Jakarta International Stadium

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Abstract— PT. Jakarta Propertindo (PT Jakpro) as one of the Region-Owned Enterprise (BUMD) of Jakarta Province was selected by the Governor of DKI Jakarta to handle the project of Jakarta International Stadium (JIS) construction. The construction of the JIS is expected to be conducted in three years from 2019 to 2021 with the capacity of approximately 80,000 people and the total investment will cost of IDR 4,546,313,646,875. Additionally, the stadium is designed not only to facilitate football but also to other sports and economic added value for the surrounded area. The construction will be funded from multiyear regional capital participation (PMD) of the Regional Budget (APBD) and starts from the 2019 fiscal year. Besides, the construction can be done after the regional government conducts an investment analysis and examine the business plan. Therefore, it's necessary to examine the feasibility of PT Jakpro's decision to run this construction project. This study used an integrated feasibility approach to obtain a comprehensive and integrated projection from the three perspectives which are technical, economic, and financial aspects. Based on the technical analysis, the investment project of Jakarta International Stadium is feasible to conduct. The construction of JIS is relatively cheaper compared to another International stadium that taken on the benchmark. Moreover, there are no regulations issues on the construction site. However, financial feasibility analysis indicates that the construction of JIS will bring negative Net Present Value (NPV) in the future, with the payback period more than 14 years. This shows that the JIS construction from a financial perspective is not feasible, but JIS is Jakarta Governor Mandate to the company so it must be run. Thus, PT Jakpro should consider another creative-sustainable way to optimize the stadium business activity to prevent loss in the future. Mainly by optimizing non-ticketing income such as; naming right, broadcasting right, and weekday's league for amateur high school competition.

Keywords: integrated feasibility, stadium business, sustainable business approach, regional-state owned enterprise

I. INTRODUCTION

Indonesia regional autonomy, as stated in State Act No. 22/1999, has aimed at enhancing economic development to achieve the welfare of the society following the potential and diversity of the local resources. Moreover, based on State Act No. 32/2004, the local authorities and

governments are encouraged to improve their creativity and innovation in developing their regions in order to enhance their competitiveness. Thus can be done by combining many local economic factors, quality of local public institutions, local human resources, and technology, which in turn will help in developing the competitiveness of the regions. Besides, according to Provincial Government Regulation No. 54/2017 Region-Owned Enterprise (BUMD), clause number 23 about the regional capital participation (PMD) has aimed to developing business and strengthening capital structure as well as for regional authority usage. This can be done after the regional government conducts an investment analysis and examine the business plan of the Region-Owned Enterprise (BUMD).

PT Jakarta Propertindo (PT Jakpro), as one of the Region-Owned Enterprise (BUMD) of Jakarta Province, has expanded its service-coverage not only to the primary property sector but also to other sectors including infrastructure and utility since 2005. Furthermore, in 2013, PT Jakpro started to classify its project's focus into three different sub-holdings, including property, infrastructure, and utility. Besides, PT Jakpro was selected by the Governor of DKI Jakarta to handle the project of Jakarta International Stadium (JIS) construction, which will be funded from regional capital participation (PMD) of the Regional Budget (APBD) of the 2019 fiscal year that amounts at Rp 1,680,069,543,141. The construction is expected to be conducted in three years from 2019 to 2021 with the capacity of approximately 80,000 people, and the total investment will cost Rp 4,546,313,646,875. The stadium is designed not only to facilitate football but also to other sports. Besides, this stadium is designed for a concert venue in order to provide more economic added values. PT Jakarta Propertindo will conduct the management of this stadium.

This study aims at analyzing the addition of working capital from Regional Capital Participation (PMD) of the Regional Budget (APBD). Additionally, this study also aims at examining the feasibility of PT Jakpro's decision to carry out this construction project. There are three perspectives of feasibility analysis, including technical, economic, and financial feasibility analysis. This study also

recommends some innovative approaches for PT Jakpro in order to achieve sustainable income from Jakarta International Stadium (JIS) in the long run.

II. MATERIALS AND METHODS

A. Literature Review

Related literature can be seen in the research of [6], which its purposes area is to identify the investment regulation on regional government, furthermore her study also to identify the Bank BJB business and investment environment. A series owned by XYZ at Bank BJB. The result of the institutional analysis showed that regional government investment management should obey the regulation for long term capital and short term capital. The long term capital is (stock share) investment limited only at BUMD (e.g., Bank BJB) 2). Furthermore, the short term investment e.g., saving and deposit, is limited only at a healthy and feasible bank and government bond, which has little risk exposure. Besides, in a study the financial feasibility analysis for Non-Bank Regional State Enterprises [7], showed the increasing performance of the technical analysis support to be combined with other feasibility analysis that performs is suitable for a long term and short term investment for regional utility enterprise [8].

Following research [3] highlighted the urgency of establishing a supervisory institution to guide BUMD in Banten Province by examining efforts on behalf of Province Government of Banten. This research found that the supervision of its BUMD was still at a minimum in terms of quantity, and the issued regulations have only concerned about the financial performance aspect. Still, the study has further revealed budget constraints for BUMD supervision, legal ambiguities in the supervision of a Limited Liability Company (PT) BUMD, limited human resources, and a complicated legal construction in need of adjustment. Additional, [9] the establishing clear and focused institution for the supervision of BUMD is an urgent matter for Regional Government. Thus, the Province authorities could supervise its BUMDs, and government guidance thereof would be more comprehensive, not limited to a financial performance control.

PMD has aimed at enhancing regional development and achieving independence of the region with the support from the Provincial Government. PMD is expected to generate optimum profit for the management of BUMD and another benefit for the welfare of society. The function and task of administration of capital participation by the government form the owner of the government's share in the regional state-owned enterprises (BUMD).

There are two paragraphs in clause number 23 about Region-Owned Enterprise (BUMD) in Government Regulation number 54 of 2017, and the first paragraph tells that the PMD has aimed to increase BUMD capital to conduct business development, strengthening the capital structure, particular assignment as public service obligation. Further, the second paragraph tells the inclusion of Regional Capital for additional BUMD capital, as referred to in paragraph shall be carried out after an

investment analysis has been carried out by the Regional Government.

B. Research Methodology

The study employs an integrated feasibility approach in order to obtain a comprehensive and integrated projection from the three perspectives, which are technical, economic, and financial aspects.

1. Technical Feasibility Analysis

Technical feasibility analysis is an overview of the technical conditions of the investment plan that usually take technical and non-technical aspects into account. this analysis examines the characteristics [2] period, needs, and project implementation that are in line with the given estimated cost. The analysis involves at least several activities that are described as follows:

- a. Investment needs prediction to achieve objectives in a specific period with the implementation of the alternative scenario and sensitivity analysis.
- b. Pre-design activity to predict the cost of investment by benchmarking with other similar projects.
- c. Project implementation based on prerequisites.

2. Economic Feasibility Analysis

Economic feasibility analysis examines the efficiency of the input utilization and to maximize its outcome. This analysis involves social, environmental, and economic aspects that consider the opportunity cost of input and outcome gained from the project. This feasibility also includes a quantitative analysis of the expected income from the proposed investment, which considers environmental, social, and economic aspects. It compares the effectiveness of the investment during the economic period with the alternative scenario of the utilization of the available resources and services needed by society.

3. Financial Feasibility Analysis

Financial feasibility is a detailed analysis of the expected cost and revenue gained from an investment that is calculated based on market price. In other words, this analysis projects how much start-up capital that needed, sources of capital, returns on investment, and other financial considerations. This study examines the projected financial and commercial benefits gained from the investment concerning market conditions [5]. This analysis involves several considerations:

1. An investment plan that consists of a financing plan, investment spending schedule calculation based on constant price and the current price published by the Central Board of Statistics (BPS).
2. Cost projection involves an initial investment, production/operation cost, overhead cost, and other costs.
3. Expected revenue includes expected revenue from the project funded by the regional capital participation and subsidy from the regional budget (if applicable).
4. The underlying assumptions used are inflation rate, data of predicted population growth rate, regional

- income per capita, and many other macro indicators.
5. Financial feasibility aspects, including IRR (Interest Rate of Return), NPV (Net Present Value), Payback Period, and investment efficiency. The detailed explanations of the financial feasibility are described below:

a) Net Present Value

Net Present Value is the difference between the present values of investment and the future values of revenue of cash flows. In other words, it is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyze the profitability of a projected investment or project.

b) Payback Period

Payback Period is the amount of time needed to recover the cost of an investment. In other words, it is the length of time an investment reaches the breakeven point. This method is used to compare between expected income and the investment cost and operating expenses. The positive difference obtained in each year is calculated and used to reduce capital value until it reaches zero.

c) Internal Rate of Return

Internal Rate of Return (IRR) method is a metric used in capital budgeting to estimate the profitability of the potential investments. It is a discount rate that makes the net present values (NPV) of all cash flows from a particular project equal to zero. It relies on the same formula as net present values (NPV) does [1]. It is used to calculate the interest rate that equates present values of the expected cash flows in the future with the present value of the initial investment expenditure.

III. RESULTS AND DISCUSSION

The technical aspects of this Jakarta International Stadium investment project are designed not only for football sport nonetheless for concert venue function. This construction will give economic added values for regional communities. Besides, in the outside stadium, the construction of two volley beach sports fields, water sport, and jogging track are also included in the project.

1. Technical Feasibility Analysis

The construction of the stadium is projected to spend two up to three years to finish with total investment reach Rp. 4.546.313.646.875. The PMD will be given in three consecutive years. First-Year is Rp. 1,680,069,543,141, in second year it will be Rp. 2,182,230,550,500, and the last year will be Rp. 684,013,553,234. There are other similar projects taken as the benchmark of the Jakarta International Stadium. These include:

Allianz Arena in Munich, Germany. The project construction commenced in 2002 and ended in 2005. The capacity of the stadium equals 75,000 people, with the building area is around 270,000-meter square. This project cost Rp 5.96 billion that equals Rp 22 million per meter square.

Beijing National Stadium in Beijing, China. This project lasted for approximately four years, from 2003 to 2007. The stadium can hold up to 91,000 people, with the building area is around 270,000-meter square. The cost of investment was Rp 5.06 billion, that equals Rp 19.6 million per meter square.

First National Bank/ Soccer City Stadium in Johannesburg, South Africa. The project started in 2007 and finished in two years after. With the area of the stadium equals to 88,958-meter square, the building can have a maximum capacity of 94,537 people. The cost of investment was Rp 6.7 billion or Rp 75.49 million per meter square.

From this benchmark, we can see that the Jakarta international stadium is relatively cheaper compared to another International stadium that taken on a benchmark. Furthermore, the objectives of Jakarta International Stadium are described as:

1. To build an international level of a football stadium in DKI Jakarta Province.
2. To substitute Lebak Bulus Stadium that was reconstructed into MRT (Mass Rapid Transit) depo.
3. To realize public interest and the provincial government's target to build a city landmark in the form of an international stadium.
4. To facilitate public interest in sports and physical activities.

Based on the technical analysis as delineated above, the investment project of Jakarta International Stadium that uses regional capital participation (PMD) from the regional budget (APBD) 2019 is feasible to conduct.

2. Economic Feasibility Analysis

The establishment of the regional-owned enterprise (BUMD) by the respective regional government aims at enhancing economic development and providing qualified public goods and services based on the respective society's needs, conditions, characteristics, and potential. The management of the region-owned enterprise (BUMD) would be based on good corporate governance, and it is a profit-oriented institution in nature. In the regional economic system, PT Jakpro is expected to play a significant role in market power balancing and contributors to the regional income through dividend payment based on profit gain [4]. In order to optimize this role at both local and national levels, PT Jakpro should improve its corporate culture to be more transparent, accountable, professional, responsible, and visionary. In order to grow its business activities, PT Jakpro needs more capital. The capital injection is crucial for PT Jakpro to strengthen its capital structure to support its business. Therefore, regional capital participation (PMD), loan/debt, grant, and other capital sources play essential roles in finance the business activities optimally and investment projects done by BUMD.

Therefore, this economic feasibility analysis can be taken into consideration for the provincial government of Jakarta for the implementation of the regional capital participation for the PT. Jakpro specifically in the Jakarta stadium area. To minimize the current gap between the

increase of public interest in sport with the improvement in the quality and quantity of the sports facility has been significant. There has been a declining quality of sports facilities and its maintenances. Thus, the construction project of Jakarta International Stadium is expected to be the solution to those problems. It is also hoped to be able to substitute Lebak Bulus Stadium, which was reconstructed into MRT Depo. The construction of MRT Depo is functioned as the Operational Control Centre of the MRT. Besides, this project also aims to realize public interest and the provincial government's target to build a city landmark in the form of an international stadium. Thus, in turn, it will improve public interest in sports and create new activities centers. Based on the economic feasibility analysis as defined above, the investment project of Jakarta International Stadium that uses regional capital participation (PMD) from the regional budget (APBD) 2019 is feasible to conduct.

3. Financial Feasibility Analysis

Based on the result of the investment feasibility analysis, the financial assessment concludes that the project is not feasible to be conducted. The breakdown of the financial assessment is as follows:

1. Net Present Value: (5,347) => Negative
2. Internal Rate of Return: 8.7% < 10%
3. Pay Back Period: 14 years
4. Return on Investment (ROI): 2.72 times from investment values
5. Benefit & Cost Ratio: 3.23 > 1
6. Gross Profit Margin: 12,321,855 or 69% from the income

Net Present Value (NPV) is the difference between the present value of investments and net cash receipts in the future. The NPV calculation result is (5,347) because the NPV is Negative; this indicated that the project is not feasible to conduct.

Payback Period refers to the time it takes to recover the cost of an investment. It shows the length of time an investment reaches a breakeven point. This study shows that the payback period for this investment project is 14 years.

Return on investment (ROI) is a performance measure used to evaluate the efficiency of an investment. ROI tries to directly measure the amount of return on a particular investment, relative to the investment's cost. The result is expressed as a percentage or a ratio. If the result is positive, it indicates that the project investment is efficient. This study shows that ROI values are positive and equals to 2,72 times from the investment value, which indicates the feasibility of the project.

The benefit-cost ratio (B/C Ratio) is an indicator that attempts to summarise the ratio of the benefits of the project relative to its costs, which are expressed in monetary terms. The result of >1 indicates that the project proposal is profitable; otherwise, the project is unprofitable. The result of the B/C ratio equals 3.23, which indicates the feasibility of the project.

Gross Profit Margin is a profitability ratio of the excessed gross profit to the total sales revenue. In this

context, gross profit equals the total revenue minus cost of goods sold. The result shows that the gross profit margin equals 12,321,855 or 69% of the total revenue.

IV. CONCLUSION

The International Jakarta Stadium construction is one of the effort to implement the region's second mission of "to make Jakarta in improving the society's welfare through broader employment provision, stability and affordability of basic needs' social justice, acceleration of infrastructure development, easiness of investment and business environment, and betterment of the spatial urban planning management". This mission aims at providing more employment opportunities while creating creative and productive entrepreneurship. Furthermore, this mission is an effort to accelerate modern and integrated infrastructure development to solve urban problems, improve investment in DKI Jakarta province as well as to realize integrated and sustainable urban management.

The national development mandates the regional government to enhance the well-being of the people and to ensure the trickle-down effect of the development is achieved. This mandate can be fulfilled by providing more employment to reduce the unemployment rate. Besides, the regional government can also encourage society's independence through fostering productive entrepreneurship that can create people's employment. The second way is to control the price level stability of the basic needs, specifically for the lower-income groups in society. Finally, the regional government should also support the acceleration of infrastructure development and the betterment of the regional and spatial planning management. Thus, in turn, will ensure the improvement of Jakarta's competitiveness through the easiness of the entrepreneurship and investment supporting systems.

Lastly, there are three sustainable stadium business approaches could be implemented. First, PT Jakpro has a great responsibility for all activities that take place at the Jakarta International Stadium. In the future, PT Jakpro is expected to be able to serve all the needs in the Stadium Business activities such as:

1. Develop an event organizer for organizing the stadium tour, organize the concert & event.
2. Develop a marketing division to handling an advertising/sponsorship in every part of the stadium starting from the stands, and installing the company's logos
3. Develop a division of cleaning services in thought collaboration with the outsourcing provider company, so that PT Jakpro can minimize maintenance costs.

Next is by changing the focus of increasing revenue by moving from selling tickets to selling broadcasting rights

(camera and drone friendly). As an effort to improve business performance and business income of PT Jakpro, a change in mindset from PT Jakpro stakeholders is needed. With starting with a focus on selling tickets to selling broadcasting rights. Broadcasting rights in question are focused on increasing sales from the sale of assets obtained through professional camera or video photos and drones recorded by PT Jakpro for the commercial needs of documentary seekers of a match or concert. For example, such as a TV station that requires good quality pictures or videos and attractive footage for news broadcasts.

Finally, the third recommendation is to expand its business strategies. Jakarta International Stadium operations will still be very dependent on matches and events, the majority of which will only be held on weekends or specific periods, so that not every day the stadium is used. This causes additional costs or company costs if the assets owned are not used to the maximum. Therefore, to maximize the stadium on a typical day, PT Jakpro can work with well-known schools in Jakarta to hold its school cup in the company's stadium. The private international schools are considered to be suitable prospective customers because if these schools hold cup events in Jakarta International Stadium, then this will benefit those schools because of the name of the stadium.

Jakarta International Stadium, as presented in this integrated feasibility in terms of technical feasibility, economic feasibility, and financial feasibility, has a different result. Both the technical feasibility and economic feasibility tells that the project is feasible to conduct.

However, on the other hand, from financial feasibility, the project is not feasible. However, the project must be developed as one of the promises of The Jakarta Governor, So PT. Jakpro must develop and conduct several sustainable business approaches to ensure and maintain the operation in the long run.

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