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Financial Analysis of Feasibility Development Nur Hidayah Hospital Become Type C Hospital

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Abstract

Background: The development of a business unit is based on assessments given by competent parties both internally and externally. Nur Hidayah Hospital received a recommendation to become a Type C hospital from the Bantul District Health Office, the Association of Indonesian Hospitals (PERSI) DIY Region, and the DIY Hospital Supervisory Agency (BPRS) during visitation for the purposes of extending the operational permit of the Hospital in 2020. This study aims to assess the feasibility of developing Nur Hidayah Hospital into a type C hospital based on financial perspective. **Materials and method:** This research is a qualitative descriptive method with a case study design. The data was taken at Nur Hidayah Hospital in September-October 2021. The data was obtained using questionnaires as primary data and secondary data from internal hospitals. Data were analyzed descriptively to show the data presentation and counted based on several financial analysis formula. **Results:** Based on data analysis, the Net present value (NPV) is 45,162,803,090 or positive value, with an internal rate of return (IRR) 28,48% and a payback period (PP) of 7 years and 2 months. **Conclusion:** : Based on the financial analysis, the development of Nur Hidayah Hospital into a Class C hospital is feasible. The results of this study can be used by the management and the Nur Hidayah Foundation as a consideration, particularly in the decision-making process to develop the Nur Hidayah Hospital as planned.

Keywords: *Feasibility, development, type C hospital*

1. Introduction

Nur Hidayah Hospital Bantul is a private hospital that started from the private practice of dr. Sagiran and dr. Tri Ermin Fadlina in 2000 at Jalan Imogiri Timur Km 11.5 Blawong Trimulyo Jetis Bantul. The doctor's practice changed to the Nur Hidayah Clinic with 24-hour service on June 29, 2003. Then in 2006, the Nur Hidayah Clinic was appointed as a Field Hospital during the earthquake disaster in Bantul Regency. Furthermore, in 2008 the Nur Hidayah Clinic turned into a Special Surgery Hospital, Nur Hidayah with 26 beds. Along with the increase in the number of patients and the community's need for obstetric and gynecological services, in 2011 Nur Hidayah Special Surgery Hospital was inaugurated as Nur Hidayah Hospital with the addition of obstetrics and ward services up to 50 beds.

From 2013 to 2020, along with improving the quality and capacity of services, Nur Hidayah Hospital received an operational permit as a type D Hospital and was accredited by a plenary Hospital Accreditation Commission. Currently, Nur Hidayah Hospital services are a 24-hour Emergency Unit, specialist and subspecialist polyclinic every day, hemodialysis, VIP, 1, 2, 3, Intensive Care Unit (ICU), and High Care Unit (HCU) rooms. isolation for infectious diseases, 24-hour laboratory, 24-hour radiology, Maternal and Child Health, operating room, nutrition, pharmacy, and other supporting services. The current flagship services of Nur Hidayah Hospital are surgery, obstetrics and gynecology, child health, and complementary.

Outpatient visit data in 2019 was recorded at 5500 patients per month, in 2020 as many as 6000 patients per month. While the number of inpatients in 2019 was 540 patients with a Bed Occupancy Rate (BOR) of 85%, in 2020 as many as 413 with a BOR of 77%. The ideal BOR standard is 75%, which means that the utilization of beds in Nur Hidayah Hospital is optimal. Meanwhile, the data for referrals to other hospitals in 2020 was 1627 patients with the reasons for facilities being 295 patients (18%), further treatment of 1332 patients (82%). With the increasing trend of outpatient visits, the number of cases being referred, and seeing the need for health services in the Bantul Regency environment, the management plans to develop the Nur Hidayah Hospital in accordance with Government Regulation No. 100 beds with specialist and subspecialist doctor services and various supporting services (1).

Several things that are sufficient to support the plan to develop Nur Hidayah Hospital into a type C hospital according to standards are: 1) technical aspects, namely the availability of land, water, electricity and telecommunications facilities; 2) Strategic and developing suburban location, 3) Community needs for Islamic and high quality health services at affordable costs, and 4) Regulatory system that supports the growth of health services in Bantul Regency (2). Research on the feasibility of investing from the financial aspect related to health care facilities has been carried out by several researchers, including: Ekel et al., conducted a study with the title Feasibility Study of the Development of the Amurang Regional General Hospital, South Minahasa Regency (3). The aspects studied include 5 things, namely: market aspects, legal aspects, human resources aspects, technical and technological aspects, and financial aspects with the results of developing Amurang Hospital into a Class C RSU that is not feasible. Santi et al., conducted a study with the title Investment Feasibility Study for the Construction of the Inpatient Installation of the Hidayah Boyolali Hospital from the financial aspect with positive results and a return on investment within 3 years (4). Meanwhile, Agustina et al., conducted a study entitled Analysis of Service-Based Hospital Investment Feasibility (Study at Sumberglagah Hospital) with the investment returns being a service-based hospital at Sumberglagah Hospital not feasible (5). Furthermore, other researchers, Andampury et al., also conducted a study entitled Investment Policy Analysis of C-Arm Radiology Equipment at RS X with the results of C-Arm investment in RS X not being feasible (6).

The similarity between this research and some of these studies is on the topic of investment even though it is viewed from different aspects. The main difference is in the source of funding and other aspects observed. In these studies, the source of funding was not

investigated because the funds may have been available or received subsidies from both the government and foundations, while in this study the source of investment funds could not be ascertained. Thus, in addition to assessing whether the investment is feasible or not, this study also calculates the number of funds needed, the payback period based on the estimated cash flow of all hospital services, and the interest rate that measures investment levels with the expected value of IRR> of the loan interest which indicates that the investment is feasible. In addition, investors or creditors who have the potential to provide financing to hospitals are also investigated.

The development of the hospital so far has used internal hospital funds, while the change to a type C hospital requires funds that exceed the foundation's self-financing capacity. The Foundation is looking for alternative funding for both investors and creditors. It is very important to know the investment feasibility study from the financial aspect for both internal and external parties. The results of the research will be very useful for the Nur Hidayah Foundation as one of the considerations in making decisions.

2. Materials and Methods

This study was qualitative research with a case study design. This study was conducted at Nur Hidayah Hospital, in September 2021. The subjects of this research are the foundation (owner), the head of the hospital, the finance department, and the administration section. The variable consisted of financial aspects: including investment plans and sources of funds, review of service tariffs, and projected revenues and costs; financial analysis: cash flow calculation, payback period (PP), internal rate of return (IRR), and net present value (NPV); eligibility: judging from the results of the financial analysis, it is stated that it is feasible or not feasible (7). The research instruments were a questionnaire interview and a document study. The data analysis method used qualitative description with data presentation and conclusion-making. Ethical clearance was obtained before data collection.

Financial analysis is one of the bases for determining economic feasibility and is a crucial step in the decision-making process, including the feasibility analysis of hospital development. Cash flow calculation aims to assess the money flows, both in and out during the hospital operation. Moreover, the other variable is PP which refers to the number of years required to reach the break-even point position. In more detail, IRR and NPV become important variables to estimate the profitability of the investment. Net present value is used to estimate the present value of all future cash flow that will be generated by the investment, while the IRR is the rate of return at which the NPV of an investment becomes zero..

$$NPV = \sum_{t=0}^{n} \frac{Rt}{(1+i)^t}$$

Rt: net cash inflow-outflow during a single period of t; i: discount rate or return that could be earned in alternative investment; and t: number of time periods

Figure 1. The formula for NPV

3. Result

The building area of Nur Hidayah Hospital is 2,424 m2 with 54 beds inpatient facilities. Nur Hidayah Hospital is equipped with clear boundaries, namely to the west by the highway, to the east by the village road, to the north by vacant land, and to the south by the village road. In accordance with existing regulations, for the development of Nur Hidayah Hospital into a Class C hospital with 100 TT, an additional 46 TT is required with a target building area of 6000 m2 outside the parking lot. This means that there is still a land shortage of 3,576 m2 to meet technical standards and hospital buildings.

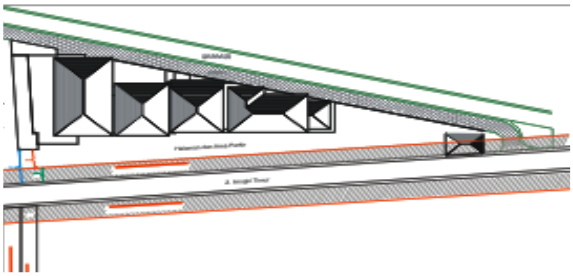

Figure 2. The current plan of the Nur Hidayah Hospital

This section includes research results and theeir analysis. It is preverable for results to be presented relevantly in illustartions or tables. Illustrations may comply with format for figures and diagrams as in Figure 2. Tables should be presented in format as shown in Table 1. Discussion of result may be described in theory qualitative or quantitatively.

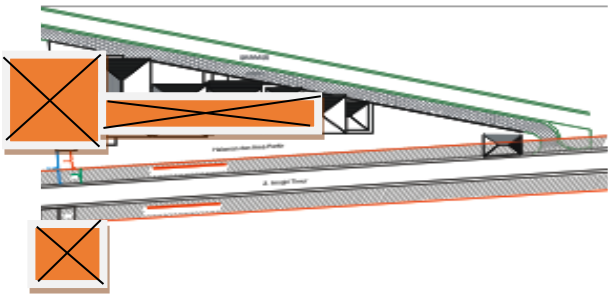

Figure 3. Planned plan of Nur Hidayah Hospital (block plan)

Figure 4. Planned plan of Nur Hidayah Hospital (main facade)

The initial capital required for the construction of a general hospital is calculated from the need for tangible fixed assets, intangible fixed assets and working capital, which is Rp. 34,105,468,400.00 This fund is used for building construction, procurement of medical equipment, non-medical equipment, preoperative costs and so on.

Net present value method calculates the difference between the present value of the investment and the present value of net cash receipts (operational and terminal cashflows) in the future (Husaini et al., 2020). If the NPV is positive, the project is accepted, while if the NPV is negative, the project is rejected. Total present value of cash flow is 79,268,271,490, with initial investment is 34,105,468,400. It is obtained NPV 45,162,803,090.

4. Discussion

This study aims to evaluate the feasibility development Nur Hidayah Hospital become type C hospital that focus on building construction and assets calculation. Total present value of cash flow is 79,268,271,490, with initial investment is 34,105,468,400. It is obtained NPV 45,162,803,090. The difference between the total present value of cash flow and the initial investment in this study is positive, meaning that the proposed project is feasible to implement. These results are important as a consideration in making investment decisions that offers clearness result and same results regardless of risk preferences for investors (8).

The IRR value is 28.48% while the required profit is 8%. Based on the results of this calculation, the project is declared feasible or profitable (9). The PI value is 2,32 or more than 1, so the public hospital development plan can be declared feasible or profitable. The number of times in payback period calculation shows that within a period of 7 years 2 months there can be a return on investment, as long as things do not happen beyond the hospital's ability. This means that hospitals must have optimal resources to be able to provide quality health services and satisfy customers so that it will have an impact on increasing income continuously (10).

5. Conclusion

Based on the financial analysis, the development of Nur Hidayah Hospital into a Class C hospital is feasible. The results of this study can be used by the management and the Nur Hidayah Foundation as a consideration, particularly in the decision-making process to develop the Nur Hidayah Hospital as planned.

6. Conflict of Interest

The researcher declares that there is no conflict of interest in the research, authorization and/or publication of this article.

7. Acknowledgement

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