

Feasibility Study of Investment for the Development of Bhakti Dharma Husada Regional General Hospital in Surabaya City

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ABSTRACT

Since its establishment in 2010, Bhakti Dharma Husada Regional General Hospital has experienced a significant increase in patient demand for healthcare services. However, some existing services require additional space, and there is an increasing need for executive and VIP services to meet community expectations for higher-quality healthcare. To address these challenges, the hospital plans to develop its facilities by constructing a new building to expand and improve service delivery. This research evaluates the investment feasibility of the planned development using several key financial parameters: Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period (PP), and Benefit-Cost Ratio (BCR). The results of the analysis show that the project is financially viable. The NPV is calculated at IDR 1,373,606,103,022, indicating positive returns over the investment period. The IRR of 17.39% exceeds the Minimum Attractive Rate of Return (MARR) of 9.21%, demonstrating strong financial performance. The BCR value of 1.28 further confirms the feasibility of the investment, as it is greater than 1. Additionally, the Payback Period is determined to be 6.89 years, which is shorter than the 10-year project lifecycle, ensuring a timely recovery of the initial investment. These findings highlight that the planned development of RSUD Bhakti Dharma Husada is both economically and operationally feasible. The expansion is expected to enhance healthcare delivery, increase patient capacity, and generate sustainable revenue for the hospital. This research provides valuable insights for hospital management and policymakers in planning future infrastructure projects.

Keywords: Investment Feasibility Analysis, BCR, IRR, NPV, PP, Hospital.

INTRODUCTION

Along with rapid developments in healthcare and technology, the need for adequate healthcare facilities is increasingly urgent (Nadiyah & Prayoga, 2024). Hospitals, as one of the main institutions in providing healthcare services, play an important role in ensuring that the community has access to quality medical services (Susetiyo & Iftitah, 2021). For this reason, many hospitals are striving to develop in terms of capacity, facilities, and services to meet these demands. Hospital development is not only related to the addition of physical facilities, but must

also pay attention to aspects of financial sustainability and efficient management, in order to continue providing affordable and quality services to the community (Sinulingga et al., 2025).

In line with these challenges, the government and healthcare providers are increasingly recognizing the need for strategic development of healthcare facilities (Djati, 2023). This development involves careful planning to not only expand physical spaces and improve facilities but also to ensure the long-term financial viability of these institutions (Zein & Septiani, 2023). Hospitals must be prepared to address both the growing demands for healthcare services and the financial pressures that come with such expansion (Yunus et al., 2023). The increasing complexity of healthcare needs calls for a balanced approach, where operational efficiency, technological integration, and socio-economic considerations are all taken into account to ensure that the development of healthcare facilities meets the needs of the community while remaining financially sustainable (Jingshan Li & Carayon, 2021).

The Surabaya City Government plans to develop the Regional General Hospital (RSUD, *Rumah Sakit Umum Daerah*) Bhakti Dharma Husada as a manifestation of improved health services for the community with its own characteristics influenced by the development of health science, technological advances and socio-economic life of the community that must remain able to improve services of higher quality and affordable by the community in order to realize the highest degree of health. Regional General Hospital (RSUD) Bhakti Dharma Husada built on land owned by the Surabaya City Government on Jl. Raya Kendung No.115-117 which is administratively located in Sememi Village Benowo District Surabaya City.

Until 2019, before the covid-19 pandemic, the Bhakti Dharma Husada Regional General Hospital (RSUD) was growing rapidly and patient visits to health services had increased. Some services require more space. In addition, there is a community need for executive and VIP services. Since its first operation in 2010, the Bhakti Dharma Husada Regional General Hospital (RSUD) has only carried out renovations in 2021, namely the construction of the PCR laboratory building and the intermediate care room (RPI). Regional General Hospital (RSUD) Bhakti Dharma Husada has never carried out large-scale development to increase service capacity. Meanwhile, the types and number of services continue to grow.

To accommodate this, the Regional General Hospital (RSUD) Bhakti Dharma Husada plans to develop services by building a new building of the Regional General Hospital (RSUD) Bhakti Dharma Husada. The new building is planned to be used for the development of old services and the provision of new services. Related to the plan, it is necessary to prepare an investment feasibility analysis of the Development of Regional General Hospital (RSUD) Bhakti Dharma Husada Surabaya City.

Bhakti Dharma Husada Regional General Hospital (RSUD) currently has a capacity of 207 beds. In accordance with the Standards for the Implementation of Class B, C and D Hospitals of the Directorate of Specialized Medical and Dental Services, Directorate General of Medical Services, Ministry of Health of the Republic of Indonesia in 2005, the Bhakti Dharma Husada

Hospital is classified as a class B hospital. For this reason, it is necessary to analyze investment activities in hospitals so as to produce alternative business patterns that are efficient but still prioritize quality in order to maintain hospital competitiveness with other private health facilities.

Based on previous research conducted by (Agni, 2022) related to the financial feasibility of investing in Hospital Inpatient and Outpatient Service Development Plans, cash flow analysis has taken into account all cost components including investment costs, operational costs and revenue derived from inpatient and outpatient service rates. Based on the existing cost components, an investment analysis is carried out using the discounted cashflow method with the parameters Payback Period (PP), Net Present Value (NPV) and Internal rate of Return (IRR). From the results of the research, it can be concluded that the investment is declared as a feasible investment to be implemented. This can be illustrated based on the parameters that have been determined, namely the Net Present Value (NPV) value is positive, the Internal rate of Return (IRR) is greater than required and the Payback Period (PP) value is smaller than the life of the investment plan that has been determined.

In addition to Agni's research, other studies such as (Yogantara & Faturhman, 2024) have also analyzed the feasibility of hospital investment with a focus on various cost components and revenue projections. These studies have contributed valuable insights into how hospitals can assess their financial viability, particularly in regard to service expansion and facility development (Khuntia et al., 2017). Additionally, the strategic approaches taken by similar institutions in developing sustainable and financially feasible hospital services (Ginter et al., 2018). This research will build on these findings by incorporating broader data and case studies, particularly in the context of Bhakti Dharma Husada's proposed development.

This research presents a novel contribution to the field by combining multiple investment analysis methods to assess the development of Bhakti Dharma Husada Regional General Hospital. The research will not only focus on traditional financial metrics but will also include socio-economic factors affecting hospital services and community health outcomes. Furthermore, this research will explore alternative tariff schemes that could balance financial sustainability with social responsibility, offering new insights into how hospitals can adapt to changing community needs without compromising service quality.

This research was carried out through several systematic implementation stages, starting with a basic research of theory and previous research as a reference. The next stage was data identification, which included primary data obtained through discussions with relevant institutions overseeing the investment in the development of the Bhakti Dharma Husada Regional Hospital, as well as secondary data from planning and budget documents published by the Surabaya City Government. After that, the data was collected and categorized based on cost components, such as investment costs, management costs, and revenue projections. Furthermore, a cash flow analysis was carried out for each health service tariff scheme, which was then analyzed for investment feasibility using the parameters of Payback Period (PP), Net

Present Value (NPV), Internal Rate of Return (IRR), and Benefit Cost Ratio (BCR) (Astasari et al., 2024).

Based on the above background, the purpose of this research is to analyze the feasibility of investing in the development of the Bhakti Dharma Husada Regional General Hospital in Surabaya using the parameters of Net Present Value (NPV), Internal Rate of Return (IRR), Benefit Cost Ratio (BCR), and Payback Period (PP). So that the benefit of this research is to contribute to the sustainability of investment in the development of the Bhakti Dharma Husada Regional Hospital in Surabaya City, as well as to provide useful input for the Surabaya city government in formulating service tariff policies and restrictions on hospital management costs, to ensure that the investment made remains profitable and sustainable.

RESEARCH METHOD

Research Subject

The subject of this research is Bhakti Dharma Husada Regional General Hospital (RSUD) which is located at Jl. Kendung No.115-117, Semampir Village, Benowo District, Surabaya. Bhakti Dharma Husada Regional General Hospital (RSUD) was built by the Surabaya City Government Health Office.

The selection of the location for the development of the Bhakti Dharma Husada Regional General Hospital (RSUD) is based on several aspects that consider geographical, demographic and economic conditions. Geographically, the sub-district with the most extensive area is Benowo sub-district, which is about 23.73 km². Benowo sub-district is a strategic location to be developed into an independent residential area equipped with trade and service facilities, given the number of settlements that are growing rapidly in Benowo sub-district. Demographically, the population in Benowo Sub-district is quite dense at 72,228 people as recorded in the Population and Civil Registration Office. Then the last consideration is the economic aspect, where the location of the Development of the Regional General Hospital (RSUD) Bhakti Dharma Husada is located on the asset land of the Surabaya City Government, of course it is profitable in terms of investment considering that no more cost allocation is needed for land acquisition.

Object of Research

The object of research is the main focus studied in a research, including the problems associated with it. This object must be in accordance with the formulation of the problem that has been previously determined, so that its selection must consider harmony with the formulation of the problem. Thus, the object of research serves as the central aspect investigated to provide answers to the problem formulation and achieve research objectives.

As the formulation of the problems that have been determined, in this case the object of research is various kinds of costs that can affect the feasibility of investment, including investment costs, operational / management costs and income from health services in the Development of Regional General Hospital (RSUD) Bhakti Dharma Husada.

Data

Primary and secondary data types are used in this research. In this research, primary data collection was obtained from interviews with parties involved in the Development of the Bhakti Dharma Husada Regional General Hospital (RSUD), then documented as data that could be used in the process of conducting research later. The observation method was also carried out in data collection with the aim of obtaining an overview of the implementation of the activities carried out. The secondary data used includes the FS Document of Hospital Development sourced from the Regional Development Planning, Research and Development Agency of Surabaya City. Then, detailed data on health service tariffs and detailed data on hospital operating costs sourced from the Surabaya City Health Office.

Investment Evaluation Analysis

From the results of primary and secondary data collection related to investment feasibility factors for the Development of the Bhakti Dharma Husada Regional General Hospital (RSUD), a sensitivity analysis is then carried out so that it can be seen that changes in factors are most influential in success or failure during the implementation of the investment in the Development of the Bhakti Dharma Husada Regional General Hospital (RSUD). Sensitivity analysis takes into account the effect of changes in each factor reviewed on the performance of investment revenue determined by the following indicators:

1. Net Present Value (NPV);
2. Internal Rate of Return (IRR);
3. Benefit Cost Ratio (BCR);
4. Payback Period (PP).

RESULT AND DISCUSSION

Investment Project Overview

The development of the Bhakti Dharma Husada Regional General Hospital (RSUD) was carried out through the allocation of the Surabaya City Regional Budget (APBD), as an effort to overcome health problems in the West Surabaya area and improve services that are of higher quality and affordable by the community as well as a Referral Hospital in the West Surabaya area.

Geographically, the Regional General Hospital (RSUD) Bhakti Dharma Husada is located on Jl.Raya Kendung No 115 - 117 Sememi Village Benowo District West Surabaya. The building area of the Regional General Hospital (RSUD) Bhakti Dharma Husada is 15,668.998 m² based on the permission letter of the Head of the Surabaya City Cipta Karya and Spatial Planning Office Number 188/3032 - 94/436.6.2/2009 dated September 5, 2009 concerning Building Permits. The service and capacity development plan of Bhakti Dharma Husada Regional General Hospital (RSUD) is as follows.

Table 1. BDH Hospital Service and Capacity Development Plan

No.	Installation	Space	Capacity
1	Emergency Room	R.Transition	3 Bed
		R. Action	16 Bed
		R. Receiver	1 Bed
		R. Isolation	8 Bed
		Triage	2 Bed
		R.Ponek	3 Bed
2	Radiology	X-ray	2 Unit
		ULTRASOUND	2 Unit
		MRI	1 Unit
		CT-Scan	2 Unit
		Mammography	1 Unit
		Panoramic	2 Unit
3	Outpatient clinic street	Public clinic building new	13 clinic
		Existing public clinic	8 Clinic
		Infectious clinic	3 Clinic
		Executive clinic	3 clinic
4	MCU	Clinic/Examination Room	2 Clinic
5	Hemodialysis	General HD	37 Unit
		HD VIP	2 Unit
		HD Insulation	4 Unit
		CAPD	1 Unit
6	Medical Rehab	Medical Rehab Clinic	10 Clinic
		Speech Therapy	2 Clinic
		Occupational Therapy	1 Clinic
		Medical Rehab- Physiotherapy	12 Clinic
7	Endoscopy	Endoscopic measures	4 Bed
		EEG	1 Bed
		EMG	2 Bed
8	Chemotherapy	Chemotherapy	21 Bed
9	Central surgery	OT	10 Unit
		Pre OP	10 Bed
		OP Post	15 Bed
		OK Cito	2 Unit
10	Intensive Care	ICU	20 TT
		Isolation ICU	4 TT
		NICU	12 TT
11	High Care Unit	HCU	7 TT
12	Hospitalization	Hospitalization	290 TT
13	VK	Kala Room	4 Bed
		Delivery Room	3 Bed

Source: FS Document Development of BDH Hospital Surabaya City Year 2023

Investment Cost Analysis

Investment costs in the Development of the Bhakti Dharma Husada Regional General Hospital (RSUD) are carried out by analyzing data on the components that make up investment costs. The details of investment costs are as follows:

1. Pre-construction costs include:
 - a. Licensing fees;
 - b. Environmental impact and analysis (EIA) fees;
 - c. Planning fees.
2. Construction costs include:
 - a. Structure cost;
 - b. Architectural fees;
 - c. Infrastructure and utility costs;
 - d. Construction OHS costs.
3. Construction supervision/management fee
4. Medical & supporting equipment procurement costs

Bhakti Dharma Husada Regional General Hospital (RSUD) will develop by constructing new buildings, namely Building A and B and renovating existing buildings. The development plan of BDH Hospital is described as follows.

Table 2. BDH Hospital Building Development Plan

No.	Development Plan	Extensive Building (m ²)
1	Phase 1A (Building A: 1 Semi-basement Floor+ 10 Floor+ 1 Floor Roof)	13.315
2	Phase 1B (Gym. Workshop, Gym. Corpse: 2 Floors, Gym. Power House, Building. Laundry Installation)	1,357
3	Phase 2 (Existing Building Renov: 2 Floors, Medical Rehab Building Renov: 1 Floor)	2,847
4	Phase 3 (Building B: 1 Floor Semi-basement+ 5 Floor Parking + 6 Floor)	11,360
Total		28,879

Source: FS Document Development of BDH Hospital Surabaya City Year 2023

The following is a breakdown of investment costs for the development of the Bhakti Dharma Husada Regional General Hospital (RSUD), presented in the table below:

Table 3. Investment Cost of BDH Hospital Development

No.	Investment Cost Breakdown	Total Cost (Rp.)
1	Pre-Construction Cost	
	a. Permit and AMDAL fees	610,299,200.00
	b. Planning fee (DED)	2,238,857,382.05

No.	Investment Cost Breakdown	Total Cost (Rp.)
2	Construction Cost	458,927,120,306.71
	a. Cost of structure, architecture, infrastructure and utilities	
	b. OHS Cost	
3	Supervision fee (construction management)	4,904,747,400.86
4	Medical & Support Equipment Cost	157,256,344,822.75
Total investment cost (IDR)		623,937,369,112.37

Source: Bappedalitbang Surabaya City, Processed by the Author (2024)

Based on the description in table 3, the components that make up the investment cost of developing the Bhakti Dharma Husada Regional General Hospital (RSUD) are pre-construction costs, construction costs, supervision costs, medical & supporting equipment costs. The component with the largest value in this investment is the hospital development cost of Rp. 458,927,120,306.71, which includes the cost of construction work and supervision costs (construction management).

Expenditure Cost Analysis

The cost of expenses at the Development of Regional General Hospital (RSUD) Bhakti Dharma Husada is secondary data obtained from the projection (RSUD) Bhakti Dharma Husada Surabaya City based on the Budget Work Plan (RKA) of the RSUD that has been operating and then processed so as to obtain the value of detailed operational cost data for 1 (one) year is as follows:

**Table 4. Operational costs of the Bhakti Dharma Husada
Regional General Hospital (RSUD) Development**

No.	Details of Expenses	Total Cost (Rp.)
1	Salary expenditure for medical & non-medical personnel	283.884.333.479,17
	Medical operational expenditure	56.382.120.418,85
	a. Hospitalization	
2	b. Outpatient	
	c. Laboratory	
	d. Pharmaceutical, etc.	
3	Office operational expenditure	93.330.922.211,17
4	Shopping for medical equipment	20.899.683.004,80
5	Office maintenance expenditure	25.742.721.459,92
6	Expenditure on equipment and machinery	17.974.378.396,30
Total expenditure cost (IDR)		498.214.158.970,21

Source: Surabaya City Goods/Services Procurement and Development Administration Section,
Processed by the Author (2024)

The component with the largest value in the development expenditure of the Bhakti Dharma Husada Regional General Hospital (RSUD) is medical personnel salary expenditure of Rp. 283,884,333,479.17 and office operational expenditure of Rp. 93,330,922,211.17. The

component details in table 4.8 are the projected expenditure costs incurred in the first year of investment.

Revenue Analysis

In the development of services at the Bhakti Dharma Husada Regional General Hospital (RSUD), the revenue in question is the projected direct income from the development of services at the Bhakti Dharma Husada Surabaya City. Direct revenue is obtained from patient forecasting for the next 10 years multiplied by the service tariff. The data used in the preparation of service development revenue (RSUD) Bhakti Dharma Husada as follows:

1. Forecasting / projection of the number of patients for 13 services that will be held at (RSUD) Bhakti Dharma Husada starting from Year 1 to Year 10.

Table 5. BDH Hospital Patient Forecasting Year 1 to 10

No.	Type of Service	Year to				
		1	2	3	4	5
1	Emergency Room	49,799	54,779	60,257	66,283	72,911
2	Outpatient	203,808	224,189	246,608	271,268	298,395
3	Hospitalization	16,651	18,316	20,147	22,162	24,378
4	Laboratory	135,129	148,642	163,506	179,857	197,842
5	Radiology	37,905	41,695	45,865	50,451	55,497
6	Medical Rehabilitation	35,584	39,142	43,057	47,362	52,098
7	OK	5,509	6,060	6,666	7,332	8,065
8	Intensive Care	556	611	672	739	813
9	VK and Perinatology	831	914	1,005	1,105	1,216
10	Hemodialysis	4,150	4,565	5,022	5,524	6,076
11	Endoscopy	83	91	100	110	121
12	Chemotherapy	356	392	431	474	522
13	MCU	1,790	1,969	2,166	2,382	2,620
	Total	492,149	541,364	595,501	655,051	720,556

No.	Type of Service	Year to				
		6	7	8	9	10
1	Emergency Room	80,202	88,222	97,045	106,749	117,424
2	Outpatient	328,235	361,058	397,164	436,881	480,569
3	Hospitalization	26,816	29,498	32,448	35,692	39,261
4	Laboratory	217,627	239,389	263,328	289,661	318,627
5	Radiology	61,046	67,151	73,866	81,253	89,378
6	Medical Rehabilitation	57,308	63,039	69,343	76,277	83,905
7	OK	8,872	9,759	10,735	11,809	12,989
8	Intensive Care	895	984	1,083	1,191	1,310
9	VK and Perinatology	1,338	1,471	1,618	1,780	1,958
10	Hemodialysis	6,684	7,353	8,088	8,897	9,786
11	Endoscopy	133	146	161	177	195

12	Chemotherapy	574	631	695	764	840
13	MCU	2,882	3,171	3,488	3,836	4,220
Total		792,611	871,873	959,060	1,054,966	1,160,462

Source: FS Document of BDH Hospital Development of Surabaya City in 2023,
Processed by the Author (2024)

For forecasting / projection The number of patient visits is assumed to increase by 10% each year, according to table 5 the number of patient arrivals is most in the laboratory and radiology service units, then in the outpatient and emergency service units.

2. The service tariffs of BDH Surabaya Hospital are as follows

Table 6. Service tariffs of BDH Surabaya Hospital

No.	Type of Service	Rate (average) (Rp)
1	Emergency Room	250.000,00
2	Outpatient	156.600,00
3	Hospitalization	1.962.000,00
4	Laboratory	1.883.000,00
5	Radiology	1.662.000,00
6	Medical Rehabilitation	131.500,00
7	OK	1.416.000,00
8	Intensive Care	16.933.024,00
9	VK and Perinatology	4.834.428,00
10	Hemodialysis	896.700,00
11	Endoscopy	2.622.600,00
12	Chemotherapy	1.467.200,00
13	MCU	450.000,00

Source: FS Document Development of BDH Hospital Surabaya City Year (2023)

Service rates are assumed to increase by 10% every 2 years after the second year.

Table 7. Revenue Projection of Bhakti Dharma Husada Regional General Hospital (RSUD)

No.	Type of Service	Revenue Projection (Rp)
1	Emergency Room	12.449.800.000,00
2	Outpatient	31.916.332.800,00
3	Hospitalization	32.668.673.400,00
4	Laboratory	254.447.812.850,00
5	Radiology	62.997.943.800,00
6	Medical Rehabilitation	4.679.282.850,00
7	OK	7.800.460.800,00
8	Intensive Care	9.406.294.832,00
9	VK and Perinatology	4.014.992.454,00
10	Hemodialysis	3.721.574.010,00
11	Endoscopy	216.364.500,00
12	Chemotherapy	522.910.080,00
13	MCU	805.365.000,00
14	Accumulated Tool Depreciation	15.725.634.482,27

No.	Type of Service	Revenue Projection (Rp)
	Total Revenue	441.373.441.858,28

Source: FS Document of BDH Hospital Development in Surabaya City Year 2023,
 Processed by the Author (2024)

The source of revenue with the largest value in the overall revenue of the Bhakti Dharma Husada Regional General Hospital (RSUD) is revenue sourced from laboratory and radiology services, followed by revenue from the outpatient and inpatient service sectors.

Investment Feasibility Evaluation Results

Based on the cost component data that has been compiled as a whole, cash flow projections can then be compiled during the investment life of 10 (ten) years so that the cash flow can be accumulated annually into a net cash flow. In preparing the cash flow, the calculation of cash inflows is obtained from health service tariffs, while cash outflows are obtained from components of hospital management costs. The details of the cash flow can be presented in the table and diagram as follows:

Table 8. 10-Year Cash Flow Projection

Thn to	Cash In (Rp)	Cash Out (Rp)	Cashflow (Rp)	NetCashflow (Rp)
0	-	623.937.369.112,37	-623.937.369.112,37	-623.937.369.112,37
1	441.373.441.858.28	537.273.844.666,96	-95.900.402.808,69	-719.837.771.921,06
2	483.938.222.595.88	552.726.455.021,58	-68.788.232.425,71	-788.626.004.346,76
3	582.262.866.099.73	569.029.210.946,42	13.233.655.153,32	-775.392.349.193,45
4	638.916.589.261.48	586.232.021.736,02	52.684.567.525,46	-722.707.781.667,99
5	769.786.689.765.11	604.388.294.190,47	165.398.395.574,64	-557.309.386.093,36
6	845.192.795.293.39	623.555.195.332,85	221.637.599.960,55	-335.671.786.132,81
7	1.019.380.899.063.73	643.793.936.849,50	375.586.962.214,22	39.915.176.081,42
8	1.119.746.425.521.87	665.170.083.159,25	454.576.342.362,62	494.491.518.444,04
9	1.351.590.791.640.19	687.753.885.195,72	663.836.906.444,46	1.158.328.424.888,50
10	1.485.177.307.355.98	711.620.642.183,69	773.556.665.172,29	1.931.885.090.060,79

Source: Author's Processed Data (2024)

Based on the results of the investment evaluation of the Bhakti Dharma Husada Regional General Hospital (RSUD) Development against the predetermined parameters, it can be concluded that the NPV value is Rp. 1,373,606,103,022 IRR of 17.390%. BCR of 1.28 and PP of 6.89 years. so that the investment is feasible to implement.

Discusion

The results of the investment feasibility analysis for the development of Bhakti Dharma Husada Regional General Hospital (RSUD) demonstrate that this project is both financially and strategically viable. Based on investment evaluation parameters, including Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period (PP), and Benefit-Cost Ratio (BCR), the project offers significant economic and operational benefits for the hospital and the Surabaya city government.

A positive NPV of IDR 1,373,606,103,022 indicates that the development will generate a surplus in revenue compared to the costs incurred over the project's lifespan. This reflects the project's potential to deliver long-term financial benefits. Additionally, the IRR of 17.39%, which exceeds the Minimum Attractive Rate of Return (MARR) of 9.21%, signifies that the project yields a high internal rate of return, even under fluctuating interest rate conditions.

The Payback Period (PP) of 6.89 years highlights the efficiency of capital recovery, which is relatively shorter than the projected 10-year lifespan of the investment. Meanwhile, the BCR value of 1.28 demonstrates that the benefits derived from this development exceed its costs, with every rupiah invested generating more than 1.28 times the return.

However, while the financial analysis confirms the project's feasibility, several non-financial factors must also be considered during implementation. Operational management efficiency, coordination among stakeholders, and social impacts on surrounding communities play a crucial role in ensuring the project's overall success (Yasah et al., 2024). For instance, the management of executive and VIP services must be carefully handled to avoid creating disparities in access to healthcare services within the community. These considerations are consistent with previous studies by (Boselie & van der Heijden, 2024), which emphasize the importance of a balanced approach to both financial and social aspects in healthcare infrastructure development.

Furthermore, sensitivity to economic variables, such as increases in operational costs and changes in service tariffs, needs to be anticipated. Additional sensitivity analyses could evaluate the impact of variable changes on investment feasibility. This step ensures that the development project remains flexible in adjusting tariff and cost policies while maintaining financial feasibility standards. Previous research by (Junchen Li et al., 2025) also highlights the value of such sensitivity analyses to assess the robustness of financial projections under varying conditions.

Overall, this research indicates that the development of RSUD Bhakti Dharma Husada is not only financially viable but also has substantial potential to improve healthcare quality in West Surabaya. These findings provide important contributions to strategic decision-making by local governments regarding healthcare infrastructure investments. In the future, further research is needed to evaluate the long-term impacts of this development, both in terms of financial sustainability and its social benefits.

CONCLUSION

The conclusion of this research shows the results of investment evaluation and sensitivity analysis of management costs and potential revenue at the Bhakti Dharma Husada Regional General Hospital, using parameters such as Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period (PP), and Benefit-Cost Ratio (BCR), this research concludes that this development project is financially feasible. A positive NPV of IDR 1,373,606,103,022, a Payback Period (PP) of 6.89 years, an IRR of 17.39%, and a BCR of 1.28 indicate the feasibility of the project. These findings indicate that the project is financially viable and can generate significant

economic benefits over its useful life. Therefore, it is recommended that the project owner set a tariff policy that limits the increase to no more than 14% and avoids an increase in operating costs of more than 14%. This will ensure the sustainability and profitability of the project. The contribution of this research is not only important for assessing the direct financial feasibility of the development, but also for providing a basis for future studies on the long-term impact of health service infrastructure investments, taking into account the financial and social dimensions in the context of Surabaya's health service system.

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