

FEASIBILITY ANALYSIS OF PRIMARY EYE CLINIC DEVELOPMENT

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ABSTRACT

Over the past four years, patient referrals to the eye clinic at Mitra Medika Padalarang Clinic have consistently increased, underscoring the growing need for eye care services in West Bandung Regency, which lacks major eye care providers. Despite this demand, the referral service remains inadequate, leaving some patients without necessary care. This quantitative case study aims to analyze the feasibility of expanding eye services at the clinic by evaluating marketing, operations, human resources, legal compliance, environmental impact (AMDAL), and financial management aspects. The analysis reveals a positive outlook for the expansion, with a Net Present Value (NPV) of Rp 2,817,629,708, indicating that the revenue generated will surpass the investment cost. Additionally, the Internal Rate of Return (IRR) of 23.18% exceeds the discount factor of 15%, signifying investment efficiency. The Payback Period of 2 years and 1 month further demonstrates the rapid return on investment, well within the 10-year investment horizon. Therefore, the development of eye services at Mitra Medika Padalarang Clinic is considered feasible and beneficial.

Keyword: Feasibility Study, Clinic Development, Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period (PP)

1. INTRODUCTION

According to the World Health Organization (WHO), approximately 180 million people worldwide have vision problems, with 40-45 million being blind, a significant portion of whom reside in Southeast Asia. In Indonesia, the prevalence of blindness and visual impairment is the second highest globally, following Ethiopia. Indonesia's 34 provinces include Java, which houses 57% of the country's population, with West Java alone accounting for 20% of the national population. In 2014, a survey conducted in West Java using the Rapid Assessment of Avoidable Blindness (RAAB) method revealed a blindness rate of 2.8% among residents aged 50 and older, with cataracts being the primary cause at 77.7%. This demographic constitutes 15.1% of West Java's total population of 47,379,389 people. Cataract Surgical Coverage (the ratio of cataract surgeries performed to the number of people requiring surgery) in West Java stands at 42%, indicating that less than 58% of those needing cataract surgery receive it. This gap is attributed to inadequate recording and reporting of cataract cases [1].

The "Vision 2020: Right to Sight" program was initiated to reduce the prevalence of eye diseases that lead to blindness. Skilled human resources and effective operating techniques are essential for improving vision outcomes. The program is guided by three key indicators from the Global Action Plan: the prevalence and number of visual impairment cases, the percentage of cataract surgeries performed, and the efforts of eye health units to maintain and restore eye health [2]. While Vision 2020 initiatives have made strides, significant challenges remain, such as the rising incidence of Diabetic Retinopathy (DR) and glaucoma, necessitating more integrated services. Preventing blindness and early detection, particularly in children, are critical to reducing blindness rates. Additionally, there is a pressing need for highly trained human resources at all levels of eye health services and for adequate health service facilities to support these efforts [3], [4].

The International Agency for the Prevention of Blindness (IAPB) is a key global organization dedicated to eye health and the prevention of blindness. IAPB advocates for a Universal Eye Health approach, which aims to provide promotive, preventive, curative, and rehabilitative eye health services to everyone, ensuring that no one faces financial hardship in accessing these services. This approach ensures high-quality eye care is available to all without the risk of excessive costs [3], [5]. In West Java Province, there is only one government hospital dedicated to eye care, which serves as a national referral center and employs 33 eye specialists. Additionally, there are three private tertiary eye hospitals with a total of 16 eye specialists. At the secondary service level, West Java has 33 government hospitals and 99 private hospitals offering eye health services. These secondary facilities employ 67 eye specialists in government hospitals and 57 in private hospitals. Despite these resources, there remains a significant need for expanded and integrated eye health services to meet the growing demand and address the rising incidence of conditions like Diabetic Retinopathy and glaucoma.

Primary health services in West Java Province encompass 1,330 eye health programs staffed by 1,065 eye health nurses. At the community level, services such as posyandu and posbindu offer 480 eye health programs, supported by 480 trained cadres [3]. Despite these efforts, the Cataract Surgical Rate (CSR) in Indonesia, as reported by the Association of Indonesian Eye Specialists (PERDAMI), is currently 1050. In West Java, this translates to 49,748 cataract operations performed annually. However, the Vision 2020 initiative recommends a CSR of 2000, indicating that West Java should be performing approximately 94,759 cataract surgeries per year to meet this target [3]. This significant gap underscores the need for enhanced surgical capacity and resources to adequately address cataract-related blindness in the region.

According to the Rapid Assessment of Avoidable Blindness (RAAB), a WHO-recommended standard for collecting data on blindness and visual impairment, the prevalence of blindness in West Java is 2.8 percent, with over 70 percent attributed to untreated cataracts. In Bandung Regency alone, RAAB data from 2018 reported approximately 20,160 cases of untreated cataracts [6]. This significant backlog highlights the urgent need for enhanced cataract surgical services and improved eye care infrastructure to address and reduce the high rates of preventable blindness in the region.

Mitra Medika Padalarang Clinic, located on Jalan Raya Padalarang in Kertamulya, Padalarang, West Bandung Regency, currently provides a range of services, including doctor's and midwife examinations, dental check-ups, and referrals. To address the accumulation of untreated cataracts and improve local eye care, the clinic plans to enhance its services by introducing eye specialists and developing specialized eye care facilities. This development will include a dedicated eye examination room, an inpatient room for those with eye diseases, and a specialized room for eye procedures and surgeries. Additionally, to meet secondary eye health standards, the clinic will need to be equipped with various essential instruments, such as a Snellen optotype with a clock dial, reading test card sheets, a trial lens and frame, an Ishihara-Kanehara color vision book, a lensometer, direct and indirect ophthalmoscopes, a slit lamp, Schiottz and applanation tonometers, a non-contact tonometer, a streak retinoscope, a gonioscopy lens with three mirrors, and a refractometer. These upgrades will enable the clinic to better address eye health needs and reduce the prevalence of untreated cataracts in the region.

Table -1: Number of Patient Visits at the Mitra Medika Padalarang Clinic

Services	Year			
	2019	2020	2021	2022
General Department	21,494	21,364	18,458	19,247
Dental Department	1,715	840	902	1,271
Family Planning Department	135	146	165	170
Maternal Department	40	27	16	25

Table -2: Number of Patient Referrals to Eye Polyclinics, Untreated and Treated Patients

Year	Eye Care Refereal	Untreated Patients	Treated Patients
2019	104	20	84
2020	110	22	88
2021	112	23	89
2022	115	24	91

Over the past four years, the number of BPJS patient referrals to eye polyclinics has increased annually, yet the referral service remains inadequate, leaving some patients without treatment. This issue may be attributed to a shortage of comprehensive eye care services. Enhancing eye services at Mitra Medika Padalarang Clinic could facilitate earlier examinations and more effective management of eye conditions. The increase in patient referrals may largely stem from BPJS patients needing care for conditions such as cataracts and glaucoma, which surpass the treatment capacity of the Pratama Clinic due to limited medications and equipment. Additionally, Mitra Medika Padalarang Clinic serves general patients, approximately 25% of whom have eye disorders like conjunctivitis, chalazion, hordeolum, and other infections. Addressing these conditions at the clinic will improve overall eye care and reduce the need for referrals.

The development of eye services at Mitra Medika Padalarang Clinic can be viewed as a valuable investment, given the critical role of vision in interacting with our increasingly digital world. Prolonged screen exposure can lead to various eye problems such as pain, itching, watering, and blurred vision. Beyond blindness, eye conditions encompass refractive disorders, infectious and non-infectious diseases. According to Table 1.4, the most common conditions among treated patients include refractive disorders (40%), conjunctivitis (25%), dry eyes (25%), and blepharitis (10%). By expanding eye services, the clinic can address these prevalent issues more effectively and reduce the need for external referrals, enhancing overall patient care and accessibility.

The Mitra Medika Padalarang Clinic aims to capture 20% of the market segment for eye care services, while local hospitals currently cover 40% of the demand. Based on data from the past four years, the clinic sees an average of 110 eye patients annually, whereas there are only two available eye care facilities in the Padalarang area. This creates a potential gap of around 22 untreated patients. Consequently, the Mitra Medika Padalarang Clinic is positioned to address 20% of the unmet need, equating to approximately 5 patients. The clinic's service scope includes treating glaucoma (15%), eye infections (20%), diabetic retinopathy (10%), refractive disorders (20%), and cataracts (35%). Early detection and treatment of cataracts can significantly improve outcomes. Given the lack of a major eye care clinic in West Bandung Regency, the development of eye services at Mitra Medika Padalarang Clinic is crucial to meeting the community's needs and enhancing overall eye health care.

Currently, the Pratama Mitra Medika Padalarang Clinic employs 4 general practitioners, 1 dentist, 1 nurse, 1 midwife, 2 pharmacist assistants, 1 medical recorder, 1 administration and complaint handler, and 1 cleaning officer. The clinic adheres to the Republic of Indonesia Minister of Health Regulation No. 14 of 2021 concerning primary clinic regulations. Financial aspects are detailed in the general financial reports for the last two years, as found in Appendix 1. The clinic also meets AMDAL requirements through collaborations for medical waste disposal and has an IPAL (Waste Management Installation). It currently possesses essential primary eye health equipment, including a Snellen chart, Ishihara test book, trial lens set, trial frame, and a direct ophthalmoscope. While this equipment is adequate for a primary clinic, there is a plan to upgrade to a main clinic to enhance service quality. This includes expanding the eye care services and facilities to better meet community needs.

2. METHOD

The research utilizes a quantitative descriptive approach combined with case study and survey methods. The case study method focuses on evaluating feasibility indicators in operations management, human resources management, and financial management for the development of a primary eye clinic at Pratama Mitra Medika Padalarang Clinic in West Bandung Regency. The survey method is applied to assess marketing management, legality, and AMDAL aspects. Specifically, the marketing management survey will target prospective patients, vendors, marketing personnel, management, owners, and stakeholders. For operations management, surveys will involve clinical consultants, suppliers, vendors, and experts. The legality aspect will be evaluated through the West Bandung District Health Service and West Bandung District Government, while AMDAL management will be reviewed with experts in the field. Data collection will be achieved through interviews and documentation. The analysis will employ both quantitative and qualitative methods: quantitative analysis for marketing aspects and qualitative analysis for HR, legal, and financial aspects.

3. LITERATURE REVIEW

A feasibility study is a comprehensive evaluation process designed to determine whether a project or plan is viable across various dimensions, including financial, market, human resources, legal, AMDAL (Environmental Impact Analysis), and operational aspects. The primary goal of a feasibility study is to ensure that a project adheres to the necessary technical, financial, social, and health criteria to maximize benefits for the community. Among these

aspects, market and marketing considerations are critical, as they significantly impact a company's ability to thrive within its industry [7]. [8] define marketing as a social and managerial process where individuals and groups meet their needs and wants through the creation, offering, and exchange of value with others.

Before formulating strategies, management must first assess the external environment to identify potential opportunities and threats. This process, known as environmental observation, involves monitoring, evaluating, and disseminating information from the external environment to key stakeholders within the company. Environmental monitoring serves as a crucial management tool to prevent strategic surprises and ensure the long-term viability of the organization. By staying informed about external factors, management can make informed decisions and adapt strategies to maintain competitive advantage and support sustainable growth.

To develop a marketing strategy for the Mitra Medika Padalarang Clinic, the STP (Segmentation-Targeting-Positioning) concept can be employed. Segmentation involves dividing the market into distinct groups of potential consumers with similar needs, characteristics, and spending behaviors [4]. By identifying these segments, the clinic can target specific groups more effectively and position its services to align with their preferences, thus enhancing market attractiveness and leveraging the clinic's strengths. This strategic approach supports informed decision-making and optimizes the clinic's market presence.

Segmentation plays a crucial role in developing health facility plans by enabling focused resource allocation and strategic decision-making. It helps facilities differentiate themselves from competitors by approaching the market from a unique perspective. Once market segment opportunities are identified, the next step is to evaluate these segments to determine which ones will be targeted. According to [9], hospitals should consider three key criteria when selecting target segments:

1. **Segment Size and Growth:** The segment should be large enough and have the potential for growth to justify the investment and effort.
2. **Segment Structure:** The segment should be structurally attractive, meaning it should not be overly competitive and should offer opportunities for differentiation.
3. **Segment Compatibility:** The segment should align with the hospital's capabilities, resources, and overall strategic objectives to ensure a good fit for its services.

These criteria help ensure that the chosen segments are viable and align with the hospital's strengths and strategic goals.

To determine the feasibility of developing eye services at the Mitra Medika Padalarang Clinic, it is essential to analyze technical and operational aspects. This evaluation includes assessing technical needs such as production capacity, technology, equipment, and optimal location for the clinic. According to [10], this analysis helps in planning the total costs for procuring fixed assets. For the Mitra Medika Padalarang Clinic, key considerations involve selecting the clinic location, determining space requirements, designing the layout, and acquiring appropriate eye health equipment and infrastructure. The Regulation of the Minister of Health of the Republic of Indonesia No. 29 of 2016 outlines requirements for secondary eye health service facilities, including the need for a dedicated eye health service room.

According to the "Guidelines for Preparing Hospital Feasibility Studies" issued by the Directorate of Medical Support Services and Health Facilities, Ministry of Health of the Republic of Indonesia in 2012, a Hospital Feasibility Study involves analyzing and explaining the feasibility of various aspects to guide the establishment or development of a hospital. This study informs the planning of health services, whether for new developments or upgrades to existing facilities [11]. Similarly, a business feasibility study assesses whether a project or plan is viable by examining multiple dimensions such as financial, market, human resources, legal, AMDAL (Environmental Impact Analysis), and operational aspects. Feasibility is defined as the process of determining if the project will yield greater benefits and profits compared to the costs incurred, ensuring that it provides value not only to the company but also to investors, creditors, the government, and the broader community [12].

According to [12], the five objectives of a feasibility study are:

1. **To Assess Project Viability:** Evaluate whether the project is practical and worth pursuing, considering all relevant aspects such as financial, market, and operational factors.
2. **To Identify Potential Risks:** Identify and analyze potential risks and challenges associated with the project, allowing for the development of strategies to mitigate these risks.
3. **To Determine Resource Requirements:** Assess the resources needed for successful project implementation, including financial, human, and technical resources.
4. **To Forecast Financial Outcomes:** Project the financial outcomes of the project, including cost estimates, revenue projections, and profitability.
5. **To Ensure Alignment with Strategic Goals:** Ensure that the project aligns with the overall strategic goals and objectives of the organization, providing long-term benefits and sustainability.

According to the Regulation of the Minister of Health of the Republic of Indonesia No. 29 of 2016, secondary eye health facilities must be equipped with essential diagnostic and treatment tools. These include a Snellen optotype sheet equipped with a clock dial, a reading test card sheet, a trial lens trial frame, the Ishihara-Kanehara book, and a lensometer. Facilities should also have both direct and indirect ophthalmoscopes, a slit lamp, Schiottz tonometer, applanation tonometer, non-contact tonometer, streak retinoscopy, a gonioscopy lens with three mirrors, and a refractometer. The regulation provides detailed guidelines on the equipment necessary for secondary and tertiary eye health services, ensuring comprehensive care and accurate diagnostics.

Human Resources Management (HR) is crucial for planning, managing, and developing aspects related to the workforce. Its primary goal is to ensure the organization has skilled, engaged, and high-quality human resources to support its strategic objectives. Key HR functions include HR planning, recruitment and selection, employee development and training, performance evaluation, payroll and benefits administration, and employee relations management. For a Main Clinic, having reliable and well-suited human resources is essential to enhance operational performance and meet the demands of the healthcare environment effectively.

In health service facilities offering secondary eye health services, care is delivered by eye specialist doctors, supported by other related specialists, nurses with additional competencies in eye health, and optical refractonists working in collaboration. Effective financial management is crucial in this context, as it focuses on maximizing value for shareholders or entities connected to the organization. The primary goal of financial management is to ensure the efficient use of resources to generate optimal financial returns and support the overall objectives of the facility.

In the financial aspect study, it is calculated how much funds are needed to build and then operate business activities [13], the overall assessment in the financial aspect includes things such as:

1. Sources of funds to be obtained
2. Investment cost requirements
3. Estimated income and investment costs over several periods including the types and amounts of cash costs incurred during the life of the investment
4. Projected balance sheet and income statement for several future periods
5. Investment assessment criteria f. Financial ratios are used to assess a company's capabilities

Analysis of financial aspects includes examining investment plans and sources of funds, analyzing income and cost projections, projecting cash flows, and conducting financial feasibility analyses such as the payback period, net present value (NPV), and internal rate of return (IRR). These analyses are carried out through several stages.

The legal aspect involves studying the business entity's legal status and its implications, including the guarantees for using financial resources in the form of loans, deeds, certificates, and permits. It is essential for simplifying and expediting business activities and establishing relationships with other parties. For the Mitra Medika Padalarang Clinic, this includes compliance with the Republic of Indonesia Minister of Health Regulation No. 29 of 2016 on Eye Health Services, Minister of Health Regulation No. 14 of 2021 on clinic regulations, and obtaining service permits from the West Bandung Regency Health Service. Additionally, the analysis of legal aspects considers the impact of the company's growth on the surrounding environment and community, assessing both positive and negative effects. Environmental Impact Analysis (AMDAL), also known as Environmental Impact Assessment (EIA), is used to evaluate these impacts and ensure compliance with environmental standards.

Based on the explanation above, it can be concluded that a feasibility study is influenced by several key aspects: market and marketing, technical and operational, human resources, financial considerations, legal requirements, and environmental impact analysis.

4. RESULTS

Analysis of Marketing Management Aspects

The feasibility study for developing the Main Eye Clinic at the Mitra Medika Padalarang Clinic in West Bandung Regency, from a marketing management perspective, includes analyzing demographic conditions, health service needs, potential market, and market segments.

The demographic analysis for developing the Main Eye Clinic at Mitra Medika Clinic in West Bandung Regency aims to understand the population density of the proposed location. West Bandung Regency, situated between 6°22' to 7°08' South Latitude and 107°06' to 107°24' East Longitude, covers an area of 1,305.77 km². The largest sub-district is Gununghalu, while Batujajar is the smallest. The target market for the new Main Eye Clinic includes sub-districts within a ±20 km radius from the proposed site, specifically Cisarua, Parongpong, Batujajar, and Cihampelas. Compared to other hospitals, this location is relatively closer, making it a strategic choice for the clinic's development. The catchment area for the Main Eye Clinic development encompasses four sub-districts with

a combined area of 46.14 km² and a population of 616,353 in 2022. This area has an average population growth rate of 1.84% and a population density of 1,389 people per km², representing nearly one-third of the total population of West Bandung Regency. According to Harding (2018), the choice of business location is influenced by factors such as the community environment, natural resources, workforce availability, proximity to markets, facilities, transportation costs, land for expansion, and the distance to customers.

The planned development of the Utama Eye Clinic is situated in Padalarang, West Bandung Regency. To assess the feasibility of this location, it's crucial to consider demographic growth projections for the next 10 years. This involves analyzing population trends not only in Padalarang District but also in the surrounding districts within a ±20 km radius, including Cisarua, Parongpong, Batujajar, and Cihampelas. This demographic analysis will provide insights into potential future demand for eye care services and help in making informed decisions about the development and capacity of the clinic. If you look at the BPS website data, it is stated that the average population increase in West Bandung Regency in 2011-2022 is 1.65%, and Padalarang District itself is 1.50% per year, while the annual population growth for each surrounding sub-district namely Cisarua District 1.65%, Parongpong District 1.42%, Batujajar District 2.10%, and Cihampelas District 2.53%.

The population in Padalarang District and the surrounding four districts, which make up the catchment area for the Main Clinic development, was 616,353 in 2022. By 2031, this population is projected to reach approximately 620,543. This anticipated growth highlights an increasing demand for health services, including eye services, which is a key consideration for the development and expansion of the Main Eye Clinic.

Market segmentation involves dividing the market into distinct groups of buyers based on their needs, characteristics, or behaviors, who may require different products or services [14]. This approach allows clinics to assess and select target markets through tailored marketing strategies. By understanding and analyzing market segments, clinics can adjust their products or marketing programs to better meet the specific needs of each segment and allocate their business budgets more effectively based on these segment characteristics. Mitra Medika Padalarang Clinic, located in West Bandung Regency, serves patients not only from the local area but also from neighboring cities and regencies. Research shows that the majority of its patients are residents of West Bandung Regency, accounting for 85% of the clinic's clientele, while the remaining 15% come from outside the regency. Research on patient demographics at Mitra Medika Padalarang Clinic reveals that the majority of visitors are aged 20-29 years, comprising 41% of the patient population. In contrast, the smallest group of patients is under 20 years old, accounting for 7%. Additionally, 65% of the patients are new, while 35% are returning patients.

Psychographic segmentation involves dividing a market based on psychological, social, and consumer behavioral characteristics. This approach is useful for understanding patient needs and preferences, which can guide the development of services that align with patient expectations. In the case of Mitra Medika Padalarang Clinic, psychographic segmentation indicates that 65% of its patients are returning clients, while 35% are new. This suggests that the clinic has established a solid reputation in the West Bandung Regency area. Currently, there are only two providers of eye services in West Bandung Regency, particularly in the Padalarang District area. Cahya Kawalayaan Hospital, located 5.1 km from the Mitra Medika Padalarang Clinic, and Karisma Cimareme Hospital, situated 4.5 km away, are the primary competitors. This presents an opportunity for the Mitra Medika Padalarang Clinic to expand its eye services and compete with these hospitals, especially given the increasing prevalence of cataracts and refractive disorders due to technological advancements.

Analysis of Operations Management Aspects

Eye health service rooms are categorized into three levels: primary, secondary, and tertiary. Primary eye health services encompass basic care and are typically provided by general practitioners or optometrists. These services include initial eye examinations and procedures such as vision measurements, refraction tests, and physical exams to detect conditions like myopia (nearsightedness), hypermetropia (farsightedness), astigmatism, or presbyopia. Facilities offering primary eye health services must be equipped with essential eye health equipment for these basic assessments. Secondary eye health services involve more specialized care, delivered by eye health professionals with advanced training. These services address complex conditions such as glaucoma, cataracts, age-related macular degeneration (AMD), diabetic retinopathy, and retinal diseases. Secondary eye care facilities must have specialized examination rooms, inpatient care capabilities, and facilities for eye procedures or surgeries. If a facility cannot provide an on-site operating room, it should arrange for scheduling surgeries at other available locations within the health service network. Tertiary eye health services involve highly specialized care, often requiring referral from primary or secondary services. These facilities are equipped with specialized examination rooms for various subspecialties, emergency eye exam and surgery rooms, inpatient accommodations, dedicated surgical theaters, and educational spaces for training and information dissemination.

The need for medical equipment at the clinic was determined through interviews with the management of the Mitra Medika Padalarang Clinic. For primary and secondary eye health services, the clinic plans to upgrade from a Pratama to a Main Clinic by adding secondary eye health equipment. This upgrade will involve procuring equipment necessary for examining and treating patients, in line with patient visit volumes and service requirements. Mitra Medika Padalarang Clinic management has identified the essential equipment needed based on the minimum requirements for secondary eye health services. Additionally, the clinic plans to acquire and provide equipment beyond these basic requirements to enhance the facilities and services offered to patients.

Analysis of Human Resource Management Aspects

In the Regulation of the Minister of Health of the Republic of Indonesia Number 29 of 2016 concerning the Implementation of Eye Health Services in Health Service Facilities, the health personnel subsystem highlights the critical role of health human resource planning. This planning involves determining the type, quantity, and qualifications of human resources needed to meet health development requirements effectively. Efficient and effective fulfillment of health personnel is essential for optimal hospital management. For eye health services to operate optimally, they must be conducted collaboratively by multidisciplinary health workers according to the service level.

1. In service facilities that provide primary eye health services, the services are delivered by doctors, nurses, and optical refractionists as collaborative partners.
2. In health service facilities that offer secondary eye health services, the services are provided by eye specialist doctors along with other related specialist partners, nurses with additional competencies in the field of eye health, and optical refractionists as collaboration partners.
3. In health service facilities that provide tertiary eye services, the services are conducted by ophthalmologists, modular competency ophthalmologists, consultant ophthalmologists, along with other related specialist partners, nurses with additional competencies in the field of eye health, and optical refractionists as collaboration partners.

Health Human Resources (HRK) are indispensable assets within healthcare organizations, as their roles cannot be entirely substituted by technological advancements alone. Despite the widespread integration of modern technology, the efficacy of health services remains highly dependent on the expertise and capabilities of HRK [15]. The availability and competency of human resources are crucial determinants of health development. Inadequate staffing for promotive and preventive health services can undermine the effectiveness of these essential aspects of care. Furthermore, insufficient staffing increases the burden on existing health workers, potentially leading to work overload and compromised service quality. The projected calculations for human resource needs represent the minimum requirements for the Clinic. Consequently, the demand for personnel, including their quantity, type, and qualifications, must scale with the clinical classification and service expansion. Meeting these HR requirements is essential for the successful operational development of the Utama Eye Clinic. If these human resource needs are adequately addressed, the Clinic will be well-positioned to proceed with its development and effectively enhance its service delivery capabilities.

Analysis of Financial Aspects

Research in this aspect aims to evaluate both the costs associated with the project and the potential revenue it can generate. This includes assessing the total investment required, projecting expected income, and determining the time needed for the investment to be recouped. Additionally, it involves analyzing potential sources of business financing and prevailing interest rates to ensure that the investment is financially viable. The assessment will utilize several financial evaluation methods to determine profitability, including payback period, Net Present Value (NPV), Internal Rate of Return (IRR), and Profitability Index (PI). These methods will collectively assess the financial feasibility and attractiveness of the project.

From the analysis of research results, it is known that the initial capital for the feasibility of developing eye services at the Mitra Medika Padalarang Clinic is calculated based on the need for tangible fixed assets and intangible fixed assets. Based on the data, it is known that the amount needed for non-medical equipment is IDR. 1,601,707,200 medical equipment amounting to IDR 1,278,016,000 and funds for the building are IDR 3,000,000,000, then the investment amount is IDR. IDR 5,879,723,200 with investment requirements as follows:

Table -3: Investment Requirements

Assets	Acquisition Value	Economic Period	Depreciation Expenditure	Capital Expenditure
Building	3,000,000,000	5 Years	600,000,000	2,400,000

Operational Tools (Medical Equipment and Inventory)	1,550,186,000	5 Years	310,037,200	1,240,148,800
Total	4,550,186,000		910,037,000	3,640,148,800

Based on table 3, it can be seen that the total assets of IDR 4,550,186,000 produce depreciation expenses of IDR 910,037,000 and investment requirements (Capital Expenditure) of IDR 3,640,148,800 assuming an economic life of the investment of 5 years.

Cash Flow is cash flow or cash flow in a certain period. To calculate net cash, depreciation costs are first calculated. In calculating depreciation rates using the straight line method, for fixed assets in the form of buildings the depreciation rate is 5% and fixed assets in the form of non-buildings are 25%, as in Table 4. The table shows that the total depreciation cost of the investment requirement of IDR 3,640,148,800 is IDR 107,509,300 which will be the basis for calculating cash flow.

Table -4: Depreciation Cost

Depreciation Cost/Amortization	Percentage	Unit Cost	Yearly Cost
Building	5%	600,000,000	30,000,000
Medical/Non-Medical Equipment	25%	310,037,200	77,409,300
Total		910,037,000	107,509,300

Estimated income from adding eye services at the Mitra Medika Padalarang Clinic is based on a projected description of the possibilities that will occur in all services provided, so the income of the Mitra Medika Padalarang Clinic will be known. In general, this income can be classified by looking at the estimated income and profit/loss projections and the cash flow of Mitra Medika Padalarang Clinic which consists of:

1. Revenue from eye services is obtained from eye services, multiplied by the total length of treatment days for one year, the length of treatment days is obtained from the results of patient projections multiplied by the average length of treatment days/LOS in 2023, namely 5 days. As the year progresses, it is assumed that inpatient rates will also be adjusted according to the abilities and socio-economic conditions of the community.
2. Doctor's care income. This income is obtained from the doctor's visit rate multiplied by the length of treatment days. It is assumed that every day the doctor visits the patient he is treating. Based on the Clinic's financial data (2023), 95% of income is returned to the doctor concerned and only 5% to the Clinic.
3. Pharmacy income Based on the Clinic's financial data (2021), each patient spends around IDR 800,000 for purchasing medicines while undergoing treatment at the Clinic. Thus, the income from this pharmacy is obtained from the number of patients treated multiplied by IDR 800,000. There are adjustments to the projections due to the possibility of an increase in the rate of inflation and an increase in the price of pharmaceutical goods.
4. Laboratory income Based on the Clinic's financial data, each patient spends around IDR 200,000 for laboratory tests while undergoing treatment at the Clinic. Thus, the income from this laboratory is obtained from the number of patients treated multiplied by IDR 200,000. There are adjustments to the projections due to the possibility of an increase in the inflation rate and an increase in reagent prices.

Thus, it can be said that the source of income from additional eye services at the Mitra Medika Padalarang Clinic is found in the four installations above.

Calculation of the estimated number of patients using the Mitra Medika Padalarang Clinic inpatient room uses the forecasting method using the linear trend method. The estimate of inpatients at the Mitra Medika Padalarang Clinic is based on the number of inpatients during the last 4 years (2018-2021), as in Table 5.

Table -5: Estimated Number of Patients for 5 Years

No	Year	Number of Patients	Growth (%)
1	2018	119	-
2	2019	123	1.96
3	2020	127	5.77
4	2021	131	1.82
5	2022	135	2.68
Total		635	3.06

Based on the data in Table 5 above, the number of patients can be predicted for the next 5 years (2023-2027), using the linear trend method seen from a straight line with the assumption of an increase of 3.06% from the previous year. The predicted number of patients in 2027 will reach 135 patients.

In calculating net cash flow, the profit and loss statement approach is used (Table 4.9) with the assumption that all income is received in cash (cash inflow) and all operational costs are paid in cash (cash outflow). Because it uses a profit and loss report approach, Net Cash Flow is income after interest and tax (EAT). Because Medika Pratama Clinic's funding source is 100 percent from investment, the Net Cash Flow is the same as the EAT value.

The investment assessment analysis in this research uses the Net Present Value (NPV), Internal Rate of Return (IRR) and Payback Period (PP) methods.

1. Net Present Value (NPV) This assessment is a financial analysis used to determine whether or not the business undertaken by the company is feasible, seen through the present value of the net cash flow that will be received by the company compared to the present value of the investment capital issued by the company. This method calculates the difference between the present value of an investment and the present value of net cash receipts (operational and terminal cash flow) in the future. If the NPV is positive then the VIP room development is accepted, while if the NPV is negative then the VIP room development is rejected. A positive NPV is usually considered an indication that the project or investment is feasible at the discount rate used. Based on research data calculations, it is known that the difference between the total present value of cash flow and the initial investment value results in a positive NPV value of IDR 2,817,629,708, so the addition of eye services by developing a VIP room at the Mitra Medika Padalarang Clinic is acceptable.
2. Internal Rate of Return (IRR) is the rate of return on own capital used to run a business. The IRR method is used to find the interest rate that equals the present value of expected future cash flows. Assessment criteria:
 - a. If the IRR obtained turns out to be greater than the interest rate of return, the investment is declared feasible to implement and obtain a loan from the bank or investor.
 - b. If the IRR is below the specified rate of return, the investment should not be implemented because it is not profitable.

The results obtained were that Mitra Medika Padalarang Clinic's internal rate of return (IRR) from this investment was 23.18% per year, greater than the interest rate set at 15%. So adding eye services to the Mitra Medika Padalarang Clinic is feasible.

Payback Period (PP) The Payback Period (PP) value in this research is a period that shows how long it will take for the capital invested in the project to return/return the investment costs. The estimated net cash value changes every year, so the calculation method used in this research is a method where the net cash is the same every year, so the PP can be found by subtracting the initial investment value from the net cash flow per year and multiplying by 12 months.

Investment returns with net cash value per year can be covered in 27 months 10 days or 2 years 1 month, as long as nothing happens beyond the capabilities of the Mitra Medika Padalarang Clinic. This means that the Mitra Medika Padalarang Clinic must have optimal resources to be able to provide quality health services.

Analysis of Legality Aspects

The legal aspects considered in the development of the Main Eye Clinic at Mitra Medika Padalarang Clinic encompass several critical factors, including the requirements and permits necessary for establishing and operating the clinic. Compliance with legal provisions ensures that the clinic adheres to regulatory standards and maintains its legitimacy throughout its operations. In accordance with the Regulation of the Minister of Health of the Republic of Indonesia Number 29 of 2016, which governs the implementation of eye health services in health service facilities, and the Regional Regulation (PERDA) of West Bandung Regency Number 7 of 2010 concerning health licensing, the legal requirements must be met. These include evaluating the conditions and permits annually and during the initial process of opening the eye services business. The clinic must also ensure the validity, completeness, and authenticity of all required documents, such as Legal Entity Documentation, Personal Identification Evidence, Company Registration Certificate (TDP), Tax Identification Number (NPWP), and Company License. The implementation permit will be presented to the Head of the West Bandung Regency Health Service for recommendation and subsequently to the Head of the West Java Provincial Health Service to ensure that the establishment and business processes of the eye service clinic are legally authorized. Based on adherence to these legal requirements, the development of the Main Eye Clinic in Padalarang District, West Bandung Regency is deemed legally compliant and appropriate for continuation.

Analysis of Environmental Aspects

Environmental aspects are critically reviewed through the Environmental Impact Analysis (AMDAL), which assesses the significant impacts of planned activities on the environment, crucial for informed decision-making in Indonesia. AMDAL is essential when a project is anticipated to affect the surrounding environment [16]. In alignment with the Minister of Environment and Forestry Regulation Number 4 of 2021, which outlines the “List of Businesses and/or Activities Required to Have Environmental Impact Analysis, Environmental Management Efforts and Environmental Monitoring Efforts or Statement of Capability for Environmental Management and Monitoring,” and the Minister of Health Regulation No. 18 of 2023 concerning “Clinical Business Activities in Special Economic Zones,” AMDAL is required. Given that the planned eye clinic will operate in a leased building for five years, and all medical waste is managed by a third party, it is important to ensure that environmental controls are strictly followed. Syringes are destroyed using a needle destroyer and subsequently handed over to third parties. This ensures that waste management and environmental impacts are effectively managed in both the short and long term, thereby safeguarding the environmental quality around the eye care clinic.

In managing medical waste, the Mitra Medika Padalarang Clinic holds a UKL UPL permit and has established collaborations with third parties for waste management, including both transportation and destruction. According to the Cooperation Agreement, routine medical waste collection by these third parties occurs every two weeks. When preparing the UKL-UPL, it is crucial to consider the impacts arising from the Main Clinic Development activities. This involves analyzing the interaction between the typology of activity components during both the construction and operation stages and the typology of environmental components, which include physical-chemical, biological, social, cultural, and public health factors. With the availability of the UKL-UPL document and following the analysis of AMDAL aspects, the development of the Main Eye Clinic in Padalarang District, West Bandung Regency, is deemed feasible to proceed.

5. CONCLUSIONS

The development of the Pratama Clinic into a Main Eye Clinic in West Bandung Regency is strategically advantageous. As the only main eye clinic in the western part of the region, it has a unique edge over competitors like Cahya Kawaluyan Hospital and Cimareme Hospital. With a target population of 616,353, growing at 1.84% annually and dense at 1,389 people per square kilometer, the clinic will serve approximately one-third of West Bandung Regency’s population. The main market segment includes residents aged 20 to 45, especially those with upper-middle incomes, BPJS Health participants, and general patients.

The development of the Main Eye Clinic in West Bandung Regency is strategically advantageous. Its location fills a service gap in the region, serving 85% of the population. Positioned along a major road, the clinic ensures easy access. Equipped with comprehensive facilities and supported by adequate budget, it is well-positioned for successful operation and service delivery.

The development of the Main Eye Clinic in West Bandung Regency aligns with HR management regulations, including the Republic of Indonesia Minister of Health Regulation No. 14 of 2021. The clinic will employ 2 ophthalmologists, 19 nurses with eye health competencies, 1 pharmacy graduate, 2 clinical lab technology experts, 2 nutrition graduates, and 6 non-health workers. Located conveniently along a major road, the clinic benefits from easy access to a wide pool of health workers, including both specialists and general practitioners.

The financial feasibility of developing the Main Eye Clinic in West Bandung Regency is strong. The investment will be recovered within 2 years and 1 month, with a 5-year investment period. The Payback Period (PP) is acceptable, and the Net Present Value (NPV) is positive at IDR 2,817,629,708. The Internal Rate of Return (IRR) is 23.18% per year, exceeding the 15% interest rate. Thus, the investment is viable and worth pursuing.

The Main Eye Clinic in West Bandung Regency must be established as a Limited Liability Company (CV) to operate legally. It requires Development and Operational Permits. Compliance with the Regulation of the Minister of Health No. 29 of 2016, the Regional Regulation No. 7 of 2010, and the Minister of Health Regulation No. 14 of 2021 is essential.

The development of the Main Eye Clinic in West Bandung Regency complies with the Minister of Environment and Forestry Regulation No. 4 of 2021 and the Minister of Health Regulation No. 18 of 2023. The clinic will maintain a clean environment with green spaces and proper waste management. Mitra Medika Padalarang Clinic has a UKL UPL permit and works with third parties for waste transport and disposal.

Based on the analysis of the six aspects—marketing, operational, HR management, financial feasibility, legal, and environmental impact—it can be concluded that the development of the Main Eye Clinic in West Bandung Regency is highly feasible. All equipment and requirements for each aspect have been met.

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