

## FEASIBILITY ANALYSIS DEVELOPMENT DINAR SALON AT CIPAGALO VILLAGE

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### Abstract

Dinar Salon is a beauty salon especially for muslimah at Cipagalo Village that offer variety treatment and beauty product for treatment at home. An increase in the number of women, it can provide opportunities for the Dinar. After do collecting and processing data obtained potential market amounted to 79%, available market amounted to 69%, and target market amounted to 14%. As for the problems faced by Dinsr Salon as the amount of labor that there is only one person and the number of customer who enough fluctuative.

In addition, the calculation done on financial aspect. The calculation covers the need of investment fund, the estimate of revenue, operational cost, income statement, cash flow, and balance sheet. Then the calculation that is used to find out the feasibility of investment is Net Present Value (NPV), Pay Back Period (PBP), and Internal Rate of Return (IRR) with the period set for the financial projection is five years. The result of calculation investment is Rp 485.664.545,- retrieved NPV with posirive value Rp 39.862.818,-, IRR by 11,3 % and PBP for 4,87 years. Development Dinar Salon at Cipagalo Village is feasible because the value of IRR obtained is greater than the value of MARR and the NPV is positive.

**Key words:** Feasibility Analysis, NPV, IRR, PBP, Beauty Salon, Village

### 1. Introduction

Along the development era, there is no doubt that beauty into something that important for women. Increased public awareness to beautify themselves not only in urban areas, even that also occurred in developing regions such as Cipagalo Village. Especially in this era of modernization, beauty is a secondary requirement approaching basic needs. Look elegant and attractive is the hope every woman that wants to look beautiful. Both young and old will certainly be happy when praised gorgeous. In an effort to beautify themselves, body care is a top priority. Hair care and facial treatments are closely related to the body. Various methods are used by women to beautify themselves, one of them is going to the salon.

In 2012, the recorded the number of women amounted to 8493 women Cipagalo Village. Then, in 2013, that number has increased by 2.07% which the number of women into 8669 women. Then the number of women in the year 2014 as many as 8863 or an increase 2.24% from 2013. Furthermore, in 2015, the increase in the number of women going by 0.47% from 2014 to 8905 women. That number is expected to continue to increase every year. There is an increasing the number of women's Cipagalo Village influence on the development of business and economic activities. The opportunity to develop economic and business activities such as opening a salon can be a potential business opportunity, because the salon is a place visited by every woman in which there are various activities for maintain healthy hair and face in an effort to beautify themselves.

Dinar Salon is a place that offers hair and facial care services for women in informal settings. This salon offers hair care services such as hair cutting, cream bath, hairmask, hair fall treatment, curly hair, smoothing, and coloring hair. While skin care services offered are facial treatment. Moreover, Dinar salons also offer makeup services for official events.

At the end of 2012, Dinar Salon has a income Rp 10.000.000,- and an increase in the following year became Rp 18.500.000,- which rose by 83.89%. Whereas in 2014, the net profit for the year Dinar Salon amounted Rp 14.500.000,- of which the income decreased by 21.62% from the previous year. Then Dinar Salon net profit rose nearly three-fold from a year earlier to Rp 54.700.000,- as the end of 2015. The income has been reduced by expenses for every year.

Increases in income in 2015, it happened because the business owners start to try to offer some beauty products to its customers. Those product include serum gold, pearl cream, cream for cream bath, cream for hairmask, herbal shampoo making black hair, and ginseng tonic. In that year also request makeup on seasonal events have increased. Typically, in previous years, demand for makeup only on Kartini's day. However, there is also a demand for makeup for engagement, wedding, birthday, Christmas, and graduation ceremony.

While decreasing the amount of income that can occur due to a decrease in the number of customers. There are times when a customer wants to try another salon. But in the end customers return again become regulars Dinar Salon because you have drawn a match. The limited capacity of skilled labor when customers increases or coming

together can also cause an increase in the number of customers who are not served can result in income Dinar Salon.

Competitor Dinar Salon along with the estimated the number of customers. In which the distance between the adjacent salon with each other which is about 200 m until 400 m. In addition, the three salons are also the number of labor as much as 1 until 4 employees.

Therefore, the development of enterprises from the informal sector to the formal sector needs to be done to improve the quality and capacity of services in order to raise competitiveness. But before doing business development, feasibility analysis needs to be conducted to determine whether the development of Dinar Salon from the informal sector into the formal sector at Cipagalo Village is feasible if viewed from market aspect, technical aspect, and financial aspects.

## **2. Theory**

### **2.1 Feasibility Business**

Business is an individual activity who run for profit as its primary purpose [1]. In practice, the business needs to conduct a feasibility study to provide the business overview examined whether feasible or not to run and it is performed to determine whether the business run profitable as its primary purpose. Profits to which the business is financial gain.

Business in general can be defined as an activity to spend cost in the hope obtain results or advantages. Entrepreneurs can also serve as an activity to do the planning activities, financing, and the business unit execution. In the business activity that is executed, there's an opportunity and the chance to make entrepreneurs think for the benefit of the business so we need a review to understand the extent of the business that can provide benefits to entrepreneurs. So that the research of the feasibility study that can be used as a basis to determine whether a business is feasible.

### **2.2 The Important Things Of Feasibility Study**

There are five reason why before running a business is required feasibility study are as follows [2]:

1. Avoiding the risk of loss
2. Easier for planning
3. Make it easy for implementation
4. Make it easy for monitoring
5. Make it easy for controlling

### **2.3 Aspect In Feasibility Analysis Business**

#### **2.3.1 Market Aspect**

Market aspect is the aspect learning about demand, supply, and marketing programs [3]. The market analysis was conducted to test and assess the degree to which the marketing of the product can support business development or business carried out. There are three characteristics of consumers in the market:

1. The Potential Market  
The potential market is a group of consumers who have a certain level of interest to a particular offer.
2. The Available Market  
The Available market is a group of consumers that have the interest, income, and access to certain deals. In the available market, consumers also have the purchasing power a good or service.
3. The Target Market  
The target market is a specific group of potential customers that were targeted in a company's marketing plan.
4. The Penetration Market  
Set of consumers who buy a company's product [4].

#### **2.3.2 Technical Aspect**

The technical aspect is an aspect of assessing a business is feasible if equipment is available that will be used to support business operations. The technical aspects are not only related to equipment and materials used for operational activities, but also to the location factors, production processes, facilities, and labor.

#### **2.3.3 Financial Aspect**

The method used to declare the feasibility of the financial aspects of using the Net Present Value, Payback Period, and Internal Rate of Return are as follows:

a. Net Present Value (NPV)

The formula of NPV is shown in the following equation:

$$NPV = \sum_{t=1}^n \frac{CF_t}{(1+K)^t} - I_0 \dots\dots\dots(2-1)$$

When:

- t = Period to-
- n = Number of period
- I<sub>0</sub> = Initial investment
- CF = Cash Flow
- K = Discount rate

Assessment criteria NPV [5]:

- If NPV > 0, then the business development recommendation received.
- If NPV = 0, then the value of the business carried on the same although the development recommendation is accepted or rejected.
- If NPV < 0, then the business development recommendation is rejected.

b. Internal Rate of Return (IRR)

The formula used is as below:

$$0 = \sum_{t=1}^n \frac{CF_t}{(1+IRR)^t} - I_0 \dots\dots\dots(2-2)$$

When:

- t = Period to-
- n = Number of period
- I<sub>0</sub> = Initial investment
- CF = Cash Flow
- K = Discount rate

Calculation IRR can use trial and error. The way to calculating the present value use reasonable interest rate, say 10 %. Then the value is compared with the cost of investment. If the value of the investment is smaller, then try again with a higher interest rate. Continue until an equally large investment costs. Conversely, with reasonable interest rates had a greater investment value, then try again with a lower interest rate to get the value of the investment is equal to the present value. IRR for the interpolation formula is:

$$IRR = P_1 - C_1 \times \frac{P_2 - P_1}{C_2 - C_1} \dots\dots\dots(2-3)$$

When:

- P<sub>1</sub> = tingkat bunga ke 1
- P<sub>2</sub> = tingkat bunga ke 2
- C<sub>1</sub> = NPV ke 1
- C<sub>2</sub> = NPV ke 2

Assessment criteria IRR [5]:

If the IRR obtained was greater than the specified rate of return, the investment is acceptable.

c. Payback Periode (PBP)

The formula used to calculate the payback period is as follows:

$$PBP = T_{p-1} + \frac{\sum_{i=1}^{T_{p-1}} I_i - \sum_{i=1}^{T_{p-1}} B_{iCP-1}}{B_p} \dots\dots\dots(2-4)$$

When:

- T<sub>p-1</sub> = Year before payback period
- I<sub>i</sub> = The number of investment that has been discounted
- B<sub>iCP-1</sub> = The number of benefit that has been discounted before payback period
- B<sub>p</sub> = The number of benefit that payback period exist

Assessment criteria PBP [6]:

If the payback period is shorter than the maximum time period of the return, the recommendation development is acceptable.

**2.4 Sensitivity Analysis**

Sensitivity analysis is a technique to anticipate changes that may occur on the variables that predicted in the planning. The sensitivity analysis is required in order to know how far the impact of the variable investment predetermined factors may change due to circumstances during the life of the investment, so these changes will significantly influence the results in decisions that have been taken [7].

### 3. Research Methodology

Conceptual model that will be discussed in this research can be seen in Figure 3.1.

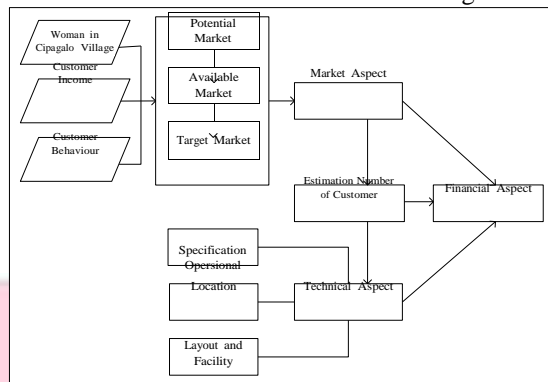


Figure 3.1 Conceptual Model Research

For systematic problem solving used to describe the steps and sequence think in regular and systematic to be taken to solve the problem. Systematic problem solving will be displayed in Figure 3.2.

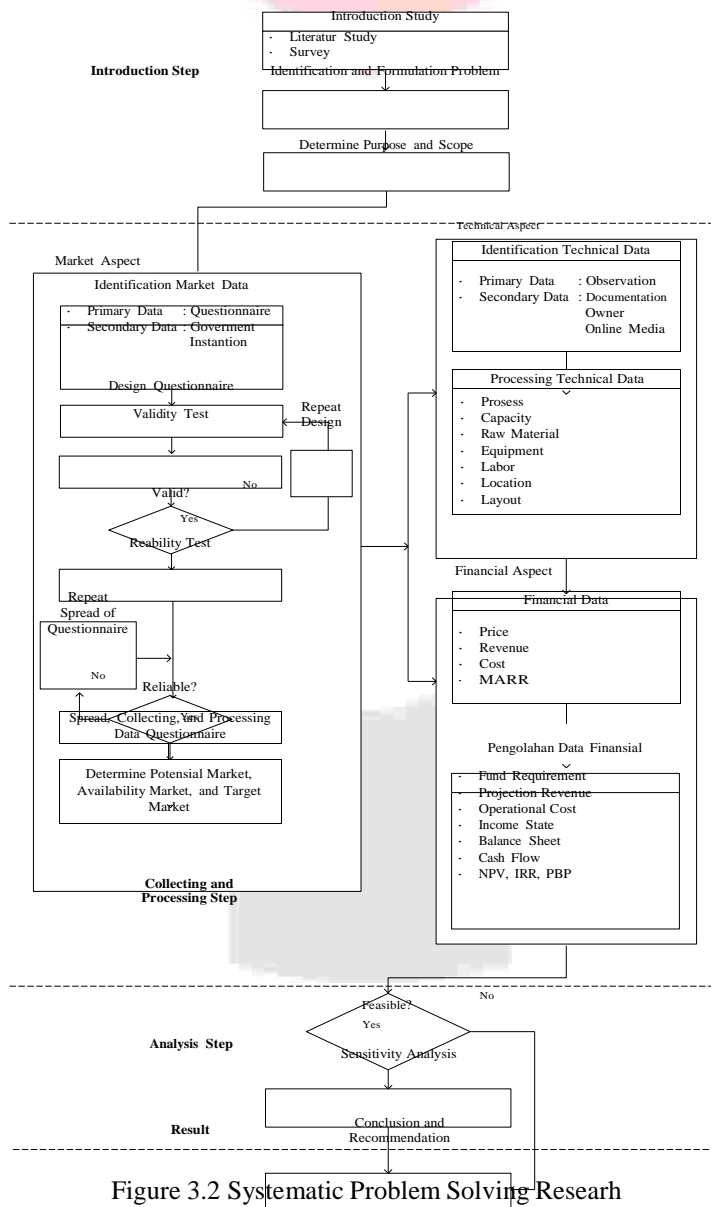


Figure 3.2 Systematic Problem Solving Research

## 4. Collecting and Processing Data

### 4.1 Market Aspect

Market data collection include:

- a. Questionnaire design
- b. Determine population
- c. Determine sample
- d. Validity test and reliability test

Market data processing include:

- a. Characteristics of respondent
- b. Consumer assessment data interpretation
- c. Determination potential market, available market, and target market
- d. Calculation estimation demand

### 4.2 Technical Aspect

The technical aspect is part of the analysis of other aspects. The technical aspect is an aspect that discusses the technical specifications relating to the operational activities of the business. Data generate information in the form of a research object, the process of identification of each of the services available, the capacity of the service, the specification of the raw material needs, the equipment used, the number of labor, human resources management, the location of the salon, and the business place layout. Technical aspects of data describing the technical condition of the salon after the development by the owner.

### 4.3 Financial Aspect

The collection of data on the financial aspect, it's come from processing and collecting data market aspect and technical aspect. These data generate cashflow and profit loss of enterprise development that would later be made the basis of the evaluation criteria in the investment. Based on the analysis of the aspects of the market will be obtained amount of estimated income while technical aspects used for calculating expenditure. These two aspects are summarized in the form of financial aspects need investment fund, estimates of revenues, operating expenses, income from the state, case flow, and balance sheet to assess the level of investment as PBP, NPV, IRR. Period in the making of financial analysis established for 5 years.

## 5. Analysis Data

### 5.1 Market Aspect Analysis

This research is conducted based on the result of the collecting and processing of market data such as market potential, market analysis available, and the target market is used to estimate the number of customers.

#### a. The Potential Market

In determining the potential market using data from questionnaires according to the interest towards services and goods offered by Dinar Salon. Based on the result of the questionnaire data processing, it is known that 79 % of respondents are interested to do the treatment and buy beauty product offered by Dinar Salon.

#### b. The Availability Market

Potential customers are willing to pay the money pulled out every service and product item offered by Salon Dinar is considered to have the capability of purchasing services and goods that are in Dinar Salon. A potential customer who is considered to have such capability is part of the available market. From the questionnaire, it is revealed that 69 % of respondents can be found on this market.

#### e. The Target Market

The target market is part of the market available that will be accessed by the company in accordance with company policy. Business owner will be aiming for about 14 % of the market. That number is based on the consideration ability of companies that can be compared from historical data.

### 5.2 Technical Aspect Analysis

The technical aspect is an aspect that should be examined in detail on this aspect because it greatly affects the calculation of the financial aspects. This feasibility study technical aspects dealing with technically needs associated with the development Dinar Salon at Cipagalo Village.

#### a. Evaluation treatment capacity

Treatment capacity is based on the capacity of the labor is owned by Dinar Salon. The calculation of the amount of the need based on total processing time per treatment namely 862.5 minutes or equivalent with 14.48 hours. While the number of treatment capacity is 67 treatment per day.

#### b. Evaluation Equipment

The equipment is an important part to provide treatment to the customers. The equipment used for the development of the salon is the old equipment can be reused plus new equipment. The amount of equipment is also adjusted by the amount of labor for the salon treatment.

c. Evaluation Labor

Labor needed for treatment are labor ever got skilled for its education about salon. Other labor is mnager that has a role cashier too. The amount of labor that is needed there are 3 persons include 2 persons to do the treatment to customers and one manager.

d. Evaluation Layout

After doing extensive room for development, operational activities increased by using a room that can still be exploited by Dinar Salon. A spacious room that is used for the operational activities of the salon is 19,74 m<sup>2</sup> be 41,34 m<sup>2</sup>.

**5.3 Financial Aspect Analysis**

The financial aspect analysis is conducted to evaluate the enterprise's financial condition over the next 5 years. From the projection on financial aspects can also exhibit the potential ownership of funds, revenue projections, operational cost projections, and feasibility of the investments. It will be depicted on the financial reports such as income statement, cash flow, and balance sheet.

a. Fund requirement estimation

Capital that is used for the development Dinar Salon is owner investment. The development does not use loans. The total cost of the investment is used for the development Dinar Salon is Rp 485.664.545,-

b. Revenue estimation

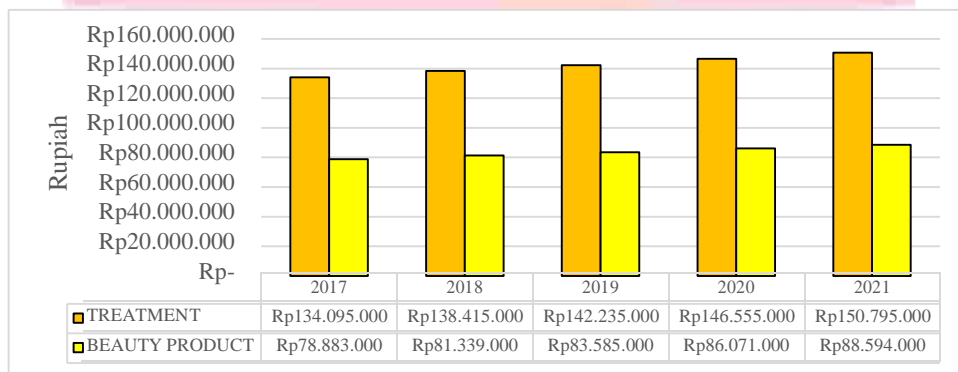


Figure 5.1 Sales Revenue

Figure 5.1 indicates the estimated number of revenue increase every year based on the increase in the number of customers from the estimation of the collecting and processing market data. Estimated revenue would serve as an estimate of cash in obtained by Dinar Salon. Estimation of revenue derived from treatment and beauty product are sold.

c. Income statement analysis

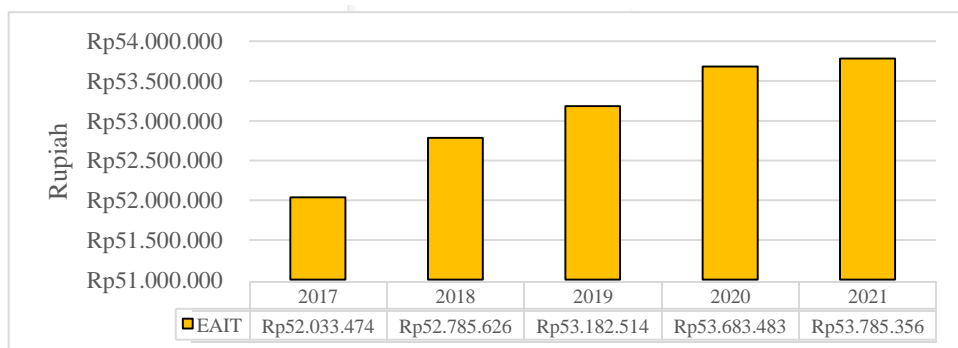


Figure 5.2 Earning After Interest And Tax

Figure 5.2 shows the earning after interest and tax after the development salon. Profit gained by Dinar Salon is directly proportional to the increase in the amount of demand each year. In addition, profit gained by Dinar Salon also is positive or profitable. The decrease of earning on 2021 happen because the increase of expenditure is greater than the increase of sales revenue from the previous year.

d. Cash flow analysis

Cash flow projection made for the period from 2017 to 2021. Net cash can be seen on the image. Because net cash is positive, the amount of enough cover expenditure during 5 years.

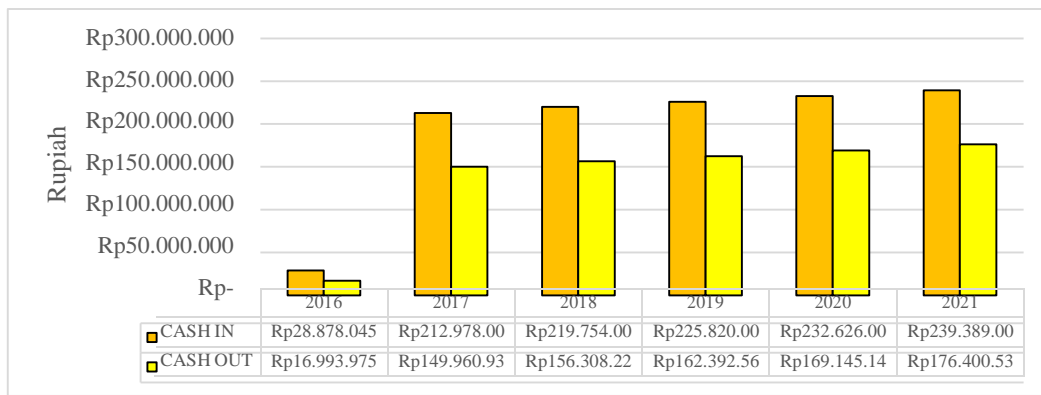


Figure 5.3 Cash Flow Projection Development Dinar Salon

e. Balance sheet analysis

Balance sheet is carried out to evaluate the value of economic position enterprise. The balance sheet gives a commonality of values in total activa and total passiva. Active is obtained from current asset and fixed asset after reduced by depreciation. Passive is obtained from liabilities, equity, and retained earning. The increase of active happen because cash from cash flow increase for every year. The increase of passive occur because retained earning increase too.

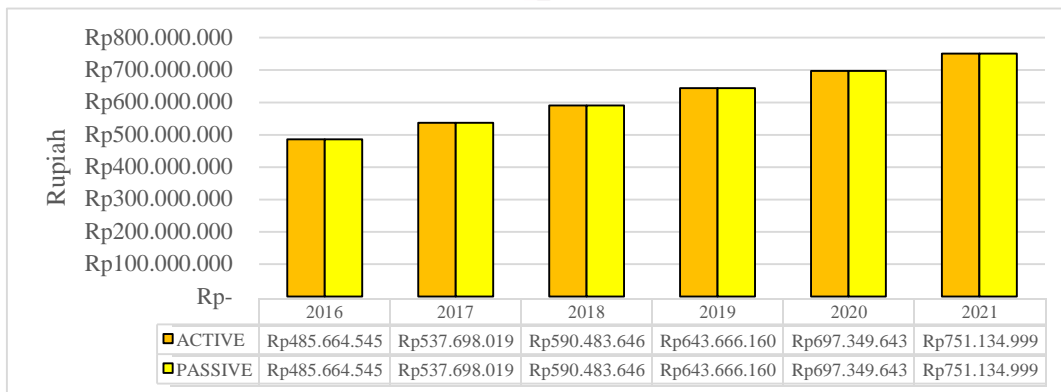


Figure 5.4 Balance Sheet Projection Development Dinar Salon

f. Feasibility analysis

Feasibility analysis development Dinar Salon said feasible if the result of the calculation NPV is positive, the payback period is fulfillment before 5 years, and the IRR greater than MARR. Here is an analysis of the result of the feasibility calculation in finansial.

Net Present Value is the calculation of the difference between the current value of cash inflows of investment and the current value of the cost of the investment. Based on the result, NPV calculation is positive Rp 39.862.818,- so the investments made can give benefits or advantages.

Payback period can be used to find out when a period or time required to payback. Based on the calculation of feasibility on the financial aspect is known that payback period occurred during 4,87 years since the development is run.

IRR for the investment period of 5 years is 11,3 % indicate that business/project gives the rate of profit of 11,3 % per year. With the value of the IRR greater than MARR (Minimum Attractive Rate of Return) that is set by the owner. Then investment development Dinar Salon can be said to feasible.

g. Sensitivity analysis

Sensitivity analysis is used to anticipate changes that may be occurring with regard to investment factor toward the feasibility of business development. In this study, sensitivity value that can affect feasibility value such as direct material and product cost, the number of customer, and selling price toward the value of NPV, IRR, and PB. If the price drop is greater than 6 %, it potentially make the investment not feasible. If the increase in direct material and beauty product cost until 16 % happen, it can be potentially result in NPV become negative. If the decline of customer occur 12 %, then the investment become not feasible too.

On the other hand, the increase in the selling price can provide greater advantage and increase prosperity labor. If the owner want to profit 15 % for every year or make target IRR until 15 %, then the selling price of treatment and beauty product must be increased until 12 %. Because the salary of labor is greatly affected by revenue, the increase of selling price hopefully also could have good impact for labor especially for their salary. Then the decrease in the material and beauty product cost can provide greater advantage. If the owner want to profit 15 % for every year or make target IRR until 15 %, then material and beauty product cost must be decreased until 27 %. Because operational cost is affected by material and beauty product cost, the decrease of material and beauty product cost could have good impact for earning. Next, the increase in the number of customer can provide greater advantage. If the owner want to profit 15 % for every year or make target IRR until 15 %, then the number of customer must be increased until 20 %. The number of customer can influence revenue and operational cost. If the number of customer is increase, so revenue and operational cost also increase. But the increase of operational cost will be recovered by the increase of revenue. So, it will give positive impact for Dinar Salon.

## 6. Conclusion

Based on information obtained from the research, it can be concluded that development Dinar Salon at Cipagalo Village feasible to do. Market aspect done assess the potential market at Cipagalo Village by doing the spread of questionnaire from collecting and processing data questionnaire. The number of customer is estimated 7460 woman from the potential market and 5148 woman from the available market. 721 woman are targeted by Dinar Salon at the beginning of development. Target market for every year is increase follow the increase of woman at Cipagalo Village.

Then, technical aspects of development Dinar Salon considered to be feasible due to the amount of the labor who has been determined based on service capability. The number of equipment has been set the amount of labor. The cost of additional equipment for development is Rp 11.560.000,- and working capital Rp 11.884.070,- per month at the beginning development.

After know the number of demand on market aspect and the requirement on technical aspect, there are financial calculation used for measure feasibility based on financial criterion. Financial calculation carried out about fund requirement, estimates revenue, operational cost that will be input in income statement, cashflow, and balance sheet used to know the amount of NPV, IRR, and PBP with financial period projection set for 5 years .The result of feasibility criteria in this aspect, It may be known that the amount of NPV is Rp 39.862.818,- , IRR as much as 11,3 %, and PBP for 4,87 years .The investment issued Rp 485.664.545,- by the owner for development Dinar Salon at Cipagalo Village.

Analysis sensitivity done for assesment of feasibility investment (NPV, IRR, and PBP) are the decline in price, the decline in the number of customer, and the increase of material and product cost. It's known that the decline in price as much as 7 %, the decline in the number of customer amounted to 12 %, and the increase of material cost (treatment and beauty product) until 16 % make NPV become negative value. On the other hand, the increase in price as much as 12 %, the increase in the number of customer amounted to 20 %, and the decrease of material and beauty product cost until 27 % make IRR can be achieved until 15%. After conducted feasibility calculation based on the result of research, the most sensitive variable is selling price.

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