Paper 51

Capacity Planning Of Additional Production Capacity Project: Study Case XYZ Coffee

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Abstract - **XYZ Coffee is a micro, small, and medium enterprise producing specialty green coffee beans, Arabica Kamojang. XYZ Coffee has a problem related to a gap between its production capacity and demand. The annual production capacity of XYZ Coffee for green coffee beans has reached 15 tons. Due to the increase in annual demand and the company's wish to expand its domestic and international market, XYZ Coffee plans to increase its production capacity. XYZ Coffee's production process is uneven because it depends on the harvest period, from April until August. Since this will be the first time XYZ Coffee plans an additional production capacity project, the company does not know how to design the detailed capacity planning and check whether it will be feasible and beneficial financially.**

The purpose of this research is to investigate the detailed capacity planning for the XYZ Coffee to produce 50 tons of green coffee beans per year in order to meet customer demand both domestic and international, to find out whether the additional project is feasible, and to find out the variable that is greatly affected the project feasibility.

Keywords - **Coffee Green Bean, Production Capacity, Capacity Planning, Monte Carlo Simulation, Sensitivity Analysis**

I. INTRODUCTION

Coffee is an essential type of beverage for most people around the world. Customer satisfaction and its economic value contribute to the countries producing and exporting the coffee bean [1]. Reference [2] mentioned that coffee is the essential food commodity worldwide and ranks second, after crude oil, among all commodities. In addition, [3] added that coffee is a beverage people enjoy, particularly in Indonesian society. Therefore, coffee is essential in our daily lives as a food commodity and human lifestyle.

XYZ Coffee is one of the MSME partners of Bank Indonesia West Java Representative Office. XYZ Coffee was established in 2012 by Ibu Hj. Eti Sumiati, a retired civil servant. Wanoja comes the Sundanese, which means "woman" because, in the beginning, only woman farmers joined this farmer association. XYZ Coffee XYZ Coffee plantation is located in Kamojang volcanic area, Bandung Regency, with an altitude of 1500 – 1700 meters above sea level, with a temperature of approximately 18 C. XYZ Coffee produces specialty coffee called "Arabica Kamojang". The coffee is processed from a coffee plantation of around 90 hectares (2022 data).

XYZ Coffee wants to increase its production capacity to fulfill domestic and international demand. The increased capacity is indicated by demand trend, which always increases yearly. The XYZ Coffee demand and production data from 5 years are stated below.

Table 1. Wanoja Green Coffee Bean Demand and Production from 2017 – 2022

Year	Green Bean Demand (In tons)	Green Bean Production (In Tons)
2017	3	3
2018	5	5
2019	8	8
2020	13	13
2021	15	15
2022	50 (forecasted)	15 (current) | 50 (planned)

Based on table 1, XYZ Coffee green bean demand is increasing annually. Furthermore, based on the company's prediction, the demand will increase to 50 tons of coffee green bean. Several issues had caused the increasing trend of coffee green bean production. First, First, customer confidence in XYZ Coffee is rising since the company can produce high-quality green beans (the company had won second place in the Indonesia Specialty Coffee Contest with a score of 86,16 in 2015). Second, some of XYZ Coffee's customers are cafes and want to open a new branch around Bandung. Therefore, they will require more green beans from XYZ Coffee as the primary raw materials for their espresso machine.

On the other hand, some of their customers are coffee roasters, and their demand for Arabica Kamojang is also increasing. XYZ Coffee, as their Arabica Kamojang suppliers, have to increase its green bean production to fulfil the demand of these coffee roasters. In addition, from this year (2022), the company has wanted to expand its domestic and international market to capture more potential customers. The Cup of Excellence Indonesia 2021 affected the XYZ Coffee brand domestically. The XYZ Coffee brand is rising because the company won second place in the Cup of Excellence 2021 with a score of 89.04.

The current coffee green bean capacity production in XYZ Coffee is 15 tons annually. Since the demand trend has been increasing over the last few years and the company wants to expand its domestic and international market, the company wants to increase its green bean production capacity from 15 tons to 50 tons. This number was chosen because of the current maximum potential green bean production from the XYZ Coffee plantation. From this year (2022), the XYZ Coffee plantation area will be 90ha and can produce 350 tons of coffee cherries. After processed, the coffee cherries will become 50 tons of green beans since the conversion from coffee cherries to green coffee beans is 1 to 7 (1kg of green coffee bean from 7kg coffee cherries processed).

However, the production system is different from the production system of manufactured goods generally, where the green bean could not be produced monthly. The green bean could not be produced monthly since the harvest period for Arabica Kamojang coffee is only five months in 1 year.

The harvest period in XYZ Coffee plantation is every April until August, and the peak harvest season is from every May to July. Furthermore, to meet demand from September to December (this year) and January to March (next year), XYZ Coffee can only rely on existing stock before the production is conducted next April. The company can handle the situation by providing a monthly sales quota. However, the current capacity could not process the coffee cherries to become the green bean on time since the current capacity can only produce up to 15 tons of coffee green bean. Therefore, to make the company able to produce up to 50 tons of green beans, XYZ Coffee needs additional assets and human resources. For instance, one of the stages of coffee bean processing is that the coffee bean will be dried with direct sunlight. Since they want to increase the production capacity, the existing drying area is not enough to accommodate the coffee cherries. Thus, they have to rent a new land to dry the coffee cherries.

On the other hand, after the drying process is completed, the following process is coffee bean hulling. The coffee cherries are peeled after previously dried to separate the green bean and its skin with the huller machine. This year, XYZ Coffee wants to increase its production capacity, and they need other assets such as another coffee huller machine and a coffee huller machine. In addition, the existing area could not accommodate the new machine. Therefore, they had to build a new area. Because this is the first time XYZ Coffee will implement an additional production capacity project, the company does not know how to design the detailed capacity planning and check whether the additional production capacity will be feasible and financially beneficial.

II. LITERATURE REVIEW

A. Operation Management

According to [4], the activities related to generating goods and services through the transition of inputs to outputs are referred to as operations management. Meanwhile, [5] mentioned that operations management (OM) is the administration of business procedures inside an organization to achieve the best level of efficiency achievable. It is concerned with transforming materials and labour as efficiently as feasible into goods and services to maximize an organization's profit.

B. Strategic Capacity Planning

The capacity planning comes from the term capacity. According to [6], capacity is defined as the ability to retain, acquire, store, and accommodate. Meanwhile, [7] defined capacity as the number of committed resources obtained for long-term use. Firms obtained the capacity to satisfy long-term demand estimates since it is costly to change on an as-needed basis. The capacity of a production system is vital. A production system that fails to manage its resources, ensuring that capacity is available and efficiently employed, tends to lose its competitive advantage.

C. Net Present Value

[8] define Net Present Value as the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is a calculation used in capital budgeting and investment planning to determine the profitability of a proposed investment or project. The NPV is the outcome of computations used to determine the present value of a future stream of payments. [9] added that Net Present Value, a long-term financial instrument, assists an individual or business decide whether to invest.

Equation (1)defines about the Net Present Value. According to [10], the net present value (NPV) is constructed by subtracting a project's initial investment (CF_0) from the present value of its cash inflows (CF_t) discounted at a rate equal to the company's cost of capital (r).

$$\sum_{t=1}^{n} \frac{CF_t}{(1+r)^t} - CF_0 \qquad (1)$$

D. Payback Period

Payback periods are widely used to assess a proposed investment. Reference [9] mentioned that the payback period is the amount of time needed for the company to recover its initial investment in the business, as measured from cash inflows. Below is the formula for the payback period. Equation (2) shows the payback period formula.

$$Payback\ Period = \frac{Total\ Investment}{Annual\ Cash\ flow}\ x\ 1\ year \qquad (2)$$

E. Depreciation

According to [11], depreciation is assigning the cost of a plant asset reasonably and methodically to the value of its usable (service) life. The straight-line technique, which divides the difference between an asset's cost and its estimated salvage value by the number of years it is expected to be utilized, is one of the most often used depreciation methods.

F. Monte Carlo Simulation

According to [12], the Monte Carlo simulation is a method for iteratively testing a deterministic model utilizing sets of random integers as inputs. Meanwhile, [13] define Monte Carlo simulations as a probabilistic approach used to tackle many parameter problems that cannot be solved analytically.

G. Conceptual Framework

Various researchers have attempted to explain and define the concept of the conceptual framework. According to [14], A conceptual framework is a final result of combining several related concepts to explain and provide a better understanding of the phenomenon under examination. Meanwhile, [15] stated that a conceptual framework is a synthesis of many findings from the research literature sources that have been evaluated, outlining the study agenda for a greater understanding of the research aims.

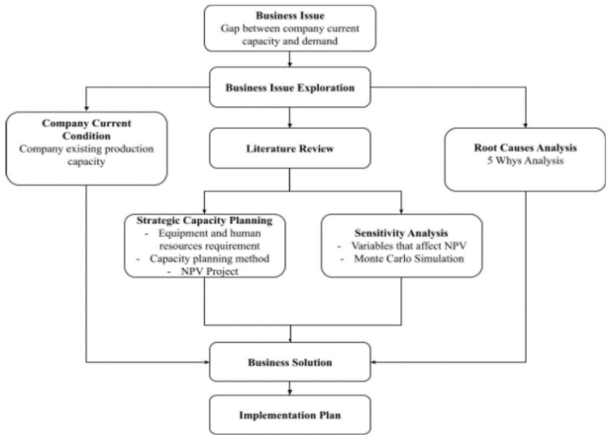

Figure 1. Conceptual Framework

In general, the purpose of a business is to earn a profit and the profit could be earned by fulfill the demand. However, the demand is uncertain and fluctuate because demand could be high and low depending on the situations and conditions. Meanwhile, capacity is fixed, which means that the total amount of the company capacity is constant. Therefore, if the demand exceeds the company capacity, there is a gap between the company current capacity and the demand.

XYZ Coffee currently has 15 tons of green coffee bean production capacity. Since the demand trend has been increasing over the last few years and expand its market both domestic and international, the company wants to increase the production capacity. Furthermore, XYZ Coffee predicted that the demand will be 50 tons starting in 2022, however there is a gap between XYZ Coffee production capacity and the demand because the current capacity is only 15 tons. Therefore, the company has to increase its production capacity to fulfill the demand both domestic and international.

XYZ Coffee business issue will be discussed further in business issue exploration. The exploration of the business issue started by defining the company current capacity condition to describe the XYZ Coffee green bean production process, including the company current equipment and human resources and also the conversion scheme from coffee cherries until it becomes green coffee bean. Next, literature review is needed to determine the theories that is used in the research. The author uses two theories, which are strategic capacity planning and sensitivity analysis. Strategic capacity planning is used to determine the equipment and labor needed for XYZ Coffee green bean production process.

Meanwhile, sensitivity analysis is used to find out the Net Present Value of the additional production capacity project feasibility whether the project is feasible and beneficial for XYZ Coffee. In addition, Monte Carlo simulation is used to analyze an uncertainty with using a random number to the sensitivity or the performance of the simulated NPV of XYZ Coffee. Later, analysis of gap between the company current capacity and demand will be discussed by using 5 Whys analysis with the purpose of help finding the root cause of the gap between the company current capacity and demand.

Business solution is formulated after the company current capacity condition and gap between the company current capacity and demand is determined. Then, Literature review is used as a guideline in formulating the business solution for XYZ Coffee business issue.

After the proposed business solution for XYZ Coffee is formulated, then the next phase is implementation plan

of XYZ Coffee capacity planning with the objective of determining the steps including the resources needed to increase the production capacity and also the timeline of each implementation process.

III. METHODOLOGY

According to [16], Research methodology refers to a collection of systematic techniques used in the research. It is a guide to research and how it is carried out. It outlines and analyzes methodologies, sheds light on the limitations and resources, clarifies the assumptions and consequences, and connects the promise to the twilight zone at the frontiers of knowledge.

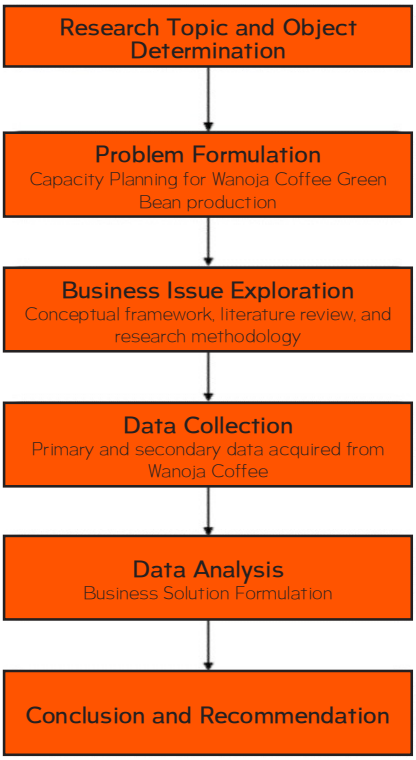

Figure 2. Research Flow

The research was started by determining the research topic and research object. The topic of this research is the utilization of capacity planning. Meanwhile, the research object is XYZ Coffee (specialty coffee producer in West Java), one of Bank Indonesia West Java Representative offices that fostered small-medium enterprises. Next step, the author identified the problem faced by XYZ Coffee in determining the capacity planning for its additional production capacity. In addition, XYZ Coffee does not know whether the additional production capacity is feasible and beneficial financially. Then, the author explores the business issue by formulating the conceptual framework, gathering and reviewing the literature regarding the problem, and constructing the research methodology.

The first step in defining the research objective is identifying XYZ Coffee's problems. In this phase, the author gathered data from Mr. Satrea Amambi, secretary and operation man-ager of XYZ Coffee. After conducting several meetings and interviews with Mr. Satrea, the author knows the current condition and problems faced by XYZ Coffee.

In the business issue exploration section, a conceptual framework, literature review, and re-search methodology build a solid body of theory relevant to the study topic and a guide for the research. In this step, the author found sources as a literature review such as academic books, journals, and previous papers with a similar issue to help the author understand better about the topic.

This research uses primary and secondary data to solve the XYZ Coffee business issue. The author gathered the primary data from the interview with Mr Satrea Amambi, the XYZ Coffee secretary and operation manager. The interview was conducted using a semi-structured interview where the author prepared several questions to ask. The author added some new questions relevant to the research when the interview was conducted.

Secondary data was obtained from the XYZ Coffee's documents, for instance, the company's green bean production data from 2018 until 2022, product sales, and the cost struc-ture. In addition, the author also uses external resources, which are academic books, peer-reviewed journals, and other resources, for example, other studies. The purpose of using the secondary data is to help the issue formulation, review the literature, ask the questions for the interview, and evaluate the overall analysis.

After gathering all of the necessary data for the research, the author conducted data analysis to give the possible solutions for the research problems. In general, the process is assorting the data. The author designed the detailed capacity planning for XYZ Coffee's additional capacity project, crosschecked the workers required, calculated the cost and revenue using cost-benefit analysis such as Net Present Value and Payback Period, and conducted sensitivity analysis and using Monte Carlo simulation.

The conclusion will be done after the data has been analyzed. It will summarize the results from the data analysis as a final result of the study, which fulfils the objectives of this re-search. After that, XYZ Coffee makes recommendations for what they need to do to overcome their problem and give a recommendation for future research.

IV. (EXPECTED) FINDINGS AND DISCUSSION

A. Proposed Coffee Green Bean Capacity Planning

Based on the introduction, XYZ Coffee production is uneven (from April until August). Therefore, the author proposed capacity planning for XYZ Coffee to optimize production with fewer workers. In calculating the labor requirements for XYZ Coffee, the author uses the average method where the amount of production, which is 350 tons of coffee cherries, will be divided by the production months (April until August), which is five months. Therefore, the average monthly production is 70 tons of coffee cherries. If converted to coffee green bean, the monthly production is 50 tons divided by five 10 tons of green beans. In addition, the working hours and days remain the same, according to XYZ Coffee. The labor requirement calculation is described below.

Table 2. Proposed XYZ Coffee Green Bean Annual Capacity Planning

Production Process	Human Resources Required	Conversion from Coffee Cherries to Coffee Green Bean
Cherry Harvesting	Farmers	70,000kg
Cherry Sorting	8	69,900kg
Cherry Fermentation		69,900kg
Cherry Drying		26,500kg
Cherry Stripping	2	18,500kg
Coffee Bean Sifting		16,500kg
Density Sorting	2	11,000kg
Handpicked	5	10,600kg
Packing	2	10,000kg

The first process is cherry harvesting from farmers with a cherry conversion output of 70,000kg. These cherries will be delivered to the XYZ Coffee production plant for the following cherry sorting process.

Cherry sorting (3 working hours and 24 working days) with the cherry conversion output of 69,900kg.

- Labors required = 8 persons x 125kg x 3 hours x 24 days = 72,000kg/month.

Next, these eight persons will move to the next station, cherry fermentation.

Cherry fermentation (2 working hours and 24 working days) with the cherry conversion output of 69,900kg.

- Labors required = 8 persons x 125kg x 3 hours x 24 days = 72,000kg/month.

Next, these eight persons will move to the next station, cherry drying.

Cherry drying (3 working hours and 21 working days) with the cherry conversion output of 26,500kg.

- Labors required = 2 persons x 250kg x 3 hours x 21 days = 31,500kg/month

Cherry Stripping (2 operators with two machine capacity of 300kg+700kg per hour with three daily machine hours and nine working days) with the cherry conversion output of 18,500kg.

- Required = 1000kg x 3 hours x 9 days = 27,000kg (2 labors and 2 machines).

Next, these two laborers will move to the next station, coffee bean sifting.

Coffee bean sifting (2 operators, two machine capacity of 200kg+700kg per hour, four machine hours, and nine working days) with the coffee green bean output of 16,500kg.

- Required = 900kg x 4 hours x 9 working days = 32,400kg 2 persons and 2 machines)

Density sorting (2 operators, one machine with a capacity of 1000kg/hour, three machine hours and nine working days) with the coffee green bean conversion output of 11,000kg.

- Required = 1000kg x 3 hours x 9 working days = 27,000kg (this happens since the density sorting machine has a large capacity; therefore, two laborers are required to operate the machine)

Handpicking (6 persons with eight working hours daily and 24 working days) with the coffee green bean conversion output of 10,600kg.

- Required = 5 persons x 10kg x 8 hours x 24 days = 10,800kg

Packing (4 persons with eight working hours daily and 24 working days) with the green bean conversion output of 10,000kg.

- Required = 2 persons x 25kg x 8 hours and 24 days = 9,600kg.

From the table and paragraph above, it could be concluded that XYZ Coffee needs 19 human resources, 1 additional huller machine with capacity of 700kg/hour and 1 additional color sorter machine. In addition, XYZ Coffee also needs several assets such as one additional storage, one additional factory, land rent, and also paranet.

B. Sensitivity Analysis

The author obtained the budget plan from Mr Satrea, the production manager of XYZ Coffee. Then the author determined the initial investment of XYZ Coffee additional production capacity project

Table 3. Initial investment of additional production capacity for XYZ Coffee

No	Description	Sub total
1	Coffee huller machine	Rp40,000,000
2	Coffee sorter machine	Rp50,000,000
3	Land rent	Rp16,000,000
4	Para net	Rp10,000,000
5	Electricity Installation	Rp12,000,000
6	Water Installation	Rp8,000,000
7	Storage construction	Rp180,000,000
8	Additional factory construction	Rp72,000,000
9	Laptop	Rp16,699,000
10	Lamp	Rp176,000
11	Office furniture	Rp1,250,000
Total		**Rp406,125.000**

Table 3. describes the initial investment for the additional production capacity project by XYZ Coffee. The initial investment costs Rp406.125.000. The costs consist of machine and equipment costs, installation costs, construction, and other costs. All components are considered fixed costs since whether there is an increase or decrease in coffee green bean produced, it will not affect the cost of those components themselves.

Table 4. NPV Calculation for XYZ Coffee additional capacity project

Year	Annual cash Flow	Cost of capital	Present value
1	(Rp1,148,725,000)	6%	(Rp1,175,640,148)
2	Rp882,400,000	6%	Rp806,024,336
3	Rp882,400,000	6%	Rp759,423,419
4	Rp882,400,000	6%	Rp715,516,770
5	Rp882,400,000	6%	Rp674,148,617
	NPV = Rp2,955,113,142 – Rp1,175,640,148 = Rp1,779,472,994		
	Payback Period = 2.3 years		

Table 4. describes about NPV and payback period of XYZ Coffee additional capacity project. Based on the NPV and payback period calculation above, the results of the NPV are Rp1,779,472,994 which is above zero. The payback period is two years and three months (calculated from year 0, the initial investment). Therefore, the investment is feasible from the NPV side because the value of the money exceeds zero. From the payback period side, the investment will return in 2 years and three months (from year 0) which is faster than the determined specified time by XYZ Coffee (5 years). Therefore, the project of additional production capacity is feasible and beneficial for XYZ Coffee because, from the NPV side, the project value is above zero. The money return time is faster than the specified return time determined by XYZ Coffee from the payback period.

Based on the literature review, sensitivity analysis aims to assess the incremental impact on project NPV by adjusting the variables while holding other factors constant. Below is the sensitivity analysis of the XYZ Coffee NPV project.

Based on XYZ Coffee NPV calculation, there four factors of NPV: production volume, unit production cost, sales volume, and selling price. However, the production and sales volume of XYZ Coffee is constant because the company planned to produce 50 tons and sell 50 tons of green coffee beans. Meanwhile, unit production cost and selling price value fluctuate due to external factors. Based on the company information, the price of coffee cherries affects the unit production costs and the selling price. Below are the input variables for the sensitivity analysis.

Table 5. Input Variables for Sensitivity Analysis

	Optimistic	Base Case	Pessimistic
Change in Production Cost	-6.25%	0%	6.25%
Change in Selling Price	25%	0%	-25%

As mentioned in the beginning, the input variables are change in production cost and change in selling price since both variables affected the NPV and payback period simulation for XYZ Coffee. The +-6.25% change in production cost and +-25% are obtained from XYZ Coffee experience while the production cost and selling prices increase and decrease.

Table 6. Summary of Sensitivity Analysis Result

Variables	Project NPV		Estimated Range
	Optimistic	Pessimistic	
Change in Production Cost	Rp3,306,363,647	Rp252,582,340	Rp3,053,781,308
Change in Selling Price	Rp8,452,603,893	-Rp4,893,657,905	-Rp13,346,261,798

Based on the description in table 6, the highest estimated range from the calculation result is the change in the selling price. Therefore, the change in the selling price is the most sensitive variable to the projected NPV.

C. Monte Carlo Simulation

the Monte Carlo simulation is to find the results of the NPV based on random values. Below are the results of the Monte Carlo Simulation of XYZ Coffee Net Present Value acquired from around 1000 trials.

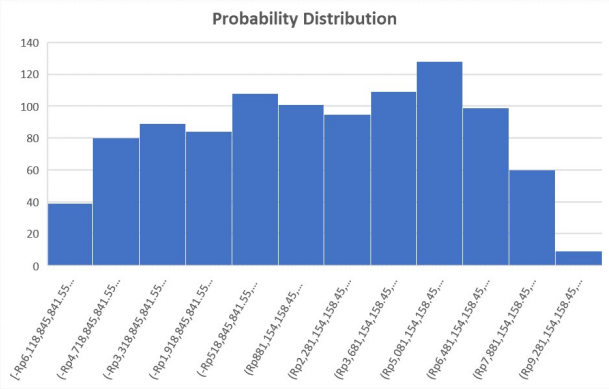

Figure 3. Probability Distribution of XYZ Coffee NPV Monte Carlo Simulation

Based on figure 3,8, the resulting NPV before conducting the Monte Carlo simulation is Rp1,779,472,993.55. Then, the NPV after the Monte Carlo simulation has an average of Rp2,126,041,163.11 from 1000 trials; the average NPV is around Rp2 billion, which is above zero, and the project is still feasible. In addition, the maximum NPV is Rp9,723,596,648.46. The minimum NPV is -Rp6,118,845,841.55. from the maximum and minimum NPV; it could be concluded that if XYZ Coffee could sell its green coffee bean at a certain price or if there is a change in production cost, the maximum NPV that the company will get is around Rp9,7 billion and the minimum NPV that the company will get is minus Rp6,1 billion.

The standard deviation of the XYZ Coffee NPV using Monte Carlo simulation is Rp4,053,683,478.48 which is above the average NPV. From the standard deviation, it could be concluded that the additional production capacity project has high volatility. Next, the median is Rp2,254,972,556.47 which means that the median value NPV of XYZ Coffee from 1000 trials is around Rp2,2 million. The skewness is -0,122, which is near zero. From the skewness, it could be concluded that the distribution of NPV results is centered on the NPV value. The distribution's kurtosis is -1,090, which means that the data distribution tends to be flat. In addition, the NPV below zero is 30% which means that there is a probability of 70% from 1000 trials to generate a positive NPV. Therefore, the project is still feasible.

V. CONCLUSION

As mentioned in the beginning, XYZ Coffee targeted the production capacity of 50 tons of raw green beans to fulfil domestic and international demand. The production process of XYZ Coffee is uneven since the production process depends on the harvest period. The harvest period of XYZ Coffee is from April until August. The detailed capacity planning consists of the production process from cherry harvesting until packing, including labor and machine required, and the conversion from coffee cherries to green coffee beans. To produce 50 tons of green coffee beans, 350 tons of coffee cherries are required (with the conversion from 7kg of coffee cherries to 1kg of green coffee beans).

From the findings, it could be concluded that for additional production capacity from 15 to 50 tons of green bean, the company needs:

- nine additional human resources.
- One additional huller machine with a capacity of 700kg/hour.
- One additional color sorter with a capacity of 500kg/hour.

In addition, the company also needs new buildings and land rent, which are:

- One additional storage with the capacity of 60m2.
- One additional factory with a capacity of 24m2.
- Land rent with 2000m2.
- Para net with 1000m2.

Based on Net Present Value and Payback Period Calculation, the project NPV is Rp1,779,472,993.55which is above zero, and the payback period is 2.3 years faster than the specified return time determined by XYZ Coffee (5 years). Therefore, the project is feasible and beneficial for XYZ Coffee because the project value is above zero from the NPV side and the money return of the project is faster than the determined specified time from the company.

Sensitivity analysis is made by taking two variables: unit production cost and selling price, because both variables' value fluctuates and affects the company's NPV. Based on the value range, the highest estimated range from the calculation result is the change in selling price results. Therefore, in other words, changing the selling price is the most sensitive variable to the projected NPV. Meanwhile, the scenario analysis using Monte Carlo simulation with 1000 trials shows that the resulting NPV before conducting the Monte Carlo simulation is Rp1,779,472,993.55. Then, the NPV after the Monte Carlo simulation is Rp2,126,041,163.11. In addition, the maximum NPV is Rp9,723,596,648.46 and the minimum NPV is -Rp6,118,845,841.55. The probability that the NPV of XYZ Coffee to become below zero is 30%. From the sensitivity analysis, it could be concluded that the additional production capacity of XYZ Coffee is still feasible and beneficial for the company.

According to the to the findings and discussion, the managerial implications are follows:

- XYZ Coffee has to implement the additional production capacity project because the Net Present Value is above zero and the payback period is faster than the specified time determined by XYZ Coffee.

- XYZ Coffee has to build additional storage, factory, purchase additional assets, and hire more workers to implement the additional production capacity. In addition, XYZ Coffee has to conduct training for the new workers to ensure they understand XYZ Coffee production process and produce high quality green coffee beans.

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