Business Design and Risk Analysis of Sonja Coffee Shop with the Concept of Coworking Space

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Abstract. Sonja Coffee Shop is a business development with the innovative concept of coworking space in Depok City. In this paper, the market aspect is derived from the spread of questionnaires to 100 respondents in Depok City with the age range of 15 – 34 years. Gained a potential market of 96%, the market is available at 97% and a target market of 0.18% of the market is available. Analysis of technical and operational design is done to know the production and income that occurred in the business for 5 years to come. The calculation of financial aspects acquired by NPV amounted to IDR 192,905,472, IRR value of 21% and PBP for 4.5 years. The value of IRR > MARR is 12% and NPV > 0, so this business is feasible to run. There is sensitivity to the increase in direct raw material costs by 14%, an increase in direct labour costs by 12%, a decrease in demand by 16% and a decrease in sales prices by 3%. There are business risks, market risks due to more and more emerging competitors, operational risks due to damage to machinery and facilities and financial risk due to inflation which is calculated at 7.03%.

1. Introduction

Coffee is a commodity in the world that is cultivated in more than 50 countries. In 2018, Indonesia was a country after Brazil, Vietnam and Colombia to become the 4th largest coffee producing country in the world, making it the mainstay of the country's export output. Based on coffee area and production data according to company status in 2014 - 2018 according to the Association of Indonesian Coffee Exporters in 2018 total area of coffee plantations in Indonesia is 1,259,136 (Ha) with a total coffee production of 674,636 tons [3]. The large area of the coffee plantation is also influenced by the high population growth in Indonesia which cultivates the coffee plantation. Population growth in one city in West Java is quite high, one of the cities is Depok City.

Based on population data every sub-district and gender from the Central Statistics Agency of Depok City in 2018 the population of Depok City up to 2018 is 2,330,333 inhabitants [1]. To find out the magnitude of market development in Depok City can be seen from the number of MSMEs based on existing business fields. According to the Department of Cooperatives and Micro Enterprises in Depok, there are a few MSMEs in Depok that are divided into several business sectors until 2019 and the most business sectors are culinary business, which is 1752 businesses. With the high number of MSMEs in the culinary business sector in Depok City, it can become a business opportunity for the development of a coffee shop culinary business in Depok City.

Sonja Coffee Shop, which was established in 2018, is located on Jalan Ikan Tombro RT.1 / RW.1 Mojolangu, Lowokwaru District, Malang City, East Java. In developing its business to...
profits, it is done by opening a new branch in one of the cities in West Java, Depok, with the concept of coworking space innovation to increase the selling value of Sonja Coffee Shop. In addition, there are threats to compete with other businesses, namely high-quality products and low-priced so that these businesses need strategies to improve service quality and carry out effective planning to reduce operational costs [2]. In business development planning, the income obtained is an illustration of the financial data that is owned so that it becomes one of the factors opening the new branch of Sonja Coffee Shop. Table 1 show a historical income data obtained starting from December 2018 until November 2019 as follows.

| Month    | Total Income |
|----------|--------------|
| December | IDR 23,521,800 |
| January  | IDR 19,500,700 |
| February | IDR 25,845,200 |
| March    | IDR 24,224,200 |
| April    | IDR 20,509,000 |
| May      | IDR 19,709,500 |
| June     | IDR 10,187,400 |
| July     | IDR 17,928,000 |
| August   | IDR 18,261,000 |
| September| IDR 18,173,000 |
| November | IDR 20,170,000 |

Based on the historical income every month obtained, it is known that monthly income is stable at IDR. 15,000,000 - IDR. 20,000,000 so it is one of the factors in business development. Based on the number of populations every district in Depok City which is quite high and the number of MSMEs in the culinary business sector in Depok City can make the target market by the Sonja Coffee Shop business in offering the products it sells. Research conducted to determine the feasibility analysis of market aspects is used to determine the amount of demand and marketing strategies based on price, product, place and promotion analysis. The feasibility analysis of the technical and operational design is the process of building a business technically and operating it after the business is completed. As for the financial feasibility analysis, it is carried out as a basis for determining whether a business is feasible or not. Kasmir and Jakfar said feasibility could be used to avoid this risks that will occur, to control the planning process and to facilitate the carrying out of work [6]. In this study aimed to determine the feasibility of the business seen from the market aspects, technical and operational design, and financial aspects. A sensitivity rate and risk measurement are carried out to anticipate business failures, so that the business development process undertaken can improve competitiveness with other similar business competitors.

2. Methods
The conceptual model is a structured research methodology design consisting of several concepts that are interrelated to one another. Conceptual models are built based on the concept of thought in the form of theory that can help research to formulate solutions to existing problems. The feasibility analysis of opening a new branch of Sonja Coffee Shop with the concept of coworking space has three main aspects in its business processes, namely market aspects, technical and operational design, and financial aspects. The research was carried out systematically starting from the market aspect, then continued with the technical and operational design, and then the financial aspects before the results obtained regarding the feasibility of business development continued in the sensitivity rate and risk measurement to anticipate business failure [11]. Figure 1 is a conceptual model in the following research.
To find out market opportunities related to consumer behavior, market competition and prices to be determined, analysis of market aspects can be carried out at an early stage [12]. At this stage, analysis of available markets, potential markets and target markets is carried out through questionnaires to residents of Depok City aged 15 to 34 years using convenience sampling. The result of this analysis is the demand and estimated income which will be used in data collection and financial aspects analysis. This dimension ends with the description of the model and the investment funds.

Financial aspects gathered from business and technological aspects of data processing. NPV, Payback Period and IRR are the metrics that will be used to determine whether a company is feasible to run or not. NPV is a way of measuring the difference between the present value of an expenditure and the present value of projected net cash receipts [4]. Payback Period (PBP) is a period of time that is needed to recoup investment expenses (initial cash investment) using cash flow, so it can be said that the payback period is the ratio between initial cash investment and cash inflow, the result of which is a time [10]. PBP calculation is as follows.

\[
PBP = \frac{\text{Investment Value}}{\text{Net Cash in Flow}} \times 1 \text{ year}
\]  

(1)

Internal Rate of Return (IRR) is a tool used to calculate the interest rate by providing an initial investment to equalize the present value of projected cash flows in the future or cash receipts [4]. IRR calculation is as follows.

\[
IRR = i_1 \frac{NPV_1}{(NPV_1-NPV_2)} (i_2-i_1)
\]

(2)

Sensitivity rate which aims to determine business conditions if there are some unwanted changes. Furthermore, risk level analysis can be calculated based on the risks that may arise in this business so that the feasibility of the business can be found. There are several studies that have been conducted regarding the feasibility analysis, one of which is the feasibility analysis of the bread business which shows a positive NPV and an IRR of 67% so that this business can be said to be feasible [8]. In another study on measuring the level of risk there is a barcode project which shows that the total risk is calculated by the value of each risk multiplied by its weight [7]. Previous research on the feasibility and risk analysis of opening a Nasi Gandul restaurant branch showed decent results with the results showing an IRR of 27.83%, a risk of 6.26% and a MARR of 14% to 20.26% [9].
3. Result and Analysis

3.1. Market Aspect
Market aspects are needed to determine the potential market, available market and target market of Sonja Coffee Shop in Depok City obtained by collecting data and processing questionnaire data, it show potential market is 96% or 791,398 consumers, available market is 97% or 799,640 consumers, and the target market is 0.18% of available market as many as 52,704 orders. To know the projected demand for the next 5 years is predicted based on the rate of population growth in Depok City increase by 3.36% every year. Table 2 is a projection of demand for the next 5 years.

| Year | Demand |
|------|--------|
| 2021 | 52704  |
| 2022 | 54475  |
| 2023 | 56306  |
| 2024 | 58198  |
| 2025 | 60154  |

After the demand forecasting process is carried out for the next 5 years, Sonja Coffee Shop also predicts each type of menu in the next 5 years. Table 3 is an estimation of each type of products in the next 5 years.

| Menu          | Percentage | 2021 | 2022 | 2023 | 2024 | 2025 |
|---------------|------------|------|------|------|------|------|
| Manual Brew   | 10%        | 5271 | 5448 | 5631 | 5820 | 6016 |
| Signature Kopi| 30%        | 15812| 16343| 16892| 17460| 18047|
| Espresso Based| 20%        | 10541| 10895| 11262| 11640| 12031|
| Non-Coffee    | 10%        | 5271 | 5448 | 5631 | 5820 | 6016 |
| Tea           | 10%        | 5271 | 5448 | 5631 | 5820 | 6016 |
| Snack         | 20%        | 10541| 10895| 11262| 11640| 12031|
| Total         | 100%       | 52704| 54475| 56306| 58198| 60154|

3.2. Technical and Operational Design
The technical and operational design carried out in this study consists of an analysis of the production process, namely the business process in the Sonja Coffee Shop, which is illustrated by the activity diagram starting from the consumer coming in to order until the customer finishes enjoying the order and exiting the business place, for the operating process described the operation process map is made to calculate and know the time of making each type of menu offered and how long it takes to prepare for opening the store. The coworking space concept applied by Sonja Coffee Shop can be classified into the Midsize and Big Community Coworking Space classification, a room that can accommodate more than 40 people supported by the facilities provided by this shop to provide comfort to consumers who come. Figure 2 is the layout of the Sonja Coffee Shop with the Concept of Coworking Space.
The operating process starting from purchasing raw materials to the process of closing the shop so as to produce the amount of labour needed as show in Table 4.

Table 4. Labor calculation

| Product            | Standard Time (minutes) | Demand/ Day | Standard Time/ Minutes/ Demand/ Day |
|--------------------|-------------------------|-------------|------------------------------------|
| Manual Brew        | 15                      | 16          | 240                                |
| Signature Kopi     | 15                      | 46          | 690                                |
| Espresso Based     | 20                      | 32          | 640                                |
| Non-Coffee         | 15                      | 16          | 240                                |
| Tea                | 15                      | 16          | 240                                |
| Snack              | 35                      | 32          | 1120                               |
| Purchase of Raw Materials | 60                 | -           | 60                                 |
| Preparation for Opening a Store | 60              | -           | 60                                 |
| Preparation for Store Closing | 60            | -           | 60                                 |
| **Total Standard Time / Minute / Day** |              |             | **3350**                           |
| **Effective working time / day** |              |             | **360**                            |
| **Total Labor**    |                         |             | **10**                             |
Based on Table 4, obtained the number of direct workers needed by Sonja Coffee Shop as many as 10 people. The location of the business as a place for the operation of this business is a leased building. The business location which is used as a branch of Sonja Coffee Shop in Depok is located at JL. Margonda Raya No.330, Kemiri Muka, Beji District, Depok City, West Java 16424, with an area of 400 m$^2$ and a building area of approximately 320 m$^2$.

3.3. Financial Aspect

In this business, the need for funds consisting of total fixed investment costs, working capital which is the estimated cost for the first 4 months, SIUP and trademarks, as shown in Table 5.

| Table 5. Total business cost |
|-----------------------------|
| Total Business Costs (2020) | Total |
| Total Investment Cost       | IDR165,124,090 |
| Working Capital (Estimated Cost for 4 Months) | IDR429,037,756 |
| SIUP                        | IDR2,700,000 |
| Trademark                   | IDR500,000 |
| Total                       | IDR597,361,846 |

Based on the calculation of total business cost amount to IDR 597,361,846. Furthermore, calculations are performed to determine the estimated income which is the estimated income derived from the number of demands on each type of product multiplied by the price of each menu offered. Every year the product sales price is obtained from the calculation of the cost of production. The following is an estimated revenue from the Sonja Coffee Shop be seen in Table 6.

| Table 6. Estimated income |
|---------------------------|
| Year | Total Income |
| 2021 | IDR 1,424,282,000 |
| 2022 | IDR 1,503,965,000 |
| 2023 | IDR 1,613,911,000 |
| 2024 | IDR 1,707,432,000 |
| 2025 | IDR 1,821,788,000 |

Feasibility analysis is carried out to determine whether the procurement of an investment or business development is feasible or not. Determination of the feasibility aspects is done by calculating the NPV (Net Present Value), IRR (Internal Rate of Return), and PBP (Pay Back Period). Table 8 is the result of the calculation of financial feasibility of the Sonja Coffee Shop.

| Table 7. Feasibility analysis |
|-------------------------------|
| Interest Rate | 12% |
| NPV            | IDR192,905,472 |
| Payback Period | 4.5 |
| IRR            | 21% |
3.4. Sensitivity Rate
Calculations made to find out how the business situation occurs when there is an increase or decrease in costs caused by market effects and to measure the degree to which a condition or change makes the business unfeasible is a sensitivity rate [5]. The sensitivity rate done in this research is increase in the cost of direct raw materials, an increase in direct labor costs, a decrease in demand and a decrease in sales prices.

| Table 8. Sensitivity rate |
|---------------------------|
| Input Parameters          | Percentage | NPV    | IRR    |
| Increase in The Cost of Direct Raw Materials | 14% | IDR 3,777,053 | 12.19% |
| Sensitive at              |            |        |        |
| Increase in Direct Labor Costs | 11.5% | IDR 6,658,923 | 12.33% |
| Sensitive at              |            |        |        |
| Decrease in Demand        | 15% | IDR 15,484,488 | 12.76% |
| Sensitive at              |            |        |        |
| Decrease in Sales Prices  | 3%  | IDR 12,039,225 | 12.59% |
| Sensitive at              | 3.5%       | IDR 4,007,571 | 11.8%  |

Based on Table 8, an increase in direct raw material costs by 14%, an increase in direct labor costs by 12%, a decrease in demand by 16% and a decrease in sales prices by 3%.

3.5. Risk Measurement
Risk in this business are market risk in the form of the emergence of new competitors who will take the market from Sonja Coffee Shop, operational risks in the form of operational facilities and equipment damage such as broken glass and damage to machinery used and financial risk in the form of an increase in operational costs and production costs so that it will affect the selling price of the product.

| Table 9. Risk measurement |
|---------------------------|
| No | Risk         | Likelihood |
|----|--------------|------------|
| 1  | Market Risk  | 3%         |
| 2  | Operational Risk | 1%        |
| 3  | Financial Risk | 3.03%    |
|    | Total        | 7.03%      |

Based on Table 9, the total business risk is 7.03%. The percentage value will be added to the MARR value in the comparison of IRR values. The previous MARR value was 12% then added to 7.03% to 19.03% of the risk elements contained in the table above. The calculation carried out yields an IRR value of 21% which is still greater than the MARR value of 19.03% and with an NPV of IDR 40,627,070, with an estimated risk factor of 7.03% it can be said that the development of the Sonja Coffee Shop is still feasible to run.

4. Conclusion
After calculating and analyzing the market aspects, potential markets and available markets are accrued at 96% and 97%, target market of 0.18% resulting in demand of 52,704 in the first year. Estimate demand for the next 5 years is predicted based on the rate of population growth in Depok City increase by 3.36% every year. The needs of technical and operational design have been adjusted to the estimated demand. The technical and operational design of the Sonja Coffee Shop operational
equipment and facilities needed that have been adjusted to the estimated demand, obtained the number of direct workers needed by Sonja Coffee Shop as many as 10 people and the total funds needed of IDR 597,361,846. The result feasibility calculation on the financial aspects, the NPV > 0 results are IDR192,905,472, the IRR value > MARR is 21%, greater than the MARR value of 12% and PBP value of 4.5 years so that the Sonja Coffee Shop business can be said to be feasible to run. Through calculations and analyses on sensitivity rate of changes in these variables that most influence the value of NPV, IRR and PBP is a decrease in sales prices by 3%.

The total business risk of the Sonja Coffee Shop is 7.03%. The percentage value will be added to the MARR value in the comparison of IRR values. The previous MARR value was 12% then added to 7.03% to 19.03% of the risk elements contained in the table above. The calculation carried out yields an IRR value of 21% which is still greater than the MARR value of 19.03% and with an NPV of IDR 40,627,070, with an estimated risk factor of 7.03% it can be said that the development of the Sonja Coffee Shop business is still feasible to run.

Research limitations contained in this paper are the lack of more risk calculations and risk control processes, the suggestion for further research is to analyse more risks so that businesses can take anticipatory action earlier.

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