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ANALYSIS OF COFFEE BEANS POTENTIAL FROM PUNTANG
MOUNTAIN, WEST JAVA, INDONESIA, USING BUSINESS MODEL
CANVAS APPROACH

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Abstract

Puntang Mountain is located in West Java Province, Indonesia, and known as coffee plantation area which produces one of the best quality coffee beans and it's been acknowledged by Specialty Coffee Association of America (SCAA). The quality has been proven, however, there are things need to be considered. The objective of this research is to describe and analyze factors that related to the coffee beans by using business model canvas approach before mapping the strengths and weaknesses of coffee beans. Research methodology used in this study is the qualitative method by conducting the interview with the coffee farmer groups, headman, and Personage in Mountain Puntang area. Our findings show that the strength points of Puntang Mountain area are the local wisdom at society in Puntang Mountain and the quality of coffee beans which have been proven as one of the best coffee beans. The main problem related to coffee beans of Puntang Mountain are production capacity, branding, and limited distribution channels.

INTRODUCTION

Puntang Mountain located in Banjaran, Bandung, West Java, Indonesia is one of the coffee plantation regions in Indonesia. Based on the report taken from Kompas (Susanti, 2016), Puntang Mountain Coffee samples taken to the coffee championship, held by the Specialty Coffee Association of America (SCAA) in Atlanta on 14-17 April 2016, was successfully crowned as the first champion. Therefore, it can be concluded that, the best coffee in the world comes from Puntang Mountain.

However, in reality, it is contrast to the fact of farmers' life. The best predicate reward does not give much contribution to their lives, especially coffee farmers in Puntang Mountain. From observation and interviews, it is known that Puntang Mountain coffee selling price was only 50,000 rupiah

per kilogram. While the price of coffee in some countries such as Italy, Malta, and England are 103,000 to 184,000 rupiah per pound (BBC, 2018). This illustration shows that there is big gap between the selling price from coffee farmers and markets.

The price gap of coffee beans occurs possibly because of the length of trading chain. Coffee farmers in Puntang have been aware of these problems, so they have made several attempts to shorten those trading chain. For examples, they established community or farmer group called LMDH (*Lembaga Masyarakat Desa Hutan/Forest Village Community*), an institution which has role to support and develop of coffee beans from farmers in Puntang Mountain, and they tried to shorten the trading chain by selling their own brand coffee to end consumers.

This paper describes the business model of coffee farmers in Puntang Mountain using business model canvas approach. Researchers describes the farmers' business into nine basic building blocks. Afterward, we can map the strengths and weaknesses of coffee farmers business in Puntang Mountain. Later, it is expected that the results of this research can help the relevant parties find the most suitable business strategy to increase the coffee beans in Puntang Mountain.

LITERATURE REVIEW

A business model can help an entrepreneur to describe, arrange, deliver, and understand the value of their company. Discussion of an innovation in business can only work if each party involved has a deep understanding in the company model of business.

Osterwalder and Pigneur (2010) simplify the business model concept. They believe that a business model can be simplified into nine basic blocks showing a company way or logic in generating revenue, profit, and calculating the cost structure. Their business concept is known as Business Model Canvas (BMC).

Those nine basic blocks consist of Customer Relationship, Value Proposition, Channels, Customer Relationship, Revenue Stream, Key Resources, Key Activities, Key Partnership, and Cost Structure. Those nine basic blocks cover four main areas of business such as: customers, supplier, infrastructure, and finance. The concept of Business Model Canvas (BMC) has been applied and tested all over the world. The result from the business canvas model analysis can be used as a reference in determining or implementing company strategy through organizational structure, processes, and systems owned by the company.

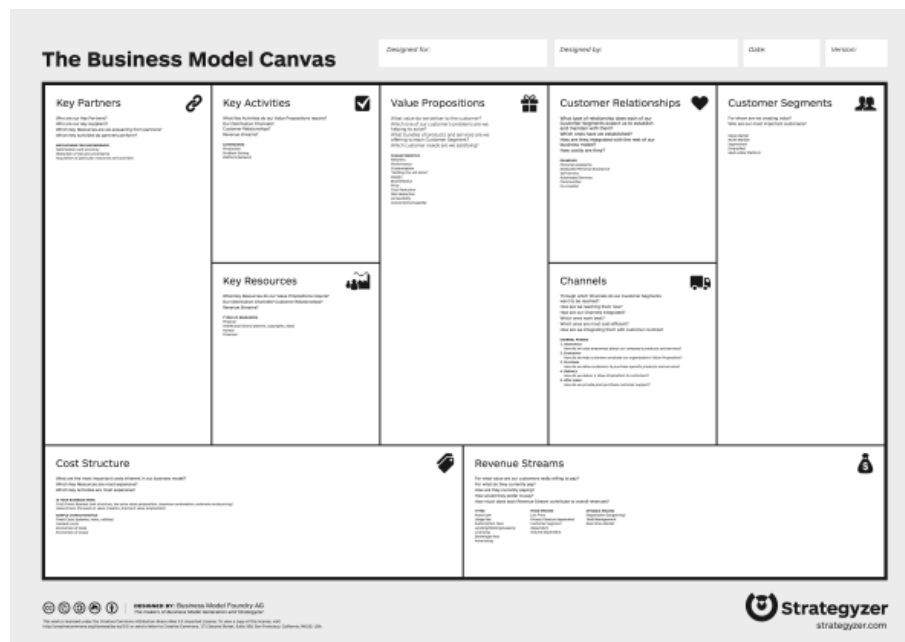


Figure 1. Business Model Canvas Template (Sources: www.strategyzer.com)

From Figure 1, we try to explain about each nine-basic block of business model canvas will be described as follows (Osterwalder & Pigneur, 2010):

Value proposition of product determines and creates the value of your product or service for the customer that you target. This block explains about value of products/services that customers perceived and solved customer needs. Value proposition also has several elements that can be created such as new products features, performance, customization, solved customers problem, product design or services, status or brand, price of products or services, cost reduction, minimize risk, capability of access to provide products or services, convenience or usability of products or services.

Distribution channels describe how a company deliver the value proposition which can be represented by products and services to our targeted segment market. Company should select the channels carefully that fit with the target market starting with owned channels, partner channel, and could be combine both of them. By selecting the right and effective channels, company can deliver the company's value proposition faster, efficient, and cost-effective. Type of channels can be separated as direct channels and indirect channels. The example of direct channels are sales person, website, and physical store, while indirect channels can be wholesaler and consignment or partner store.

Customer relationship explain various types of relation that company want to build with their target customer and how can integrate the customer relationship with company's business model that is developed and fit with business. Customer relationship is also driven by several types of motivation, such as customer acquisition, customer retention, and upscaling sales. There are several types of customer relationship that company can create, namely: personal relationship, special personal relationship, self-service relationship, automated relationship, community, and co-creation.

Customer segments explain the customer group that company wants to serve and deliver the value of the products/services. There are several types

of customer segment that can be chosen, such as, mass market, niche market, segmented market, diversified market, and multi-platform market. Mass market focuses on volume number of customer base; there are not many customer segments in this category market, e.g. consumer of electronic products. Niche market is a business model which targeted specific and specialized customer segment type, e.g. a spare part in automotive industry which have specific buyers. Segmented market has several business models which differentiate the needs and wants of each customer segment category, e.g. a bank which categorizes their customers based on many types of groups such as deposit number, loan number, retail customer, and priority customers. Diversified market segment serves two or more customer segments which have not related each other and have their specific needs and wants, e.g. Amazon.com which decides diversified their services with selling cloud services. Multi-platform market serves two or more customer segments which one or more customers have relation and dependency of each other, e.g. a credit card company is very dependent with many stores and companies which provide the EDC machine.

Revenue stream describes the sources of income that company get from each sale from target segment. If customer has an important role as core of your business model, company's revenue stream can be described as pulse of the company. Business model is defined into two types of cash flow which are revenue from transaction and customer repetition whose come and buy repeatedly. Here are some sources of revenue that can be considered; selling assets, utilization fee, subscription fee, lease or rent fee, license fee, commission fee, and advertising fee. Revenue stream also explains how customer pays the product or services and the most important thing is for what value that customer pays. Another thing that is related to the revenue stream is pricing mechanism of your product; there are two types of common mechanism applied in pricing, fixed-pricing method and dynamic-pricing method. Fixed-pricing method is the most common method used by company. This method considers the price based on product function, product features, and number of production volume. Dynamic-pricing method determines the price based on the market condition. This type of pricing is implemented in auction, real-time market, such as stock market and traditional market.

Key resources describe the most valuable assets that company owns which are needed to make your business model running well and work properly. Key resources can be physical, financial, intellectual, and human resources. Key resource allows company to create and offer value proposition, reach the company's target market, and gain the revenue.

Key activities can be described as the most important thing that company should do in terms of operational field to make their business model work well and properly. Activities that can be included in the key activities are: production, platform, network, or infrastructure, and offer a problem solving. Key activities are also needed to create and provide the value proposition to the company, reach the company's target market, retain the customers, and gain the revenue.

Key partnership describes about your supply chain and partnership which makes your business model works properly and run well. Many companies have agreements with several partners for some reasons and partnership

strategies could be a foundation for various types of business model. These are some reason why company has the partnership, namely: optimization and economic of scale factors, minimize risk and uncertainty, and acquisition resources and certain activities that company cannot afford to do it. Partnership could be divided into four type of partnership model, strategic alliance among direct and indirect competitors, cooperation or strategic alliance along with direct or indirect competitors, joint venture company to develop or create a new company, and buyer-seller supply chain network to make sure that product that we get from supplier is reliable.

The last block, cost structure, describes all costs that occur because of the operational from company which mostly come from key resources, key activities, and key partnership. Those operational activities could impact the whole of business model of company. Cost structure can be easily measured if all of key resources, key activities, and key partnership have been determined. Common approach to determine the cost structure consists of two approaches, cost-driven approach and value-driven approach. From its characteristic, cost can be divided into fixed cost and variable cost.

Based on several previous researches that we analyze, we decide to use the Business Model Canvas approach because it can easily categorize each type of activities into each block in business model canvas. Afterwards, we can analyze the strength and weakness aspects that can help coffee beans farmers to improve their daily routine operational. In addition, this business model canvas can be applied and adopted in many sectors of industries.

Here are several previous studies on business analysis using business model which become the basis of this research, namely: the first one is a research by Vorley et Al. (2008). Vorley et al. created a business model canvas design of agriculture business for smallholder which included small farmers. It helped much the business to understand how to improve and conduct their daily-routine business. Therefore, it could increase welfare of the small farmers after several suggestions and improvements implemented, such as negotiation process and emerging the market segment. It also showed that many smallholder farmers were varied depending on the farmers itself who implemented and employed the model for their business.

Second, a research by Mikael & Pirhonen (2011). It analyzed the use of business model canvas as an analytical tool to create value in Electric Mobility. The formed value can help the company to improve the industry's capability to win the competition.

Next is a research by Ahokangas & Myllykoski (2014). In this research, the researchers compiled business model frameworks that could be used to find opportunities and strengths and they can be used to explore business more deeply as well.

Johansson & Abrahamsson (2014) analyzed the use of business models in some newborn global companies. The company is engaged in mobile communications, financial services, and digital music distribution. It is concluded that business model concept implementation can help newborn global companies to achieve a high business growth.

Research by Polling et al. (2017), entitled "*Business Model in Urban Farming: A Comparative Analysis of Case Studies from Spain, Italy and Germany*" compared business model of urban farming in Spain, Italy, and Germany by using the Business Model Canvas (BMC) approach. The result

of this study showed that each of country region had a different type of business model due to geographic and historical differences. Based on the analysis, it is concluded that there are three main business models of urban farming: low cost specialization strategy, differentiation strategy, and diversification strategy. Other findings showed that geographical, environment, and culture influence the urban farming style in each country. Many farmers also combined more than one business model to gain the economics of scale in business and develop sustainability business under challenging urban condition.

Research by Doorneweert and Waarts (2012) on the Business Model for smallholder tea farmers in three countries, Sri Lanka, Indonesia, and Kenya, showed that by using the Business Model Canvas (BMC) approach, tea farmers could analyze and know the area that they had to improve, e.g. to increase the quality of tea, they had to pursuit for the international certification and the result after getting the certificate for tea, they could generate an additional revenue because of improvement on the quality of product and increase of production numbers. However, because in tea leaf industry there are many kinds of certification published by many organizations. In addition, the characteristics of tea market categorized as fragmented market, there is potentially challenge in tea farmers itself.

Research by Purnomo, Sari, Bunyamin, Gunawan & Susanti (2018) on the agroindustry sector showed that business model canvas could also be applied in agroindustry sector. Business model canvas approach can give an added-value in agriculture and help map the variables into each block in business model canvas to create an efficiency in business process.

MATERIALS AND METHODS

This research uses qualitative approach by doing the observation and interview approach. Observation is planned activities such as watching and recording then analyzing and interpreting the data from the activities. Furthermore, the design of observation uses the structured observational study in which researchers have planned set of activities or phenomena to be studied. Interview is a planned, guided, and purposeful conversation between respondent and interviewer. As observation, interview can also be unstructured or structured (Sekaran & Bougie, 2013). In this research, the unstructured interviews are conducted to explore, get insights, and know the needs of respondents. A qualitative research shows several data such as (Anderson, 2010):

1. Observation, field, or diary notes
2. Image or photograph
3. Document (reports, meeting minutes, e-mails)
4. Audio or video recordings and transcripts from in-depth or semi-structured interviews

These are several considerations for this research by using the qualitative method:

1. The respondents are in rural area which prefer interview and discussion rather than writing in questionnaires.
2. The data are collected based on the respondents' experiences in coffee plant quality.

Data that researchers provide and collect for this research consist of two types of data, primary and secondary data. Primary data are collected and gathered data from the activities that researcher conduct for their own specific purposes. Meanwhile, secondary data are the data that are already provided and collected by others with the purposes that are not related to the purposes of the current study (Sekaran & Bougie, 2013). The primary data used in this research are interview approach to our target respondents, namely:

1. Coffee farmer group of Wangun Village
2. Headman of Pasirmulya Village
3. Personage of Wangun Village
4. Farmer groups or communities of Pasirmulya Village

Secondary data that we provide in this research are literature studies from journal, textbook, articles, and other references that are appropriate and relevant with our research.

RESULTS AND DISCUSSIONS

To fulfill the business model canvas based on Ostewalder and Pigner (2010), we have to map and analyze the data into nine blocks, starting from the value proposition to revenue streams and cost structure.

The results of this study show that the value proposition of coffee from Puntang Mountain is the quality of the products which is recognized worldwide by Specialty Coffee Association of America (SCAA). However, the brand of the coffee is also weak; only few people are aware about the coffee beans from Puntang Mountain and the production capacity is still the major problem. Another problem faced is the method of cultivation in those area still using the traditional method that impacts to the number of coffee production.

The customer segment of the coffee beans from Puntang Mountain currently is only local collector which give price below the market price and few direct buyers. Coffee farmers relatively have no choice with this current condition. Based on the situation, it can be concluded that the market segment that coffee farmers targeted is niche market, however, the bargain power of coffee farmers in this situation is very low. They cannot determine the price of coffee beans and it is very highly dependent on coffee beans collector. Farmers should consider and find other collectors to improve the price such as collector from national wide area.

Customer relationship created and obtained between coffee farmers and its customers is a personal relationship, so they can build an emotional engagement, mutual interest, and long-lasting bounding between farmers and customers. Even though there is a problem occurs such as low bargaining power of farmers to their customers, they can still establish a good communication and collaboration.

Channel created and developed by coffee farmers for its customers is direct distribution of on-farm model. Therefore, customer who wants to buy raw coffee beans should visit the coffee field to meet the farmers and then they negotiate the price.

Revenue stream is earned only by selling a coffee beans to the buyers and the turnover of production per farmland unit. Before selling their products, they have already separated the coffee beans by its quality. By implementing

this method, they can slightly increase their revenue. The revenue stream of farmer is very depending on the harvest of coffee per farmland unit, on average, twice per year per farmland unit. That's why every farmer is already well-educated by official local area government and the planting time period also make sure the sustainability of business.

Key resources can be described as farmland, farm location, farmers, and machinery or equipment that related to the cultivation process. As we know that the quality of coffee beans from Puntang Mountain is the best quality product. It is because the coffee is planted on the altitude about 1,500 meters above the sea level; average altitude for qualified coffee beans grown is at about 1,300 meter above the sea level.

Key activities can be described into two core activities such as production of coffee beans, from planting through becoming a coffee beans, and direct selling the coffee beans to the collectors or few direct buyers who come into field with minimum price.

In key partnership aspect, there are few farmers group in Wangun Village which create an official local farmers community. This step can be developed to be a huge community with collaboration among several farmers coffee groups and association to create cartel which control and monitor the price. Another partnership that can be developed is maintaining relation with the local government of Pasirmulya to get information from the government, especially information about training, funding, and development related to the coffee beans and plant.

Cost structure that occurs mostly come from the operational or key activities of planting the coffee to becoming a coffee beans such as fertilizers, water, and cost of caring the plant.

By analyzing with Business Model Canvas (BMC) approach, we can map the strength and weakness of coffee beans products. The strength point of coffee beans is the quality of product planted in the 1,500 meters above the sea level, higher than the average good quality coffee planted on 1,300 meters above the sea level, as well as local wisdom in Puntang Mountain in managing and cultivating the coffee plants.

Many weaknesses should be improved such as product branding, selling product directly to the collectors with higher price, bargaining power to negotiate the price of coffee beans and product awareness. The production capacity also become the problem since the limitation of capital and human resources. Channel of distribution is also another issue arising. Like bargaining power issue, only few channels exist i.e. direct collectors.

CONCLUSIONS

Based on the analysis by using the business model canvas approach, we come out with several conclusions. First, the quality of coffee beans from Puntang Mountain have been acknowledged by Specialty Coffee Association of America (SCAA) because the farmland of coffee beans is located at altitude more than 1,500 meters above the sea level, which commonly average quality coffee beans are planted at altitude of 1,300 meters above the sea level. Another strength point is local wisdom which makes the forestry surrounding plant area sustain. They become the main potential opportunity to develop the products from Puntang Mountain and increase the welfare level of coffee farmers at the same time.

Another issue related to the coffee beans from Puntang Mountain is that there are a lot of things to do for improvement that potentially increases the revenue, such as the products itself and optimizing the production capacity. Coffee farmers also have room to improve and increase their productivity and customer segment can also be broader. Therefore, adding channels are to reach the potential customers and develop branding strategy to increase awareness level of society for coffee beans from Puntang Mountain. By improving and resolving the problems that occur illustrated in the business model canvas approach, there will be an opportunity to increase the revenue for coffee farmers.

For future research, we suggest that researchers can come out with business strategy to develop the coffee beans from Puntang Mountain based on analysis of coffee beans potential at Puntang Mountain we have already conducted.

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