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Analysis of the Business Model Canvas for the Development of Timor-Leste Arabica Coffee

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ABSTRACT

The agricultural sector plays an important role in Timor-Leste's economy, with Arabica coffee being one of its high-value commodities. Timor-Leste Arabica coffee has significant development potential due to its distinctive flavor profile and suitable agroclimatic conditions. However, this potential has not been fully realized due to challenges in value chain management, marketing, product innovation, and resource utilization. This study aims to analyze the Business Model Canvas (BMC) as a basis for developing Letefoho Arabica Coffee in Timor-Leste. The results indicate that Letefoho Arabica Coffee has strong development potential, supported by high-quality organic products, adequate resources and production activities, strong customer relationships, and supportive partnerships. Nevertheless, several challenges remain, including a customer base concentrated in middle- and upper-income groups, traditional marketing channels, and unstable revenue. Development strategies include diversifying package sizes to improve affordability, utilizing digital technology and e-commerce for marketing, strengthening partnerships with cooperatives and exporters, and maintaining cost efficiency and product quality. These strategies are expected to expand market reach, increase revenue, and strengthen the competitiveness of Letefoho Timor-Leste Arabica Coffee in national and international markets

INTRODUCTION

The agricultural sector is one of the most important sectors in Timor-Leste's economy. One of the leading agricultural commodities with high economic value is Arabica coffee. Coffee is the primary non-oil and gas export commodity, making a significant contribution to the income of rural communities and the country's foreign exchange reserves. In fact, approximately 25% of farming households in Timor-Leste rely on the coffee sector for their income. Ermera District is the largest coffee-producing center in Timor-Leste, with coffee plantations covering 31,616 hectares and accounting for approximately 38% of the country's total coffee production (Ministry of Agriculture and Fisheries, Timor-Leste, 2025). One of the regions producing the finest Arabica coffee in Ermera District is

Letefoho. Arabica coffee is known for its high quality due to its distinctive aroma, floral and chocolatey flavor notes, and balanced acidity, making it highly sought after in international markets.

Arabica coffee in Timor-Leste is primarily cultivated using natural organic methods through traditional agroforestry systems. The most widely cultivated varieties are Arabica Typica and Hybrid de Timor (HDT), which are of superior quality and resistant to coffee plant diseases. In addition, the geographical conditions of the mountainous region, with elevations ranging from 1,400 to 1,900 meters above sea level, contribute to the high quality of the coffee beans produced. Despite the high quality of the coffee, the coffee marketing system in Timor-Leste still faces various challenges. The long

marketing chain results in relatively low profits for farmers, as they remain dependent on middlemen and large exporters. Furthermore, conventional marketing practices limit access to international markets for both farmers and local coffee businesses.

Timor-Leste's Arabica coffee has great potential because it is known for its distinctive flavor profile and is supported by agroclimatic conditions suitable for growing high-quality coffee. However, this potential has not yet been fully realized due to various challenges, such as limitations in value chain management, marketing strategies, product innovation, and the suboptimal integration of resource utilization. Therefore, an approach is needed to evaluate the agribusiness conditions of Timor-Leste Arabica coffee and identify opportunities for its development. This study aims to analyze the Business Model Canvas (BMC) as a basis for the development of Timor-Leste Arabica coffee.

METHODS

The research location is in Letefoho, Timor-Leste. The location for this study was selected using a purposive sampling method. Letefoho, Timor-Leste, was chosen as the research location because it possesses the historical data and information necessary for the current study, making it an appropriate choice for this research. Furthermore, Letefoho, Timor-Leste, is an Arabica coffee-producing region that still holds potential for development. The types of data used in this study include primary and secondary data. The data collection methods employed in this study were interviews, recall, and documentation. Key informants served as the primary data sources for obtaining more in-depth information regarding the development of a business model for the Arabica coffee agribusiness in Timor-Leste. Key informants were identified using purposive sampling, which involves the deliberate selection of informants based on the consideration that they possess knowledge, experience, and direct involvement in Arabica coffee agribusiness activities in the study area. There was one key informant in this study, who served as the Chair of the Arabica Coffee Farmers' Group in Letefoho, Timor-Leste. Data analysis in this study was conducted using the Business Model Canvas

(BMC) approach to identify and evaluate the company's business model. The BMC is a business model framework developed by Osterwalder and Pigneur that simplifies complex business concepts into a more systematic form so that it can be used as a basis for formulating alternative corporate strategies and assessing business feasibility (Mandamdari & Widjojoko, 2022). The BMC framework is presented in the form of a canvas that includes nine main elements: customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure.

RESULTS AND DISCUSSION

Based on the results of research conducted through observation and interviews with key informants, the business process of Letefoho Arabica Coffee in Timor-Leste can be described in greater detail and in a structured manner aligned with the nine components of the BMC framework. The following presents the research findings regarding the nine business components within the BMC framework.

a. Customer Segment

Consumers are a key element in the success of any business. Companies produce goods or services to meet consumer demand; therefore, without consumers purchasing their products, companies would be unable to thrive amid competition from other rivals (Shobaah & Irianto, 2023).

Based on the interview results, the customer segment for the Letefoho Timor-Leste Arabica Coffee business consists of consumers in the middle-to-upper economic class, given the relatively high price of Timor-Leste Arabica coffee. This means that the customer segment for Timor-Leste Arabica coffee does not yet encompass all socioeconomic groups. The researchers suggest that in the future, the Letefoho Timor-Leste Arabica Coffee business should target the lower-middle market by differentiating product package sizes to make the product more affordable for consumers and expand its market reach.

b. Value Proposition

The value proposition of the Timor-Leste Arabica coffee business is that the Arabica coffee produced is made from organic ingredients (without chemical preservatives), which are safe for health and harmless to consume. The production process also places great emphasis on hygiene and product quality. As a result, the business prioritizes sustainability, food diversity, and the utilization of locally available resources. In an interview, the Chairperson of the Letefoho Arabica Coffee Farmers' Group in Timor-Leste stated:

“The advantage of the Arabica coffee we produce is that it is made from organic ingredients (without chemical preservatives), making it very safe for long-term consumption. We pay close attention to the cleanliness of the raw materials and the equipment we use in the production process. The raw materials we use also come from locally grown Arabica coffee in Letefoho, Timor-Leste.”

It can be concluded from the interview with the Chairperson of the Letefoho Arabica Coffee Farmers' Group in Timor-Leste that the group adds value for customers by providing high-quality service, using high-quality raw materials, and maintaining good relationships with customers. The researcher strongly supports the value provided to customers in the Timor-Leste Arabica coffee industry. Moving forward, it is hoped that the group will continue to maintain good relationships with customers and sustain the efforts already made.

c. Channels

Channels are the pathways or media used to deliver products and services, along with their value propositions, to consumers (Makkarennu & Rahmadani, 2021). Arabica coffee farmers in Timor-Leste use two main channels to operate their businesses: through middlemen and direct sales to markets. The majority of the coffee produced is distributed through middlemen rather than directly to end consumers.

A small portion of Letefoho Arabica coffee farmers in Timor-Leste market or sell their Arabica coffee products directly to local markets and consumers. The marketing process for Letefoho

Arabica coffee from Timor-Leste is still relatively traditional and does not yet utilize information technology. The researchers suggest implementing other methods that can optimize the marketing of Letefoho Arabica coffee from Timor-Leste.

d. Customer Relationship

The customer relationship established by the Letefoho Arabica Coffee business in Timor-Leste involves building good relationships with customers to understand current and future market demand. This includes maintaining effective communication by providing excellent, polite, and friendly customer service; simplifying the ordering process; offering discounts; and ensuring product quality. Customer satisfaction is one of the primary goals of any business. Customers who have a satisfying experience will return to make repeat purchases. Therefore, producers must provide the best possible service to their customers.

e. Revenue Stream

The revenue stream is a crucial part of the business model. Revenue is generated from the sale of the product—Timor-Leste Arabica coffee. This component is the most important because it supports operational processes. Letefoho Timor-Leste Arabica coffee businesses generate revenue from coffee sales, with packaging options including 250g, 500g, and 1 kg. Revenue is generated from the sale of Arabica coffee to collectors at prices ranging from \$4.50 for 250g, \$8.00 for 500g, and \$13.00 for 1 kg. Revenue from the Timor-Leste Arabica coffee business is highly unpredictable, given that the number of consumers purchasing the product varies.

f. Key Resources

This section explains the key requirements necessary for operating a business model. The key resources in the Timor-Leste Arabica coffee business consist of production materials, business facilities and infrastructure, and human resources that support all business activities. The production materials used include Arabica coffee cherries, coffee seedlings, water, organic fertilizer, and product packaging materials. The business facilities and infrastructure used include hoes, machetes, pruning shears, harvest baskets, scales, pulpers, drying equipment, hullers,

roasters, grinders, and packaging equipment. Meanwhile, the human resources involved include coffee farmers, harvesters, post-harvest processing workers, packaging staff, and marketing personnel. The availability of adequate production materials, business facilities, and human resources is a critical factor in ensuring smooth operations, maintaining product quality, and enhancing the competitiveness of Letefoho Arabica Coffee in both the domestic and international markets.

g. Key Activities

The main activities in the Letefoho Arabica Coffee agribusiness begin with the cultivation and maintenance of coffee plants. These activities include weeding, pruning, fertilizing, and pest and disease control to maintain crop productivity and quality. Once the coffee cherries reach optimal ripeness, farmers selectively harvest them by picking only the perfectly red ones (red cherries). After harvesting, the coffee cherries undergo post-harvest processing, which includes hulling, fermentation, washing, drying, and sorting. These steps aim to produce high-quality coffee beans that meet market standards. The dried coffee beans are then stored or further processed through roasting and grinding before being packaged as ready-to-sell products.

In addition to production, other key activities include the marketing and distribution of coffee products. Marketing is conducted through direct sales to consumers, partnerships with cooperatives and exporters, and the use of e-commerce platforms. The use of digital technology in marketing enables Letefoho Arabica Coffee to reach a wider market, increase the product's value, and strengthen the competitiveness of Timor-Leste coffee in the international market.

h. Key Partnerships

Partners are a key component of any business; business operations cannot run smoothly without them. Partnerships in the Letefoho Arabica Coffee agribusiness in Timor-Leste involve various parties that support one another in the production, processing, and marketing of Arabica coffee. The Letefoho Arabica Coffee agribusiness in Timor-Leste collaborates with various parties. Cooperative

relationships have been established among coffee farmers, farmer groups, cooperatives, collectors, processors, and exporters, all of whom play a role in channeling the harvest to a broader market. Through these partnerships, farmers gain access to market information, improved product quality, and better marketing opportunities. In addition, support from the government, financial institutions, and research institutions is also needed to enhance farmers' capacity, expand access to capital, and strengthen the competitiveness of Letefoho Arabica Coffee in both national and international markets. Through sustainable partnerships, all stakeholders in the Arabica coffee value chain can reap economic benefits and support the development of a more advanced and sustainable coffee agribusiness. A business must be able to manage its network to expand its business strategy, which will also help ensure the smooth operation of its business activities. This finding is consistent with Hemas's (2016) research, which shows that companies need to manage their networks effectively to expand their business strategies while supporting the smooth operation of their business activities.

i. Cost Structure

The cost structure refers to the various cost components required in a business, such as fixed costs and labor costs. The cost structure in the Letefoho Arabica Coffee agribusiness in Timor-Leste consists of fixed and variable costs incurred throughout the process from coffee production to marketing. Fixed costs include the purchase and maintenance of production equipment, such as hoes, machetes, pruning shears, harvest baskets, scales, pulpers, dryers, hullers, roasters, grinders, and packaging equipment. Meanwhile, variable costs include the procurement of seedlings, fertilizer, labor, transportation costs, product packaging, marketing, and distribution costs to consumers or target markets. All of these cost components play a vital role in supporting the smooth operation of the business and maintaining the quality of Letefoho Arabica Coffee so that it can compete in both national and international markets.

CONCLUSION

The agribusiness model for Letefoho Arabica Coffee in Timor-Leste has good potential for development because it is supported by high-quality organic products, adequate resources and production activities, strong customer relationships, and partnerships that support business operations; however, its development still faces several challenges, particularly a customer base limited to the middle and upper classes, marketing channels that remain traditional, and unstable revenue. Therefore, a development strategy is needed that involves diversifying package sizes to make prices more affordable, utilizing digital technology and e-commerce in marketing, strengthening partnerships with cooperatives and exporters, and sustainably managing costs and product quality so that market reach expands, revenue increases, and the competitiveness of Letefoho Timor-Leste Arabica Coffee in both national and international markets grows stronger.

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