

## ANALYSIS OF ARABICA COFFEE COMMODITIES BUSINESS MODELS AND IMPLEMENTATION OF THE GREEN MSME CONCEPT IN BENER MERIAH DISTRICT

Dedy Darmansyah<sup>1</sup>, Hartini<sup>2</sup>, Ina Yuyun<sup>3</sup>, Abdillah Rasyid<sup>4</sup>

<sup>1, 3, 4</sup>

Agribusiness Study Program, Faculty of Agriculture, Universitas Teuku Umar

<sup>2</sup>

Development Economics Study Program, Faculty of Economics and Business, Universitas Teuku Umar

Corresponding E-mail: [dedydarmansyah@utu.ac.id](mailto:dedydarmansyah@utu.ac.id)

### Abstract

In a global era that increasingly emphasizes the issue of climate change and environmental sustainability, Micro, Small and Medium Enterprises (MSMEs) have a crucial role in combining economic growth with environmental preservation. Bener Meriah Regency, as one of the leading Arabica coffee producers in Indonesia, has a golden opportunity to adopt the green MSME model in the coffee business. This business model emphasizes the application of green technology and a circular economy that optimizes the use of resources. This research was conducted in Bener Meriah Regency during the period June to September 2023, using the Business Model Canvas method and the green business concept from Bank Indonesia. The research results show that Arabica coffee MSMEs in Bener Meriah Regency have started implementing a green business model with a focus on various aspects, including production, marketing, human resources, and finance. In addition, the adoption of this business model is reinforced by the principles of green entrepreneurship, where sustainability is a core part of business operations. This gives a positive indication of the potential of MSMEs in Bener Meriah Regency to contribute to creating a more sustainable and environmentally friendly economy.

**Keywords:** *Green MSMEs, Bener Meriah Regency, Arabica Coffee, Environmental Sustainability, Business Model Canvas*

### 1. INTRODUCTION

In facing global challenges related to climate change and environmental sustainability, environmental issues are increasingly becoming the main focus in various sectors, including in the business world. Micro, Small and Medium Enterprises (MSMEs) as a vital component of the regional economy have a significant role in maintaining a balance between economic growth and environmental preservation. To achieve the goal of green MSMEs, MSMEs must be encouraged to use sustainable resources to prevent exploitation of natural resources. Therefore, the use of green technology and the implementation of a circular economy must be encouraged in the process of developing sustainable small and medium enterprises. Sustainable development of MSMEs through a circular economy is achieved by optimizing the use of raw materials, natural resources, Green MSMEs are business groups/business units that consider environmental aspects in their production processes. These MSMEs aim to contribute to climate, environmental and biodiversity protection through their products, services and business activities, (Koirala, 2019). An MSME can be called green or sustainable if it can balance economic, social and ecological indicators or aspects. By developing a green MSME business model, it will not be separated from green entrepreneurship. (Isaak, 2016) defines a green entrepreneur as someone who seeks to transform a sector of the economy towards sustainability by starting a business in that sector with green design, green processes and a long-term commitment to sustainability in everything said and done. Several studies that look at green MSME business models include: (Broccardo & Zicari, 2020) which focuses on the wine business model in Italy. The results of this research show that sustainability can create long-term value through business model innovation, even when there are differences in

performance between family businesses and non-family businesses. However, currently, these green MSMEs have not fully integrated sustainability due to unconfirmed environmental, social and economic aspects.

In this context, Bener Meriah Regency, which is one of the leading coffee commodity producing regions in Indonesia, has the opportunity to apply the green MSME model in the coffee commodity business. Coffee commodity is one of the promising economic sectors for people in this area. This regency is also an Arabica coffee producing area which is already familiar in the world market. Along with the designation of Bener Meriah Regency as a foreign exchange district, in the process of developing a coffee business, one has to be prepared to face market constraints. To overcome market barriers, Arabica coffee businesses need to adopt new technologies, improve quality, and diversify their products to meet changing consumer demands. (Wijaya A. A, Main GL, 2018). Market access for small-scale Arabica coffee farmers can be improved through better organization, joint marketing, and certification schemes that guarantee sustainability and quality. (Takoua G, Mohamed M, 2020). The concept of the Green MSME Business Model was introduced by Bank Indonesia to be applied to business actors, one of which is the coffee business. The implementation of a green MSME business model is important because For International has a tendency to place embargoes on trade in products that are not environmentally friendly, carbon taxes, and lowering credit ratings for companies that are not environmentally friendly. (Model et al., nd). So increasing the scale of micro businesses to small businesses must be based on a green MSME business model which in the future will have an impact on export performance. (Uvarova et al., 2021). Green practices carried out by MSME BI are classified into 3, namely (i) Eco-adopters, (ii) Eco-entrepreneurs, and (iii) Eco-innovators. Green MSMEs are assessed based on various green indicators covering aspects of: (i) production, (ii) marketing, (iii) human resources, and (iii) finance, based on their respective stages.

In practice, there are green indicators that are mandatory and complementary. Economic indicators refer to the economic feasibility of the company. Social indicators are related to the company's responsibility towards the operational environment, employee and community interests, human rights, and social impacts. Meanwhile, environmental indicators refer to a company's impact on natural systems. Environmental indicators can also be measured through the availability of renewable energy resources at business unit locations, the potential for global warming, the potential for solid waste, the density of landfills (Firdaus et al., n.d.). By paying attention to the wants and needs of the market, coffee business actors can improve the quality of the products they produce because the meaning of quality in the definition of strategy is anything that is able to fulfill the wants or needs of customers. (Darmansyah, 2019). So by looking at the current global market challenges, it is necessary to do something about it analyze the application of the green MSMEs model to the coffee commodity business in Bener Meriah Regency by identifying sustainable practices that can be implemented by MSMEs in the coffee commodity value chain.

## 2. IMPLEMENTATION METHOD

### Time and Location

This research was conducted from June 2023 to September 2023 in Bener Meriah District, Aceh Province

### Data collection technique

Respondents in this study were coffee commodity entrepreneurs and the Related Services in Bener Meriah Regency. The method of determining business actor respondents is purposive sampling. For research that uses statistical data analysis the minimum sample size is 30, (Menon, 2018). The number of samples determined was 33 samples where there were 30 MSMEs that would be the sample in this study, while for the sample 3 samples from the Technical Service who would be interviewed.

## Method

In this study using the Business Model Canvas method and Green Business Concept Study from Bank Indonesia. In the process of collecting data using the Business Model Canvas method, semi-structured interviews were conducted. The results of semi-structured interviews with open questions to coffee MSME entrepreneurs in Bener Meriah Regency resulted in a mapping of the business model that was carried out in the form of a Business Model Canvas (BMC). BMC consists of 9 components, namely: 1) Customer Segment, the first stage is where Green Coffee MSMEs must know the customer segmentation of coffee MSMEs, namely anyone who is a customer of the product offered, 2) Value Propositions, components This will analyze the value of the products that have been provided by coffee SMEs to consumers in an effort to attract customers. (Osterwalder & Pigneur, 2010). The green business concept developed by MSMEs is reflected in various indicators that must be met in the aspects of production, marketing, human resources and finance. In the business model, especially with regard to green MSMEs, they must meet production and human resource indicators that emphasize environmentally friendly and sustainable aspects, a circular and digital economy, this will require (Model et al., nd):

1. Key resources that are more environmentally friendly and promote sustainability. These key resources relate to human resources, technology, raw materials, places, facilities and brands needed to deliver green MSME value co-creation.
2. Key activities, various green MSME activities in producing products/commodities that are more environmentally friendly and carry sustainability aspects.
3. Key partners, describes the key partners of green MSME actors in producing products that are environmentally friendly and sustainable.

Financial indicators can be seen in the Revenue Stream and Cost Structure sections where the two sections display receipts, the payment system obtained by coffee MSMEs and how alternative contributions are used to the overall income of coffee MSMEs and what costs are incurred by coffee MSMEs in carrying out activities thus depicting a good and sustainable financial condition.

## 3. RESULTS AND DISCUSSION

### 3.1 Business Model Canvas

Key Partner	Key Activites	Value Proposition	Costumer Relationships	Costumer Segments
<ol style="list-style-type: none"> <li>1. Petani Kopi (Produsen Kopi)</li> <li>2. Koperasi (Jasa Pengangkutan, Dukungan Gudang Penyimpanan Kopi, Proses Jasa Mesin Sutton, Jasa Penjemuran Kopi)</li> </ol>	<ol style="list-style-type: none"> <li>1. Cupping skor cita rasa kopi</li> <li>2. Pengangkutan Kopi Asalan yang di beli dari Petani</li> <li>3. Pengeringan biji Kopi (sampai 13-12%)</li> <li>4. Sutton Biji Kopi</li> <li>5. Sortasi Biji Kopi (Defect 5%)</li> <li>6. Packaging (50 Kg)</li> <li>7. Distribusi Kopi</li> </ol>	<ol style="list-style-type: none"> <li>1. Penjualan Biji Grade 1               <ul style="list-style-type: none"> <li>- Triple Pick</li> <li>- Kualitas Ekspor</li> <li>- Skor Cupping Tersedia</li> </ul> </li> <li>2. Penjualan Biji Kopi Sisa Proses Grade 1               <ul style="list-style-type: none"> <li>- Harga murah</li> </ul> </li> <li>3. Penjualan biji kopi sisa sutton               <ul style="list-style-type: none"> <li>- Harga murah</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Expo/Pameran</li> </ol>	<ol style="list-style-type: none"> <li>1. Perusahaan penampung biji kopi</li> <li>2. Coffee Shop</li> <li>3. Konsumen konsumsi pribadi</li> </ol>
	<b>Key Resources</b> <ol style="list-style-type: none"> <li>1. Tenaga Ahli Kopi (Quality Control, MT/ Penyuluh/Internal Control System)</li> </ol>		<b>Channel</b> <ol style="list-style-type: none"> <li>1. Online (Instagram, WA, FB)</li> <li>2. Penjualan Langsung</li> </ol>	
<b>Cost Structure</b> <ol style="list-style-type: none"> <li>1. Biaya Pembelian Bahan Baku Kopi</li> <li>2. Biaya Cupping</li> <li>3. Biaya Pengangkutan Kopi dari Petani</li> <li>4. Biaya Penjemuran kopi (15% dijemur hingga 12.5%)</li> <li>5. Biaya Sortasi Biji Kopi (15% disortasi hingga 5%)</li> <li>6. Biaya Packing</li> <li>7. Beli Karung dan Plastik kemasan bagian dalam</li> </ol>			<b>Revenue Streams</b> <ol style="list-style-type: none"> <li>1. Penjualan Biji Kopi Grade 1</li> <li>2. Penjualan Biji Sortasi</li> <li>3. Penjualan Biji Sutton</li> </ol>	

Table. 1 Canvas Business Models

1. Value Propositions  
Arabica Coffee Business Actors in Bener Meriah Regency sell Grade 1 Arabica Coffee Beans with the value offered, namely Triple Pick, Export Quality and Availability of Cupping Score. While the next product is Grade 1 Processed Leftover Coffee Beans at a low price and the water content is already 12.5%. The next product is the sale of leftover coffee beans at low prices.
2. Customer Segments  
Coffee bean storage companies, coffee shops and personal consumption consumers are the target consumers of Arabica coffee businesses in Bener Meriah district.
3. Channels  
The Cahanel or channels used consist of online (Instagram, WA, FB) and direct sales.
4. Customer Relationships  
Arabica coffee business actors build relationships with customers through expo/exhibition activities. Through these activities, business actors educate consumers and provide coffee product demonstrations.
5. Revenue Streams  
The products sold are Grade 1 Coffee Beans, Sorted Beans and Sutton Beans as a source of business income. Sales priority is Grade 1, but each of these products has a different market segment and contribution to the Arabica coffee business.
6. Key Resources  
Arabica coffee business actors have coffee experts who are either certified or experienced. So this makes a distinct advantage that can be provided in addition to superior coffee quality in protecting consumers and potential for business development.
7. Key Activities  
Arabica coffee business actors have important activities in carrying out coffee processing including: Cupping coffee taste scores, Transportation of Random Coffee purchased from Farmers, Drying Coffee beans (up to 13-12%), Sutton Coffee Beans, Sorting Coffee Beans (Defect 5) %), Packaging (50 Kg) Delivery of coffee to target consumers.
8. Key Parnerts  
The partners in the coffee business include Coffee Farmers (Coffee Producers) and Cooperatives which help provide transportation services, storage warehouses, sewing machine services, coffee drying services)
9. Cost Structure  
Some of the important costs include; Costs for purchasing coffee raw materials, costs for cupping coffee flavors, costs for transporting coffee from farmers, costs for drying coffee (15% to dry in the sun up to 12.5%), costs for sorting coffee beans (15% for sorting up to 5%) and packing costs for purchasing sacks, plastic packaging the inside part.

### 3.2 Green MSMEs concept

This concept can be seen from the results of interviews and mapping of business models that meet the aspects of production, marketing, human resources and finance in the Green MSMEs concept. The following is the description in 5 sections of the BMC:

1. *Key Resources*  
In the Key Resources section, it can be seen that the human resources possessed by Arabica coffee business actors have areas of expertise.
2. *key activities,*  
From activity Coffee Transportation, Coffee Bean Drying, Sutton, Sorting, Packaging it is still categorized as environmentally friendly and carries sustainability aspects.
3. *key partners,*  
The use of technology is still dependent on partners, one of which is cooperatives because some coffee production equipment has high prices so it will be more efficient to use

partners in operations. raw materials, places, facilities, and brands needed to deliver green MSME value co-creation. In this case partners play a very important role in helping to produce environmentally friendly products indirectly in a centralized and controlled manner.

4. *Revenue Streams*

In this case, business actors have three types of products with different segments. These three products have different contributions as operating income so that the income generated from the three products helps the Arabica coffee business economy to run sustainably.

5. *Cost Structure*

The costs incurred are still in a relevant condition which does not interfere with the financial condition of a business so that it can be sustainable.

## 4. CONCLUSION

1. Arabica coffee businesses in Bener Meriah Regency offer a variety of coffee bean products with certain characteristics and qualities, such as Triple Pick and Export Quality. They target various consumer segments ranging from coffee bean storage companies, coffee shops, to private consumers. In running their business, they take advantage of technology by marketing through online channels as well as direct sales. Customer relationships are strengthened through expo or exhibition activities, which not only increase sales but also educate consumers about the coffee products they offer.
2. The main source of this business actor is coffee experts who are both certified and experienced, which gives them a competitive advantage in this business. The main activities carried out by business actors cover processes from start to finish, such as transportation, drying, to packaging of coffee. The existence of partnerships with coffee farmers and cooperatives provides support in various aspects, including the provision of services and production facilities.
3. In addition, from the perspective of the Green MSMEs concept, from a financial perspective there are several sources of income derived from the various types of coffee products offered. The costs incurred for operations and production are still relevant and do not disrupt the financial stability of the business. These business actors either directly or indirectly put forward the principles of sustainability and environmental friendliness. This can be seen from their environmentally friendly activities, as well as cooperation with partners who support environmentally friendly production. This shows that the Arabica coffee business in Bener Meriah Regency does not only focus on economic benefits, but also contributes to environmental sustainability.
4. This journal is entirely the result of BIMA research funding for the Ministry of Education and Culture Research and Technology in the national competitive research category in the research scheme for beginner lecturers in the basic research strata of the 2023 Fiscal Year.

## REFERENCES

- Broccardo, L., & Zicari, A. (2020). Sustainability as a driver for value creation: A business model analysis of small and medium enterprises in the Italian wine sector. *Journal of Cleaner Production*, 259, 120852.
- Darmansyah, D. (2019). Consumer indicators in choosing a coffee shop (case study: aceh province coffee shop consumers). *Journal of Farming Business*, 5(2), 76–84.
- Firdaus, M., Hartono, A., Wijayanti, P., Dewi, FR, Setyawati, D., Nugraheni, SRW, Tampubolon, BI, Hidayanti, SRU, & Meliany, BS (nd). Study of Green MSME Development Business Models.
- Isaak, R. (2016). Ecopreneurship, rent-seeking, and free-riding in global context: Job-creation without ecocide. *Small Enterprise Research*, 23(1), 85–93.
- Koirala, S. (2019). SMEs: Key drivers of green and inclusive growth.
- Menon, V. (2018). Determining sample size. *Journal of Cutaneous and Aesthetic Surgery*.
- Models, K., Development, B., & Green, U. (nd). Green MSME Development Business Model Study.
- Osterwalder, A., & Pigneur, Y. (2010). Business model generation: a handbook for visionaries, game changers, and challengers (Vol. 1). John Wiley & Sons.
- Takoua G, Mohamed M, SH (2020). N. Enhancing market access for small-scale Arabica coffee farmers through better organization, collective marketing, and certification schemes ensuring sustainability and qualityo Title. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 235–247.
- Uvarova, I., Mavlutova, I., & Atstaja, D. (2021). Development of the green entrepreneurial mindset through modern entrepreneurship education. *IOP Conference Series: Earth and Environmental Science*, 628(1). <https://doi.org/10.1088/1755-1315/628/1/012034>
- Wijaya A.A, Main GL, SA. (2018). Enhancing Competitiveness of Arabica Coffee in Indonesia through Agro-technology Innovation. *IOP Conference Series: Earth and Environmental Science*, 1(Enhancing Competitiveness of Arabica Coffee in Indonesia through Agro-technology Innovation), 125.