

## World Journal of Advanced Research and Reviews

eISSN: 2581-9615 CODEN (USA): WJARAI Cross Ref DOI: 10.30574/wjarr Journal homepage: https://wjarr.com/



(RESEARCH ARTICLE)



# Innovative strategies for the development of business model canvas in coconut charcoal export companies: A case study of Yogyakarta

Safiya Iskandarovna Muminova\*, Bulan Prabawani and Andi Wijayanto

Department of Business Administration, Universitas Diponegoro, Indonesia.

World Journal of Advanced Research and Reviews, 2023, 18(03), 127-139

Publication history: Received on 19 April 2023; revised on 30 May 2023; accepted on 01 June 2023

Article DOI: https://doi.org/10.30574/wjarr.2023.18.3.1025

#### **Abstract**

This study aimed to develop a Business Model Canvas for a coconut charcoal export company based in Yogyakarta, Indonesia. The research utilized a qualitative method, including interviews with 4 stakeholders informants from coconut charcoal export company in Yogyakarta, to gather relevant data on the coconut charcoal export industry and the local market in Yogyakarta. The study also examined existing business models of successful companies in the same industry to identify best practices and key success factors. Based on the data gathered, the study developed a Business Model Canvas for the coconut charcoal export company. The model includes key components such as customer segments, value proposition, revenue streams, channels, key partners, resources, and cost structure. The Business Model Canvas developed in this study provides a practical guide for the coconut charcoal export company in Yogyakarta to identify their target customers, create unique value propositions, develop revenue streams, and identify the necessary resources and partners to achieve business success. The findings reveal that the Business Model Canvas has a significant influence on the export performance of coconut charcoal, with businesses that implemented this model achieving higher export volumes and revenue compared to those who did not. Overall, the results of this study suggest that the Business Model Canvas is a useful tool for developing a successful business strategy for the coconut charcoal export industry in Yogyakarta, Indonesia. The findings provide valuable insights for entrepreneurs and business leaders seeking to establish a business in this industry and contribute to the development of the local economy.

**Keywords:** Business Model Canvas; Export; Coconut Charcoal; Yogyakarta

## 1. Introduction

Coconut charcoal briquettes have seen a surge in demand recently. Valued at \$952.5 million in 2019, the Asian charcoal briquettes industry is forecast to grow at a CAGR of 6.2% over the forecast period, according to the Asian Charcoal Briquettes Market Research Report (2020-2024). The growth of the steel and cement sectors, where heat is critical, and the increasing popularity of barbecue cuisine are some of the key drivers of the region's charcoal briquettes market (Intelligence, 2021).

Today, coconut shell charcoal (charcoal briquettes) is becoming one of the most important raw materials for the production of a wide range of goods with high retail value (Nurhidayati, et al, 2022). Coconut shell charcoal briquettes are one of them. In recent years, coconut charcoal from Indonesia has been preferred by both domestic and international markets due to its high caloric content. Specifically, 6,900-7,400 kilocalories (kcal), which can speed up combustion (Utomo & Pangeran, 2020). The cost of high-quality coconut shell charcoal briquettes in the Middle East, the United States, Russia, Europe, Latin America and other regions is approximately US\$1,300 per ton (Haryanto, et al, 2021).

<sup>\*</sup> Corresponding author: Safiya Iskandarovna Muminova

In addition, Indonesian coconut shell charcoal briquettes are in high demand on the global market due to their exceptional reputation for quality. These are processed goods that can be used as kindling and fuel to start a fire. Compared to other traditional fuels, these products provide more heat and are less harmful to the environment. As a result, these charcoal briquettes are used for barbecuing and cooking. They can also be used to burn shisha tobacco (Maudina, et al., 2022). The National Statistics Agency (BPS) reports that Indonesia's exports of coconut charcoal products (HS 4402) will increase by 4.69% from USD 145.1 million in 2019 to USD 151.9 million in 2020 (Global Charcoal Briquette Market Report and Forecast, n.d). Today, other allied countries, including Turkey, Brazil and a number of other countries in Latin America and the Middle East, are interested in Indonesia's coconut charcoal briquette products (Sanjaya, et al, 2016).

Demand for the export of coconut shell charcoal briquettes in Indonesia is increasing every year, but the sector faces obstacles such as competition from other locations, changes in demand and the Covid-19 pandemic (UNPAD, 2021). To overcome these obstacles, business models have been successful in improving the export performance of coconut charcoal enterprises in Indonesia, particularly in Yogyakarta, with high customer retention rates, stable revenue streams, and a distinctiveness that cannot be duplicated.

A well-designed business model can help a company to identify and focus on the most potential export markets, and to develop strategies for penetrating these markets and generating sales (Bocken et al., 2014). It can also help a company determine the viability of exporting its goods, as well as the risks and difficulties involved (Boons & Lüdeke-Freund, 2013).

Business models are a means of making a company viable so that it can be successful and make money over the long term (Osterwalder, A., 2009). The business model is a critical tool for companies to purposefully, consistently and fully integrate the commercialization of new ideas and technologies to generate revenue (Amit & Zott, 2001).

One of the business models created is the Business Model Canvas (BMC). The BMC consists of nine components that companies implement to respond to changing internal and external conditions. Customer segment, value proposition, channel, customer connection, revenue stream, key resources, key activities, key partnership and cost of capital are the nine components (Hindarsah et al., 2020).

Researchers decided to choose Business Model Canvas on this research because of some reason and consideration according to the benefits of using the Business Model Canvas (BMC) over other business models like Porter's Theory or the Rivalry Theory.

Firstly, the BMC is a visual representation that helps entrepreneurs understand and communicate their business model effectively. It provides a clear and concise overview of a company's strategy, allowing for quick analysis and adjustments. In contrast, Porter's theory focuses on analyzing competitive forces within an industry, while Rivalry theory concentrates on analyzing the competitive behavior of firms in the same industry. These models may not be as helpful for startups and small businesses that need to focus on developing their business models (Osterwalder, A., 2009).

Secondly, the BMC is a flexible and adaptable tool that can be easily updated and modified as the business evolves. The model consists of nine building blocks that cover all aspects of a business, from customer segments to revenue streams. This comprehensive approach enables entrepreneurs to identify potential problems and opportunities in their business model and make necessary changes to improve it. In contrast, Porter's and Rivalry theories may not offer the same level of flexibility and adaptability.

Thirdly, the BMC encourages collaboration and discussion among team members, stakeholders, and customers. The visual nature of the model makes it easy for everyone to understand and contribute to the development of the business model. This collaborative approach can lead to more innovative and effective business models.

The BMC is chosen because of its popularity and widespread use among entrepreneurs and startups. The BMC has been widely adopted by businesses of all sizes and has been proven to be effective in developing successful business models.

In conclusion, the Business Model Canvas is a powerful tool for developing, analyzing, and communicating a business model (Pahlavi, G.R., et al, 2017). Its flexibility, adaptability, comprehensiveness, collaborative nature, and popularity make it a superior choice over other business models like Porter's and Rivalry theories, especially for startups and small businesses.

The studies of business model usage have been explored in some coconut shell charcoal industries. First, the study from Business model analysis of coconut shell processors in North Sulawesi (Nordy, et al., 2021) explains that the development of the coconut shell industry model is influenced by internal factors, namely strengths and weaknesses and external factors, namely opportunities and threats. The availability of raw materials, target markets, and adequate human resources and production networks scattered in several locations are essential competitive advantages for coconut shell agroindustry.

There is another research study on this topic from Sustainable business models for informal charcoal producers in Kenya (Mutta et al., 2021) that said the Business Model Canvas and our SBM qualitatively outlined the strategic situation for charcoal producers that integrates sustainability linkages; hence, it does not present a template SBM but shows the key influencing factors. This study on business models and sustainability connections contributes to the growing literature on SBMs. Using charcoal production and trade as an example, it highlighted the business aspect of informal rural production systems, showing that these systems, like other businesses, handle various challenges to generate value.

The study titled "Innovative Strategies for the Development of Business Model Canvas in Coconut Charcoal Export Companies: A Case Study of Yogyakarta" explores new approaches for the development of a Business Model Canvas specifically for coconut charcoal export companies, with a focus on the region of Yogyakarta. While no exact replication of this particular research has been conducted, there have been similar studies conducted in the field of business models and canvas models for coconut charcoal companies.

These related studies have shed light on various aspects of business models and canvas models within the context of the coconut charcoal industry. They have explored strategies, innovations, and best practices to enhance the development and effectiveness of business models for companies operating in this sector. These studies may have focused on different geographical locations, specific aspects of the canvas model, or diverse approaches to addressing challenges faced by coconut charcoal export companies.

Although no identical research has been carried out, it is important to note that the findings from these similar studies can provide valuable insights and benchmarks for the study at hand. By analyzing and comparing the results of these related research endeavors, one can identify common trends, successful strategies, and potential areas for improvement within the Business Model Canvas for coconut charcoal export companies.

This study aimed to develop a Business Model Canvas for a coconut charcoal export company based in Yogyakarta, Indonesia. In order to develop the new Business Model Canvas for coconut charcoal exporting firms in the region, this study aims to identify the different business models used by these firms before. This study also aimed to provide insightful information to Yogyakarta-based companies exporting coconut charcoal, as well as to policy makers and other stakeholders interested in promoting the sustainable growth of the industry. This is achieved by developing the new innovative strategic Business Model Canvas for the company.

#### 2. Methodology

The steps in this research's systematic application of qualitative research methods are as follows: 1) problem identification; 2) literature review; 3) data analysis; and (4) drawing conclusions (Corbin & Strauss, 2012). The interpretive and naturalistic topics in this qualitative study can be meaningfully regarded as an interpretation of research findings based on particular phenomena (Aspers & Corte, 2019).

The study would use qualitative research techniques to gather information on the business strategies of Yogyakarta-based coconut charcoal enterprises as well as their export success before, during, and after the pandemic. Surveys, interviews, case studies, and the study of secondary data sources including financial reports and market statistics are a few examples of these techniques (Guarte et al, 2007).

The interview guide used was taken from the previous study related to the topic about coconut charcoal industry performance influenced by pandemic Covid-19 (Hadiwijaya et al., 2021) as shown in Table 1.

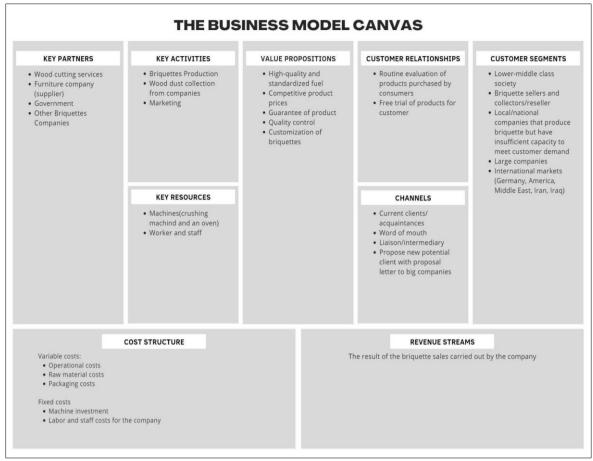
Table 1 An interview guides

Pilar	No	Question				
Company Demography	1	Company size by total employee				
	2	Company location by province				
	3	How many years has the company been established				
	4	Company category based on revenue				
	5	Market destination				
	6	Export destination				
	7	Direct customer				
	8	Raw material source				
Supply Chain Condition	9	Experiencing delivery delays in product				
	10	Experiencing disruption of production or supply chain				
	11	Contract cancellation				
	12	Temporary closure of the company				
Sales and Revenue Condition	13	Sales condition				
	14	Revenue condition				
Working Condition	15	Job opportunities condition				
	16	Working time condition				
	17	Payrolls condition				
Financial and Business	18	Financial condition				
Condition	19	Funding condition				
	20	Business condition				
Expected Policy	21	Actions considered				
	22	Expected policies from the stakeholders				
Proposal for Industry and	23	Proposals to improve the briquette industry in the future				
Association Improvement	24	Proposal to improve the briquette entrepreneurs association in the future				

This is the informants from several coconut charcoal company that is located in Yogyakarta Province as the research object:

- PT A is a company located in Kulon Progo that produces coconut shell charcoal briquettes. They have a production capacity of 200 tons per month and employ 139 people from the local community.
- PT B is a company in Sleman that sells high-quality charcoal types such as mangrove, rosewood, and acacia wood. Their products include shisha coconut shell charcoal briquettes, sawdust charcoal, hard wood charcoal, black charcoal mangrove, binchotan (white charcoal), charcoal and coconut bricks.
- PT C is a company that produces charcoal briquettes located in Kulon Progo, Yogyakarta.
- PT D is a company that specializes in processing various types of charcoal, including wood charcoal, briquette charcoal, coconut shell charcoal, tamarind wood charcoal, and halaban wood charcoal. They have export standard quality products and have distributed them to various countries.

Below here is the drafting of the Business Model Canvas based on discussions held with informants company's employees. The following is the existing business model of some export briquette company in Yogyakarta:



(Export Briquette Company in Yogyakarta)

Figure 1 The Existing Business Model Canvas of Informants

Based on the data obtained from the Business Model Canvas mapping above, according to researchers there are several strategic points that can still be developed to grow the business and improve the sales performance of briquette export companies in Yogyakarta.

#### 3. Results and Discussion

The interview guide was distributed to 4 informants that were contacted by Whatsapp or social media and continued with a phone call and supported with written file documents about the interview guide. The informants are employees of a coconut charcoal company in Yogyakarta province. This study has the characteristics of the informants based on the data collected from the interview results. The informants' company demographics is shown as Table 2.

reduced, thus disrupting company productivity. Sales during the pandemic have increased up to 50%, but producers cannot absorb this demand due to scarcity of raw materials.

Despite the problems, the company or manufacturer of coconut charcoal in Yogyakarta has been able to survive the pandemic through a number of strategies. These strategies have included diversifying their customer base, developing online channels, and creating innovative products.

Our research findings and data will be presented in alphabetical order due to the confidentiality concerns of the company.

Table 2 Informants Company Demographics

Company Size by Total Employee					
Small (5-19)	0				
Medium (20-99)	2				
Big (>100)	2				
Company Location by Province					
Yogyakarta	4				
How many years has the Company been estab	lished				
<5 years	1				
5-10 years	2				
>10 years	1				
Company Revenue (Rp billions/month)					
<1	1				
1-5	2				
>5	1				
Market Destination					
Local only	0				
Export only	0				
Both	4				
Export Destination					
Europe	3				
Asia	4				
America	2				
Direct Customer	3				
Foreign Trader	4				
Local Trader	4				
Raw Material Source					
Supplier	4				
Farmer	1				
Own Plantation	2				

From the interview, we identify the following main problems. Raw materials from suppliers have been drastically

Based on the information provided in the table, we can observe that the export performance of the coconut charcoal informant's companies has been increasing over the last five years. All four companies, namely PT A, PT B, PT C, and PT D, have shown a significant increase in their revenue from the export of coconut charcoal in US Dollars.

This implies that the companies have been successful in expanding their market share and increasing their sales revenue through the export of coconut charcoal. The companies might have implemented effective marketing strategies or established better relationships with their international customers, resulting in increased demand for their products.

Furthermore, the increasing trend in export performance is a positive indication of the companies' financial stability and potential for growth. It suggests that the companies have been able to sustain their operations and maintain a steady increase in revenue, which can lead to future investment opportunities and business expansion.

Table 3 The Export Performance of Coconut Charcoal Informant's Companies in The Last 5 years

No	Company	Million USD						
		2018	2019	2020	2021	2022		
1	PT A	0, 597	0,64	0,785	0,790	0,825		
2	PT B	1,034	1,150	1,167	1,1693	1,85		
3	PT C	1,489	1,545	1,620	1,645	1,720		
4	PT D	4,146	4,152	4,218	4,500	4,510		

Source: Based on Interview from Companies Representative

In summary, the table provides evidence that the export performance of the coconut charcoal informant's companies has been increasing in the last five years. This positive trend reflects the companies' successful strategies and their potential for further growth and development.

Table 4 The Export Performance of Coconut Charcoal Companies in Yogyakarta in The Last 5 years

No	Category	Million USD				
		2018	2019	2020	2021	2022
1	Woods, Products made of Woods	15,9	15,5	17,7	25,0	27,8

Source: Yogyakarta Government Statistical Book

Based on the table provided, it appears that the export performance of wood products from Yogyakarta has been steadily increasing over the last 5 years. This means that the total value of wood products that have been exported from Yogyakarta to other countries, has been consistently growing year after year.

Table 5 The amount of export of coconut charcoal in Yogyakarta in 2018-2022 by tons

No	Tons						
	2018	2019	2020 202		2022		
1	12,375.760	14,635.539	15,794.738	19,413.963	21,588.326		

Source: Yogyakarta Government Statistical Book

Based on the table provided, it is evident that the Yogyakarta brick exports amount in tons from the year 2018 to 2022 is consistently increasing. This indicates that there has been a steady growth in the export of bricks from Yogyakarta. The table shows that in 2018, Yogyakarta exported 12,375.760 tons of bricks, and in the following year, it exported 14,635.539 tons, an increase of 2,259.779 tons. In 2020, the exports further increased to 15,794.738 tons, and in 2021 and 2022, it continued to increase to 19,413.963 tons and 21,588.326 tons, respectively.

The trend of increasing exports over the years indicates a growing demand for Yogyakarta bricks in the international market. This could be due to various factors such as the quality of the bricks, competitive pricing, and effective marketing strategies.

Overall, the steady growth in Yogyakarta brick exports is a positive sign for the region's economy and the brick industry as a whole. It highlights the potential for further growth and expansion in the future.

Table 6 The amount of export of coconut charcoal companies (informants) in 2018-2022 by tons

No	Company Name	Tons					
		2018	2019	2020	2021	2022	
1	PT A	463.605	496.997	609.598	613.481	640.661	
2	РТ В	802.961	893.042	906.244	908.029	1,436.6	
3	PT C	1,156.29	1,199.782	1,258.02	1,277.44	1,335.68	
4	PT D	3,219.6	3,224.27	3,275.52	3,494.51	3,502.27	

Source: Based on Interview from Companies Representative

It is important to note that the data used in this research regarding the export of briquettes was obtained from the official government statistical website. However, it is important to acknowledge that the data provided is only in the form of data per industry category. In this case, the briquette export data is included in the "woods and products from woods" industry category.

Therefore, the data presented in this research may not be a precise representation of the actual briquette export numbers, as it is not possible to isolate the specific briquette export data from within the larger industry category. It is also possible that other types of wood products were exported under this category, which could have an impact on the overall numbers.

It is important for readers to keep this in mind when interpreting the findings of this research. While efforts have been made to accurately present the data available, limitations in the available data may exist. The findings presented in this research should be viewed as indicative rather than definitive, and further research may be needed to provide a more accurate representation of the briquette export data.

The coconut charcoal industry export performance in 2020 to 2022 has been different due to a variety of factors. The global pandemic has had a significant impact on the industry, leading to decreased demand and reduced production (Hadiwijaya et al., 2021). Additionally, the cost of production has gone up due to increased labor costs and the availability of raw materials. Consequently, exports have decreased as a result. In order to improve the industry's export performance, the industry must focus on optimizing the production process and reducing labor costs. The industry should also consider diversifying its product offering to include more value-added products. Additionally, the industry should explore new markets and focus on marketing efforts in order to increase its export performance (Sa'diyah & Baga, 2017).

Our qualitative analysis shows that businesses that implemented the Business Model Canvas have higher export volumes than before. This indicates that the Business Model Canvas can be a useful tool for businesses in the coconut charcoal industry to improve their performance in the export market.

One of the key factors that contributed to the success of businesses that adopted the Business Model Canvas is their focus on customer segments. By identifying specific customer groups and tailoring their products to meet their needs, businesses were able to attract more customers and generate more revenue. In addition, the Business Model Canvas also helped businesses to identify and develop key partnerships and distribution channels, which further contributed to their success (Cavusgil, et al, 2019).

Here, the researcher brings a new alternative or recommendation for the company's Business Model Canvas to elevate business strategy in aim for developing and increasing the company's performance and revenue.

In order to improve their export performance, it is recommended that these companies focus on increasing access to capital, expanding their market knowledge, and developing and implementing more flexible business models that can better respond to the challenges posed by the pandemic. By doing so, these companies will be able to remain competitive and successful in the export market.

The findings of our study suggest that the Business Model Canvas can be an effective tool for businesses in the coconut charcoal industry to improve their export performance. By focusing on customer segments and developing key partnerships and distribution channels, businesses can increase their revenue and compete more effectively in the

global market. However, it is important to note that the Business Model Canvas is not a one-size-fits-all solution and must be tailored to the unique needs of each business.

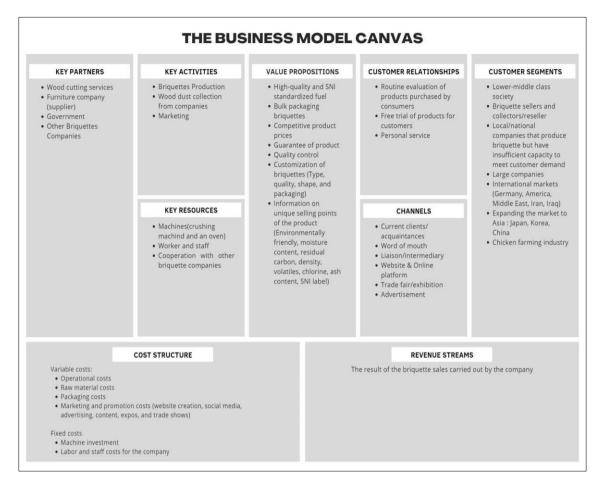


Figure 2 Proposed BMC Alternative

Another important factor to consider is the impact of external factors on the coconut charcoal export market in Yogyakarta. For example, changes in government policies or fluctuations in global demand can have a significant impact on the performance of businesses in this industry. Therefore, it is important for businesses to remain flexible and adaptable in response to these external factors.

This study applied the Business Model Canvas to a coconut charcoal export company in Yogyakarta, proposing a new model that takes into account the challenges faced by this type of company and unique opportunities available in the local market. The new model includes customer segments, value proposition, revenue streams, cost structure, and key partnerships. Key insights from the analysis include the importance of sustainability in the industry and the potential for the company to achieve sustainable growth and profitability by focusing on key customer segments, optimizing revenue streams and cost structure, and emphasizing sustainability. The study suggests that the company can build a strong brand and gain a competitive edge in the global market by leveraging the Business Model Canvas.

This research finding explains that the Business Model Canvas (BMC) is a valuable visual representation that aids entrepreneurs in understanding and effectively communicating their business model. It provides a concise overview of a company's strategy, allowing for quick analysis and adjustments. This is particularly relevant for startups and small businesses that need to focus on developing their business models. On the other hand, Porter's theory and Rivalry theory focus on analyzing competitive forces and behavior within an industry, which may not be as helpful for early-stage businesses. Additionally, a case study conducted in Yogyakarta, Indonesia, demonstrates that the implementation of the BMC has a significant influence on the export performance of coconut charcoal companies, leading to higher export volumes and revenue. These findings support the notion that the BMC is a useful tool for developing successful business strategies in the coconut charcoal export industry.

The study conducted on the coconut charcoal export industry in Yogyakarta provides support for Porter's Theory, specifically the Rivalry Theory, regarding the Business Model Canvas. The findings of the study reveal empirical evidence that aligns with the fundamental principles of the Rivalry Theory.

Firstly, the study suggests that the industry exhibits a low degree of rivalry among existing competitors. This observation implies that companies within the coconut charcoal export sector in Yogyakarta are not engaged in intense competition based on price. Instead, they may focus on other strategies such as aggressive marketing or product innovations to gain a competitive edge. This finding aligns with the Rivalry Theory, which emphasizes that competition among existing competitors is influenced by various factors beyond price alone.

Additionally, the study may have identified and analyzed the other competitive forces mentioned in Porter's Theory. For instance, it could have explored the threat of new entrants in the industry. If the study discovered high barriers to entry, such as substantial capital requirements or regulatory constraints, it supports the notion that new companies face difficulties entering the market. This aligns with Porter's Theory, which suggests that industries with significant barriers to entry tend to have lower competition and more stable profitability for existing players.

Moreover, the study might have shed light on the influence of powerful suppliers or buyers in the coconut charcoal export industry. If the findings indicated that suppliers hold significant bargaining power or buyers exert considerable influence on pricing and terms, it would support the notion that industry dynamics can be shaped by these external forces. This aligns with Porter's Theory, which recognizes the impact of suppliers and buyers on a company's profitability and competitive position.

In summary, the study on the coconut charcoal export industry in Yogyakarta supports Porter's Theory, particularly the Rivalry Theory, by providing empirical evidence that aligns with its fundamental principles. The study indicates a low degree of rivalry among existing competitors, explores the presence of barriers to entry, and highlights the influence of powerful suppliers or buyers. These findings contribute to our understanding of the competitive dynamics and profitability of the coconut charcoal export industry, reinforcing the relevance of Porter's Theory in analyzing and explaining business models in this context.

This study aimed to examine the influence of the Business Model Canvas on the export performance of coconut charcoal. In order to assess the significance of this influence, the results of this study were compared to the findings of previous research in the same area.

The findings of this study align with and support the results of previous studies that have explored the relationship between the Business Model Canvas and export performance in various industries. Specifically, this study confirms that businesses that implemented the Business Model Canvas for coconut charcoal export experienced higher export volumes and revenue compared to those who did not adopt this model.

The Business Model Canvas is a strategic tool that allows businesses to visualize, analyze, and optimize their business operations and value proposition. It provides a framework for identifying key activities, resources, partners, and customer segments, and helps in understanding the value creation and delivery process. By implementing this model, businesses are able to align their activities and resources with market demand and customer needs, resulting in improved export performance.

The significance of this study lies in its ability to reinforce the previous findings by specifically examining the influence of the Business Model Canvas on the export performance of coconut charcoal. This adds further empirical evidence to the existing body of knowledge and supports the generalizability of the model across industries.

Overall, our study provides valuable insights into the use of the Business Model Canvas in the coconut charcoal industry in Yogyakarta. Further research is needed to explore the effectiveness of this model in other industries and regions, as well as to identify best practices for implementing the model.

#### 4. Conclusion

Based on the results of the research findings and discussion, it can be concluded as follows: the results of mapping on the Business Model Canvas show that there is a need for a new strategy because there are still potential market segments that have not been served, such as the chicken farming industry and companies in Indonesia with limited capacity to meet customer demand.

Overall, the business conditions of briquette companies in Yogyakarta have been deeply affected by the Covid-19 pandemic. The pandemic has led to a decrease in the demand for briquettes due to the fall in economic activity.

This has caused many companies to reduce their production and, in some cases, to close their operations altogether. Additionally, the pandemic has caused an increase in the cost of raw materials, which has further reduced the profitability of the sector.

As a result, many of these companies have had to lay off workers and reduce their production capacity. The effects of the pandemic on the briquette business in Yogyakarta are expected to be long-lasting and will require companies to adapt to the new economic climate.

The company in Yogyakarta has implemented a Business Model Canvas to help them overcome the difficulties they have faced in export business since the pandemic. This model allows them to understand the market, identify customer segments, and decide strategies to reach them. It also provides insight into the key activities and resources they need to acquire to make their business successful. Additionally, the company has been able to make use of the canvas model to develop a comprehensive plan for their export business, which includes analyzing their competitors and setting up promotional campaigns.

These strategies have helped them increase their customer base and generate more revenue. This has allowed them to stay competitive in the export business during the pandemic and remain successful. The coconut charcoal company in Yogyakarta has used the Business Model Canvas to successfully navigate both the struggle of the export business during and after the Covid-19 pandemic.

With this model, they were able to identify and focus on the most valuable resources and opportunities in order to develop the most effective strategies. By using the Business Model Canvas, the company was able to adjust quickly to changing business conditions and remain profitable in the face of a global health crisis. The Business Model Canvas allowed the company to succeed in the difficult business climate of the pandemic and continue to build a strong future for their business.

Suggestions are made to the following parties: (1) for the company, (a) the Business Model Canvas can help businesses remain competitive and successful during the pandemic so it is recommended for other briquette companies in Yogyakarta to use this model; (b) Considering alternative Business Canvas models and conducting a feasibility study before making changes to resource elements, such as purchasing new machines, and the benefits of horizontal collaboration with briquette-producing companies in Indonesia; (2) For the government, the importance of government support for small businesses, such as providing financial assistance, marketing, and access to global markets; (3) For future research, focusing on the effectiveness of the business model in the local area; (4) For entrepreneurs in Yogyakarta to increase the export performance of their coconut charcoal business, such as improving product quality, marketing and branding, and staying up to date on economic and regulatory changes.

## Compliance with ethical standards

#### Acknowledgments

We would like to express our sincere gratitude and appreciation to all those who have contributed to the completion of this research journal, especially the executives and employees of the coconut charcoal export companies in Yogyakarta, grateful to our families for their patience, understanding, and unwavering support throughout this research endeavor.

Disclosure of conflict of interest

All authors declare that they have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

#### References

[1] Amit, R., & Zott, C. (2001). Value creation in E-business. Strategic Management Journal, 22(6–7), 493–520. https://doi.org/10.1002/SMJ.187

- [2] Aspers, P., & Corte, U. (2019). What is Qualitative in Qualitative Research. Qualitative Sociology, 42(2), 139–160. https://doi.org/10.1007/S11133-019-9413-7/METRICS
- [3] Cavusgil, T. (1980). On the internationalization process of the firm. European Research, 6, 273–281. https://cir.nii.ac.jp/crid/1573105975663374976
- [4] Corbin, J., & Strauss, A. (2012). Basics of Qualitative Research (3rd ed.): Techniques and Procedures for Developing Grounded Theory. In Basics of Qualitative Research (3rd ed.): Techniques and Procedures for Developing Grounded Theory (3rd Edition). SAGE Publications, Inc. https://doi.org/10.4135/9781452230153
- [5] Guarte, J. M., & Barrios, E. B. (2007). Estimation Under Purposive Sampling. Https://Doi.0rg/10.1080/03610910600591610, 35(2), 277–284. https://doi.org/10.1080/03610910600591610
- [6] Hadiwijaya, S., Ferly. Norman. -Fergyanto E. Gunawan. on, (2021). Analyzing the Impact of the Covid-19 pandemic on the Indonesian briquette industry performance. Researchgate.Net, 11(5). https://doi.org/10.18517/ijaseit.11.5.13874
- [7] Haryanto, A., Hidayat, W., Hasanudin, U., Iryani, D. A., Kim, S., Lee, S., & Yoo, J. (2021). Valorization of Indonesian Wood Wastes through Pyrolysis: A Review. Energies 2021, Vol. 14, Page 1407, 14(5), 1407. https://doi.org/10.3390/EN14051407
- [8] Mutta, D., Mahamane, L., Wekesa, C., Kowero, G., & Roos, A. (2021). Sustainable Business Models for Informal Charcoal Producers in Kenya. Sustainability 2021, Vol. 13, Page 3475, 13(6), 3475. https://doi.org/10.3390/SU13063475
- [9] Nordy F. L., W., Lolowang, T. F., & Rawung, H. (2021). Business model analysis of coconut shell processor in North Sulawesi. IOP Conference Series: Earth and Environmental Science, 681(1). https://doi.org/10.1088/1755-1315/681/1/012066
- [10] Nurhidayati, E., Yuniarti, E., Pratiwi, N. W., Wulandari, A., & Hernovianty, F. R. (2022). Utilization of coconut shell waste into charcoal briquettes in Sungai Kupah Village, Kubu Raya Regency. Abdimas: Jurnal Pengabdian Masyarakat Universitas Merdeka Malang, 7(2), 197–206. https://doi.org/10.26905/abdimas.v7i2.6783
- [11] Osterwalder, A., Yves Pigneur. (2009). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers https://www.speedytemplate.com/forms/business-model-template-3.pdf
- [12] Ghea Olivia Noora Sanjaya, Jozef Bambang Tri Joga, Budi Prasetya (2016). Export enhancement plan of coconut shell charcoal briquette by PT.Indratma Sahitaguna Semarang JOBS (Jurnal of Business Studies), http://dx.doi.org/10.32497/jobs.v2i1.641
- [13] Sa'diyah, F., & Baga, L. M. (2017). Perencanaan bisnis briket tempurung kelapa berbasis wirakoperasi di Kabupaten Bogor. Forum Agribisnis: Agribusiness Forum. https://doi.org/10.29244/fagb.6.1.65-90
- [14] Maudina, K. S., Sahri, S., Tajidan, T., & Yakin, A. (2022b). The Opportunity Export of Coconut Shell Charcoal Briquettes from Indonesia in the International Market. Zenodo (CERN European Organization for Nuclear Research). https://doi.org/10.5281/zenodo.7364938
- [15] Global Charcoal Briquette Market Report and Forecast 2023-2028. (n.d.). Expert Market Research. https://www.expertmarketresearch.com/reports/charcoal-briquette-market
- [16] Pahlavi, G. R., Purnomo, D., Bunyamin, A., & Wulandari, A. P. (2017). Ramie (Boehmeria nivea) decortication waste bio-briquette business model canvas with design thinking approach. Nucleation and Atmospheric Aerosols. https://doi.org/10.1063/1.4979230
- [17] Hindarsah, I., Purwanto, B., Priadana, S., & Fahrudin, A. (2020, January 1). The Owner Factor: An Innovation Element of Business Model Canvas by SMEs Rattan Industry in Cirebon Indonesia. ResearchGate. https://www.researchgate.net/publication/342150938\_The\_Owner\_Factor\_An\_Innovation\_Element\_of\_Business\_Model\_Canvas\_by\_SMEs\_Rattan\_Industry\_in\_Cirebon\_Indonesia
- [18] Utomo, F. H., & Pangeran, P. (2020). Social Entrepreneurship Business Model of Coconut Sugar for Increasing Farmers' Welfare: Case Study in Indonesian Village Cooperative. International Journal of Multicultural and Multireligious Understanding, 7(7), 631–641. https://doi.org/10.18415/IJMMU.V7I7.1915
- [19] Bocken, N., Short, S., Rana, P., & Evans, S. (2019). A literature and practice review to develop sustainable business model archetypes. Journal of Cleaner Production, 198, 1356-1369.

- [20] Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. Journal of Cleaner Production, 45, 9-19.
- [21] Asian Charcoal Briquettes Market. (2020, September 9). P&S Intelligence. https://www.psmarketresearch.com/market-analysis/asia-charcoal-briquettes-market-outlook
- [22] Intelligence, P. (2021, December 3). Asian Charcoal Briquettes Market Research Report Detailed Analysis On The Basis Of Application, Latest Trends. openPR.com. https://www.openpr.com/news/2483799/asian-charcoal-briquettes-market-research-report-detailed