

Efforts to Penetrate the Global Market: Analysis of Drivers and Barriers to Export of Worm Farming MSMEs in Malang

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ABSTRACT

The vermiculture business is one of the MSME sectors that has high potential in exports, especially to meet the needs of the animal feed industry, organic agriculture, and cosmetic raw materials. This research aims to examine the factors that support and hinder the sustainability of exports of vermiculture products through a case study at CV RAJ Organic in Malang City. The research method used is a descriptive qualitative approach with in-depth interview techniques to business owners, observation, and documentation. The results showed that export success is influenced by product quality, partnerships with global market networks, and the adaptive capacity of business actors. However, there are structural barriers such as complex export bureaucracy, regulatory uncertainty, and lack of local government support. In the era of digital transformation, digitizing the export process is a strategic solution to reduce administrative barriers and accelerate global market access. Therefore, this study recommends the importance of establishing an integrated export service system at the regional level, improving mentoring, digitizing the export process, and socializing regulations to improve the competitiveness and sustainability of local potential-based MSME exports.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in the Indonesian economy, both nationally and internationally. As one of the economic sectors that absorbs the largest workforce and has great potential in supporting economic growth, MSMEs are also the backbone of driving non-oil and gas exports (Setyawati et al., 2023; Sugangga et al., 2023). The export potential of MSMEs is increasingly promising with digital transformation and market globalization, opening up opportunities for local products to compete in international markets (Cassia & Magno, 2022). However, while many MSMEs have begun to penetrate the global market, there are still many structural and operational challenges that hinder the sustainability of their exports.

One example of an MSME with high export potential is vermiculture, specifically CV RAJ Organik in Malang City. Vermiculture products, such as adult worms and vermicompost, are in high demand in the international market due to their benefits in organic agriculture, animal husbandry, and the cosmetic industry (Amelia Setyawati & Amelia Sugangga, 2025). However, the export process for these MSMEs is plagued by various obstacles, especially complicated bureaucracy, regulatory uncertainty, and lack of support from local governments. This is reinforced by the results of research by Siringoringo et al. (2009) and Sudarmiatin et al. (2023), which state that administrative and regulatory factors are the main obstacles to the export performance of MSMEs in Indonesia.

In addition, there are still few studies that specifically examine the export performance of MSMEs in the vermiculture sector, creating a research gap. Julien & Ramangalahy (2003) noted that research on MSME export performance is still very limited, especially those that focus on the agricultural sector and specific commodities such as vermiculture. In fact, understanding the internal and external factors that influence export sustainability is important for designing effective export support policies and service systems at the local level.

This research has several novelty, namely: Focuses on an under-explored MSME sector, namely vermiculture, with an in-depth case study at CV. RAJ Organik. Combining the analysis of export barriers with the perspective of digitizing the export process as a practical solution. Analyzes the role of local government in building a responsive and inclusive integrated export service system. Provide recommendations for technology-based mentoring models and cross-sector coordination to improve global market access for local potential-based MSMEs.

The objectives of this study are: To identify internal and external factors that encourage or hinder the sustainability of exports of worm farming products in Malang City MSMEs. To examine the role of local government in facilitating MSME exports, including socialization of regulations, certification, and provision of a one-stop service system. To offer a model of an integrated export service system that can be implemented at the regional level, through the integration of digitalization and technical assistance. To provide policy recommendations to stakeholders to improve the competitiveness and export capacity of MSMEs in the vermiculture sector.

Thus, this research is not only academically important, but also has practical significance in regional economic development and strengthening the position of Indonesian MSMEs in the global market. In the current context of digital transformation, export digitalization is key to accelerating market access and reducing the bureaucratic burden that is often a stumbling block for local MSME actors (Cassia & Magno, 2022; Sudarmiati et al., 2023).

LITERATURE REVIEW

Export Sustainability and the Role of Product Quality

One of the main factors influencing the success of MSME exports is product quality. In the context of worm farming, quality includes not only the physical aspects of the product but also ecological and economic added value such as its use in organic farming and cosmetics. Research by Cassia & Magno (2022) emphasizes that product quality is the cornerstone for improving export performance through cross-border e-commerce. With digitalization, MSMEs can more easily display and maintain their product quality standards in the global market. Therefore, increasing production capacity and quality control is absolutely necessary in order to compete in the international market.

Digitalization of Export Processes

In the era of digital transformation, digitizing the export process is a strategic solution to reduce administrative barriers and accelerate access to global markets. According to Sudarmiati et al. (2023), digital marketing and export management systems based on information technology provide great opportunities for MSMEs to expand their reach. In addition, Falk & de Lemos (2019) stated that labor productivity and investment in research and development (R&D) have a positive relationship with export participation. Technology integration in the distribution, promotion, and supply chain management processes can improve the efficiency and competitiveness of MSMEs in foreign markets.

Bureaucratic Barriers and Regulatory Uncertainty

MSMEs are often hampered by bureaucratic complexity and unclear export regulations. As experienced by CV RAJ Organik, the long permit and certification process and the lack of socialization of policies make it difficult for many business actors. This is in line with the results of research by Siringoringo et al. (2009) which states that administrative and communication barriers are one of the causes of the low export performance of MSMEs in Indonesia. Furthermore, Sudarmiati (2022) recommended the need for a one-stop export service system guided by experts to help MSMEs deal with dynamic and complex regulations.

The Role of Local Governments in Export Facilitation

Local governments have an important role in facilitating MSME exports through technical assistance, financing assistance, and international market promotion. However, the lack of integrated export service units at the local level is a major obstacle for MSMEs such as CV RAJ Organik. As stated by Amelia

Sugangga et al. (2023), MSME empowerment cannot be separated from improving financial literacy and economic inclusion, which must be supported by local policies. Cooperation between local governments, educational institutions, and export associations is needed to create an inclusive and sustainable export ecosystem.

Adaptive Strategies of Business Actors

In the midst of limited institutional support, business actors demonstrated high adaptive capacity. They build export networks, participate in private training, and focus on derivative products that are easier to market. Michael et al. (2016) stated that human, organizational, technological and social capital are key factors in shaping the export intentions of non-exporting SMEs in developing countries. This kind of adaptive strategy is a strong foundation for MSMEs to continue to exist in the midst of global competition. Handayati et al. (2022) also emphasized the importance of business resilience and flexibility in redesigning business models in times of crisis or policy change.

METHODOLOGY

This study used a descriptive qualitative approach to examine the factors that encourage and hinder the sustainability of exports of worm farming products at CV. RAJ Organik, Malang City. Data collection methods were conducted through in-depth interviews with business owners, direct observation at the business location, and documentation in the form of photographs and field notes. This approach was chosen because it allows researchers to understand operational dynamics and export challenges holistically and provides a detailed description of the reality experienced by MSME actors (Creswell & Poth, 2018). Case studies as a research strategy are particularly relevant for exploring complex phenomena in specific contexts, such as bureaucratic barriers, uncertain regulations, and the role of local governments in supporting MSME exports (Baxter & Jack, 2008).

In data analysis, thematic coding techniques were used to identify patterns from the information obtained during the data collection process. This process included data reduction, data presentation, and verification of findings in order to produce valid and reliable conclusions (Miles & Huberman, 1994). In addition, triangulation of data sources was conducted to increase the credibility of the research results. This approach is in line with the recommendations of recent journals that emphasize the importance of validity in qualitative research, especially in the context of business and management studies (Noble & Dicks, 2018; Nowell et al., 2017).

RESEARCH RESULT

This study examines in-depth the factors driving and inhibiting the sustainability of vermiculture exports through a case study of CV RAJ Organik in Malang City. Based on the results of in-depth interviews, field observations, and document analysis, it can be concluded that product quality, global market networks, and the adaptive ability of business actors are the three main factors that drive the export success of MSMEs in this sector. However, complicated

export bureaucracy, regulatory uncertainty, and lack of local government support remain significant structural barriers that hinder the international market expansion potential of local MSMEs.

CV RAJ Organik is one example of a successful MSME in the vermiculture sector that has penetrated the export market. Founded by Mr. Abdul Aziz Adam in 2011, the beginning of this business journey was not easy. Previously, he tried to cultivate eels but failed due to high mortality rates. From this failure, a new opportunity arose, namely utilizing earthworms as the main business object. With an initial capital of Rp200,000, he started building his business gradually, selling his products to fishing spots around Malang. Over time, the business grew rapidly and even managed to penetrate the export market, especially for vermicompost, which has a high demand overseas. However, a major challenge arose when they had to deal with a complex bureaucratic export system and regulations that often changed without adequate socialization (Sudarmiati et al., 2023).

One of the main findings of this study is that administrative bureaucracy is the biggest physical barrier in the MSME export process. The process of obtaining export licenses, certifications, and other supporting documents is slow and often causes delays in the delivery of goods. This directly affects the trust of foreign partners and the reputation of businesses in the international market. As stated by Siringoringo et al. (2009), internal barriers such as lack of understanding of export procedures and technical requirements are more dominant than external barriers. In the case of CV RAJ Organik, the lack of human resource capacity in the export sector means that they have to rely on partners or agents who are more familiar with the bureaucratic system as export intermediaries. This approach provides a short-term solution, but also reduces profit margins and control over product distribution (Michael et al., 2016).

In addition, regulatory uncertainty is also an important issue faced by businesses. Changes in import regulations from destination countries, for example, are often not followed by clear and fast information reaching MSMEs. This condition makes it difficult for businesses to plan production and exports effectively. Furthermore, the lack of technical assistance and coordination between government agencies makes it difficult for MSME players to meet specific export requirements, such as quality standardization and halal certification. Without access to one-stop services or integrated information systems, businesses such as CV RAJ Organik have to navigate the often-convoluted bureaucracy on their own (Cassia & Magno, 2022).

Although there are several export trainings organized by central government agencies, the role of local governments in export facilitation is still very limited. The unavailability of integrated export service units at the local level makes it difficult for MSMEs to access information, documents, and international market promotion. Businesses expect local governments to be actively present through field visits, technical guidance, and international promotions, so that they no longer feel alone in facing export challenges (Setyawati et al., 2023). In addition, digitizing the export process is considered a strategic step that can reduce administrative barriers and increase transparency

of procedures. As stated by Falk & de Lemos (2019), labor productivity and investment in research and development (R&D) greatly affect the participation and export share of MSMEs. Therefore, the integration of technology in the export service system is crucial to improve competitiveness and operational efficiency.

Amidst limited institutional support, businesses show great resilience and flexibility. They take the initiative to seek information independently, participate in export training from private institutions, and build networks with other exporters. Other adaptive strategies include focusing on derivative products such as vermicompost, which are easier to market in both domestic and international markets. In addition, CV RAJ Organik is also strengthening its brand identity and expanding regional distribution channels as a foundation to re-enter the global market when bureaucratic and regulatory conditions become more conducive (Falk & de Lemos, 2019; Cassia & Magno, 2022).

The findings also identify the need to establish an integrated export service system at the regional level. Local governments need to strengthen cross-sector coordination and establish export service centers that are responsive and easily accessible to MSME actors. These services ideally include technical guidance, promotion facilitation, certification, and assistance in building international networks. Thus, MSME players are not only assisted in the administrative process, but also encouraged to increase production capacity and explore new markets. The existence of a strong support system will increase the confidence of business actors in doing business globally (Sugangga et al., 2023).

Furthermore, digitizing the export process is a strategic solution in the era of digital transformation. With an integrated digital system, MSME players can access market information, manage documents, and monitor the export process in real-time. Digitalization also allows businesses to reach international buyers through cross-border e-commerce platforms. As studied by Cassia & Magno (2022), although cross-border e-commerce can be an accelerator of export performance, export managers should approach it strategically with a clear medium-term plan. With the use of technology, bureaucratic barriers can be minimized and export efficiency can be significantly improved.

In the long run, synergy between local governments, MSME support institutions, and businesses is key to building an inclusive and sustainable export ecosystem. Local governments can work with universities, export associations, and international partners to strengthen the capacity of MSME players through export training, access to financing, and promotion of local superior products. On the other hand, business actors are encouraged to continue to improve product quality, innovation, and global market literacy to remain competitive in the international market. With this synergy, MSMEs such as CV. RAJ Organik will not only be able to survive, but also grow and contribute to increasing the country's foreign exchange through exports based on local potential.

DISCUSSION

In the context of the Indonesian economy, Micro, Small and Medium Enterprises (MSMEs) have a strategic role, especially in regional and international economic development. One MSME sector that shows high potential in exports is

vermiculture, which can be utilized in various industries such as organic agriculture, animal feed, and cosmetic raw materials. The case study on CV RAJ Organik in Malang City offers in-depth insights into export opportunities and challenges for local MSMEs, as well as the importance of digital transformation in improving global competitiveness (Setyawati & Sugangga, 2025).

CV RAJ Organik is a clear example of how perseverance and business adaptation can turn initial failure into export success. Despite initially cultivating eels-which failed due to high mortality-the founder, Mr. Abdul Aziz Adam, was able to see a new opportunity in the production of worms as animal feed. With an initial capital of Rp200,000, he began to develop his business independently, selling products to local fishing spots before finally venturing into the export market. This journey reflects strong entrepreneurial mindset characteristics, such as the ability to take risks, flexibility and innovation, as described by Handayati et al. (2020) in their study on the effect of entrepreneurship education on entrepreneurial intention among vocational students.

However, despite the high economic and ecological value of worm products, MSMEs like CV RAJ Organik still face various structural barriers to export. One of the main issues is the complexity of administrative bureaucracy and regulatory changes that are not accompanied by adequate socialization. This leads to shipping delays, loss of trust from overseas partners, and even loss of international market access. Simplification of export procedures and transparency of regulatory information are needed so that MSMEs can more easily carry out international trade activities (Siringoringo et al., 2009; Sudarmiatin, 2022).

Another factor that often complicates MSMEs is the lack of direct support from local governments. In fact, local governments have a strategic position in providing technical facilitation, assistance, and international market promotion. As stated by Sugangga et al. (2023), the literature shows that financial literacy and managerial assistance are essential in building the competitive advantage of MSMEs in Indonesia. Local governments need to be more active in providing one-stop services that serve as information, training, and coordination centers between institutions, so that the export process can be more efficient and effective.

In addition, research also shows that MSMEs' participation in exports depends not only on external factors such as government support, but also on their own internals. Falk & de Lemos (2019) in their study found that labor productivity and R&D resource allocation have a significant relationship with MSME export performance. This suggests that investment in human capacity and innovation is key to improving global competitiveness. CV RAJ Organik, for example, has started to focus on developing derivative products such as vermicompost, which is easier to process administratively and has stable demand in domestic and international markets.

Digitalization is a strategic solution to the bureaucratic and distribution challenges. Cassia & Magno (2022) emphasize that cross-border e-commerce can be an accelerator of MSME export performance if managed strategically. An integrated digital system not only facilitates the processing of documents or certifications, but also allows businesses to monitor the export process in real-time, establish direct connections with international buyers, and access data on world

market trends. In the midst of the pandemic and the era of digital transformation, Sudarmiatin et al. (2023) also noted that implementing digital marketing strategies during times of crisis can be one of the survival strategies for MSMEs.

Export sustainability is also influenced by the ability of businesses to adapt their business strategies. Michael et al. (2016) explained that the export intentions of non-exporting MSMEs in developing countries are strongly influenced by four main capitals: human, organizational, technological and social capital. Therefore, assistance that touches on these aspects is very important. CV RAJ Organik has managed to survive by building strategic business networks, attending export training from private institutions, and optimizing local distribution channels as a foundation to penetrate the global market again.

Overall, this study provides important recommendations for the development of local potential-based MSME export policies. Governments, both central and local, should work with educational institutions, export associations, and international partners to build an inclusive and sustainable export ecosystem. In addition, the integration of digital systems and the provision of ongoing export training will be key to helping MSMEs like CV RAJ Organik grow into resilient and innovative exporters at the global level.

CONCLUSION AND RECOMMENDATION

Conclusion

A case study of CV. RAJ Organik in Malang City revealed that worm farming MSMEs have high export potential, especially for the animal feed industry, organic agriculture, and cosmetic raw materials. Factors that support export success include product quality, global partnerships, and the adaptive capabilities of business actors. However, these MSMEs face significant barriers, such as complex export bureaucracy, regulatory uncertainty, and lack of local government support.

These obstacles have resulted in delays in shipments, loss of trust from overseas partners, and decreased motivation for businesses to continue exporting. Amidst the limitations, businesses demonstrated adaptive strategies by establishing local partnerships as export intermediaries, strengthening their brands, and focusing on the domestic market.

This study recommends the need for an integrated export service system at the regional level, increased mentoring, socialization of regulations, and digitalization of the export process to improve the efficiency and competitiveness of MSMEs. With synergy between local governments, supporting institutions, and business actors, local potential-based MSMEs such as CV. RAJ Organik can become examples of success in exports and contribute to the national economy.

Recommendation

Based on the case study at CV RAJ Organik, some suggestions that can be given to improve the sustainability of exports of worm farming MSMEs in Malang City include the need to establish a one-stop export service system at the regional level to make it easier for MSME players to take care of export documents, certifications, and permits. In addition, the digitalization of the export process must be realized immediately to speed up administration,

increase time and cost efficiency, and provide access to real-time global market information. Local governments and related institutions also need to provide technical assistance and regular training for business actors to be better prepared to carry out export activities independently and in accordance with regulations. Regular socialization of export regulations is essential to prevent administrative errors due to unclear policy changes. Product development and innovation such as vermicompost processing and strengthening branding will increase added value and product competitiveness in the international market. Cooperation between MSMEs and export partners also needs to be facilitated to open global market access. Finally, improving business management through guidance on distribution, production, and marketing will make MSMEs more professional and resilient. With this combination of support, MSMEs such as CV. RAJ Organik can more easily penetrate global markets and contribute to national economic growth.

ADVANCED RESEARCH

Advanced research in the field of MSME export development highlights the critical role of ecosystem-based support systems and data-driven decision-making in enhancing global competitiveness. Studies emphasize that beyond individual capacity-building, the integration of MSMEs into a broader digital trade ecosystem—including e-certification platforms, AI-powered market intelligence, and blockchain-enabled traceability—significantly reduces transaction costs and enhances transparency. Moreover, policy research indicates that adaptive regulatory frameworks tailored to local MSME characteristics, combined with smart public-private partnerships, can stimulate innovation and resilience. In the case of worm farming MSMEs like CV. RAJ Organik, leveraging these technologies and ecosystem-based strategies can unlock niche market opportunities, improve compliance, and build long-term trust with international buyers positioning them as sustainable contributors to green economy goals.

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