Al-Kharaj: Journal of Islamic Economic and Business
Volume 8 (2), 2026
P-ISSN: 2686-262X; E-ISSN: 2685-9300

Implementation of Circular Economy Practices in Sustainable Business Models: Evidence from a Home-Based Convection Industry

Dharmawan P Hadad[1], Noviarti[2], Yuli Setiawan[3], Teguh Rifandi[4]
[1,2,3,4] Universitas Satya Negara Indonesia , Indonesia
dharmawan.hadad@usni.ac.id

Keywords:
circular economy, sustainable business, SMEs, green lifestyle, textile industry

Abstract

This study is motivated by the increasing environmental challenges caused by textile waste, particularly in small-scale industries. This study aims to analyze the implementation of circular economy practices and examine their contribution to sustainable business development and green lifestyle promotion. This research uses a qualitative case study approach focusing on Konveksi Mande. Data were collected through in-depth interviews, observation, and documentation, and analyzed using data reduction, data display, and conclusion drawing techniques. The results show that circular economy practices have been implemented through the 5R principles, with reduce being strongly applied, while reuse, recycle, and recovery are moderately implemented. However, repair has not been implemented due to limited innovation capacity. These practices contribute to environmental sustainability, generate additional economic value, and promote green lifestyle awareness in the community. This study highlights the important role of SMEs in supporting sustainable development through practical circular economy implementation.

INTRODUCTION

The rapid growth of the textile industry has significantly contributed to economic development, particularly in emerging economies such as Indonesia. However, this growth has also resulted in increasing environmental challenges, especially in the form of textile waste. According to data from the Ministry of Environment and Forestry, Indonesia generates millions of tons of waste annually, with a significant portion remaining unmanaged (SIPSN, 2023).In the textile sector, waste in the form of fabric scraps and unused materials continues to increase due to mass production and unsustainable consumption patterns (Niinimäki et al., 2020).

Traditional linear economic models, which follow a "take–make–dispose" pattern, have further exacerbated environmental degradation by increasing waste accumulation and resource depletion (Indrayani, 2021). In response to these challenges, the concept of the circular economy has emerged as an alternative approach that emphasizes resource efficiency, waste minimization, and sustainability. Circular economy practices aim to extend the lifecycle of materials through strategies such as reduce, reuse, recycle, recovery, and repair (Bappenas, 2022).

The concept of circular economy is rooted in sustainability theory, which emphasizes resource efficiency and the minimization of waste. According to Geissdoerfer et al. (2017), circular economy represents a shift from a linear economic model toward a regenerative system in which materials are reused and maintained within production cycles for as long as possible. This approach

is considered essential in addressing environmental challenges, particularly in resource-intensive industries such as textiles.

Furthermore, circular economy practices are closely related to sustainable business models. Bocken et al. (2016) argue that sustainable business models integrate environmental and social considerations into value creation processes, enabling firms to achieve long-term sustainability beyond economic performance. In this context, the adoption of circular economy practices by SMEs can enhance both environmental performance and business resilience.

In addition, the implementation of circular economy practices can influence consumer behavior and promote green lifestyles. Green lifestyle refers to environmentally responsible behavior, including waste reduction and sustainable consumption patterns (Peattie, 2010). Therefore, businesses that adopt sustainable practices can play a significant role in shaping community awareness and encouraging environmentally friendly behavior.

In the context of small and medium-sized enterprises (SMEs), the implementation of circular economy practices plays a crucial role in promoting sustainable development. SMEs dominate the industrial sector in Indonesia and contribute significantly to employment and economic growth. However, their adoption of sustainable practices is often limited due to constraints in resources, knowledge, and technological capabilities (Poerwanto et al., 2021).This condition creates a gap between sustainability goals and actual implementation at the operational level.

Previous studies have explored circular economy practices in various industrial sectors and emphasized their potential in supporting sustainable business models (Fajar et al., 2023). However, most of these studies focus on large-scale industries or conceptual discussions, while empirical studies examining the implementation of circular economy practices in small-scale, home-based industries remain limited. In addition, the linkage between circular economy practices, sustainable business models, and the development of green lifestyles in local communities has not been widely explored.

Therefore, this study aims to analyze the implementation of circular economy practices in a home-based convection industry, namely Konveksi Mande, and to examine how these practices contribute to sustainable business models and the development of green lifestyles in the surrounding community. This study provides empirical insights into how small-scale industries implement circular economy principles in practice and highlights their role in supporting environmental sustainability at the local level.

METHODS

This study employs a qualitative research approach with a case study design to examine the implementation of circular economy practices in a home-based convection industry. The qualitative design is considered appropriate as it allows for an in-depth understanding of social phenomena within a specific context and provides flexibility in exploring participants' experiences and perspectives (Sugiyono, 2005; Yin, 2018)

The research was conducted at Konveksi Mande, a home-based textile business located in Jakarta. The selection of this research site is based on its relevance to the study objectives, as the business has implemented waste management practices aligned with circular economy principles. The subjects of this study were selected using purposive sampling, which enables the researcher to choose participants who have relevant knowledge and experience regarding the research topic (Arikunto, 2010 ; Creswell, 2014). The participants consisted of one key informant (head of production), two operational employees, and one member of the surrounding community.

Data were collected through in-depth interviews, observation, and documentation. In-depth interviews were conducted to obtain detailed information regarding production processes, waste management practices, and sustainability awareness. Interviews allow researchers to explore participants' perspectives and experiences in depth (Soeharto, 2002).Observation was carried out to directly examine production activities and the implementation of circular economy practices in the workplace. Observation is useful in capturing real conditions and behaviors in the field (Ardianto, 2002). In addition, documentation such as photos and records related to production processes and waste management activities was used to support the findings.

Data analysis was conducted using qualitative data analysis techniques, including data reduction, data display, and conclusion drawing (Riduwan, 2010).Data reduction was performed by selecting and categorizing relevant information from interviews and observations. The data were then organized and presented systematically to facilitate interpretation. Finally, conclusions were drawn based on patterns and relationships identified in the data.

To ensure the validity of the findings, this study applied data triangulation by comparing information obtained from different sources and data collection techniques. Triangulation is essential in qualitative research to enhance the credibility and reliability of the results (Sugiyono, 2005).

RESULTS AND DISCUSSION

Result

The results of this study present the findings related to the implementation of circular economy practices in Konveksi Mande. The analysis focuses on the application of the 5R principles, namely

reduce, reuse, recycle, recovery, and repair, based on data collected through interviews, observations, and documentation.

The findings indicate that the company has implemented most aspects of the circular economy, although the level of implementation varies across each principle. A summary of the implementation of the 5R principles is presented in Table 1.

Table 1. Implementation of Circular Economy (5R) in Konveksi Mande

Principle	Implementation Description	Source of Data	Level of Implementation
Reduce	Use of high-quality materials and strict production control to minimize defects and waste	Interview (Key Informant & Employees)	High
Reuse	Fabric scraps are collected and stored systematically after production	Observation & Interview	Moderate
Recycle	Waste materials are sold to external collectors and processed into new products	Interview	Moderate
Recovery	Revenue from waste sales is used for machine maintenance and operational support	Interview	Moderate
Repair	No internal process to repair or transform waste into new products	Interview	Low

Table 1 shows that the implementation of circular economy practices in Konveksi Mande is dominated by the reduce principle, which is reflected in the use of high-quality materials and strict production control. Meanwhile, reuse, recycle, and recovery are implemented at a moderate level through waste collection and external recycling processes. However, the repair principle has not been implemented, indicating a limitation in internal innovation capability.

a. Reduce

The implementation of the reduce principle is reflected in the company's efforts to minimize waste during the production process. This is achieved through the use of high-quality raw materials and strict production control. The head of production emphasized that careful supervision and coordination among workers help reduce defective products and fabric waste.

In addition, employees stated that they perform their tasks carefully to avoid production errors, indicating that waste reduction is embedded in daily operational practices. These findings suggest that the reduce principle is strongly implemented at the operational level.

This finding is consistent with the circular economy theory, which emphasizes resource efficiency and waste minimization (Geissdoerfer et al., 2017). This indicates that SMEs tend to prioritize low-cost and practical sustainability strategies.

b. Reuse

The reuse principle is implemented through the systematic collection of fabric waste generated during production. Instead of being discarded, fabric scraps are stored in designated containers and managed collectively.

This practice aligns with the circular economy framework, which aims to extend the lifecycle of materials through reuse and recycling (Korhonen et al., 2018). However, the reliance on external parties suggests limited internal capabilities.

c. **Recycle**

The recycle principle is applied through collaboration with external parties. Fabric waste collected from production is sold to waste collectors, who process the materials into new products such as recycled yarn.

This practice ensures that waste materials remain within the production cycle and do not contribute to environmental pollution. However, the recycling process is carried out externally, indicating that the company does not yet possess internal recycling capabilities.

This finding is also consistent with circular economy theory, which emphasizes maintaining materials within the production cycle through recycling processes (Kirchherr et al., 2017).

d. Recovery

The recovery principle is reflected in the economic utilization of waste materials. The company generates additional income by selling fabric waste to collectors, and the revenue obtained is used to support operational activities, particularly machine maintenance.

This finding indicates that waste is not only managed from an environmental perspective but also contributes to the economic sustainability of the business. Thus, recovery plays a supporting role in maintaining business continuity.

This finding supports the sustainable business model theory, where environmental practices can also generate economic value (Bocken et al., 2016).

e. Repair

The repair principle has not been implemented in Konveksi Mande. The company does not process defective products or fabric waste into new products internally. Instead, all waste materials are transferred to external collectors for further processing.

The absence of repair activities indicates that the company has not yet reached a fully developed circular economy stage, which requires innovation and product redesign (Niinimäki et al., 2020). This condition indicates a limitation in innovation and internal processing capabilities. The absence of repair activities suggests that the implementation of circular economy practices has not yet reached a fully integrated stage.

Beyond the implementation of the 5R principles, the findings also reveal that circular economy practices in Konveksi Mande generate broader impacts on environmental, economic, and social aspects. These impacts reflect the role of circular economy not only as a waste management strategy but also as a driver of sustainable business development and community awareness.

A summary of the impacts resulting from the implementation of circular economy practices is presented in Table 2.

Table 2. Impact of Circular Economy Implementation in Konveksi Mande

Aspect	**Findings**	**Evidence**
Environmental	Reduction of textile waste and minimized environmental pollution	Waste is collected and not disposed directly
Economic	Additional income generated from selling fabric waste	Revenue used for machine maintenance
Social	Increased awareness of green lifestyle among surrounding community	Community adopts more responsible consumption behavior

Impact Analysis

The implementation of circular economy practices in Konveksi Mande generates multidimensional impacts, including environmental, economic, and social aspects, as presented in Table 2.

From an environmental perspective, the company successfully reduces textile waste by collecting and managing fabric scraps instead of discarding them directly into the environment. This practice contributes to minimizing pollution and supports cleaner production processes. The findings indicate that waste management activities are integrated into daily operations, reflecting an environmentally conscious production system.

From an economic perspective, the company benefits from additional income generated through the sale of fabric waste to external collectors. The revenue obtained is utilized to support

operational needs, particularly machine maintenance. This demonstrates that circular economy practices not only reduce waste but also create financial value, thereby contributing to business sustainability.

From a social perspective, the presence of circular economy practices in the company influences the surrounding community. Interview results show that community members become more aware of the importance of reducing consumption and minimizing waste. This indicates that sustainable business practices can encourage the development of environmentally responsible behavior within the community.

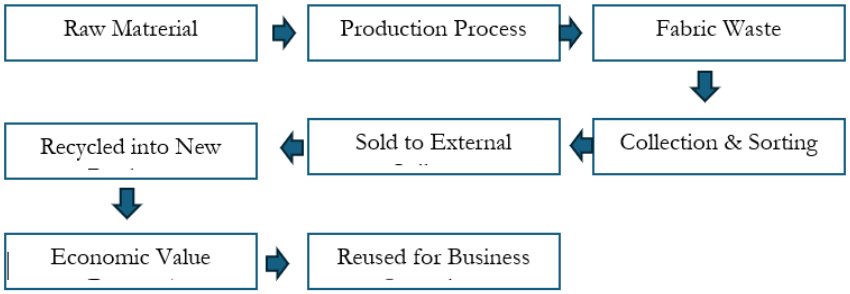

Figure 1. Circular Economy Flow in Konveksi Mande

Figure 1 illustrates the flow of circular economy practices in Konveksi Mande, showing how fabric waste is managed, transferred to external collectors, and reintroduced into the economic cycle to generate additional value

These findings reflect the triple bottom line concept, which emphasizes the integration of environmental, economic, and social performance in achieving sustainability (Elkington, 1997).

DISCUSSION

The findings of this study indicate that circular economy practices have been implemented in Konveksi Mande through the application of the 5R principles. However, the level of implementation varies across each principle, suggesting that the company is still in the early stage of adopting a fully integrated circular economy system.

The strong implementation of the **reduce principle** reflects the company's focus on minimizing waste through material efficiency and quality control. This finding is consistent with the concept of circular economy, which emphasizes reducing resource input and waste generation as a primary strategy for sustainability (Bappenas, 2022). Previous studies also highlight that waste reduction is often the most accessible entry point for small and medium enterprises (SMEs) in adopting sustainable practices due to its low cost and immediate impact (Fajar et al., 2023).

Furthermore, the implementation of **reuse and recycle** practices demonstrates that Konveksi Mande has adopted a practical approach to waste management by collaborating with external parties. This finding aligns with the circular economy framework, which promotes extending the lifecycle of materials through reuse and recycling processes (Indrayani, 2021). However, the reliance on external collectors indicates limited internal innovation capabilities. This condition is commonly found in SMEs, where constraints in technology, knowledge, and capital hinder the development of in-house recycling systems (Poerwanto et al., 2021).

The **recovery principle**, reflected in the conversion of waste into economic value, highlights the dual benefit of circular economy practices. The ability to generate additional income from waste supports business sustainability while simultaneously reducing environmental impact. This finding is in line with previous research stating that circular economy implementation can create new revenue streams and improve operational efficiency (Bappenas, 2022).

However, the absence of the **repair principle** indicates that the company has not yet reached an advanced level of circular economy implementation. The inability to transform waste into new value-added products internally suggests that innovation remains limited. According to Niinimäki et al. (2020), a fully developed circular economy system requires not only waste management but also product redesign and innovation to maximize resource utilization.

In addition to business-related outcomes, the findings also reveal social implications. The presence of circular economy practices in Konveksi Mande contributes to increasing environmental awareness among the surrounding community. This supports the argument that sustainable business practices can influence consumer behavior and encourage the adoption of green lifestyles (Fajar et al., 2023). The interaction between business operations and community behavior highlights the broader role of SMEs in promoting sustainability beyond economic activities.

Overall, this study extends existing literature by providing empirical evidence of how circular economy practices are implemented in a home-based industry context. Unlike previous studies that focus on large-scale industries, this research demonstrates that SMEs can adopt circular economy principles in simple and practical ways. However, to achieve a higher level of sustainability, SMEs need to enhance their innovation capacity, particularly in developing internal waste processing and value-added products.

This study provides a significant contribution to the literature on circular economy by offering empirical evidence from a small-scale, home-based industry context, which is often underrepresented in previous studies. While most existing research focuses on large-scale industries, this study demonstrates that circular economy practices can be implemented in a simple and practical manner within SMEs, despite resource limitations.

Furthermore, this study highlights that the implementation of circular economy is not only related to environmental and economic performance but also plays a role in shaping community behavior toward green lifestyles. This finding expands the understanding of circular economy by emphasizing its social dimension, particularly in the context of local communities.

However, the findings also indicate that innovation capability remains a critical factor in achieving a fully integrated circular economy system. Therefore, strengthening internal innovation and technological capacity is essential for SMEs to move beyond basic waste management practices toward value-added circular business models.

These findings reinforce the importance of circular economy as a practical approach for SMEs in achieving sustainability, particularly in resource-constrained environments. This study contributes to the existing literature by providing empirical evidence of circular economy implementation in a home-based SME context, which is still limited in previous research. It also highlights the role of SMEs not only in environmental sustainability but also in promoting social awareness through green lifestyle practices. These results support the sustainable business model and triple bottom line perspectives, where business activities generate environmental, economic, and social value simultaneously.

Conclusion

This study concludes that circular economy practices have been implemented in Konveksi Mande through the application of the 5R principles, namely reduce, reuse, recycle, recovery, and repair. Among these principles, reduce, reuse, recycle, and recovery have been applied at varying levels, while the repair principle has not yet been implemented. This indicates that the company has adopted circular economy practices at a basic operational level but has not yet achieved a fully integrated system.

The findings show that the implementation of circular economy practices contributes to environmental sustainability through waste reduction, economic benefits through additional income from waste utilization, and social impact through increased awareness of green lifestyles among the surrounding community. These results highlight the important role of SMEs in supporting sustainable development, even with limited resources.

From a theoretical perspective, this study contributes to the literature by providing empirical evidence of circular economy implementation in a small-scale, home-based industry context, which is often underrepresented in previous studies. From a practical perspective, the findings suggest that SMEs can adopt simple and feasible circular economy practices, although further innovation is needed to enhance value creation from waste materials.

However, this study has several limitations. The research focuses on a single case study, which may limit the generalizability of the findings. In addition, the study relies on qualitative data, which may be influenced by subjective interpretations.

Therefore, future research is recommended to involve a larger number of SMEs and apply quantitative or mixed-method approaches to obtain more comprehensive results. Further studies are also encouraged to explore innovation strategies in waste processing and value-added product development to support the advancement of circular economy practices in SMEs.

REFERENCE

Arikunto, S. (2010). *Prosedur Penelitian*. Rineka Cipta.

Bappenas. (2022). *Circular Economy in Indonesia*. Bappenas.

Fajar, A., & others. (2023). Circular Economy Practices in SMEs. *Journal of Sustainability*.

Indrayani, L. (2021). Circular Economy and Waste Management. *Environmental Research Journal*.

Niinimäki, K., & others. (2020). The Environmental Impact of Textile Industry. *Nature Reviews Earth & Environment*.

Poerwanto, A., & others. (2021). SMEs and Sustainability Challenges. *SME Development Journal*.

Riduwan. (2010). *Metode dan Teknik Menyusun Tesis*. Alfabeta.

SIPSN. (2023). *National Waste Management Data*.

Soeharto, I. (2002). *Metodologi Penelitian Sosial*. Remaja Rosdakarya.

Sugiyono. (2005). *Metode Penelitian Kualitatif*. Alfabeta.

Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The Circular Economy – A new sustainability paradigm? Journal of Cleaner Production, 143, 757–768.

Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2016). Product design and business model strategies for a circular economy. Journal of Industrial and Production Engineering, 33(5), 308–320.

Niinimäki, K. (2020). The environmental price of fast fashion. Nature Reviews Earth & Environment, 1, 189–200.

Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy. Resources, Conservation & Recycling, 127, 221–232.

Korhonen, J., Honkasalo, A., & Seppälä, J. (2018). Circular economy: the concept and its limitations. Ecological Economics, 143, 37–46.

Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy. Journal of Cleaner Production, 114, 11–32.

Murray, A., Skene, K., & Haynes, K. (2017). The circular economy: An interdisciplinary exploration. Journal of Business Ethics, 140, 369–380.

Prieto-Sandoval, V., Jaca, C., & Ormazabal, M. (2018). Towards a consensus on circular economy. Journal of Cleaner Production, 179, 605–615.