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Sustainability Innovation in Small Medium Enterprises (SMEs): A Qualitative Analysis

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Abstract

Prior research suggests that today, sustainability is an important key in innovation. While the integration of sustainability into innovation in large enterprises has been widely studied, research on small-medium enterprises (SMEs) is still lacking. The aim of this study is to understand the sustainability innovation practices in SMEs. We interviewed 30 SME owners and managers in Indonesia and analyzed the data using thematic analysis to understand how SMEs practice sustainability innovation. The findings show that sustainability innovation in the form of product innovation is commonly practiced through the use of more environmentally friendly raw materials and packaging materials. As for process innovation, the practices include local sourcing and empowerment of the surrounding community as well as small-scale waste treatment to help reduce the damaging impact on the environment.

Keywords

sustainability innovation, small medium enterprises (SMEs), generic interpretive qualitative study, interview, thematic analysis

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Sustainability Innovation in Small Medium Enterprises (SMEs): A Qualitative Analysis

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Prior research suggests that today, sustainability is an important key in innovation. While the integration of sustainability into innovation in large enterprises has been widely studied, research on small-medium enterprises (SMEs) is still lacking. The aim of this study is to understand the sustainability innovation practices in SMEs. We interviewed 30 SME owners and managers in Indonesia and analyzed the data using thematic analysis to understand how SMEs practice sustainability innovation. The findings show that sustainability innovation in the form of product innovation is commonly practiced through the use of more environmentally friendly raw materials and packaging materials. As for process innovation, the practices include local sourcing and empowerment of the surrounding community as well as small-scale waste treatment to help reduce the damaging impact on the environment.

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Introduction

To overcome the latest challenges in business and management, business players and their stakeholders have to shift the firm's innovation paradigm to sustainability innovation. Sustainability innovation is a type of innovation not only being profit-oriented but also oriented to provide benefit to the environment and society (Hansen & Große-Dunker, 2013; Le & Ikram, 2022). The challenges faced include increasingly damaging environmental conditions and the economic disparity accompanying industrialization and economic growth (Adebayo & Kirikkaleli, 2021). Unfortunately, this shift is not easy to make for the business because it challenges the firm's existing way of thinking and operating. Sustainability innovation at a proactive level necessitates a change at the operational level and the firm's philosophy and mindset (Adams et al., 2016).

Prior research indicates an awareness that sustainability is an essential key to innovation (Nidumolu et al., 2009; Sumrin et al., 2021). Integrating sustainability into corporate innovation is a challenge for companies because innovation itself is a complex process, especially when sustainability aspects are incorporated into innovation. Rigorous efforts are needed to include sustainability in various elements of a firm's innovation (Tidd & Bessant, 2013) such as strategy, process, organizational linkage, and learning. Although many firms have realized the importance of sustainability innovation, this awareness is limited to large businesses, while small and medium enterprises (SMEs) are still scarce (Cataldo et al., 2021; Kundurpi et al., 2021). For SMEs, regulatory and market demands are not as stringent as large businesses. However, unlike large businesses, resources of SMEs are also not abundant.

This study aims to understand SMEs' sustainability innovation practices, which have not received much attention in the literature. The research question posed is: how do SMEs practice sustainability innovation? Empirical studies on this topic contribute to the literature by providing primary data to describe the phenomenon of interest. Moreover, the qualitative approach allows for obtaining an in-depth understanding of the phenomenon (Leary et al., 2022). For business practitioners, especially business owners and managers of SMEs, this study is expected to generate ideas on the sustainability practices that are feasible to implement. This study focuses on Indonesia, a developing economy that desires to become a more innovative and sustainable economy.

The next section reviews the potential and challenges of practicing sustainability innovation in SMEs. Subsequently, we present the method to explain the data collection and the analysis technique used. We then present the findings of the study and discuss them in relationship to findings from previous studies. Finally, we conclude by articulating the theoretical and practical implications of the study as well as limitations and possible future research directions.

Literature Review

SMEs have the potential to develop sustainability innovation because of their lean structures in which the owner directly manages the organization, resulting in faster decision-making (Harsanto & Permana, 2021; Yadav et al., 2019). The organizational structure is usually simple and does not involve complex bureaucracy found in the larger enterprises (Azis et al., 2017). The deep involvement of the owner also means the owner's vision determines whether and at what speed sustainability innovation is implemented (Chassé & Courrent, 2018; Widianto & Harsanto, 2017).

In a review by Klewitz and Hansen (2014), various strategic behaviors of SMEs are found in addressing sustainability innovation. SMEs that completely ignore environmental and social factors in innovating can be categorized as SMEs that are resistant to sustainability innovation. Furthermore, SMEs that begin to consciously incorporate environmental and social factors into their innovations can be categorized as SMEs with anticipatory behavior. Consideration of sustainability factors is internal with no or little interaction with external parties in the development of sustainability innovation (Harsanto et al., 2022). There are also SMEs that are classified as innovation-based. These organizations give greater consideration to the sustainability factor in their innovation and involve external parties more highly than the reactive SMEs (Harsanto & Permana, 2019; Klewitz & Hansen, 2014). Lastly, sustainability-rooted SMEs have fully integrated the sustainability factor in innovation and involve external parties in their innovation. This type of SME targets fundamental innovation in its business model, which differs from most SMEs operating in its industry.

In the literature on innovation management and sustainability innovation, the two main types of innovation are product innovation and process innovation (Crossan & Apaydin, 2010). "Product innovation" refers to the introduction of new or significantly changed goods or services in terms of their characteristics, specifications, raw materials, or intended uses (OECD & Eurostat, 2005). "Process innovation" refers to the implementation of new or significantly improved operating processes in terms of their technical flow or hardware and software (OECD & Eurostat, 2005). In a wider perspective, a product and process categorization is widely used in business and management studies (Aka, 2019; Usman et al., 2021). Although not as prominent as product and process innovation, there are other types of innovation, such as organizational innovation and marketing innovation. In the context of sustainability innovation, the product and process innovations that companies undertake are sustainable, aiming at one

or all aspects of the environment and society, in addition to economic aspects (Hansen & Große-Dunker, 2013).

Several studies have identified factors that contribute to the development of sustainable innovation; for example, Al-Swidi et al. (2022) found that SME owners who have a clear vision of sustainability are most likely to be involved in sustainable innovation. Similarly, Ayuso et al. (2011) found that engagement in dialogue with multiple stakeholders such as employees, local communities, or the government is a key factor for SMEs to innovate sustainably. Other factors identified include collaboration with external partners and access to resources (Melander, 2017).

An examination of the literature on SME sustainability innovation indicates that qualitative studies are rare, resulting in a gap in understanding that this study aims to address. For example, Nasiri et al.'s (2022) study examined the influence of external factors such as market turbulence and technological turbulence, as well as digital orientation towards sustainability innovation.

Researchers' Position

We are a team of researchers in the field of management and business at an academic institution in Indonesia. During the writing process, we also collaborated with a colleague in the UK. In this research, our focus lies in exploring sustainability innovation in SMEs, particularly the practices they adopt. Previously, we had addressed the topic of sustainability innovation in a different context, specifically within social enterprises.

This research contributes to a more comprehensive understanding of the subject at hand, ultimately aiming to encourage innovative and sustainable practices among SMEs in alignment with the direction of economic development in Indonesia. The Indonesian authors have all engaged with SMEs in various capacities, such as research, training, or mentoring. The significance of this research lies in its potential to inform SMEs and policymakers about sustainable innovation practices that are both realistic and achievable for SMEs**.**

We are engaged in the process of obtaining research focus, compiling an interview guide, identifying and obtaining participants, conducting participant interviews, analyzing data, and writing it up for publication. Through this process, we became familiar with the literature on qualitative research and influential authors such as Yin, Silverman, Eisenhardt, and journals such as *The Qualitative Report*. Our intention through this paper is to provide readers with an overview that sustainability innovation can be applied to SMEs and the practices that SMEs in Indonesia undertake, both from a product and process innovation perspective.

Method

Type of Qualitative Inquiry

The literature indicates that studies on sustainability of innovation in SMEs are needed, and as such qualitative elaboration is important to develop the literature. Specifically, we use a generic interpretive qualitative study (Merriam, 2002). With the generic interpretive approach, researchers are interested in understanding how participants make sense of a situation or phenomenon. In this study, the participants are owner-managers of SMEs who interpret how the phenomenon of sustainability innovation is practiced in their businesses.

Participants

The study included 30 participants from 30 SMEs in Indonesia. To identify participants, we used two criteria: a) the business size of SMEs, with a maximum of 99 employees in alignment with the definition in *The Enterprise Survey* (The World Bank, 2022); and b) the SMEs innovation activities – it has performed innovation activities either product and/or process innovation in the last three years. Snowball sampling was carried out by first identifying SMEs that met these criteria and were located in West Java, Indonesia. The snowballing process then generated a variety of participants not only in the West Java area but elsewhere in Indonesia. "Snowball" or "chain" sampling is a sampling approach where recruited participants recommend the next participants, leading to an accumulation of more participants (Patton, 1990). The SME's industries were diverse, including the food and beverage, fashion, merchandising, and service industries.

Data Collection

We collected data through semi-structured interviews with owner-managers of SMEs and analyzed them to identify patterns and provide detailed descriptions of sustainability innovation practices in business. The interviews were conducted in the Indonesian language. The interview guide included questions to elicit a description of the firm, the products produced, as well as the firm's innovations that intersect with environmental and/or social aspects. The key questions asked were: "from a product standpoint, are there any innovations that provide environmental or social benefits? Could you provide an example, please?" and, "from a process standpoint, are there any innovations that provide environmental or social benefits? Could you provide an example, please?" Participants were also asked to reflect on the innovations they have made. Interviews took place in mid-2021 through a combination of in person and online interviews. Twenty-two out of the thirty interviews are recorded. Recording was carried out with the consent of the participants who were then transcribed for analysis. Unrecorded interviews are documented through notes. Data from interview transcripts and notes were then processed for analysis. We received ethical approval for the study from the Padjadjaran University Research Ethics Committee.

Data Analysis

The interview results were transcribed then analyzed using thematic analysis following the methods described by Braun and Clarke (2006), including initial mapping of themes, development, and the final thematic map. Coding was carried out by two authors at a broad conceptual level. NVivo qualitative software and Microsoft Excel were used to assist the analysis process. NVivo was used to import transcriptions and notes and as a place for coding. Microsoft Excel was used to recapitulate coding result matrix as well as descriptive information from participants such as product, industry type, and employee number.

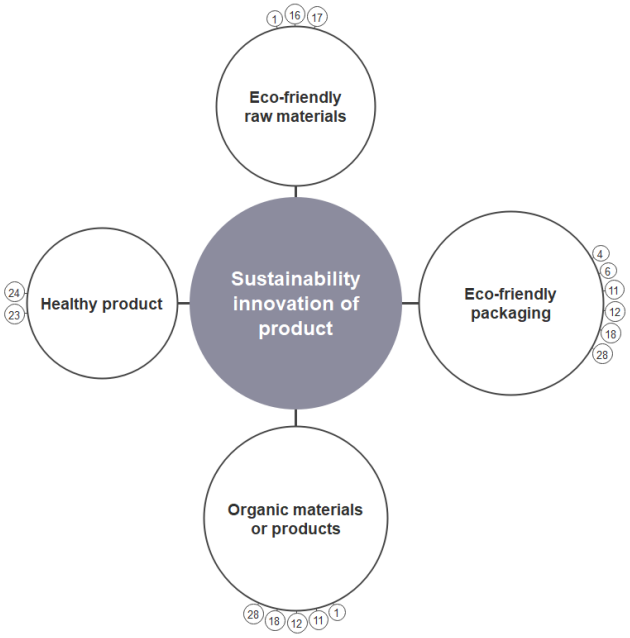
Results and Discussion

The key finding from this study is that SMEs practice sustainability innovation differently. The common classification in innovation literature is based on the product and process (Crossan & Apaydin, 2010). Following are the results and discussion based on product innovation and process innovation.

Sustainability Innovation of Products

Sustainability innovation of products reflects the practice of sustainability innovation implemented in the firm's products or packaging. The most widely practiced sustainability innovation of products by participants is eco-friendly packaging, followed by organic materials or products, eco-friendly raw materials, and healthy products. The results of the analysis are visualized in Figure 1, which principally uses the thematic map method proposed by Braun and Clarke (2006). Figure 1 is the final map that formed after going through several iterations. In the initial stage, we identified unstructured themes regarding the sustainability of product innovation practiced by SMEs, consisting of 16 specific practices. In the next stage, we grouped these practices based on the type of materials, including raw materials, supporting materials, and final products. Finally, we organized them according to the four categories identified in Figure 1: eco-friendly materials, eco-friendly packaging, organic materials of products, and healthy products. The numbers next to the nodes in Figure 1 indicate the firm that practices a particular type of innovation. In the following sections, the findings for each practice are presented and discussed.

Figure 1
Thematic map of sustainability innovation of products



Eco-Friendly Packaging

"Eco-friendly packaging" is the type of product sustainability innovation that is most widely practiced by participants and participating SMEs. There are in total six SMEs that practice it. Eco-friendly materials used for packaging include paper, wood, bark, or materials obtained from recycling. For example, SME 4 engaged in the production of therapeutic aroma candles using *besek* and shredded paper in packaging instead of conventional packaging.

> … we try to make this product as sustainable as possible by using environmentally friendly products such as the use of "*besek*" as an alternative

> packaging. Also, the container for candles this company uses is reusable. So that it is environmentally friendly (SME 4).

"Besek" is a packaging made of woven bamboo and formed into a small basin without a cover. *Besek* is usually made with a height of about four to eight centimeters with a length of about 25 to 40 centimeters. The size of the *besek* is made according to its needs (Sutrisno et al., 2022). The use of natural raw materials on *besek* packaging is one of the advantages offered by SME 4. In addition, raw materials for making *besek* can be easily obtained locally in Indonesia, which can reduce production costs (Noviadji, 2014).

SME 30 is engaged in the clothing industry. The textile industry is the largest industry in the world after the food industry. However, this industry has a negative impact on the environment (Paras & Curteza, 2018). To reduce the impact, many companies use fewer toxic chemicals. In addition, the high consumption will certainly cause waste and environmental damage. This can cause an increase in textile waste (Harsanto et al., 2023; Sarasi et al., 2023). Therefore, SME 30 recycles clothes and uses cassava bags as packaging. This recycling activity not only reduces waste in the environment but can also have value on the secondary market. "… there are also many benefits. In addition to the community, we support each other, and it turns out that it can also save the earth… by reusing items that are still worth using" (SME 30).

Eco-friendly packaging has great potential and contribution to sustainable development (Lindh et al., 2016). Therefore, eco-friendly packaging has an important role in the industry. The importance of the role of eco-friendly packaging requires SME actors to make continuous improvements to their packaging to reduce materials, increase recyclable packaging content, and produce more renewable materials that can be involved in the product packaging process (Prakash & Pathak, 2017).

There are several reasons why the practice of eco-friendly packaging might be the most popular for the sustainability innovation of products. First, using eco-friendly packaging is easier to do because the modifications are not made to the core product. Second, in addition to being easier, it is also cheaper because when changes in raw materials are made to the main product, the implications for production costs will be significant and can change the firm's production methods.

Organic Materials or Products

The next practice of sustainability innovation of products that is quite popular among the participating SMEs is the use of organic materials or products. There are five SMEs that practice it. As an example, one of the SMEs makes a beauty soap product from organic materials. The ingredients used for its manufacture are derived from plants such as saffron, chamomile, jasmine, and almonds. The soap is sold at a premium price because of its uniqueness and is often offered as gifts at weddings and other special events.

The main product of SME 18 is clothing. This company uses organic materials to produce clothes, namely cotton. This company does not use polyester material, so it is more environmentally friendly. SME 12 is a company that produces craft products in the form of wood bark painting craft products. The company uses bark material as the basic material of its craft; therefore, the craft products produced by this company are environmentally friendly – bark can be easily decomposed by bacteria found in nature. As described by the participant from SME 12: "the product is in the form of handicrafts whose basic ingredients are made of bark. But in addition to the basic bark material, it also has a unique shape, so it has strong local nuance" (SME 12).

SME 11 is a company engaged in the waste processing industry which offers innovative services in the form of waste management and consulting services for large industries, small

industries and households. SME 1 is an herbal and homecare products manufacturer and one of its main products is rosella tea. Unlike other companies, SME 1 uses organic fertilizers on its rosella plants. The use of organic fertilizers aims to reduce the use of chemical fertilizers to reduce pollution that occurs in the soil.

In the literature, the use of organic materials or products refers to the use of raw materials from organic farming (Delate et al., 2021), which can provide a competitive advantage in the form of differentiation as well as be useful for targeting niche markets of consumers (Harsanto, 2021; Kahupi et al., 2021). This applies as an example in the case of SME 28, which uses organic ingredients as a differentiator for their soap products, which helps it target a niche market with strong differentiation that is different from similar products on the market.

Eco-Friendly Raw Materials

Another form of sustainability innovation products is the use of environmentally friendly raw materials in product manufacturing. In this case, there are three SMEs that use and practice this innovation. The SMEs use environmentally friendly raw materials such as pineapple fiber, organic fertilizers, and souvenirs that are replaced with plants.

SME 1 is one example of SMEs using environmentally friendly raw materials – they engaged in the herbal and homecare industry use organic fertilizers. The fertilizer in this case is more environmentally friendly because it does not use chemicals at all. SME 16 is a company that utilizes pineapple fiber as raw material in making body brush products. By using pineapple fiber raw materials, this company can minimize the impact from disposal of waste derived from pineapple leaves: "…waste from pineapple leaf, we process it, so it can beneficial" (SME 16).

SME 17 produces a variety of souvenir products in the form of plants. These souvenirs are made with the aim of replacing various souvenirs that will cause garbage. As described by the participant from SME 17: "In 2017, we dare to take opportunities that do involve the environment, especially green gifts so we also want to move people's interest to develop their lifestyles to be healthier and minimizing the use of plastic" (SME 17).

Healthy Product

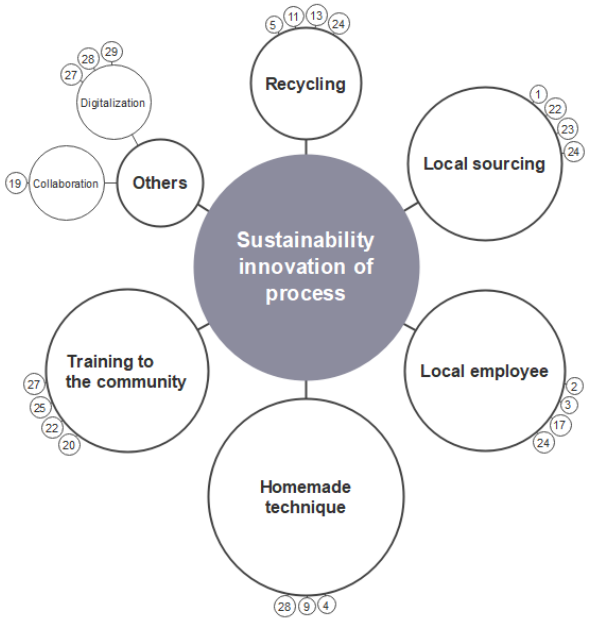
Another form of sustainability innovation products is the introduction of healthier products. In this case, there are two SMEs that use and practice this innovation. One SME, for example, innovates by producing tea blends by mixing original single tea with dried fruit for various health benefits. Another SME, SME 24, offers products to support health using a traditional medicine approach from Indonesia called *jamu*. "*Jamu"* is herbal medicine manufactured from natural ingredients including leaves, seeds, roots, bark, flowers, or fruits. Animal-derived materials, such as honey or native chicken eggs, are also sometimes used. Unlike most SMEs, which experienced a significant decline in demand during the COVID-19 pandemic, SME 24 demand was increased by providing product to maintain immunity for their customers, including innovations in the form of providing supplements for COVID-19 patients in the recovery process.

Sustainability Innovation of Processes

Sustainability innovation of processes reflects practices involved in the process of making the firm's products either directly or indirectly. This includes practices related to the organization, which are sometimes divided into organizational innovation and sometimes combined into the process innovation group. Practices that are implemented by most

participating SMEs are recycling, local sourcing, local employees, and providing training to the community. Other practices include homemade production techniques. Figure 2 shows the thematic map obtained from the results of the analysis of the data from the participants.

Figure 2
Thematic map of sustainability innovation of processes



Recycling

One of the most popular sustainability innovations of processes implemented is recycling. Recycling is one of the common techniques used as part of waste handling by processing waste into something useful. There are four participants implementing this practice. Examples of this practice by the participants include reprocessing used clothes and processing organic waste to become fertilizer and animal feed.

An example is SME 11, whose business is indeed engaged in waste management in collaboration with various firms to help recycle their waste. As stated by participant from SME 11: "We treat the waste. We focus on processing waste in commercial areas." Another example is SME 24, which processes the waste from the health drink they produce to become fertilizer and animal feed.

Recycling is an important part of the sustainability innovation of processes because it contributes to a cleaner production process through the utilization of waste so that it becomes useful again. In larger businesses, recycling usually goes hand in hand with other waste management, such as improved control of liquid waste or air waste (Rohlf et al., 2021).

Local Sourcing

Focusing on purchasing raw materials or supporting materials from the local region is known as local sourcing (Niu et al., 2020; Sirilertsuwan et al., 2018). This practice is something that is commonly done in Indonesia, although there were four SMEs who described this practice as part of their sustainability innovation. The example of local sourcing that is practiced by the participants has something in common, namely involving local farmers growing certain products and then buying the results at harvest. SME 1, for example, which sells its main product in the form of rosella tea, empowers farmers in the surrounding area

around to grow this type of tea with organic fertilizer. Likewise, SME 23, takes raw materials from local farmers from around the area. As stated by one of the participants:

> We also try to cooperate with local farmers because there are provisions that we make ourselves. The criteria must be from Indonesia and now we have collaborated with tea farmers from Yogyakarta and Kaliurang. We really maintain it with the farmer… (SME 23).

Local sourcing usually goes hand in hand with local production. This practice is included in sustainability innovation because SMEs have a choice of decision to procure from the local area or outside the local area. On the one hand, local sourcing poses a challenge for SMEs to still be able to obtain the quality or quantity of raw materials or supporting materials according to standards. On the other hand, local sourcing provides benefits, among others in the form of economic empowerment in the local area as well as reducing emissions from transportation (Halldórsson & Kovács, 2010).

Local Employee

If local sourcing is a policy to buy raw materials or supporting materials from the surrounding environment, local employees are process innovators by recruiting employees from the surrounding environment. This is also common in Indonesia, with four SMEs emphasizing this practice. For example, this empowerment involves supporting farmer groups in the production process and helping local residents, including housewives and children out of school.

SME 2 for example, which produces crackers uniquely made from sweet potatoes, empowers the group of low-income farmers in the area. This group of farmers is not only limited to growing sweet potatoes but also helps in the production process to obtain additional income. As stated by one of the participants: "This firm is a farmer's group, the Women's Farmer's Group. So, the employee is actually a member too" (SME 2).

This practice, in addition to being good for the social environment, is also good for the company. For the social environment, this practice helps them to earn income without spending high on mobility to the workplace. This kind of practice for SMEs can help reduce the potential for social conflict because the potential of human resources in the surrounding environment can be absorbed (Harsanto et al., 2018).

Training to Society

The form of sustainability innovation practiced by several SMEs who are participants is to provide education or training to the community. This practice is innovative because it helps increase public awareness about the existence of certain SMEs and, at the same time, provides benefits for the community in the form of increasing knowledge. Four firms implement this practice. The form of education provided is evidenced related to the field of business they operated. For example, SME 25 is engaged in medical science education services providing free education webinars to the public on several health topics to the public. As stated by one of the participants: "10% profit was put into a donation project to Orphanage Network. In addition, the educational platform is in the form of social activities that are offered for free ..." (SME 25).

Delivering training to the society is part of the firm's engagement in sustainability activities, which is a form of sustainability innovation of processes (Klewitz & Hansen, 2014). This practice provides benefits for the firm to bring the company closer to external

stakeholders, so that it can provide a meaningful contribution to the community while making people more familiar with the firm's activities and products.

Homemade Technique

The practice of sustainability innovation of processes in the form of homemade techniques contributes to the environment by reducing negative impacts on the environment in addition to providing high authentic value for the products. There are three firms that practice it with common practices the use of hands in the production process. For example, a firm that produces aromatherapy candles and another firm that produces organic soap use a manual process that does not cause pollution and waste. As stated by one of the participants: "because candle making is homemade so it doesn't cause pollution like candle made in the factory produced use machineries" (SME 4).

Homemade techniques are usually traditional processes that can be incorporated into efforts to reduce waste so as to minimize the firm's negative impact on the environment. Waste handling is one of the key issues in the cleaner production concept and refers to activities to handle waste responsibly through efforts both before the waste is generated (e.g., a production process that can minimize waste) or after it is generated (e.g., recycling activities or managing material disposal; León-Bravo et al., 2019).

Others

Several other sustainability innovations of processes practices were implemented, including digitalization and collaboration with stakeholders. Digitalization is carried out by several companies, for example to modify the ordering system during the 2020-2021 COVID-19 pandemic to go online or to provide digital channels to bring firms closer to potential customers (Harsanto, 2020). For collaboration, there are SMEs who practice it as a new breakthrough to increase their business scale. SMEs can be reluctant at first to engage in collaboration for a variety of reasons (Grimpe et al., 2021) but the demands of circumstances or the potential benefits of collaboration can make an SME change its outlook. Collaboration is practiced by SME 19 which is engaged in digital media services which felt a deep impact during the COVID-19 pandemic. To deal with decreased demand and limitations in mobility, this business collaborates with other creative media to be able to attract demand while working on it together remotely.

Contributions, Limitations and Future Directions

This study found that sustainability innovation is practiced by SMEs in multiform. Sustainability innovation of products is practiced in the form of eco-friendly packaging, organic materials of products, eco-friendly raw materials, and healthy products. Sustainability innovation of process is practiced in forms such as recycling, local sourcing, local employees, homemade techniques, and training to the community.

This study contributes to our understanding of the practice of sustainability innovation in SMEs. In the era of growing public awareness regarding the importance of sustainability and innovation, SMEs' contribution is still often underestimated. Because of their limited capital and limited pressure from regulations and the market, it is usually challenging for SMEs to implement sustainability innovation. The study highlights the role of SMEs in driving sustainability and innovation, despite these inherent limitations. This understanding is crucial for policymakers, investors, and stakeholders who may overlook the potential of SMEs in driving sustainable practices and innovative solutions. SMEs make up a significant portion of

the global business landscape, and their active involvement in sustainability and innovation efforts is vital for addressing pressing societal and environmental challenges.

This study provides new knowledge by challenging the prevailing perception that SMEs are less capable of adopting sustainability innovation. By addressing this knowledge gap, the study enables stakeholders to make more informed decisions, develop targeted policies, and allocate resources effectively to promote sustainable practices and innovation in SMEs.

This study also has implications for the practice by providing ideas for SME business actors to develop sustainability innovation in their business. Some practices are quite complex and require a large commitment and investment, such as replacing the main raw material. However, some need relatively minor investments that are more feasible for SMEs. For policymakers, this study can provide direction for the development of SMEs through training or financial incentives that enable SMEs to develop sustainable innovation practices in their businesses.

As is the case in any study, there are limitations that need to be considered. This study was conducted in only one context (Indonesia) so the results may not be applicable to other contexts. However, it may be relevant for another similar developing country. Future studies can be carried out in other contexts – comparing developing countries or comparing developing to developed countries to learn about differences.

This study represents a call for action to stakeholders across various levels to acknowledge and endorse the importance of SMEs in propelling sustainability innovation. It extends a welcoming invitation to policymakers, investors, and business leaders, urging them to recognize the untapped potential of SMEs and actively involve them in the pursuit of sustainability and innovation. By offering valuable insights into effective strategies and best practices, this study equips SMEs with the knowledge and confidence to embark on the path of sustainable business practices, even when faced with limited resources. It serves as a reminder that sustainability and innovation should not be seen as privileges exclusive to large corporations, but rather as attainable goals that can be embraced by businesses of all sizes.

References

Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D., & Overy, P. (2016). Sustainability-oriented Innovation: A systematic review. *International Journal of Management Reviews*, *18*(2), 180-205. https://doi.org/https://doi.org/10.1111/ijmr.12068

Adebayo, T. S., & Kirikkaleli, D. (2021). Impact of renewable energy consumption, globalization, and technological innovation on environmental degradation in Japan: Application of wavelet tools. *Environment, Development and Sustainability*, *23*(11), 16057-16082. https://doi.org/10.1007/s10668-021-01322-2

Aka, K. G. (2019). Actor-network theory to understand, track and succeed in a sustainable innovation development process. *Journal of Cleaner Production*, *225*, 524-540. https://doi.org/10.1016/j.jclepro.2019.03.351

Al-Swidi, A. K., Al-Hakimi, M. A., Gelaidan, H. M., & Al-Temimi, S. K. A. J. (2022). How does consumer pressure affect green innovation of manufacturing SMEs in the presence of green human resource management and green values? A moderated mediation analysis. *Business Ethics, the Environment & Responsibility*, *31*(4), 1157-1173. https://doi.org/10.1111/beer.12459

Ayuso, S., Rodriguez, M. A., Garcia-Castro, R., & Arino, M. A. (2011). Does stakeholder engagement promote sustainable innovation orientation? *Industrial Management & Data Systems*, *111*(9), 1399-1417. https://doi.org/10.1108/02635571111182764

Azis, Y., Darun, M. R., Kartini, D., Bernik, M., & Harsanto, B. (2017). A model of managing

innovation of SMEs in Indonesian creative industries. *International Journal of Business and Society*, *18*(35), 391-408.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Cataldo, R., Crocetta, C., Grassia, M. G., Mazzocchi, P., Rocca, A., & Quintano, C. (2021). Sustainable innovation: The Italian scenario studied through higher-order partial least squares-path modeling. *Social Indicators Research*, 1-25. https://doi.org/10.1007/s11205-021-02846-w

Chassé, S., & Courrent, J. (2018). Linking owner–managers' personal sustainability behaviors and corporate practices in SMEs: The moderating roles of perceived advantages and environmental hostility. *Business Ethics: A European Review*, *27*(2), 127-143. https://doi.org/10.1111/beer.12176

Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, *47*(6), 1154-1191. https://doi.org/10.1111/j.1467-6486.2009.00880.x

Delate, K., Heller, B., & Shade, J. (2021). Organic cotton production may alleviate the environmental impacts of intensive conventional cotton production. *Renewable Agriculture and Food Systems*, *36*(4), 405-412. https://doi.org/10.1017/S1742170520000356

Grimpe, C., Sofka, W., & Distel, A. P. (2021). SME participation in research grant consortia—the emergence of coordinated attention in collaborative innovation. *Small Business Economics*, *59*, 1567-1592. https://doi.org/10.1007/s11187-021-00582-6

Halldórsson, Á., & Kovács, G. (2010). The sustainable agenda and energy efficiency: Logistics solutions and supply chains in times of climate change. *International Journal of Physical Distribution & Logistics Management*, *40*(1/2), 5-13. https://doi.org/10.1108/09600031011018019

Hansen, E. G., & Große-Dunker, F. (2013). Sustainability-oriented innovation. In S. O. Idowu, N. Capaldi, L. Zu, & A. Das Gupta (Eds.), *Encyclopedia of corporate social responsibility*. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-28036-8

Harsanto, B. (2020). *The first-three-month review of research on Covid-19: A scientometrics analysis* [Conference presentation]. IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC). https://doi.org/10.1109/ICE/ITMC49519.2020.9198316

Harsanto, B. (2021). Sustainability innovation in the agriculture sector in Indonesia: A review. *1st ICADAI 2021 E3S Web of Conferences*, *306*, 02022. https://doi.org/10.1051/e3sconf/202130602022

Harsanto, B., Michaelides, R., & Drummond, H. (2018). Sustainability-oriented innovation (SOI) in emerging economies: A preliminary investigation from Indonesia. *2018 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, 1553-1557. https://doi.org/10.1109/IEEM.2018.8607473

Harsanto, B., Mulyana, A., Faisal, Y. A., & Shandy, V. M. (2022). Open innovation for sustainability in the social enterprises: An empirical evidence. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(160), 1-15. https://doi.org/10.3390/joitmc8030160

Harsanto, B., & Permana, C. T. (2019). Understanding sustainability-oriented innovation (SOI) using network perspective in Asia Pacific and ASEAN: A systematic review. *Journal of Asean Studies*, *7*(1), 1-17. https://doi.org/10.21512/jas.v7i1.5756

Harsanto, B., & Permana, C. T. (2021). Sustainability-oriented innovation (SOI) in the cultural village: An actor-network perspective in the case of Laweyan Batik Village. *Journal of Cultural Heritage Management and Sustainable Development*, *11*(3), 297-311.

https://doi.org/10.1108/JCHMSD-08-2019-0102

Harsanto, B., Primiana, I., Sarasi, V., & Satyakti, Y. (2023). Sustainability innovation in the textile industry: A systematic review. *Sustainability, 15*(2), 1549. https://doi.org/10.3390/su15021549

Kahupi, I., Hull, C. E., Okorie, O., & Millette, S. (2021). Building competitive advantage with sustainable products–A case study perspective of stakeholders. *Journal of Cleaner Production, 289*, 125699. https://doi.org/10.1016/j.jclepro.2020.125699

Klewitz, J., & Hansen, E. G. (2014). Sustainability-oriented innovation of SMEs: A systematic review. *Journal of Cleaner Production, 65*, 57-75. https://doi.org/10.1016/j.jclepro.2013.07.017

Kundurpi, A., Westman, L., Luederitz, C., Burch, S., & Mercado, A. (2021). Navigating between adaptation and transformation: How intermediaries support businesses in sustainability transitions. *Journal of Cleaner Production, 283*, 125366. https://doi.org/10.1016/j.jclepro.2020.125366

Le, T. T., & Ikram, M. (2022). Do sustainability innovation and firm competitiveness help improve firm performance? Evidence from the SME sector in Vietnam. *Sustainable Production and Consumption, 29*(2022), 588-599. https://doi.org/10.1016/j.spc.2021.11.008

Leary, M., Muller, T. M., Poly, C., Sopper, J., & Gebauer, R. D. (2022). Defining collaboration through the lens of a Delphi study: Student affairs and academic affairs partnerships in residential learning communities. *The Qualitative Report, 27*(3), 664-690. https://doi.org/10.46743/2160-3715/2022.5276

León-Bravo, V., Moretto, A., Cagliano, R., & Caniato, F. (2019). Innovation for sustainable development in the food industry: Retro and forward-looking innovation approaches to improve quality and healthiness. *Corporate Social Responsibility and Environmental Management, 26*(5), 1049-1062. https://doi.org/10.1002/csr.1785

Lindh, H., Williams, H., Olsson, A., & Wikström, F. (2016). Elucidating the indirect contributions of packaging to sustainable development: A terminology of packaging functions and features. *Packaging Technology and Science, 29*(4-5), 225-246. https://doi.org/10.1002/pts.2197

Melander, L. (2017). Achieving sustainable development by collaborating in green product innovation. *Business Strategy and the Environment, 26*(8), 1095-1109. https://doi.org/10.1002/bse.1970

Merriam, S. B. (2002). Introduction to qualitative research. In S. B. Merriam & R. S. Grenier (Eds.), *Qualitative research in practice: Examples for discussion and analysis* (pp. 3-17). John Wiley & Sons.

Nasiri, M., Saunila, M., Rantala, T., & Ukko, J. (2022). Sustainable innovation among small businesses: The role of digital orientation, the external environment, and company characteristics. *Sustainable Development, 30*(4), 703-712. https://doi.org/10.1002/sd.2267

Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (September 2009). Why sustainability is now the key driver of innovation. *Harvard Business Review*, pp. 57-64.

Niu, B., Xie, F., Mu, Z., & Ji, P. (2020). Multinational firms' local sourcing strategies considering unreliable supply and environmental sustainability. *Resources, Conservation and Recycling, 155*, 104648. https://doi.org/10.1016/j.resconrec.2019.104648

Noviadji, B. R. (2014). Desain kemasan tradisional dalam konteks kekinian. *Artika, 1*(1), 10-21. https://doi.org/10.34148/artika.v1i1.24

OECD/Eurostat. (2005). *Oslo manual: Guidelines for collecting and interpreting innovation data* (3rd ed.). The Measurement of Scientific and Technological Activities, OECD

Publishing. https://doi.org/10.1787/9789264013100-en

Paras, M. K., & Curteza, A. (2018). Revisiting upcycling phenomena: A concept in clothing industry. *Research Journal of Textile and Apparel*, *22*(2), 00-00. https://doi.org/10.1108/RJTA-03-2017-0011

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE.

Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *Journal of Cleaner Production*, *141*, 385-393. https://doi.org/10.1016/j.jclepro.2016.09.116

Rohlf, E. M., Karimi, S., & Bareither, C. A. (2021). Implications of municipal solid waste co-disposal experiments on biodegradation and biochemical compatibility. *Waste Management*, *129*, 62-75. https://doi.org/10.1016/j.wasman.2021.05.009

Sarasi, V., Primiana, I., Harsanto, B., & Satyakti, Y. (2023). Sustainable supply chain of Indonesia's textile & apparel industry: opportunities and challenges. *Research Journal of Textile and Apparel*. Advance online publication. https://doi.org/10.1108/RJTA-08-2022-0091

Sirilertsuwan, P., Ekwall, D., & Hjelmgren, D. (2018). Proximity manufacturing for enhancing clothing supply chain sustainability. *The International Journal of Logistics Management*, *29*(4), 1346-1378. https://doi.org/10.1108/IJLM-09-2017-0233

Sumrin, S., Gupta, S., Asaad, Y., Wang, Y., Bhattacharya, S., & Foroudi, P. (2021). Eco-innovation for environment and waste prevention. *Journal of Business Research*, *122*, 627-639. https://doi.org/10.1016/j.jbusres.2020.08.001

Sutrisno, A. A., Sunarto, B., & Dharsono, D. (2022). Design paradigm and syntagm of woven bamboo packaging (besek). *Bahasa Dan Seni: Jurnal Bahasa, Sastra, Seni, Dan Pengajarannya*, *50*(1), 128-138. https//doi.org/10.17977/um015v50i12022p128

The World Bank. (2022). *Enterprise survey questionnaire*. https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/ES_BEE questionnaire.pdf

Tidd, J., & Bessant, J. (2013). *Managing innovation: Integrating technological, market and organizational change* (5th ed.). Wiley. https://doi.org/10.1192/bjp.112.483.211-a

Usman, A., Azis, Y., Harsanto, B., & Azis, A. M. (2021). Airport service quality dimension and measurement: A systematic literature review and future research agenda. *International Journal of Quality and Reliability Management*. Advance online publication. https://doi.org/10.1108/IJQRM-07-2021-0198

Widianto, S., & Harsanto, B. (2017). The impact of transformational leadership and organizational culture on firm performance in Indonesia SMEs. In N. Muenjohn & A. McMurray (Eds.), *The Palgrave handbook of leadership in transforming Asia* (pp. 503-517). Palgrave Macmillan London. https://doi.org/10.1057/978-1-137-57940-9_27

Yadav, V., Jain, R., Mittal, M. L., Panwar, A., & Lyons, A. C. (2019). The propagation of lean thinking in SMEs. *Production Planning & Control*, *30*(10-12), 854-865. https://doi.org/10.1080/09537287.2019.1582094

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