



Zero Waste In Micro, Small And Medium Enterprises As A Model Of Increasing Income In The Framework Of Sustainable Business

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Article Info	Abstract
<p>Article History : Received March 2023 Accepted Mei 2023 Published June 2023</p> <p>Keywords: <i>Zero Waste; MSMEs; Sustainable Business; Income</i></p>	<p>The take-make-waste model is the dominant model of linear economic growth, assuming that natural resources are widely and unlimitedly available since their reconception during the industrial revolution. The environment is something that is very close to life based on the interaction of nature with society, even has a very wide scope as it develops. Zero waste is a philosophy that is used as a lifestyle to encourage the life cycle of resources, so that existing products can be reused more optimally. In order to prevent the use of materials that are difficult to decompose and overcome the large amount of waste left over from business, MSMEs can apply the concept of zero waste in increasing income. Very minimal education and unorganized management are one of the factors for the lack of awareness to apply a zero waste lifestyle in everyday life and sustainable business. The purpose of this study is to reveal the meaning of the zero waste approach to MSMEs as a model of increasing income in business sustainability. The research used is based on qualitative descriptive by collecting data, interviews, documenting the results of zero waste in the community, and looking at the potential for increasing MSME income. The results showed that the implementation of zero waste carried out by MSMEs can increase income. Waste in the form of patchwork can be reprocessed into handicrafts in the form of cellphone hangers, women's clothing in the form of dresses and wall crafts carried out by MSMEs Batik Laksmi Art Kampoeng Djadhoel to produce use value. The proceeds from the sale of processed waste can increase the income of MSMEs actors. In addition, the level of awareness in MSME actors towards the environment is very high. Factors such as the potential for zero waste-based community waste treatment that can be applied by the surrounding community in a sustainable manner and the potential for providing a forum for economic activity in Kampoeng Djadhoel MSME activities.</p>

INTRODUCTION

The environment is something that is very close to life based on the interaction of nature with society, even has a very wide scope as it develops. However, in simple terms the environment is closely related to nature and its constituents. Modern lifestyles encourage humans to continuously need many desires, consumption is increasing, and increasing population is one of the causes of changes in natural ecosystems. Human activities are increasingly diverse every day and more and more goods and products are purchased, so that the waste produced has exceeded the ability of nature to absorb it. Urbanization, population growth, economic growth, and diverse consumption patterns encourage high waste generation. Sustainable Development Goals (SDGs) is a sustainable development program to address current and future development problems initiated and agreed upon by 193 countries in the world at the Development Conference. The use of disposable items today seems to be inseparable from people's lives. Marketing strategies succeed in making consumers feel that the goods they have are not enough and must update the type or model of goods so as not to be considered outdated. This does not only occur in the problem of people's consumptive patterns, but the awareness of business actors and industries in preventing and minimizing many landfills that are difficult to decompose and processed waste. Indonesia prioritizes achieving these targets as a national development priority. According to Sustainability Ambassador Covestro (2021), revealed data that today's global society has consumed 1.7 times more needs available on earth than it should. The data shows that the earth's ability to provide for human needs is slower than the pace at which humans consume it in a year. The dominant linear economic growth model, the take-make-waste model, has existed under the assumption that natural resources are widely available and unlimited since their reconception during the industrial revolution. It has brought contemporary civilization to the brink of ecological catastrophe, and it continues to be a barrier to further economic, social and environmental development. (Bogovic & Grdic, 2020, p. 2). If changes are not

immediately made to the method of managing economic growth, the environment and society will soon have a bad impact, therefore, in recent years a social movement called zero waste has been introduced. According to zerowaste.id, zero waste is a philosophy that is used as a lifestyle to encourage the life cycle of resources, so that existing products can be reused more optimally.

The concept of zero waste is more about controlling ourselves to no longer be consumptive and responsible for the environment. This is because zero waste is a lifestyle, of course, it requires a process to live it. Do it slowly, but definitely and consistently. This is what we can do at the beginning is to increase literacy, update with information related to our environmental conditions. This awareness is also needed for MSMEs actors on the environmental impacts caused by the disposal of production products. The level of awareness of MSMEs and traditional market traders to prevent the use of materials that are difficult to decompose and overcome the amount of waste left over from business is still very low. Very minimal education and unorganized management are one of the factors in the lack of awareness to apply a zero waste lifestyle in daily life and business sustainability. This requires motivation and encouragement to adopt a waste-free lifestyle. The use of technology can be a solution, but the most important thing is to change lifestyle. Small and Micro Medium Enterprises or MSMEs have experienced a fairly rapid increase in current conditions. Conditions that increasingly attract the community in improving economic welfare, when compared to doing business in the business sector with large capital. MSMEs face various problems such as lack of knowledge about the environment and factors that become the success of small businesses that add use value and generate additional income when utilizing the rest of their production to zero waste.

MSMEs Laksmi Art Batik craft entrepreneurs in the city of Semarang. Batik is an illustrated Indonesian cloth that is made specifically by writing certain motifs by applying night or candles as a result of processed used cooking oil waste on the fabric. Coastal batik from the island of Java has a long history of acculturation, with diverse patterns influenced by

various cultures. Batik has been regarded by the public as an important cultural icon in Indonesia.

There is a circular economy approach through zero waste, by processing waste into products that are useful and can generate income, such as other products that are easy to decompose. Micro, Small and Medium Enterprises (MSMEs) are the most strategic sector of the national economy and concern the lives of many people so that they become the backbone of the national economy. MSMEs are also the largest group of economic actors in the economy in Indonesia and have proven to be the key to securing the national economy during the economic crisis and becoming a decimator of post-crisis economic growth (Rifai, 2021). In addition, sustainable business has an important role for economic activities. It can be seen that now the development of sustainable business is increasing, including in Indonesia. In general, sustainable business must be able to manage its business based on three elements called 3Ps, namely Profit, People and Planet. To provide input on strategic issues of Micro, Small and Medium Enterprises (MSMEs).

Zero waste refers to waste management and planning approaches that emphasize the prevention of waste production. The principle of zero waste in general is the 3Rs, namely Reduce, Reuse, and Recycle, as well as the principle of processing waste as close as possible to the source of waste to reduce transportation burden. Zero waste is a new view in waste management, considering that the waste issue has reached an alarming level. The issue of waste, especially plastic waste, is a serious concern because of plastic production. Based on ourworldindata.org data, it experienced a drastic increase reaching 381 million tons in 2015 (Ritchie H, RoserM, 2018). Even kompas.com have written that Indonesia is included in countries that experience waste emergencies (Kompas, 2016, 2018). This condition threatens the ecosystem and the environment, so it needs special handling. This handling can be started from the regulation of each stakeholder in the world. This encourages the role of MSME actors in implementing a zero waste approach in the model of increasing income and dealing with climate change. However, according to ecological finance theory states that the role of the financial environment including investment and

organizational access to capital issues is part of the efficient operation of the financial system. In the world sector, waste management businesses, especially from developing countries, are faced with several problems related to increasing income, and the economy is in the challenge of environmentally friendly operations. By seeing and paying attention to the gap and research gap phenomenon above, researchers are interested in conducting research on the Zero Waste approach in Micro, Small and Medium Enterprises with the novelty in this study, namely the Income Increase Model in the Framework of Sustainable Business.

RESEARCH METHODS

This research employs a qualitative approach by clearly and elaborately describing or explaining a phenomenon and obtaining comprehensive data about the research subject. The method used in this research is comparative descriptive, where the researcher describes the findings from interviews, observations, and documentation. The study explains social phenomena by developing concepts and gathering facts, but the author does not test hypotheses. One of the reasons the author chose the qualitative method is to delve into the depth of the object under study, especially regarding the Zero Waste approach in MSMEs within sustainable business. Therefore, the method used is qualitative as an approach to analyzing Zero Waste in Micro, Small, and Medium Enterprises as a model for income improvement to understand and interpret sustainable business in environmental conservation or green investment.

RESULTS AND DISCUSSION

In this research, a theoretical study was conducted on the concept of zero waste, and a literature review was performed on Kampoenng Djadhoel. The study began by examining the activities of the community in the village area by aligning aspects with the zero waste concept. Subsequently, literature from the tourist village in the Kampoenng Djadhoel environment was dissected to observe the implementation of

environmental conservation by the village community.

The Batik products produced by the MSMEs (Micro, Small, and Medium Enterprises) of the Batik Paguyuban Kampoeng Djadhoel, located at Jl. Batik No.441 RT 04 RW 02, Kelurahan Rejomulyo, Kecamatan Semarang Timur, Kota Semarang. The collection of batik motifs produced is quite comprehensive, ranging from motifs like Lawang Sewu, Tugu Muda, Warak Ngendog, Asem Areng, Burung Kuntul, and many other motifs. The production involves the use of natural dyes such as wood and earth colors, successfully attracting domestic and international tourists, thus contributing to Semarang's revenue. Fifteen households residing in the Kampoeng Djadhoel area utilize their time to work as batik artisans, selling their products directly to interested visitors in a relatively simple yet magnificent environment. Typically, visitors can witness and learn the art of batik-making, guided by the batik artisans who have their respective stands or spaces.

The Central Batik Village or Djadhoel Village (Old-Time - Shopping and Strolling - Creative Ideas are always Djedhoel's) simply uses this term for easy and memorable promotion to the wider community. Before being known as Djadhoel Village, the area was prone to criminal activities due to its darkness, including robbery, theft, and even murder. Moreover, the area was often flooded and considered slum-like. Not wanting to be continuously trapped in such an environment, the local community held discussions. On December 17, 2016, driven by strong will and a spirit of mutual cooperation, the area underwent a 180-degree transformation. What was once a risky area became comfortable, what was once slum-like and dirty now became a famous village because of its uniqueness. The uniqueness of Kampoeng Djadoel is evident in the colorful mural paintings covering all the walls of the houses. The narrow alleys are adorned with paintings depicting specific themes. More than just beautifying the area, Kampoeng Djadoel tells the story of the establishment of Semarang, the history of batik in the archipelago, besides being beautiful and clean, it also provides a nostalgic atmosphere that makes visitors feel comfortable to linger.

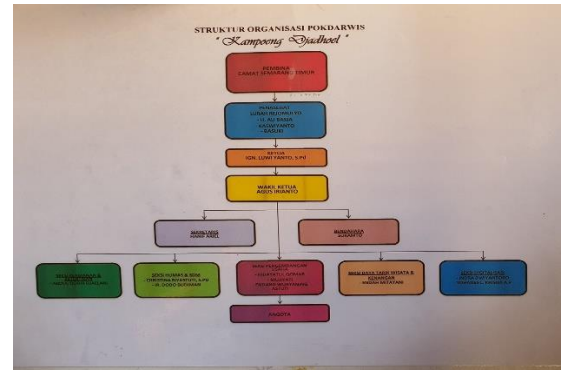


Figure 2. Kampoeng Djadhoel's organizational structure

Source: Author's Document

Kampoeng Djadhoel was officially inaugurated on April 29, 2017. Since December 17, 2016, Kampoeng Djadhoel has adopted the motto KPK (Togetherness, Change, Care). Through the togetherness of the residents, the village has changed to become comfortable. By beautifying their village, transforming it from a problematic area, the residents are inspired to care for their own village and maintain their slogan: the nearest relative is a neighbor. In the initial phase, the community focused on improving the physical environment. It took a year to revitalize it to its current state. This transformation was achieved through the spirit of mutual cooperation, a characteristic feature of the village. As a result, the residents developed a deeper love for their village. The concept of Kampoeng Djadhoel not only promotes the reputation of batik but also revives elements of the past, including culture, history, and local wisdom, so that we can always remember the traditions of our ancestors. The residents are extraordinary in their solidarity, togetherness, and mutual cooperation. Consequently, the location, which was previously a slum area and a victim of premanism (criminal activities), including high crime rates, has been transformed into a place that generates foreign exchange.

The researcher found a batik production facility designed in one location, where visitors can learn the art of batik making and understand the entire process from start to finish. This involves engaging various Micro, Small, and Medium Enterprises (MSMEs) and skilled batik artisans in Kampoeng Batik Tengah. After the revitalization of Kampoeng Djadhoel, many state-owned enterprises were willing to assist in its

development, including CSR (Corporate Social Responsibility) from Angkasa Pura I, Ahmad Yani Airport Semarang. Hopefully, with CSR from Angkasa Pura I, Kampoeng Djadhoel will benefit, leading to economic development, complete facilities as batik-making infrastructure, a more beautiful village, and increased tourism. Since the revitalization and arrangement, the residents have been harmonious, active in community activities, with an additional bonus in 2018 when Kampoeng Djadhoel won third place in the Creative Economy category in the city of Semarang. This was due to the empowerment of the residents' economy, batik training for all ages, cleanliness, a child-friendly village, a gathering place for various communities, and a research location for students and academics, both domestic and international.

The use of disposable items today seems inseparable from people's lives. The remnants of batik fabric, batik dye, used plastic bags are small examples of waste generated in the batik-making process. These items eventually become non-degradable waste that piles up and threatens the environment. Businesses and industries aim to prevent and minimize the accumulation of difficult-to-degrade waste and the by-products of

processing. The zero waste concept is more about self-control, urging us to be less consumptive and take responsibility for the environment. It involves becoming more aware of what we buy and consume and understanding its environmental impact. Zero waste is a lifestyle, requiring a gradual but consistent process.

MSMEs Kampoeng Djadhoel has been implementing zero waste practices slowly but surely. To begin, it's essential to increase literacy and stay updated on information related to the environmental situation. This awareness is crucial for MSMEs operators to understand the environmental impact of their production waste. The level of awareness among MSMEs operators and traditional market traders regarding the use of non-degradable materials and the management of waste resulting from their business activities is still relatively low. It requires motivation and encouragement to adopt a zero waste lifestyle. Currently, Earth needs us to contribute to waste management. If not done now, the consequences will be experienced by future generations. Technology can be a solution, but the most crucial aspect is lifestyle change.



Figure 3. Patchwork and wax to make batik as a result of zero waste application

Source: Author's Document

Micro, Small, and Medium Enterprises MSMEs have experienced rapid growth, particularly in the current conditions. They are increasingly appealing to people looking to improve economic well-being compared to engaging in businesses with substantial capital. The research results show that MSMEs Kampoeng Djadhoel faces various issues, such as a lack of knowledge about the environment and factors

contributing to the success of small businesses in adding value and generating additional income by utilizing the by-products of their production process towards zero waste. Another finding from the research highlights one MSMEs processing used cooking oil waste into candles. These candles are then used to create batik motifs by incorporating different colors. Moreover, the research shows that the application of zero waste

by MSMEs can increase income. Waste in the form of fabric scraps can be reprocessed into handicrafts such as cellphone holders, women's clothing like dresses, and wall decorations, conducted by MSMEs Batik Laksmi Art Kampoeng Djadhoel, generating added value. The sales of processed waste contribute to the income of MSMEs operators. Additionally, MSMEs operators show a high level of environmental awareness.

The factors include the potential for waste processing by the community based on the zero-waste concept that can be applied sustainably and the potential provision of economic activity containers in MSMEs Kampoeng Djadhoel. This requires a circular economic approach through zero waste, processing the used cooking oil waste into valuable products that generate income, such as candles and soap. MSMEs is a strategically vital sector for the national economy, significantly impacting the livelihoods of many people, making it the backbone of the national economy.

Sustainable business plays a crucial role in economic activities. The development of sustainable business is increasing, including in Indonesia. A business is considered sustainable if it can achieve its business goals, enhance value in the long term, and maintain consistency in maintaining its achievements. In general, sustainable business must be able to manage its business based on the three elements known as the 3Ps: Profit, People, and Planet. To provide input on strategic issues related to Micro, Small, and Medium Enterprises (MSMEs), HIPMIKINDO, in collaboration with Poros Hijau Indonesia Korda

DKI Jakarta and the Indonesian Solid Waste Association (InSWA), encourages the active role of UMKM in waste management in Indonesia through Focus Group Discussions (FGD).

Zero waste is a philosophy that advocates for redesigning resources from a linear system to a closed cycle, ensuring that all products can be reused. Zero waste focuses on waste management and planning approaches that emphasize preventing waste production. This is in contrast to the traditional waste management approach, which emphasizes treating already-produced waste. Zero waste is more than just recycling; it involves waste prevention and reduction.

The general principles of zero waste include the 3Rs: Reduce, Reuse, and Recycle, along with the principle of treating waste as close to its source as possible to reduce the transportation burden. This research supports the role of UMKM operators in implementing the zero-waste approach as a model for income improvement and facing climate change challenges. It also supports the theory of ecological finance, stating that environmental factors, including investments and organizational access to capital issues, are part of an efficient financial system. In the waste management sector, especially in developing countries, businesses face challenges related to income generation and the economy in the pursuit of environmentally friendly operations. The zero-waste principle follows the inverted triangle hierarchy, illustrating waste management with Reduce, Reuse, and Recycle in order, as shown in Figure 2.



Figure 4. Hierarki Zero Waste

Source: Zerowaste.com (2021)

The results of this research show that modern lifestyles continuously drive people to have numerous desires, leading to increased consumption. The growing population is one of the causes of changes in the natural ecosystem, triggering alterations in environmental conditions that result in disasters and become increasingly unpredictable. This issue is not only related to the consumptive patterns of society but also to the awareness of business and industry players in preventing and minimizing the accumulation of hard-to-degrade waste and by-products of processing.

This awareness is crucial for Micro, Small, and Medium Enterprises (UMKM) operators regarding the environmental impact resulting from the disposal of their production waste. UMKM

faces various issues, such as a lack of knowledge about the environment and factors contributing to the success of small businesses in adding value and generating additional income by utilizing the by-products of their production process, leading up to zero waste.

Sustainable business plays a crucial role in economic activities. The development of sustainable business is increasing, including in Indonesia. Sustainable business is defined as a business that is beneficial both for short-term and long-term purposes and is sustainable in nature, not just for a specific period. A business is considered sustainable if it can achieve its business goals, enhance value in the long term, and maintain consistency in maintaining its achievements.



Figure 5. Zero Waste Framework Results Increase Revenue

Source: <https://waste4change.com/blog/ekonomi-sirkular> and Researcher Document

A business cannot thrive without a healthy and supportive environment. Therefore, companies must also be capable of maintaining an environment that is conducive to sustaining their business operations. The concept of sustainable business drives companies to undertake various efforts that can ensure the continuity of their business. Some ways to maintain sustainability include adopting better systems and utilizing more environmentally-friendly technologies. By incorporating new technologies or systems that are environmentally friendly, the adverse impact on the environment can be reduced. As a result, environmental sustainability is better preserved.

CONCLUSION

Conclusion Small and Medium Enterprises (SMEs) have experienced significant growth in the current economic conditions. This trend is attracting people to improve economic well-being, especially when compared to engaging in businesses that require substantial capital. However, SMEs face various challenges, including environmental management and factors contributing to the success of small businesses in adding value and generating additional income by utilizing the leftover production. The issue extends beyond the consumptive patterns of society, encompassing the awareness of business and industry players in preventing and minimizing the

accumulation of difficult-to-decompose waste and processing by-products. The take-make-waste model represents a dominant linear economic growth model, assuming that natural resources are abundantly and limitlessly available since its conceptualization during the industrial revolution.

The environment is closely intertwined with life based on the interaction of nature with society, evolving to have broad implications. Zero waste is a philosophy adopted as a lifestyle to encourage the resource life cycle, ensuring that existing products can be maximally reused. The research findings indicate that implementing zero waste by SMEs can increase income. Waste, in the form of scrap fabric, can be reprocessed into handicrafts such as mobile phone hangers, women's clothing like dresses, and wall decorations by SMEs like Batik Laksmi Art in Kampoeng Djadhoel, resulting in added value. The sale of processed waste contributes to increased income for SME practitioners. Furthermore, there is a high level of environmental awareness among SME practitioners. Factors such as the potential for waste processing in a zero waste-based community that can be applied sustainably and the potential provision of economic activity containers for SMEs in Kampoeng Djadhoel. Future research is recommended to add indicators that are suspected to influence the behavior of SMEs in business sustainability by considering environmental and natural factors.

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