



Analysis of Green Financing Literacy as Sustainable Financing for Micro, Small, and Medium Enterprises (MSMEs) in the Food Processing Industry Sector

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ABSTRACT

This study aims to analyze green financing literacy as sustainable financing for micro, small, and medium enterprises (MSMEs) in the food processing industry sector in Bandar Lampung City. The research method used is descriptive qualitative, focusing solely on MSME actors involved in the production of chips located on Pagar Alam Street in Bandar Lampung City. The study was conducted through interviews and research studies. Based on the analysis conducted, the results indicate that the level of green financing literacy among MSME actors is still low, with many not fully understanding the benefits and mechanisms of this financing. Additionally, challenges in accessing financing and implementing environmentally friendly practices have also been identified. This study is expected to provide recommendations for improving MSME literacy and access to green financing, thereby supporting the development of more sustainable businesses that are responsive to environmental challenges. There is a need for socialization about green financing for MSME actors and the loan procedures from financial institutions.

INTRODUCTION

Sustainable finance is defined as comprehensive support from the financial services industry for sustainable growth resulting from the alignment of economic, social, and environmental interests. The aim of sustainable financing programs in Indonesia is to enhance the resilience and competitiveness of Financial Services Institutions, provide the necessary funding sources for the community, and contribute to the national commitment to addressing global warming issues through business activities that are preventive or mitigative as well as adaptive to climate change towards a competitive low-carbon economy (Ivana, 2022).

In an era that increasingly recognizes the environmental impact and climate change, the main challenge faced by MSMEs is how they can continue to grow economically while considering the environmental impact of their business activities. On the other hand, access to adequate financing is

also a key factor in supporting the growth and sustainability of MSMEs. Although there have been efforts to encourage more environmentally friendly business practices, MSMEs often face obstacles in accessing financing. This can hinder their ability to adopt more sustainable technologies and business practices. (Amruddin, 2020)

Micro, Small, and Medium Enterprises (MSMEs), a micro enterprise is defined as a productive business owned by an individual and/or an individual business entity that meets the criteria for micro enterprises as stipulated in the law (Srijani, 2020). Micro, Small, and Medium Enterprises (MSMEs) play a vital role in the development of local economic activities and community empowerment. One of the large cities in Indonesia with rapid MSME development is Lampung Province. Below is data on the number of MSMEs in Lampung Province for the years 2020-2022:

Table 1. The Development of MSMEs in Lampung Province

No.	Regency/City	2020	2021	2022	Total
1	Bandar Lampung	118.421	118.501	128.533	365.455
2	Metro	13.966	13.886	19.689	47.541
3	Lampung Barat	3.096	2.652	5.836	11.584
4	Lampung Tengah	2.748	3.079	6.841	12.668
5	Tulang Bawang Barat	1.790	2.890	4.645	9.325
6	Pringsewu	1.327	1.965	3.879	7.171
7	Lampung Utara	1.057	1.795	3.499	6.351
8	Lampung Timur	1.095	1.297	3.850	6.242
9	Lampung Selatan	947	1.089	3.606	5.642
10	Mesuji	896	1.259	2.576	4.731
11	Pesawaran	840	947	2.394	4.181
12	Tulang Bawang	779	858	1.912	3.549
13	Tanggamus	364	457	1.043	1.864
14	Way Kanan	230	324	940	1.494
Total		147.556	150.999	192.234	

Source: Dinas Koperasi dan UKM Provinsi Lampung

Based on data on the development of MSMEs in Lampung Province, the Bandar Lampung Regency experiences significant annual growth in MSMEs, contributing greatly to the Regional Gross Domestic Product (PDRB) of Bandar Lampung City. Additionally, these MSMEs absorb a large workforce, helping to reduce unemployment rates. One of the MSME sectors in food and beverage is a key sector that contributes significantly to economic growth. In order to ensure sustainable regional economic growth and promote development and equity, the government needs to maintain the potential of Micro, Small, and Medium Enterprises (MSMEs) in facing future challenges.

The growth of the food and beverage industry sector is currently experiencing substantial and significant development, especially in Bandar Lampung City, where the food industry is becoming increasingly competitive due to its large number. The following shows the average growth of the Manufacturing Industry from 2020 to 2022:

Table 2. Number of MSME Actors in Bandar Lampung City

No.	Type of Business	Type of MSME		
		2020	2021	2022
1	Crafts	45	51	67
2	Food	92	103	118
3	Service Industry	20	26	51
Total		157	178	236

Source: Dinas Perindustrian Kota Bandar Lampung

The data on the number of MSME actors in Bandar Lampung shows that the development of MSMEs in Bandar Lampung from 2020 to 2022 is dominated by food businesses, with 313 business units that experience an annual increase. This indicates that the food sector can be developed and empowered. However, MSMEs often face challenges in their business development, particularly regarding access to financing. Limited access to capital is the main obstacle faced by MSMEs, which often restricts their ability to expand operations, improve product quality, or develop new innovations. Additionally, environmental issues are becoming a growing global concern, including the negative impacts produced by the food processing industry.

The food processing industry, especially in the context of MSMEs involved in banana chip processing in Bandar Lampung, plays an important role in the local economy. Banana chips, as a popular processed product, have a wide market potential both locally and nationally. However, this sector faces several challenges that hinder its growth, particularly concerning sustainability issues. One of the main challenges is the environmental impact generated from the production process, including inadequate waste management and inefficient raw material usage. On the other hand, awareness of the importance of sustainable practices is increasing among both consumers and business actors.

In this context, green financing emerges as a form of financing that can support the sustainability of MSMEs. Green Finance is defined as financial support for green growth aimed at significantly reducing greenhouse gas effects and air pollutant emissions. It represents a balanced growth between the economy and the environment. Green Finance continues to be developed to advance the financial industry and economy while reducing greenhouse gas emissions and improving the environment through financing mechanisms. It is a form of contribution from the banking sector to environmental improvement and financial strengthening for businesses. With Green Finance, it is hoped that businesses will become more environmentally conscious and conduct their operations not solely for profit (Uddin, 2016).

Through environmentally friendly financing, MSMEs in the banana chip processing sector can adopt more efficient and sustainable technologies, thus reducing the environmental impact of the production process. With the rising awareness of environmental issues, the implementation of green financing is expected to enhance the competitiveness of banana chip products in an increasingly competitive market. This dynamics can be explained by the Triple Bottom Line Theory, which is based on People, Planet, and Profit (3P). People signifies the fulfillment of community welfare. Planet indicates that companies must manage their natural resources well and be mindful of the environmental impact of their activities. Profit signifies that companies must engage in ethical trade (Rasmini, 2015). Profit represents the additional income used to ensure the company's survival, people refer to the community as one of the supporting elements that determine the sustainability of the company, and planet represents the environment, which has a cause-and-effect relationship with the company (Wijaya, 2013).

Although green financing offers many benefits, there are several issues faced by banana chip processing MSMEs in Bandar Lampung. First, there is still a low understanding of the concept of green financing among MSME actors. Second, there are obstacles in accessing funding sources that support sustainable practices, both from formal financial institutions and government programs. Third, there are challenges in implementing environmentally friendly technologies that often require high initial investments.

METHODS

This research uses a qualitative approach, which is a method to explore and understand the meanings of individuals or specific groups derived from social or humanitarian issues. The type of research employed in this study is a case study method, which is commonly found in various fields, particularly in evaluations, where the researcher develops an in-depth analysis of a case, often a

program, event, activity, process, or one or more individuals. The cases are limited by time and activity, and the researcher collects comprehensive information using various data collection procedures based on a predetermined timeline (Sugiyono, 2011).

The focus of this study is on how MSMEs in the Food Processing Industry Sector understand Green Financing and how it is implemented. The sources of data collected in this research include primary and secondary data. Data collection methods used are observation, interviews, and documentation. The number of informants in this study is five, consisting of MSME actors in the chip processing industry in Bandar Lampung City, who are borrowers/customers of the Green Financing Program.

This study highlights the significant potential of MSMEs in the food processing sector in Bandar Lampung, particularly in banana chip processing. However, this face challenges in accessing financing and environmental issues. Green financing can be a solution to support the sustainability of MSMEs, although there are barriers such as low understanding and limited access to funding sources. Enhancing literacy on green financing is crucial for strengthening the position of MSMEs in the local economy while maintaining environmental sustainability.

RESULTS

The small chip industry on Jalan Pagar Alam in Bandar Lampung consists of 32 industrial units. The chip industry center in Bandar Lampung was established in May 2008. The establishment of this area was symbolically marked by the construction of an archway declaring the area as the chip industry center of Bandar Lampung. This archway is the result of collaboration between the Bandar Lampung City Industry Office and PT. Perkebunan Nusantara VII Lampung Province, which is one of the state-owned enterprises fostering partnership programs with MSMEs in Lampung Province.

The first interview was conducted with Mr. Sucipto, the chairman of the Telo Rejeki Joint Business Group on Jalan Pagar Alam in Bandar Lampung. According to Mr. Sucipto, he is not aware of or implementing the Green Finance concept among MSME actors, particularly in the banana chip processing industry on Jalan Pagar Alam in Bandar Lampung, as he himself has not heard of Green Finance. If it exists, there are certainly challenges regarding the facilities not meeting the Green Industry standards. On average, these food processing MSMEs produce in their own homes, which also serve as their production sites.

Knowledge of funding sources or financing schemes under Green Finance is not known or understood at all by the banana chip processing MSMEs on Jalan Pagar Alam Gang PU in Bandar Lampung. Furthermore, the unpreparedness of these MSME actors to meet Green Industry requirements in their business activities is also a major obstacle to the effective realization of this scheme.

The informants used in this study include five actors from the banana chip processing MSMEs in Bandar Lampung. Based on the interview results, it was found that one of the MSME actors claimed to know about the "Green Financing" scheme or had at least heard of it, while four actors claimed to have no knowledge of the "Green Financing" scheme at all. This indicates that the community's knowledge regarding the "Green Financing" scheme is still very limited, with a lack of socialization being the main factor.

The interviews also provided insights into the informants' characteristics based on bank financing. From the interviews, it can be explained that two of the informants received funding in the form of bank loans, while three informants did not receive any bank loans. This shows that the number of banana chip processing MSMEs in Jalan Pagar Alam, Bandar Lampung, that receive credit assistance from banks is still small, and most rely on personal funds.

Additionally, it was found that out of the five banana chip processing MSME actors, only two expressed interest in obtaining loans under the "Green Financing" scheme, while three indicated they were not or were not yet interested in the scheme. The lack of interest from banana chip processing MSMEs in the "Green Financing" scheme is attributed to their perception that the requirements to obtain

financing under this scheme are quite difficult to implement in their businesses, where one of the government stipulations for receiving financing assistance is that their businesses must adhere to environmentally friendly practices, namely implementing the reduce, reuse, and recycle system.

In the banana chip processing MSME sector, some have already applied the Green Finance concept. For example, leftover banana peels are usually made into animal feed. There is also used cooking oil that is sold to be processed into the basic ingredients for making bar soap, liquid soap, and candles. Meanwhile, the application of the Reduce, Reuse, and Recycle system among banana chip processing MSMEs on Jalan Pagar Alam Gang PU in Bandar Lampung is still quite simple. In essence, the Green Finance concept is considered very difficult to realize in the Food Processing Industry MSME sector.

The following presents the results of interviews from five banana chip processing MSME actors on Jalan Pagar Alam in Bandar Lampung regarding the application of the green finance concept, where to obtain funding, they must meet environmentally friendly indicators by considering three aspects:

Reduce

Based on the interview results, the informants' responses regarding the Reduce process carried out by the banana chip processing MSMEs on Jalan Pagar Alam in Bandar Lampung include the following: From interviews with five MSME actors, it can be explained that only one MSME actor uses a spinner machine for the drying or draining process during production, while four others do not use a machine and simply drain manually. This is due to the traditional nature of their work, indicating a need for training and socialization on the use of production tools to facilitate production.

In this regard, previous research has shown that owners of chip processing businesses face difficulties in acquiring more modern production equipment for more efficient and effective production. This is due to the high costs of transitioning from traditional (manual) to modern (machine) production methods. In addition to the high transition costs, the owners and their workers lack knowledge about operating modern production equipment, as some owners are reluctant to use modern tools due to unfamiliarity and fear of potential risks associated with using such equipment.

From the analysis of the interview results, it can be explained that three MSME actors conserve electricity and gas. This is evident as the businesses Keripik Suheri, Lateb Jaya, and Rona Jaya save energy by using wood-fueled stoves. For electricity, MSME actors also save energy by using energy-efficient LED lights in their production spaces. The energy-saving measures taken by MSME actors aim to reduce costs and also serve as efforts to be environmentally friendly. However, all MSMEs do not conserve water because the main raw material, bananas, requires thorough washing and thus consumes a large amount of water.

From the interview results, it was explained that three MSME actors avoid using and purchasing unnecessary items. This is indicated by periodic checks of their stock to assess available materials, thereby reducing excess purchases. In contrast, two MSME actors do not avoid purchasing unnecessary items. This is because they believe that bulk purchasing of raw materials is significantly cheaper than buying in smaller quantities, resulting in excess material being stored for future use.

Reuse

Based on the interview results, the informants' responses regarding the Reuse process as seen from the reuse of waste by the banana chip processing MSMEs on Jalan Pagar Alam in Bandar Lampung include the following: The interviews revealed that three MSME actors sell or give their production waste to those in need. This is demonstrated by the collaboration between the companies and waste collectors, where the collectors take banana peel waste to be used as animal feed. Meanwhile, other business operators dispose of their waste directly in the trash.

From the interviews with five MSME actors, two of them take action regarding their waste. Specifically, the MSME actors Karya Mandiri and Keripik Asa sell their used oil to be reprocessed into

the raw materials for making bar soap, liquid soap, and candles. Additionally, three MSME actors utilize the used production oil as a mixed fuel to fire their stoves for subsequent production processes.

Recycle

Based on the interview results, the informants' responses regarding the Recycle process conducted by the banana chip processing MSMEs on Jalan Pagar Alam in Bandar Lampung include the following: The interviews indicate that the raw materials that can be recycled are found in the MSMEs Karya Mandiri and Keripik Asa, where used oil is reprocessed as the raw material for making bar soap, liquid soap, and candles. Meanwhile, for the MSMEs Keripik Suheri, Lateb Jaya, and Rona Jaya, the raw material consists of used production oil that is mixed as fuel.

The analysis of the interview results also revealed that there are no efforts made to maintain the sustainability of water sources directly by the business operators. However, there are two business operators, Karya Mandiri and Rona Jaya, who have created a reservoir for water from the production process, which is used to clean the floors of their production areas and to water the plants around their business premises. For the other business operators, they do not recycle the water from the production process as it is directly disposed of into the drainage system.

DISCUSSION

Sustainable finance in Indonesia is defined as comprehensive support from the financial services industry for sustainable growth, resulting from the alignment of economic, social, and environmental interests. The goal of the sustainable finance program in Indonesia is to enhance the resilience and competitiveness of Financial Services Institutions (FSIs), provide the necessary funding sources for the community, and contribute to the national commitment to address global warming through business activities that involve both mitigation and adaptation to climate change, moving towards a competitive low-carbon economy.

One of the planned funding sources to support the objectives of the sustainable finance program is funding through green financing schemes, which motivate entrepreneurs to implement green industry indicators in their businesses by adhering to the principles of reduce, reuse, and recycle (Uddin, 2016).

Based on the presentation of interview results from MSME operators in the banana chip processing industry in Bandar Lampung, it is evident that the implementation of the green financing concept still faces obstacles, including a lack of understanding of sustainability concepts. This often serves as a major barrier (Amruddin, 2020). Many MSME operators are unaware of the long-term benefits of investing in environmentally friendly practices, leading them to neglect such initiatives. Furthermore, limited access to relevant information sources makes it difficult for them to find appropriate solutions to enhance the sustainability of their businesses.

Solutions to overcome these barriers include organizing educational and training programs targeted at MSME operators. This program can encompass seminars, workshops, and mentoring to help them understand the benefits and practical implementation of green financing. The government, in collaboration with private institutions, can work together to provide training focused on sustainable resource management.

CONCLUSION

The level of literacy among MSMEs in the Banana Chip Processing Industry on Jalan Pagar Alam, Bandar Lampung, regarding funding through the Green Financing scheme is still not well understood. This can be seen from the observations and interview results of the research, where 4 out of 5 respondents or MSME operators in the banana chip processing sector are unaware of and do not understand the Green Financing scheme. The lack of socialization is a primary factor contributing to this issue.

The implementation of Green Financing as sustainable financing for MSMEs in the Banana Chip

Processing Industry on Jalan Pagar Alam, Bandar Lampung, has not yet been applied. This has resulted in several significant environmental issues, as evidenced by the still high volumes of solid and liquid waste and emissions produced during the processing. Waste such as banana peels and processing by-products are often discarded without proper utilization, posing a potential threat to the surrounding environment and creating public health problems. Additionally, the use of resources such as water and energy is not optimized, which can lead to waste and increased operational costs. Thus, the application of financing through the Green Financing scheme has not yet been effective for MSMEs in the banana chip processing industry on Jalan Pagar Alam, Bandar Lampung.

Based on the challenges encountered in the socialization of the Green Finance funding scheme, several stages need to be implemented, including increasing the supply of sustainable financial funding, enhancing demand for sustainable financial products, and supervising the implementation of sustainable finance while coordinating with relevant agencies. The implementation of these policies requires studies to produce specific regulations that are effective, particularly in the fields of banking and non-bank financial institutions (NBFIs). These policies include risk management, targets for increasing the funding portfolio of priority sustainable economic sectors, reporting, as well as monitoring the implementation of sustainable finance and assessing the health levels of banking/NBFIs. In the capital market supervision sector, specific policies and regulations related to the mechanisms for sustainable financial reporting are also necessary.

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