

IMPLEMENTATION OF ENVIRONMENTALLY FRIENDLY PACKAGING DESIGN FOR MICRO, SMALL AND MEDIUM ENTERPRISE PRODUCTS IN TANGERANG CITY

Puput Aryanto

Yatsi Madani University, Entrepreneurship Learning, The Faculty of Technology and Business

Puputaryanto@uym.ac.id

ABSTRACT

In this research, the researcher tries to discuss the application of environmentally friendly packaging design for Micro, Small and Medium Enterprises products in the Tangerang City environment, with increasing public awareness or what could be said as consumers regarding the issue of maintaining health, cleanliness and awareness of the environment, for Micro, Small and Medium Enterprises. It is hoped that it will be able to adapt to sustainable trends. The aim of this research is to explore the potential for packaging designs that are not only attractive but also contribute to reducing the environmental impact on society.

The method used includes a survey of Micro, Small and Medium Enterprises and analysis of packaging designs that have been implemented. The research results show that the majority of Micro, Small and Medium Enterprises in Tangerang still use conventional packaging, although there is high interest in switching to environmentally friendly packaging, some Factors influencing this adoption include cost, knowledge of environmentally friendly materials, and full support from the Tangerang City Government in terms of policy.

Recommendations from this research include education about the benefits of environmentally friendly packaging as well as developing partnerships between Micro, Small and Medium Enterprises and providers of sustainable packaging materials. It is hoped that by implementing better packaging design, Micro, Small and Medium Enterprises in Tangerang City can increase their competitiveness and contribute to environmental preservation, especially in the community and surrounding areas.

Keywords : Packaging Design, Environmentally Friendly, Products, Micro, Small and Medium Enterprises

INTRODUCTION

In this modern era, attention to environmental issues is increasing, and consumers are increasingly aware of the impact of the products they consume. Packaging, as an important element in marketing, plays a big role in creating first impressions and influencing purchasing decisions. However, much of the packaging used today, especially single-use plastic, contributes to serious environmental pollution problems.

In Indonesia, especially in the Tangerang City area, Micro, Small and Medium Enterprises are a very vital sector in the economy. However, Micro, Small and Medium Enterprises often face challenges in implementing sustainable practices, including in packaging design. Even though there is interest in switching to environmentally friendly packaging, many Micro, Small and Medium Enterprises are hampered by cost factors, lack of knowledge and accessibility of sustainable packaging materials.

This research aims to explore the application of environmentally friendly packaging design in Micro, Small and Medium Enterprises products in Tangerang City. By understanding the potential and challenges faced, it is hoped that strategic steps can be identified to encourage the adoption of more sustainable packaging. Through this research, it is hoped that Micro, Small and Medium Enterprises can increase their competitiveness while contributing to environmental preservation.

Overall, this research will explore various aspects related to the implementation of environmentally friendly packaging design, starting from the benefits, challenges faced, to practical recommendations for Micro, Small and Medium Enterprises in Tangerang.

Theme.

- a. Communication and Branding Approach

Subtheme.

- a. Application of Environmentally Friendly Packaging Design for Micro, Small and Medium Enterprise Products in Tangerang City

Literature review.

1. Environmentally Friendly Packaging Design Concept
 - a. Environmentally friendly packaging design refers to the practice of designing packaging that minimizes negative impacts on the environment. According to Lewis (2009), sustainable packaging must meet criteria such as the use of biodegradable materials, recycling and renewable resources and in the context of Micro, Small and Medium Enterprises, packaging design not only functions as product protection but also as a marketing tool that can attract consumer attention.
2. The Role of Packaging in Marketing
 - a. Packaging has an important role in marketing strategy. Kotler and Keller (2016) stated that attractive packaging can influence consumer purchasing decisions. In the era of environmental awareness, consumers are increasingly choosing products with sustainable packaging, so Micro, Small and Medium Enterprises need to consider this aspect to remain competitive.
3. Environmental Regulations and Policies
 - a. The Tangerang City Government has an important role in encouraging the use of environmentally friendly packaging through regulations and policies. There are several studies showing that incentives and support from the Tangerang City Government can encourage Micro, Small and Medium Enterprises to switch to more sustainable packaging designs (Sutrisno, 2020). In Tangerang City, policies such as reducing the use of single-use plastic have provided encouragement for Micro, Small and Medium Enterprises to look for better packaging alternatives.
4. Challenges in Implementing Environmentally Friendly Packaging Design
 - a. Even though there is interest in switching to environmentally friendly packaging, Micro, Small and Medium Enterprises often face various challenges, such as higher costs and a lack of knowledge about alternative packaging materials (Pratiwi, 2021), a study in Tangerang City shows that cost and accessibility of materials are a factor. The main obstacle for Micro, Small and Medium Enterprises in implementing sustainable packaging design.
5. Case Studies and Best Practices
 - a. Several Micro, Small and Medium Enterprises in various regions have succeeded in implementing environmentally friendly packaging designs, such as using recycled materials and innovation in design to reduce waste (Halim, 2022), these practices can be an inspiration for Micro, Small and Medium Enterprises in Tangerang to adopt similar strategies and raise awareness of the importance of sustainable packaging.

METHOD

This research design uses mixed methods which combines surveys and in-depth interviews. This approach allows for richer and in-depth data collection regarding the views and practices of Micro, Small and Medium Enterprises, while the research population and sample used are Micro, Small and Medium Enterprises in Tangerang City, and the sample was taken purposively by considering different types of businesses, such as food, crafts and beauty products. The targeted sample size is around 12 respondents from Micro, Small and Medium Enterprises for the survey and 12 Micro, Small and Medium Enterprises for interviews to obtain results.

HASIL DAN PEMBAHASAN

Overall, the application of environmentally friendly packaging design among Micro, Small and Medium Enterprises in Tangerang City still has a lot of room for development. With the right support, Micro, Small and Medium Enterprises can not only contribute to environmental sustainability, but also increase competitiveness in a market that increasingly prioritizes sustainability aspects, among others.

- A. Environmentally Friendly Packaging Raw Materials

The use of environmentally friendly packaging for food and snack products has now become an international trend. The idea of using environmentally friendly packaging has already developed in foreign circles. Environmentally friendly packaging for Micro, Small and Medium Enterprises as an opportunity to develop and follow this trend so as not to be left out in global competition. The use of environmentally friendly packaging is a necessity that must be implemented by every industrial player in Indonesia considering that currently the world is being filled with issues regarding the dangers of waste originating from product waste, especially plastic waste.

The development of environmentally friendly packaging carried out at the packaging house is the use of biodegradable plastic. Biodegradable plastic is made from natural polymers or what is usually called Polylactic Acid (PLA). Polylactic Acid (PLA) is produced through the fermentation process of sugar or starch by *Lactobacillus* into lactic acid which is then polymerized with the help of heat and a metal catalyst to become PLA. Polylactic Acid itself has heat resistant & strong properties, and is an elastic polymer. PLA Proceedings National Seminar provides alternatives and solutions to the problem of waste in the environment and also global warming that is happening now and there are several advantages of biodegradable plastic, that is.

1. Environmentally friendly packaging made from PLA will be much easier to biodegrade. So reducing the possibility of environmental pollution
2. Environmentally friendly packaging does not cause health problems (especially for food and cosmetic products) like plastic which is very dangerous for human health.
3. Products that implement an eco-friendly packaging system will become a differentiating value for your company among other companies (comparative advantage). It's just that biodegradable plastic (eco-friendly packaging) has a weakness, namely that the unit price is more expensive than ordinary plastic or styrofoam.

Due to the higher price of environmentally friendly packaging compared to ordinary materials, it is possible that the environmentally friendly packaging program in the Tangerang City environment will encounter few obstacles. To encourage the use of environmentally friendly packaging, this program needs encouragement from consumers and also the Tangerang City Government. For example, there is assistance from the Tangerang City Government to transform the use of environmentally friendly packaging by creating regulations that encourage business people to use this packaging. Meanwhile, from the consumer side, the support needed is our interest in buying more products that use environmentally friendly packaging.

Another alternative to using environmentally friendly packaging materials is handmade product packaging, namely by using natural packaging materials (bamboo, wood and rattan), by affixing an attractive label on one side. Products packaged using this material are food and beverage products, with middle to upper class consumer segmentation. In addition, products packaged in bamboo, wood and rattan are projected to become typical souvenir food/drink products for Tangerang City.

B. Design of environmentally friendly packaging raw materials

The use of environmentally friendly packaging for food and snack products has now become an international trend. The idea of using environmentally friendly packaging has already developed among the people of Tangerang City. especially Micro, Small and Medium Enterprise Businesspeople in Tangerang City, see this as an opportunity to develop and follow this trend so as not to be left out in business competition both traditional and global. More than that, Micro, Small and Medium Enterprise Packaging Product Businesses place packaging made from environmentally friendly materials as their Unique Selling Proposition (USP). Apart from that, Micro, Small and Medium Enterprise Businesspeople consider that the use of environmentally friendly packaging is a necessity that must be implemented by every industrial player in the City of Tangerang considering that currently society is busy with issues regarding the dangers of waste originating from product waste, especially plastic waste.

The development of environmentally friendly packaging carried out by Micro, Small and Medium Enterprises entrepreneurs is the use of biodegradable plastic. Biodegradable plastic is made from natural polymers or what is usually called Polylactic Acid (PLA). Polylactic Acid (PLA) is produced through the fermentation process of sugar or starch by *Lactobacillus* into lactic acid

which is then polymerized with the help of heat and a metal catalyst to become PLA. Polylactic Acid itself has heat resistant & strong properties, and is an elastic polymer. PLA provides an alternative and solution to the problem of waste in the environment and also the current global warming and there are several advantages to using biodegradable plastic.

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Due to the higher price of environmentally friendly packaging compared to ordinary materials, it is possible that the environmentally friendly packaging program for Micro, Small and Medium Enterprises Packaging Product Businesses will encounter few obstacles. To encourage the use of environmentally friendly packaging, this program needs encouragement from consumers and also the government. For example, there is assistance from the government to transform the use of environmentally friendly packaging by creating regulations that encourage business people to use this packaging. Meanwhile, from the consumer side, the support needed is our interest in buying more products that use environmentally friendly packaging.

C. Model of Environmentally Friendly Packaging Center for Micro, Small and Medium Enterprise Products

The concept of the Packaging House as a packaging information center, design consultation center and packaging services can help local Micro, Small and Medium Food Enterprises to be more discerning in developing their products. The Packaging House is a solution to the problems of packaging, packaging and product branding for Micro, Small and Medium Enterprises in processed food and drinks.

The packaging house's consumer targets are prioritized for Micro, Small and Medium Enterprises, in order to increase product competitiveness through good packaging. In carrying out services, the Packaging House must collaborate with the Tangerang City Government, especially the Department of Industry and Trade and the Tangerang City Cooperative Service through.

1. Packaging House Service Users

In accordance with the initial concept of establishment, the packaging house service is prioritized for Micro, Small and Medium Enterprises for processed food and beverage products. However, packaging houses can also provide packaging services and assistance for anyone who needs these services, including.

- a. Industry and business groups
- b. Aspiring entrepreneur
- c. Students as study material and internships

2. Products

Packaging covers the whole concept including direct packaging, outer parts, wrapping and others, and parts that all play a role in marketing and display. Packaging links the promotional support provided by manufacturers, displays, and the needs/desires of buyers. The function of packaging designed by Micro, Small and Medium Enterprises Businesspeople in Tangerang City is not just as a protector or container but also as a promotional tool for the products they package. The basics of packaging design consider various factors, namely safety factors, economic factors, distribution factors, communication factors, ergonomic factors, aesthetic factors, identity factors, promotional factors and environmental factors.

The attractiveness of packaging lies in the area of visual appeal and practical appeal. Visual appeal is the appearance of the packaging which includes graphic elements to create an impression, while practical appeal is the effectiveness and efficiency of a packaging aimed at consumers and distributors. In other words, the packaging products for Micro, Small and Medium Enterprise Businesspeople in Tangerang City are a combination of marketing and

design, which meet the criteria of stand out, contents, distinctive and suitable. Wherever possible, the packaging is made to appear attractive to attract the attention of potential consumers. For this reason, Micro, Small and Medium Business Entrepreneurs have a creative strategy which is the concept and application of packaging design based on data obtained from research results on all aspects of marketing to maximize visual appeal. After the creative strategy has been implemented, the work process can begin, including the application of visual elements that will be applied to the packaging page.

Figures and Tables.

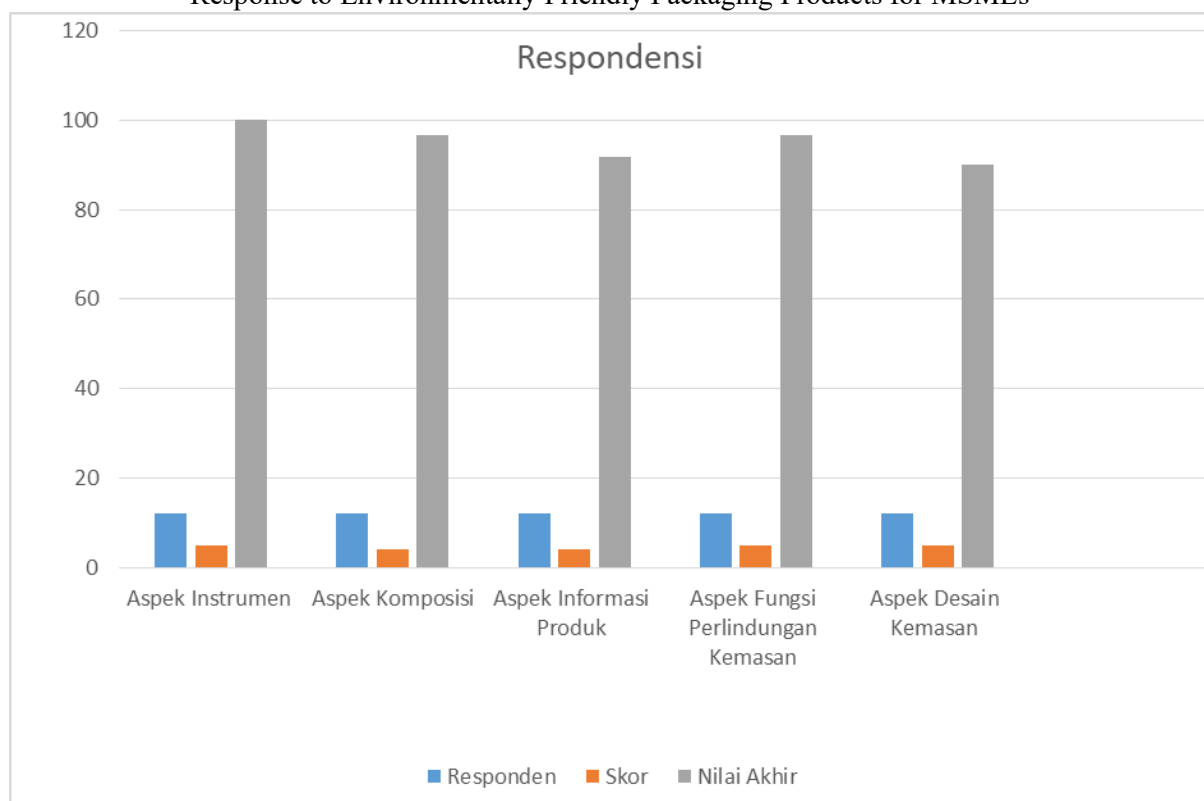
Based on the results of analysis by researchers, packaging not only functions to protect the product, but also acts as a marketing tool that attracts consumer attention, explains the product, and helps in making purchasing decisions. Creativity in packaging design continues to develop, creating uniqueness and function that represents the product inside, or becomes a unique selling proposition for an environmentally friendly packaging product for micro, small and medium enterprise products.

Table 1.
Eligibility Category for Environmentally Friendly Packaging Products for MSMEs

Numbers	Achievement Level	Qualification
1	81-100 %	Very Good
2	61-80 %	Good
3	41-60 %	Enough
4	21-40 %	Not enough
5	0-20 %	Not Good

The results of the validation test show that the results of designing the suitability of environmentally friendly packaging products for MSMEs are used with a total media validation assessment of 97.6% and a total researcher assessment of 92.8% which is included in the very good category according to the list of categories above.

Table. 2
Response to Environmentally Friendly Packaging Products for MSMEs



1. On the visual display questionnaire instrument, 100% of the 12 respondents gave a score of 5 which means "Very Good" with the calculation results using a fixed formula of 100% so that they are included in the "Very Good" qualification in the eligibility table
2. The color composition aspect received 83% a score of 5 which means "Very Good" and 16.7% a score of 4 which means "Good" from a total of 12 respondents with a total score of 96.7% which is included in the "Very Good" qualification.
3. The product information aspect received 58% a score of 5 which means "Very Good" and 41% a score of 4 which means "Good" from a total of 12 respondents with a final score of 91.7%. So that the clarity of product information on the packaging is included in the "Very Good" qualification.
4. The packaging protection function aspect received 83% score of 5 which means "Very Good" and 16.7% score of 4 which means "Good" from a total of 12 respondents with the final score after calculating using the formula being 96.7% so it is included in the qualification "Very Good" in the eligibility table.
5. The influence of packaging design on interest in purchasing products received 83.3% a score of 5 which means "Very Good", 8.3% a score of 4 which means "Good" and 8.3% a score of 3 which means "Fair" out of a total of 12 respondents. The final score is 90% and falls into the "Excellent" qualification according to the eligibility table

Table. 3
Sketches of Environmentally Friendly Packaging Products for MSMEs



This is a frame and net for box nets as well as sketches for supporting media for environmentally friendly packaging for micro, small and medium businesses. Generating ideas for shapes is done by making sketches from various sides and drawings of box nets. At this stage, the size and details of each material used are also determined. Starting from the size of the Gray Board to the size of the overall cover to the size of the packaging support.

Conclusion.

The conclusion obtained is that through the application of environmentally friendly packaging design in Micro, Small and Medium Enterprises products in Tangerang City, it shows significant potential to increase competitiveness and support environmental sustainability. Based on this research, there are several important points that can be concluded, that is.

1. MSME players in Tangerang show increased awareness of the importance of environmentally friendly packaging. However, implementation is still hampered by various factors, such as cost and accessibility of materials.
2. Adopting sustainable packaging not only helps reduce negative impacts on the environment, but can also improve brand image and attract consumers who care about environmental issues.
3. Micro, Small and Medium Enterprises face various challenges in implementing environmentally friendly packaging designs, including a lack of knowledge about alternative materials and limited capital. Support from the government and related institutions is very necessary to overcome this problem.
4. Collaborative efforts are needed between the government, educational institutions and the business community to provide training and information regarding environmentally friendly packaging design. Developing partnerships with sustainable packaging material providers is also very important.
5. With increasing consumer awareness of sustainability, Micro, Small and Medium Enterprises that adapt to environmentally friendly packaging designs have a great opportunity to develop and compete in the market.

Overall, this research emphasizes the importance of environmentally friendly packaging design as part of the business strategy of Micro, Small and Medium Enterprises in Tangerang City. With the right support, Micro, Small and Medium Enterprises can contribute to environmental preservation while increasing the sustainability of their businesses.

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1. Chancellor of Yatsi Madani University
2. Deputy Chancellor 1 of Yatsi Madani University
3. Dean of Yatsi Madani University
4. Head of the Entrepreneurship Learning at Yatsi Madani University
5. Lecturer in the Entrepreneurship Learning at Yatsi Madani University
6. Tangerang City Micro and Medium Enterprises Group

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