

Article

Implementation Strategies for Green Products and Green Packaging for Tourism MSMEs to Support the SDGs

Sumarmi Sumarmi ^{1,*}, Yosini Deliana ², Andi Dirpan ³, Eli Hendrik Sanjaya ⁴, Umar Haiyat Abdul Kohar ⁵

¹ Geography Department, Faculty of Social Science, Malang State University, Malang 65145, Indonesia

² Agricultural Economics, Faculty of Agriculture, Padjajaran University, Bandung 45363, Indonesia; y.deliana@unpad.ac.id (YD)

³ Food Science and Technology, Faculty of Agriculture, Hasanuddin University, Makasar 90245, Indonesia; dirpan@unhas.ac.id (AD)

⁴ Department of Chemistry, Faculty of Mathematics and Natural Sciences, Malang State University, Malang 65145, Indonesia; eli.hendrik.fmipa@um.ac.id (EHS)

⁵ Faculty of Management, University of Technology Malaysia (UTM), Johor Bahru 81310, Malaysia; umarhaiyat@utm.my (UHAK)

* Correspondence: Sumarmi Sumarmi, Email: sumarmi.fis@um.ac.id.

ABSTRACT

Background: Green packaging represents a viable solution to address environmental issues, contributing to the creation of a quality living environment. This study aimed to: (1) identify potential forms of green products and green packaging; (2) examine the driving factors, constraints, opportunities, and challenges associated with the use of green products and green packaging in tourism SMEs; and (3) develop strategies for the implementation of green products and green packaging in tourism SMEs to support the SDGs.

Methods: This study employs a mixed-methods research design. Primary data collection was carried out through field observations at tourism SMEs in East Java. Data analysis was using SWOT analysis.

Results: The findings indicate (1) Green products and green packaging have significant potential and the materials used are largely derived from local natural resources. (2) Strengths include the use of local materials. Weaknesses involve the ongoing need for innovation. Opportunities arise from the potential of higher prices due to increasing environmental awareness and the potential for export due to the unique cultural products. Threats include the need for continuous branding to enhance product recognition. (3) Strategies for implementing green products and green packaging in tourism SMEs to support the SDGs include socialization, education, guidance, and supportive government policies.

Conclusions: This study is an important step in implementing a green product and green packaging strategy in Tourism MSMEs to support SDGs through socialization, education, and government policies. In addition, the

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implications can provide important references for decision makers to implement green product and green packaging strategies in Tourism MSMEs and support SDGs.

KEYWORDS: green product; green packaging; SMEs; SDGs; tourism

INTRODUCTION

In recent years, exactly 3 years ago consumerism-related environmental issues have become a significant global concern. On a global scale, the linear economic paradigm and excessive consumption have led to substantial environmental problems, including in Indonesia [1–4]. Substantial environmental problems resulting from excessive consumption have an impact on the problems of plastic waste [5], microplastics [6], textile waste [7], soil pollution [8] and water pollution [9]. Plastic is a material that is widely used by the community as packaging, construction, and electronics. Excessive use of plastic results in piles of plastic waste. This is in line with the problem of microplastics that are currently widely found in rivers as a result of excessive consumption [10]. Furthermore, there are findings that excessive consumption can also result in soil and water pollution caused by organic and inorganic waste [11]. The linear economic paradigm, characterized by a take-make-dispose cycle, has been increasingly scrutinized for its role in environmental degradation, particularly within the tourism sector [12].

The tourism sector heavily supports economic growth in Indonesia. This sector is crucial as it accelerates regional economic growth. The Indonesian government promotes tourism development with the expectation that it will significantly boost economic growth and enhance public welfare [13]. However, the impact of tourism development extends beyond economic aspects to environmental concerns, including waste generation [14,15]. There are findings in previous studies that waste production has increased due to the impact of tourism development [16]. In this case, it will cause environmental problems that occur around the tourism environment, such as piles of plastic waste and food waste [17]. Piles of waste in the tourism environment consist of plastic waste, beverage cans, styrofoam, food wrappers, and leftover food. Piles of waste will cause environmental problems, such as air pollution, and the spread of disease in the tourism environment [18]. The issue of environmental degradation has heightened public awareness of the importance of preserving the environment, especially in the tourism sector.

Indonesia is the second-largest producer of waste globally, following China. Annually, it generates 17,441 tons of waste, of which only 11,113 tons (66.12%) are managed. Despite efforts, waste reduction remains minimal at 2787 tons per year, or 15.98% [19]. This increase in waste volume comes from households, MSMEs, industries, and hospitals, with tourism MSMEs being a significant contributor. If waste reduction

continues to be insufficient, waste will continue to rise, potentially leading to environmental disasters [20].

This concern has spurred a shift in public behavior, leading people to pay more attention to sustainable growth [3] and adopt environmentally conscious behaviors [21]. One form of this behavioral change in MSMEs, particularly in the tourism sector, is product packaging.

Green packaging represents an innovation aimed at fostering environmental sustainability [3,22]. The business world, especially MSMEs, has started offering green packaging products by eliminating, reusing, or applying material circulation [23,24]. Environmentally friendly packaging is crucial for environmental sustainability [25,26]. This is in line with previous research findings that green packaging can reduce the impact of plastic bottle use, reduce carbon footprints, and support a circular economy [27]. In addition, green packaging is very important for environmental sustainability because it can be recycled and is made from ecological materials. Furthermore, green packaging is proven to be safe for human health and the environment [28]. This is in line with the findings of previous studies that green packaging has three main identities, namely minimizing the use of packaging that is difficult to decompose, using low energy consumption and using environmentally friendly packaging [29]. Packaging is a key component in MSME products, used to preserve, protect, and market products during storage, transportation, and processing [30,31].

Packaging issues are frequently encountered by the food industry, which is one of the largest contributors to environmental pollution due to packaging [32,33]. The packaging used, mostly plastic, for consumed products eventually becomes plastic waste, significantly impacting the environment. As a result of these identified environmental issues, sustainable development has become a major topic in academic and business discussions [34]. Research on green products and green packaging increasingly focuses on sustainable development, with studies such as [35] forming quantitative frameworks for selecting appropriate packaging procedures for agricultural materials to improve overall packaging efficiency. Furthermore, data-based modeling developed by [35] allows for the optimization of sustainable packaging efficiency in dynamic processes aligned with ecological, social, and aesthetic rules to enhance sustainability in packaging operations.

Other research, such as [36], identifies socio-demographic variables such as gender, education, and income as significant factors influencing Gen Z's intention to purchase environmentally friendly packaged beverages. These variables play a crucial role in shaping consumer behavior and attitudes toward sustainable products. Previous studies strongly support how technology and socio-demographic variables impact sustainable development [35,36]. Technological developments will affect sustainable development in the production and marketing of green products and green packaging [37]. The production of green products and

green packaging by utilizing technological developments can increase time efficiency and increase production volumes [38]. Furthermore, technological developments applied to product marketing can affect sales levels, for example marketing through e-commerce [39]. In addition, socio-demographics will affect the purchase of green products and green packaging [40]. This is in line with findings in previous studies that socio-demographics have an impact on awareness of purchasing green products [41]. Socio-demographics also affect consumer behavior in purchasing green products [42]. This research differs from previous studies by focusing on MSME operators, specifically in the tourism sector. This study aims to formulate strategies for implementing green products and green packaging by identifying MSME operators in the tourism sector.

LITERATURE REVIEW

Environmental issues have led to increased demand and concern for green products [43]. Green products are considered those that have a positive and conducive impact on the environment [44,45]. This aligns with previous research findings that green products are developed due to their lower negative environmental impact [46,47]. Green products are made from recycled materials and produced using energy-efficient methods [48,49]. Green Products made from recycled materials such as recycled cardboard or paper, wood waste and unused bamboo waste. The use of recycled materials is proven to be environmentally friendly [50]. Furthermore, Green Products made using recycled materials as a reinforcement of sustainable environmental development [51]. In addition, there are findings in previous studies that green products can be made using renewable resources such as bamboo, wood, and bioplastics [52]. The production process of green products is not only through energy-saving methods, but can also use Clean Production Technology and recycling methods [53]. The manufacture of green products can also be supported by sophisticated technological tools to increase production volume and time efficiency. Environmentally friendly products are also designed to avoid harming ecological environments such as water, soil, and air during production and consumption [48].

A green product is an effort to minimize waste from production processes while maximizing environmentally friendly product creation [45]. Green products are environmentally conscious items created and processed based on practices aimed at reducing negative environmental impacts throughout production, distribution, and usage [54,55]. Environmentally friendly products must meet acceptable environmental standards, including recyclable packaging, advanced pollution control techniques, and energy efficiency in production [56]. In summary, green products do not use harmful materials and do not pose environmental risks from production to usage.

Green packaging has emerged as an innovative concept attracting significant attention from researchers and industry practitioners [35].

Green packaging is crucial for reducing waste and pollution impacts [57] because it uses recyclable and ecological materials. This approach aims to achieve effective packaging while considering consumer safety, human health, and minimal environmental impact. Additionally, green packaging production employs environmentally friendly and resource-efficient technologies [58]. Green products and green packaging can be integrated with digitalization [59]. The issue of technological development can be the main focus of marketing and production of green products and green packaging [60]. The combination of globalization and digitalization has resulted in transformative changes. This is related to digitalization in the tourism business [61]. Three features characterize green packaging: minimizing the use of non-biodegradable packaging, using energy-efficient packaging, and utilizing environmentally friendly materials [58]. The strategy of implementing green products and green packaging in tourism can support the implementation of sustainable development in green tourism [62].

MATERIALS AND METHODS

This study was conducted in four regions: Banyuwangi Regency, Pamekasan Regency, Malang City, and Batu City, East Java Province, Indonesia. These locations were chosen because they are rich in tourist destinations, each with its unique characteristics. In the research design using mixed methods. This study uses a combination method that combines qualitative and quantitative approaches [63]. Combining qualitative and quantitative methods in research is considered so that data can be confirmed widely, valid and highly reliable [64]. In this study, the design used is Exploratory Sequential Design which has 2 phases. The first phase begins with qualitative techniques which are the main interpretation priority, the second phase is continued with quantitative techniques as confirmatory [65].

The study employed a mixed-method design involving collecting both primary and secondary data. This study uses primary data collection by conducting observations, interviews and documentation. The first primary data is observation, recording, then compiling it into a report explaining the findings that are the basis or topic of the research. The second primary data is conducting interviews regarding green products and green packaging for Tourism MSMEs in East Java. The third primary data is conducting documentation using cameras, drones, and image data in the form of photos or maps. Furthermore, regarding secondary data, the researcher conducted a literature study on green products and green packaging.

The first study used a descriptive qualitative approach, by identifying the demographic characteristics of MSME entrepreneurs in the tourism sector in East Java. The second study conducted a descriptive qualitative analysis, by identifying the potential forms of green products and green packaging that can be applied to tourism MSMEs in East Java. The third

study conducted a quantitative analysis, through a SWOT analysis to evaluate the factors influencing the adoption of green products and packaging. SWOT analysis, in a quantitative approach, aims to accurately calculate and develop reconstruction and education models [66–69]. The research locations are illustrated in Figure 1.

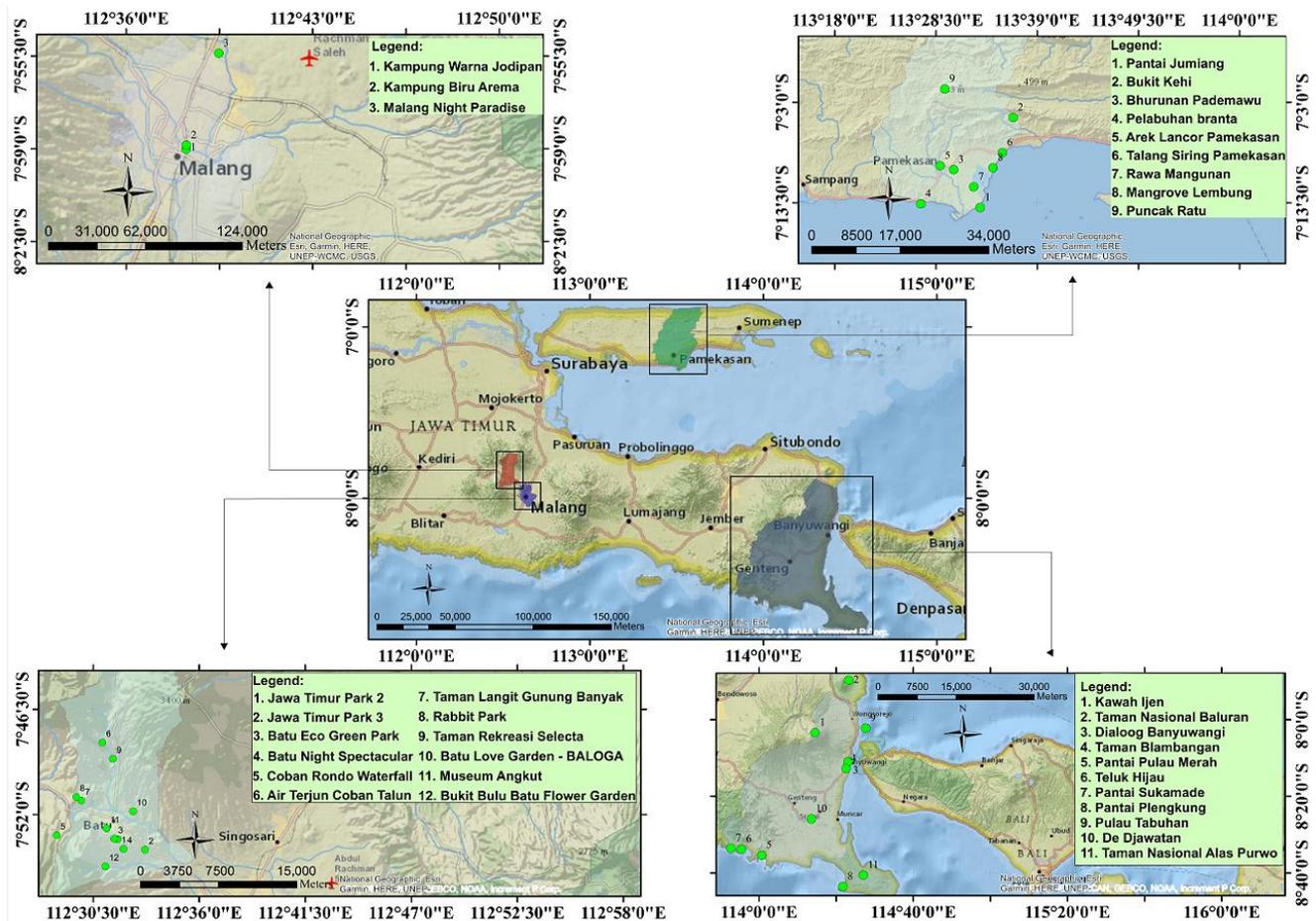


Figure 1. The Map of the study sites.

The subjects of this study were selected using purposive sampling, which involves establishing specific criteria that serve as limits for the informants involved. According to the set criteria, the subjects of this study were MSME entrepreneurs in tourist areas of Banyuwangi Regency, Pamekasan Regency, Malang City, and Batu City. The number of respondents in this study is detailed in Table 1.

Table 1. Number of respondents at the study.

No.	Region	Total
1	Pamekasan	21
2	Batu City	25
3	Banyuwangi	25
4	Malang City	29
Total Number of Respondents		100

The data collection methods used in this study included quantitative data collection through questionnaires to gain insights into the knowledge of tourism MSME operators regarding green products and green packaging-qualitative data collection involved observations, interviews, and documentation. In-depth interviews were conducted with MSME managers handling green products and consumers.

The data related to tourism MSME were analyzed using descriptive analysis employing SWOT (Strengths, Weaknesses, Opportunities, and Threats). This SWOT analysis included (1) identifying key factors (green products and green packaging implemented by MSMEs) and (2) evaluating the Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS) [70]. The weighting of each factor was derived from interviews with tourism MSME entrepreneurs producing green products and green packaging. The results of this evaluation were then classified according to SWOT quadrants, allowing for the identification of the most effective strategies for implementing green products and green packaging in tourism MSMEs to enhance support for the Sustainable Development Goals (SDGs).

Quantitative analysis in this study utilized SWOT to support strategic decision-making, particularly for environmental management [69,71]. Additionally, SWOT analysis helps prioritize sustainable development goals based on stakeholder knowledge. This approach examines strengths, weaknesses, opportunities, and threats, providing stakeholders with insights useful in the decision-making process. The structural SWOT model aids in formulating organizational strategies for developing reconstruction models, as illustrated in Table 2.

Table 2. SWOT matrix.

SWOT Analysis		Internal Audit	
		Strengths	Weakness
External Audit	Opportunities	SO	WO
	Threats	ST	WT

Source: [69].

In this study, social data are derived from qualitative interviews analyzed using the interactive model of Miles and Huberman [72], which includes the following steps: (1) Data Collection, (2) Data Reduction, (3) Data Display, and (4) Conclusion Drawing and Verification. Data analysis in this research involves both qualitative and quantitative methods. The qualitative analysis follows the procedures outlined by [73] which include (1) transcribing all data as part of data processing and preparation, (2) reading and inputting all collected data, (3) reducing data by selecting, simplifying, abstracting, and transforming it, (4) evaluating the activities of tourism MSME entrepreneurs related to green packaging and green

products, (5) exploring directions related to green packaging and green products in tourism MSMEs based on deeper coding categories, and (6) identifying distinctive and interesting aspects to draw conclusions.

RESULTS

Demographic Characteristics of Tourism MSMEs

The characteristics of tourism MSME entrepreneurs in the four cities varied significantly. They had diverse backgrounds in terms of education level, business field, and age. Identifying these entrepreneurs is essential for reviewing green packaging policy strategies. Figure 2 illustrates the demographic characteristics of tourism MSME entrepreneurs by education level.



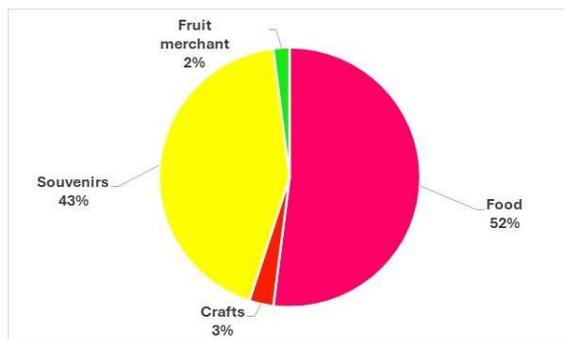
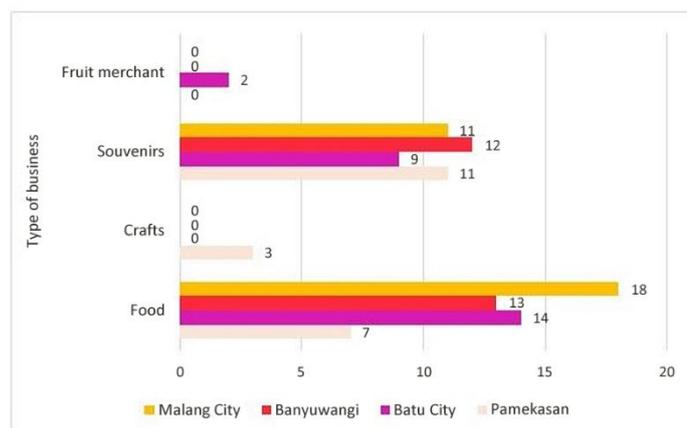
Figure 2. Tourism MSME business entrepreneurs based on education levels.

Figure 2 shows that the majority of MSME entrepreneurs (58 respondents) have completed Senior High School (SMA). This is followed by those with a Bachelor's degree (S1) (32 respondents), Junior High School (SMP) (6 respondents), Diploma 3 (3 respondents), and a Master's degree (1 respondent). Educational background serves as a differentiator among them in terms of green products and green packaging since it positively impacts the marketing of eco-friendly products and the utilization of green marketing mix to achieve business profitability [74]. Additionally, education helps in informing, raising awareness, educating, and changing consumer behavior [75]. The educational level also influences the tourism MSMEs in doing their business, as detailed in Table 3.

Table 3. MSMEs Based on Business.

Region	Type of Business				Total
	Food and Beverages	Crafts	Souvenirs	Fruit Merchant	
Pamekasan	7	3	11	0	21
Batu City	14	0	9	2	25
Banyuwangi	13	0	12	0	25
Malang City	18	0	11	0	29
Total Frequency	52	3	43	2	100

Based on the data from tourism MSME respondents, the most common type of business is food and beverages, accounting for 52%, followed by souvenirs at 43%, crafts at 3%, and fruit vendors at 2%. The dominance of the food and beverage sector indicates its significant contribution to the community. The types of businesses operated by tourism MSMEs are illustrated in Figure 3, and the distribution of these business types in each city is shown in Figure 4.

**Figure 3.** MSMEs based by business.**Figure 4.** Distribution of business types in tourism MSMEs.

According to [76] and [77], the food and beverage industry is a major contributor to the growth of economies globally. In the European Union, this sector is the largest manufacturing sector in terms of revenue, value-

added, and employment [77]. However, this sector is also associated with various environmental issues, including high water consumption and wastewater production. Consistent with this research, tourism MSMEs, particularly those in the food and beverage sector, contribute significantly to waste generation, highlighting the need for innovations in green products and green packaging. Therefore, there is a critical need for tourism MSMEs to adopt green products and green packaging practices to ensure sustainable preservation. The age of the MSME entrepreneurs also influences the effectiveness of green products and green packaging innovations. The characteristics of tourism MSME entrepreneurs can be seen in Table 4.

Table 4. Age of tourism MSME entrepreneurs.

Region	Age			
	20–30 years	30–40 years	40–50 years	50–60 years
Pamekasan	4	7	7	3
Kota Batu	7	10	4	3
Banyuwangi	4	2	13	7
Kota Malang	6	8	8	7
Total	21	27	32	20

Table 4 shows that the majority of MSME entrepreneurs are between 40–50 years (32%), followed by those 30–40 years (27%), 20–30 years (21%), and 50–60 years (20%). The highest ratio of entrepreneurs falls within the 20–30 years age range. Younger entrepreneurs have significant potential for innovation in green products and green packaging. Their advantages include better adaptation to technology, creativity, environmental awareness, and access to information, which foster continuous innovation in environmentally friendly business practices [35,57]. Young entrepreneurs are generally more adept at innovating sustainable products and packaging and are quicker to receive education on creating attractive, sustainable products [78,79]. The detailed age distribution of tourism MSME entrepreneurs is shown in Figure 5.

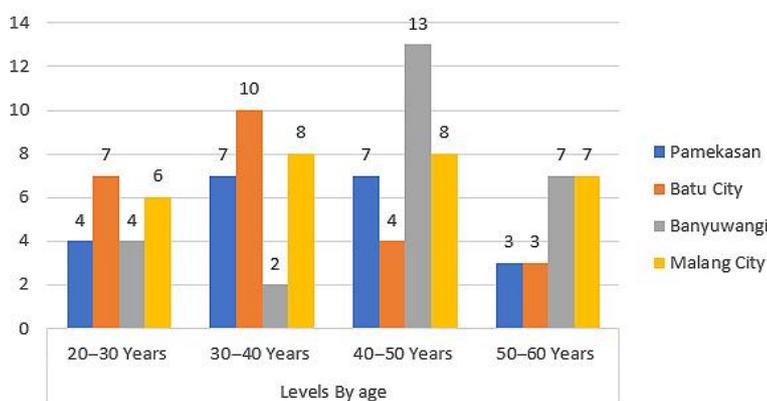


Figure 5. The detailed age distribution of tourism MSME entrepreneurs.

Potential Green Products and Green Packaging for Tourism MSMEs in East Java

Tourism activities are often associated with food, beverages, souvenirs, and other items. Tourists seek uniqueness in their experiences, including local food, drinks, and souvenirs. Figure 6 illustrates examples of green products and food packaging.



Figure 6. Green products and food packaging. (a) Coffee packaged in reusable paper packaging; (b) Woven bamboo as a place for rice; (c) Lamp holder from natural wood; (d) Straws made of bamboo; (e) Paper wrap for dark chocolate.

According to the collected data, respondents recommended the following green products and packaging options: (1) paper bags, (2) replacing plastic straws with edible starch straws or reusable metal straws, (3) using packaging materials such as corrugated cardboard, woven bamboo (besek), reusable food containers, paper, banana leaves, lontar leaves, and tepus leaves. These materials are natural, food-grade, sturdy, water-resistant, and reusable. All these products and packaging options are expected to be environmentally friendly to reduce waste.

Factors Affecting the Strengths, Weaknesses, Opportunities, and Threats of Green Products and Green Packaging

The factors influencing the strengths, weaknesses, opportunities, and threats of using green products and green packaging are detailed in Table 5. Data collected through questionnaires were analyzed using SWOT analysis. The SWOT analysis identifies potential strengths, weaknesses, opportunities, and threats in the tourism sector [66]. The results of the SWOT analysis are presented in Table 5. The IFAS and EFAS matrices are

assessed based on the criteria shown in Table 5. Subsequently, the quadrant for the green products and packaging is determined by the x and y values. The x value of 6.9 is derived from internal factors by subtracting the weakness score (W) from the strength score (S). The y value of 4.4 is obtained from external factors by subtracting the threat score (T) from the opportunity score (O). Therefore, Quadrant I is represented based on the values of 6.9 (x) and 4.4 (y), indicating that tourism MSME entrepreneurs can further develop green products and green packaging. The SWOT analysis results are shown in Table 5, and the quadrant is illustrated in Figure 7.

Table 5. Internal factors (IFAS) and external factors (EFAS).

Internal Factors (IFAS)				
Strengths (S)		Weight	Rating	Score
1	It is important to produce goods with environmentally friendly packaging (green packaging)	0.4	4	1.6
2	Green packaging significantly reduces plastic waste	0.3	3	0.9
3	It is good to produce goods in reusable packaging	0.3	3	0.9
4	Green packaging made from local materials has high-quality	0.3	4	1.2
5	It is interesting to use green packaging from recycled materials	0.3	2	0.6
6	It is important to educate others to produce and use green packaging	0.3	3	0.9
7	It is interesting to reuse goods as crafts for green packaging	0.3	3	0.9
8	Green packaging has made selling prices higher	0.3	2	0.6
9	Products sold in green packaging have lower production costs and are more efficient	0.2	3	0.6
10	Green packaging helps industries to have a better image	0.3	3	0.9
11	Green packaging leads to faster production time	0.2	4	0.8
12	As environmental awareness rises, green packaging now becomes the best choice	0.3	3	0.9
13	Leading environmental organizations support products with green packaging	0.2	3	0.6
14	Green packaging helps to reduce negative impacts on the environment and human health	0.3	3	0.9
15	Businesses that use green packaging can attract the international market with innovative products	0.3	2	0.6
16	Green packaging leads to a more affordable price for customers	0.2	3	0.6
Total				13.5

Table 5. Cont.

Internal Factors (IFAS)				
Weaknesses (W)		Weight	Rating	Score
1	Products with green packaging tend to be less marketable	0.4	2	0.8
2	Products with green packaging tend to be less visually appealing to customers	0.3	2	0.6
3	Products with green packaging tend to be less durable	0.3	3	0.9
4	Products with green packaging are not yet well-known in the market, so sales tend to be low	0.3	3	0.9
5	Customers do not really trust the quality of green packaging	0.3	3	0.9
6	Products with green packaging tend to be more expensive than products with regular packaging because the packaging materials are expensive	0.3	2	0.6
7	Products with green packaging have limited choices	0.3	2	0.6
8	Green packaging designs tend to be less attractive	0.3	3	0.9
9	Environmentally friendly packages cannot be stacked properly, making storage more challenging	0.2	2	0.4
Total				6.6
X = Strengths - Weaknesses				6.9
External Factors (EFAS)				
Opportunities (O)		Weight	Rating	Score
1	There is increasing government support for products with green packaging	0.3	4	1.2
2	Many new technological developments support more efficient green packaging production	0.3	4	1.2
3	Products that use green packaging have many opportunities to get grants and assistance from government and non-government institutions	0.3	3	0.9
4	Green packaging is an attractive branding so that goods are easy to sell to domestic or foreign tourists	0.1	4	0.4
5	Products with green packaging have a great opportunity to be exported with higher value	0.1	3	0.3
6	It is very important to educate other MSMEs to use green packaging to avoid plastic waste	0.3	3	0.9
7	Raw materials for green packaging are cheaper	0.3	3	0.9
8	Products with recycled cardboard as green packaging are more popular because they are environmentally friendly	0.3	3	0.9
9	It opens many collaboration opportunities with other MSMEs that also produce green packaging to improve branding further	0.3	3	0.9
10	Products with green packaging are very profitable because of few competitors	0.3	2	0.6
11	Products with green packaging have high export opportunities due to limited production	0.2	4	0.8
Total				9

Table 5. Cont.

External Factors (EFAS)				
Threats (T)		Weight	Rating	Score
1	Raw materials for making green packaging are difficult to obtain	0.4	3	1.2
2	Many people do not yet have knowledge and awareness of protecting the environment	0.3	2	0.6
3	Many business people do not care about making products with easy-to-recycle packaging	0.3	3	0.9
4	New competitors using green packaging for their products start to appear	0.3	3	0.9
5	Changes in consumer attitudes that are inconsistent toward products with green packaging	0.2	3	0.6
6	There are more innovative business people when it comes to using green packaging	0.2	2	0.4
Total				4.6
Y = Opportunities – Threats				4.4

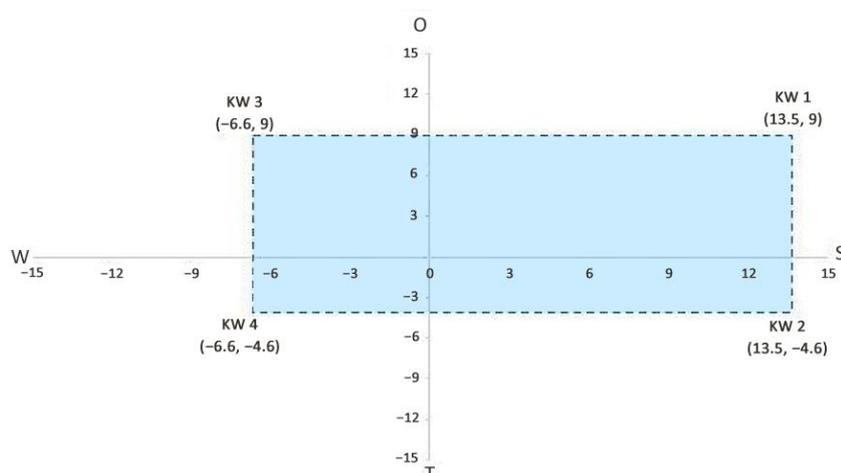


Figure 7. SWOT quadrants of green packaging. Note: KW 1: Progressive; KW 2: Diversification strategy; KW 3: Change strategy; KW 4: Survival strategy.

Based on the findings of the study, Quadrant 1 (Progressive) represents the most favorable situation. Being in Quadrant 1 indicates that tourism MSMEs have strong opportunities and strengths in developing green products and green packaging. In this scenario, the strategy should focus on supporting government policies and increasing environmental awareness. It is recommended to have an aggressive strategy that is oriented towards growth, taking advantage of the positive response from the community and tourists, as well as the internal strengths possessed by MSMEs. In addition, the policy in Quadrant 3, covers related to making attractive green packaging designs for MSMEs because current technological developments are very supportive to develop designs according to the needs of the times. Meanwhile, the policy in quadrant 2,

public awareness related to green packaging products is increasingly having a good impact on the environment, so it is necessary to make it easier to obtain raw materials for green packaging. Finally, for the Quadrant 4 policy, MSME actors must start getting acquainted with green packaging manufacturing technology by participating in training related to green packaging.

Strategy for Implementing Green Products and Green Packaging in Tourism MSMEs to Support the SDGs

From the SWOT analysis, tourism MSMEs in East Java, specifically in Banyuwangi Regency, Pamekasan Regency, Malang City, and Batu City, fall into Quadrant 1 (Progressive). Continuous improvements are necessary to develop businesses further with green products and green packaging. Based on interviews with tourism MSME entrepreneurs in East Java, the implementation strategies for green products and green packaging can be explained in Table 6.

Table 6. Results of interviews with MSME entrepreneurs regarding the implementation of green products and green packaging.

MSME Entrepreneurs Agreed on Green Product and Green Packaging

1. Waste Reduction: Green packaging helps in reducing waste accumulation.
 2. Product Quality and Longevity: Green packaging can maintain product quality and longevity without increasing waste.
 3. Support for MSMEs: Green packaging is beneficial for MSMEs as it reduces waste, particularly plastic waste.
 4. Consumer Appeal: Green packaging has significant prospects due to its waste-reducing properties and its ability to attract environmentally conscious consumers.
 5. Economic Value: Green packaging offers considerable economic benefits by reducing waste and environmental damage while providing high economic value to MSME entrepreneurs.
 6. Export and Sales Potential: Green packaging can enhance export opportunities and sales, as consumers are often attracted to unique, eco-friendly products.
 7. Recycled Packaging: The use of recycled packaging is advantageous in attracting environmentally conscious consumers.
 8. Overall Benefits: Green packaging is effective in reducing waste and appealing to consumers.
 9. Economic and Environmental Gains: Green packaging is advantageous for producers, although it requires support and the provision of raw materials.
 10. Cost Efficiency: Green packaging reduces waste and raw material costs as these materials can be sourced from the local environment.
 11. Reduction of Single-Use Plastics: Green packaging helps in minimizing single-use plastic waste.
 12. Decrease in Waste Incineration: Green packaging contributes to reduced waste incineration.
 13. Competitive Branding: MSMEs can leverage branding with green products and packaging as a competitive business tool.
-

Table 6. Cont.

MSME Entrepreneurs Disagreed on Green Product and Green Packaging

1. Product Protection: Continuing to use plastic may be preferred to avoid product damage.
 2. Cost Implications: Bamboo baskets and wooden crates are more expensive, which could increase the selling price of goods.
 3. Hygiene Concerns: Some people may prefer plastic bottles for beverage products to ensure hygiene.
-

Recommended strategies for green products and green packaging by tourism MSME entrepreneurs:

- 1) Use environmentally friendly paper bags: Adopting paper bags as an alternative to plastic bags helps reduce environmental impact.
- 2) Replace plastic straws: To minimize waste, transition to edible straws made from flour or reusable metal straws.
- 3) Adopt eco-friendly packaging: Utilize packaging materials such as cardboard, woven baskets, food containers, paper wrappers, banana leaves, lontar leaves, and tepus leaves. These materials are natural, food-grade, sturdy, water-resistant, and reusable.
- 4) Implement reusable packaging and bags: Encourage the use of packaging and bags that can be reused multiple times.
- 5) Leverage green packaging for branding: Home industries and MSMEs should use green packaging for branding purposes to enhance sales.
- 6) Foster innovation to reduce waste: Tourism MSMEs need to focus on innovation to minimize waste generation.
- 7) Raise awareness among MSME entrepreneurs: Tourism MSME entrepreneurs must be aware of green products and green packaging.
- 8) Government support: The government should conduct outreach, provide education, and offer guidance to tourism MSME entrepreneurs on adopting green products and packaging and reducing plastic use.
- 9) Minimize plastic use: Shift towards recyclable packaging to reduce reliance on plastic.
- 10) The community, especially MSMEs, need to carry out sustainable brand management for green products and green packaging to accommodate food items.
- 11) Socialization needs to be carried out to behave in sustainable consumption, purchase environmentally conscious products and choose healthy foods.

DISCUSSION

Sustainable economic development is vital for driving economic growth in Indonesia. The tourism sector plays a significant role as a catalyst for economic expansion in the country [80]. Tourism is one of the important elements in developing the world economy, as proven by research in Portugal that cases of economic crisis disappeared by implementing tourism as the main source of the economy [81]. In addition,

tourism is also one of the main sources of income for developed and developing countries, it is proven that tourism in Pakistan significantly increases gross domestic product (GDP) by 0.051%, foreign direct investment by 2.647%, energy development by 0.134%, and agricultural development by 0.26%, and reduces poverty by 0.51% [82]. There are previous findings stating that tourism plays a major role in improving the country's economy, which is proven by the fact that the number of tourist arrivals in Saudi Arabia has a strong relationship with economic growth [83]. A study on research findings conducted by Turner and Freiermuth that tourism is the strongest pillar for sustainable development for the economies of developed and developing countries [84].

Tourism-related MSMEs are key contributors to economic development and can lead to increased local revenue [85]. This is in line with the findings of this study, that in Banyuwangi Regency, with the establishment of the Banyuwangi Hijau branding, much ecotourism has been developed, including tourist souvenirs from Banyuwangi which are Green Products and Green Packaging, this has a very significant economic impact on the Banyuwangi community. Batu City is branded as an Agrotourism City, so that many MSMEs are developing which are engaged in selling agricultural products such as apples, oranges, strawberries, various vegetables and flowers that can be managed and sold as tourist souvenirs. Furthermore, there are efforts to get high selling value, Tourism MSMEs package it with attractive and unique Green Packaging. Malang City with the branding of Malang Beautiful, many Tourism MSMEs are developing related to Malangan batik, Malangan Masks, various processed products from Sanan tempeh and many more related to heritage tourism that showcase the beauty of Malang City. Pamekasan City with Batik City Branding. The Pamekasan City Trade and Tourism Office built a Batik Area in Pamekasan City, which is occupied by MSMEs that make batik in the form of hand-drawn batik, printed batik, or ecoprint, with directions to use Green Packaging.

To support the branding of each city, many policies have been taken by the local government and many have encouraged tourism UMKM actors to develop well and be able to improve the community's economy. This in turn will lead to an increase in Regional Original Income (PAD). Tourists engage in shopping activities generate direct demand for goods and services, which in turn creates indirect demand for various other goods and services. To meet this demand, investment in transportation, communication, hospitality, accommodation, crafts, consumer goods industries, service industries, and dining establishments is essential [4]. In this case it is said to be important because it can improve the economy. There are findings in previous research that economic growth will have an impact on income to carry out development which can be proven through the equal distribution of infrastructure development, such as roads, bridges, hospitals and educational facilities [86]. Therefore, the main focus is on improving the economy through marketing strategies for

goods and services as a means of strengthening sustainable economic development.

A well-planned marketing strategy for goods and services is crucial to introduce new packaging to consumers. This is very important because it can help marketing and promote the sustainability of the product. There are findings in previous research that product labeling can be a marketing tactic and a promotional strategy, as is done in the European Union which created Ecolabel as information about the impact of products on the environment [87]. Social media promotion and collaboration with retailers or distributors are key to market expansion [88,89]. Producers collaborate with e-commerce companies such as Maxim and Grab to market products. Furthermore, the manufacturer implements Instagram social media as a supporter of product marketing strategies. Therefore, product promotion through Instagram social media and collaboration between manufacturers and e-commerce companies are able to sell products every day around 50 products. By combining packaging innovation, market understanding, and effective marketing strategies, MSME entrepreneurs can enhance their sales potential [90,91]. Packaging plays a critical role in product marketing. It serves not only as a protective container but also as a medium for attracting consumer interest and providing product information [92]. Manufacturers use packaging to differentiate their products in terms of colors, shapes, and perceived quality [93]. Therefore, incorporating eco-friendly branding that reflects the unique characteristics of each region in East Java is crucial. In this case, the uniqueness of combining environmentally friendly branding on the products sold is considered important because it can attract tourists by offering products that have artistic value. Unique local offerings and souvenirs will create lasting memories for travelers [94]. The producer's strategy to fulfill the needs of these travelers and the branding of each different city has involved many unique and environmentally friendly packaging innovations with materials obtained from local areas. This is proven by previous research findings that tourist interest in products prepared by producers is very necessary so that products are easy to buy and sell [95].

As environmental awareness among consumers increases, their purchasing behavior is also affected. Environmentally conscious consumers are willing to pay a premium for green products or environmentally friendly packaging [45,46,96]. This is in line with previous research findings that the use of green products and green packaging is related to environmentally conscious consumers as the main focus to protect the environment from degradation and pollution [97]. Green packaging often provides additional functionality after consumption, making it suitable for souvenirs. Multi-functional packaging combines emotional and functional aspects, offering a unique appeal by blending modern and ethnic elements. Green packaging meets hygienic, modern, informative, and reusable needs [57]. The study reveals that in

East Java (Banyuwangi Regency, Pamekasan Regency, Malang City, and Batu City), packaging designs frequently utilize natural or traditional materials. These packages excel in economic, cultural, social, and ecological aspects, supporting environmental sustainability [58,74]. Proper packaging design will also communicate local culture to future generations in this digital age [35]. Eco-friendly packaging based on unique local potential will promote sustainable tourism in East Java and Indonesia as a whole. Green products focus on paper bags, the use of straws with edible flour, and the use of green products with woven bamboo materials. Green packaging is in the form of product goods and products promoted on e-commerce. The East Java Trade Office and Tourism Office also continue to provide guidance and assistance to Tourism MSMEs to produce Green Products and Green Packaging to support the SDGs. The implementation strategy of green products and green packaging will support SDGs. Green products and green packaging will affect SDGs 12. The focus of SDGs number 12 is on sustainable consumption and production. This is in line with the statement by the United Nations states that the goal of SDGs number 12 is to ensure sustainable consumption and production patterns which are key to sustaining current and future generations [98].

CONCLUSIONS

Based on the research findings and discussion, the following conclusions can be drawn. First, green products and green packaging are highly applicable to tourism MSMEs in East Java. The materials used are largely derived from natural, local resources, such as wood, bamboo, leaves, corn husks, paper, and cardboard. Green packaging is advantageous due to its limited competition, opening broader business opportunities. Second, some factors influence green products and green packaging. The strengths include the use of local materials. The weaknesses include the need for continuous innovation. Opportunities arise from the ability to charge higher prices due to growing environmental awareness and the potential for export due to cultural uniqueness. The threat lies in maintaining effective branding to enhance product recognition. Third, to support the SDGs, the implementation of green products and green packaging in tourism MSMEs should involve outreach, education, guidance, and supportive government policies. The limitations of this study focus on business actors and knowing the implementation strategy of green products and green packaging. Therefore, further research needs to be carried out by expanding the focus on research and strategies for implementing green products and green packaging based on different perspectives and different locations of MSMEs.

DATA AVAILABILITY

The dataset of the study is available from the authors upon reasonable request.

AUTHOR CONTRIBUTIONS

Conceptualization, SS; Methodology, SS, YD and AD; Software, EHS and UHAK; Validation, AD, EHS and UHAK; Formal Analysis, SS; Investigation, SS; Resources, SS, YD and AD; Data Curation, EHS and UHAK; Writing—Original Draft Preparation, SS; Writing—Review and Editing, YD, AD, EHS and UHAK; Visualization, YD, AD, EHS and UHAK; Supervision, YD, AD, EHS and UHAK; Project Administration, SS; Funding Acquisition, SS.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

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