
Green Product Differentiation as a Strategy to Enhance the Competitive Advantage of Handicraft SMEs

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ABSTRACT

Waste-based handicraft SMEs face increasing challenges in sustaining competitive advantage despite the growing demand for environmentally friendly products. This study aims to formulate a sustainable product differentiation strategy for KJL Art & Craft through an analysis of its internal and external business environment using the Internal Factor Evaluation (IFE), External Factor Evaluation (EFE), and Internal–External (IE) matrix. A descriptive case study approach was employed, with data collected through semi-structured interviews, observation, documentation, digital media review, and literature analysis. The results show an IFE score of 3.41 and an EFE score of 2.71, positioning the business in Cell IV (Grow and Build) of the IE matrix. These findings indicate strong internal capabilities and a moderate ability to respond to external opportunities and challenges. The recommended strategy focuses on sustainable product differentiation by leveraging recycled materials, distinctive product designs, and artisan craftsmanship, supported by green digital marketing, product innovation, market development, and internal capacity enhancement. This study contributes practical strategic recommendations for waste-based handicraft SMEs seeking to strengthen their sustainable competitive advantage in an increasingly competitive market.

Keywords: SMEs, Sustainable Competitive Advantage, Product Differentiation, Green Digital Marketing, IE Matrix.

INTRODUCTION

The role of small and medium-sized enterprises (SMEs) in the Indonesian economy has become increasingly significant, with the number of SMEs reaching 30.19 million as of 31 October 2025. West Java recorded the largest number of SMEs, with approximately 5.4 million enterprises. According to Biro DTI Kementerian UMKM Republik Indonesia (2025), SMEs play a crucial role in driving economic growth, creating employment opportunities, and preserving local products.

create product variations, products innovations, and branding strategies. The study also revealed that SMEs actively market their products, remain open to adopting new approaches, and are oriented toward sustainable product development (Retnaningsih et al., 2024).

The ability to compete effectively is essential for SMEs. Various marketing strategies have been shown to enhance competitiveness and increase sales performance. Several studies have demonstrated that the use of digital platforms can minimize marketing challenges faced by SMEs, as reported by Partini and

Table 1. General Overview of UMKM KJL Art & Craft

Product Types	Promotional Activities, Exhibition Participation, or Awards	Domestic Market	Global Market
Decorative lamps made from PVC waste, wall clocks, PVC scratch paintings, keychains, ashtrays, plaques, bags, masks, and others.	Creative Challenge Event KaTa Creative Exhibition, Kriya National Indonesia Exhibition in Yogyakarta, and others.	Bandung, Aceh, Kalimantan, NTB, and others.	India, Malaysia, Australia, Taiwan, and others

Source: Various sources (interviews, Instagram, Facebook, newspaper articles, 2026).

Despite their significant role, SMEs face complex challenges arising from both internal and external business environments. These challenges primarily relate to human resources, marketing capabilities, particularly digital marketing capabilities, access to capital, product-related issues, infrastructure, and various other constraints. In response to these challenges, a study found that SMEs have the capability to

Mulyani (2024), while also contributing to increased sales, as evidenced in the study by Partini (2024). Furthermore, product designs that align with market trends, incorporate ergonomic features, and are produced efficiently have been found to expand market segments and increase sales revenue by up to 50% (Maryam et al., 2025).

KJL Art & Craft SMEs also face competition in the creative and handicraft industry. Established in 2019, KJL Art & Craft is an enterprise located in Wantilan Village, Cipeundeuy District, Subang Regency, West Java, Indonesia. It was initiated by a creative community, one of whose members is Mr. Yoyo Taryono. The enterprise operates in the creative industry by processing and utilizing waste materials to produce artistic, functional, and economically valuable products. Its primary raw materials consist of discarded PVC pipes and wood. Initially producing decorative lamps made from PVC pipes, the enterprise has since expanded its product portfolio to include a wide range of other creative products. Various marketing initiatives, particularly digital marketing, have been implemented through social media and participation in numerous exhibitions. The enterprise serves both B2B and B2C markets domestically and in several international markets, although domestic demand remains its primary market. Its current production capacity reaches approximately 500 units per month. KJL adopts an environmentally friendly concept based on the 3R principles (Reduce, Reuse, Recycle) and possesses competitive strengths in handmade products, distinctive designs, and customized services tailored to customer needs. In addition to achieving profitability, KJL Art & Craft SMEs also generate social and environmental benefits through waste utilization and community empowerment. These characteristics are

described in Facebook Kabisa Jalma Leutik (2025), a blog authored by Nurtyalndi (2023), and the Instagram account bahyono_kjl (2023). Although KJL Art & Craft SMEs have undertaken various efforts, including participation in regional, national, and international events, they have not yet achieved a sustainable competitive advantage in either domestic or international markets. Creativity in handicraft products remains an important factor, even in traditional handicraft industries that are considered part of ancestral heritage (Fetzer, 2025).

Creativity is an important element in product innovation to strengthen competitiveness. It is also a key component of a product differentiation strategy. Differentiation represents the third generic strategy within Porter's Generic Strategies framework. According to Porter, as cited in David (2011), differentiation is a strategy that offers products or services that are unique compared with competing products within the same industry. However, since the handicraft industry is often closely linked to cultural heritage, it is important for SMEs operating in this sector to address sustainability aspects (Harsanto et al., 2026). These sustainability aspects are increasingly perceived as important. For instance, several national media outlets have highlighted sustainability issues, particularly those related to waste reduction activities. Moreover, in developing countries, practical implementation remains far from the expectations set by global

agreements under the 2030 Agenda for Sustainable Development (Wangsa, 2026).

KJL Art & Craft SMEs are highly relevant in the context of sustainability, as their business operates in environmentally friendly products, which can serve as added value and strengthen their competitiveness in the handicraft industry. The increasing awareness of sustainability issues among handicraft SMEs (Harsanto et al., 2026), particularly in relation to waste or recycling awareness, represents an external opportunity for KJL Art & Craft SMEs.

A study explains that green digital marketing strategies promoted by national media regarding sustainability can enhance perceptions of sustainability. In relation to KJL Art & Craft SMEs, this is considered relevant as it can also be adopted in the form of a green digital marketing strategy (Wangsa, 2026).

Another study explains that differentiation strategy can enhance competitive advantage. This study also emphasizes product design uniqueness and added value, which are highly relevant for KJL Art & Craft SMEs, particularly in relation to environmentally friendly products as part of their brand image (Sulastri et al., 2025). The importance of the differentiation strategy and uniqueness is not only relevant for SMEs but also for large-scale technology companies (Arts et al., 2021). According to David (2011), superior differentiation must be unique, and such uniqueness should be difficult for competitors to

imitate, while also being accompanied by other competitive advantages.

According to Barney (1991), the Resource-Based View (RBV) theory argues that internal performance plays a more decisive role in strengthening competitive advantage compared to external factors. These internal resources consist of three main categories, namely physical resources, human resources, and operational resources. Furthermore, Barney (1991) explains four empirical indicators of such resources, namely valuable, rare, imperfectly imitable, and non-substitutable (VRIN). The underlying assumptions of this theory are that strategic resources are heterogeneously distributed across firms and remain relatively stable over time.

In addition to the RBV concept, strategy formulation becomes more appropriate when a company is able to analyze both its internal and external environments using the Internal Factor Evaluation (IFE), External Factor Evaluation (EFE), and Internal-External (IE) Matrix developed by David (2011).

If a strategy based on the Resource-Based View (RBV) concept is applied to SMEs, in this study specifically KJL Art & Craft SMEs, by adopting a differentiation strategy and green digital marketing, it is expected that SMEs will achieve sustainable competitive advantage by considering both their internal and external environmental conditions.

Previous studies have extensively discussed SME development strategies using the differentiation concept; however, in Indonesia, there are still limited studies that integrate this concept with the Resource-Based View (RBV), green digital marketing, and sustainability, along with an analysis of internal and external factors. Existing studies have mostly focused on examining causal relationships between variables. In addition, research on KJL Art & Craft SMEs as an enterprise that uses waste as its main raw material remains limited; therefore, further research is needed to provide recommendations that are aligned with its business characteristics.

Based on these issues, an important question arises regarding how the internal and external strategic factors of KJL Art & Craft SMEs can be systematically identified and analyzed to formulate an appropriate green product differentiation strategy. Furthermore, it is necessary to determine how this strategy can strengthen the sustainable competitive advantage of waste-based handicraft SMEs in an increasingly competitive business environment. To address this research problem, the objective of this study is to analyze internal and external factors using the IFE, EFE, and IE matrixes as a basis for recommending a green product differentiation strategy to strengthen the competitive advantage of KJL Art & Craft SMEs.

METHOD

This study uses a descriptive approach and a case study of KJL Art & Craft SMEs, located in Subang Regency, West Java. The SME uses industrial waste as its main raw material. The researcher formulates its development strategy.

The population in this study consists of individuals who understand the operations and history of KJL Art & Craft SMEs. The data collection techniques include semi-structured interviews, direct observation, documentation of business activities, digital newspapers, social media, and literature studies on KJL Art & Craft SMEs, strategic management, differentiation, green digital marketing, competitive advantage, and SWOT analysis.

The instruments used in this study include interview guidelines, observation sheets, documentation records, and assessment sheets listing internal and external strategic factors.

The data analysis technique begins with the identification of internal and external factors. Internal factors consist of strengths and weaknesses, while external factors consist of opportunities and threats. The next step involves assigning weights and ratings to obtain the total scores for each internal and external factor. The weights and ratings are determined by the researcher based on the analysis and synthesis of data obtained from interviews, observations,

literature studies, and documentation, with reference to the IFE and EFE frameworks.

The subsequent step involves constructing the Internal-External (IE) Matrix, which aims to determine the strategic position of KJL Art & Craft SMEs. Finally, the results of the analysis are interpreted and linked with relevant theories to formulate the SME development strategy. The resulting strategy formulation serves as a recommendation for appropriate strategic development.

RESULTS and DISCUSSION

Based on the results of interviews conducted and various related literature, the author identified at least five key opportunities and four main threats as part of the external factors. After inputting the data and performing scoring to assess the level of influence on the company and its ability to respond, the total EFE (External Factor Evaluation) score obtained was 2.71. This indicates that KJL Art & Craft SMEs are able to respond to their external environment fairly well. Meanwhile, the IFE score was 3.41. The IFE score reflects the position or response of KJL Art & Craft SMEs to internal factors. A score of 3.41 indicates that the internal condition of KJL Art & Craft SMEs is relatively strong. Six strengths and four weaknesses were identified. This position is presented in Table 2.

Based on the IE matrix presented in Table 2, the position of KJL Art & Craft SMEs is located in cell IV. Referring to David (2011), this cell falls within quadrant 1 (cells I, II, and IV), which represents the grow and build category. Each quadrant is associated with appropriate types of strategies.

The strategy that is relevant to these analytical results is an intensive strategy. Within the intensive strategy, there are three strategic options, namely market penetration, market development, and product development. Product development strategy includes differentiation strategy.

The results of the analysis of internal factors in the form of strengths indicate that KJL Art & Craft SMEs have unique products made from waste materials based on the 3R principles (Reduce, Reuse, Recycle), maintain active social media channels, have engaged in export activities, possess skilled human resources or artisans, establish cooperation with the government, and actively participate in various SME exhibition events. These internal strengths are difficult for competitors to imitate and are consistent with Barney's (1991) Resource-Based View (RBV) theory, which explains that a firm's competitive advantage is stronger when it is based on valuable, rare, and non-substitutable internal resources.

Based on these findings, the appropriate recommendation is that KJL Art & Craft SMEs

Table 2. IE (Internal-External) Matrix of KJL Art & Craft SMEs

Total EFE Score	Total IFE Score: Strong (3.0–4.0)	Total IFE Score: Moderate (2.0–2.99)	Total IFE Score: Weak (1.0–1.99)
High (3.0–4.0)	Cell I Grow and Build	Cell II Grow and Build	Cell III Hold and Maintain
Moderate (2.0–2.99)	Cell IV Grow and Build	Cell V Hold and Maintain	Cell VI Harvest or Divest
Low (1.0–1.99)	Cell VII Hold and Maintain	Cell VIII Harvest or Divest	Cell IX Harvest or Divest

Source: Research Results (2026).

should develop a strong product line with an eco-lifestyle image, limited edition products, and custom services in order to further enhance differentiation.

After identifying the factors categorized as strengths, the next internal factors classified as weaknesses include limited labor, high dependence on artisans' creativity, the absence of a showroom or product gallery with only a workshop available, and limited production capacity. These weaknesses may hinder KJL Art & Craft SMEs if a product development strategy based on differentiation is implemented, as they can become constraining factors. Therefore, the strategy must be accompanied by strengthening internal capacity to increase production capability.

The issue of limited skilled labor has been addressed through training programs for local artisans in order to enhance and expand

workforce capabilities. This is in line with Barney's (1991) Resource-Based View (RBV) theory, which emphasizes the importance of developing human resources and production capabilities in this case.

The external factors identified as key opportunities include the increasing trend of environmentally friendly products, strong government support for SMEs in Indonesia in general and particularly in Subang Regency, the rapid development of digital marketing and e-commerce, and the still vast export potential for handicraft products. In addition, growing public awareness of recycling can be leveraged by KJL Art & Craft SMEs.

Furthermore, increasing public awareness of sustainability issues is also a positive factor for KJL Art & Craft SMEs, which produce products based on waste materials. This represents a

unique value and added advantage that is not found in other handicraft products. This condition is consistent with previous studies explaining sustainability as an important issue influencing consumer purchasing decisions in SMEs operating in the creative industry.

In response to external factors, particularly the increasing trend of awareness toward environmentally friendly products, KJL Art & Craft SMEs can emphasize sustainability narratives in all promotional media and product packaging. This approach is aligned with the concept of green digital marketing. Since KJL Art & Craft SMEs already utilize social media platforms, it would be more effective not only to post product catalogs but also to increase content that provides education on recycling processes, stories behind the products, and their environmental impact. The existing export experience can also be strengthened by expanding market networks, participating more frequently in international exhibitions, and optimizing the use of global marketplaces.

In addition to opportunities, KJL Art & Craft SMEs also face several external factors classified as threats, including an abundance of handicraft products in the market, changing consumer preferences, declining purchasing power, and the emergence of similar imported products offered at lower prices. These external factors indicate that a cost leadership strategy based on low prices will be increasingly difficult for KJL Art & Craft SMEs

to implement. The appropriate strategic choice is to maintain competitiveness through product differentiation by offering products with uniqueness and added value that are difficult for competitors to imitate, in line with Porter's (1985) theory.

Based on the above discussion, the results of the internal and external factor analysis using the IFE, EFE, and IE matrices indicate that a differentiation strategy is the most appropriate alternative for KJL Art & Craft SMEs. Unique product design, the use of waste materials as raw inputs, handmade production processes, the availability of customized product services, and a product image strengthened through green digital marketing as a sustainable brand are expected to expand market reach while simultaneously enhancing competitive advantage.

CONCLUSION

In The results of the analysis using the IFE, EFE, and IE matrices indicate that the company is positioned in Cell IV (grow and build), suggesting that an intensive strategy is the most appropriate strategic option. The findings also show that KJL Art & Craft SMEs have a strong internal condition and a relatively good ability to respond to external environmental changes. A sustainability-based differentiation strategy is recommended as the primary strategic direction, supported by product uniqueness derived from waste materials, skilled

artisans, and increasing market opportunities for environmentally friendly products. Accordingly, product development, the implementation of green digital marketing, market expansion, and strengthening internal capacity are required to support a strategy that enhances sustainable competitive advantage.

The limitations of this study lie in its case study approach, which focuses on a single SME; therefore, the findings cannot be generalized to all handicraft SMEs. In addition, the weighting and rating in the IFE and EFE matrices were determined based on the researcher's analysis of interview results, observations, documentation, and literature review, which may still involve a degree of subjectivity in the assessment process.

Future research is expected to involve a larger number of SMEs as research objects or conduct comparative analyses across regions or creative industry sectors. The combination of strategic analysis with quantitative methods in future studies is expected to test the effectiveness of implementing differentiation strategies in sustainability-based SMEs on enhancing competitive advantage.

CONFLICTS OF INTEREST

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data;

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