

Research Paper



MARKETING STRATEGY INTEGRATED BY VALUE CHAIN ANALYSIS IN *KAMPUNG BATIK GIRILOYO*, BANTUL REGENCY, YOGYAKARTA

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ABSTRACT. *Kampung Batik Giriloyo* is one of the largest traditional batik centers in Indonesia, located in the Special Region of Yogyakarta. The conversion rate of visitors who purchase products has decreased, causing a decrease in batik sales. From 2023 to 2024, *Kampung Batik Giriloyo* recorded a 0.50% decrease. This indicates a gap between customer expectations and the dynamic market behavior. This study aims to design a marketing strategy that is expected to increase the sales conversion of *Kampung Batik Giriloyo* products. This marketing strategy strengthens the role of the community and increases competitiveness. This research methodology uses an integrated analytical framework: Value Chain Analysis (VCA), the KANO model, Activity-Based Costing (ABC), and Material Flow Analysis (MFA). VCA assesses service activities as the primary source of differentiation. The KANO model shows that price is a Must-Have Quality. The most productive approach to combining findings is to position *Kampung Batik Giriloyo* within the 8Ps of the Marketing Mix. The proposed marketing strategy requires improvements in operations and enhancement of the community's cultural values. The key points are that service differentiation, fair pricing, and ecological heritage branding are key components that positively impact conversion rates. The integration of cultural value creation and focused marketing practices allows this research to position its role in marketing strategy and cultural economics, thus contributing to both theoretical and practical aspects.

INTRODUCTION

ADWI 2023 acknowledges *Kampung Batik Giriloyo* for its hand-drawn batik utilizing traditional techniques and for its historical and cultural significance, as well as for being a sustainable craft example by using local practices. UNESCO declared DI Yogyakarta as Batik City in the world in 2014 (UNESCO, 2014). *Kampung Batik Giriloyo's* marketing performance continues to decline, despite the growing number of tourists due to educational tourism focused on batik. Visitor to buyer conversion rates dropped to 2.40% for 2024 from 2.54% in 2023, pointing to a disconnect or a gap between cultural appeal and consumer behavior in this era. The combination of cultural and value-positive practices of traditional batik techniques with marketing remains relatively unexplored. The marketing strategy was derived from the batik value chain activities. It is

important to know that the value chain for batik is also the value chain for cultural and environmental sustainable practices. Eco-friendly practices within the batik value chain (Sharma and Trivedi, 2018) combined with sustainable cultural marketing practices are relatively absent. A marketing framework that can translate these values into batik market competitiveness is still under development. Most research has focused on production processes, environmental benefits, and cultural preservation, and the design of the research has left little to be desired. From a state-of-the-art perspective, the batik industry has left a research gap in value creation. Value creation still leaves little to be desired regarding the examination of the core value chain. In the long term, marketing differentiation within these defined activities appears to constitute a 'smart' value chain (Blokdyk, 2020). Production and service value chain activities remain an activity-based 'puzzle', resulting in a lack of knowledge regarding cost

efficiency, service value, and price opacity (Negi *et al.*, 2023). Adequate research on the marketing of batik products is still lacking (Rahman *et al.*, 2023). Felaza (2016) explains how most marketers ignore environmental aspects (such as water and energy) that consumers consider important in determining their own sustainability. Value Chain Analysis to determine the important activities for crafts. Activity-Based Costing to see the *Kampung Batik Giriloyo* cost structure for each jarik batik. The KANO model was used to understand what makes customers interested in crafts. Material Flow Analysis to determine how traditional crafts affect the environment. These tools help to understand traditional crafts and how to market them in this economic era. This study aims to formulate a marketing strategy for *Kampung Batik Giriloyo* that strengthens its position as an eco-heritage batik destination and increases visitor conversion into buyers. This research bridges cultural economics and marketing and advances the marketing paradigm for traditional crafts.

RESEARCH DAN METHODS

This study aims to recommend a marketing strategy for *Kampung Batik Giriloyo* in two ways: the cultural side of batik processes and batik sales. Quantitative methods are used to understand the real situation, which is specifically described by the data obtained, as well as qualitative methods for clearer description and depiction. By applying the mixed method, this research is expected to be a more in-depth study. The data collection process was carried out through real-time observation at the site, interviews with the *Kampung Batik Giriloyo* administrators, and distribution of questionnaires to visitors to the *Kampung Batik Giriloyo*. Visitors who had visited *Kampung Batik Giriloyo* (batik buyers or batik class participants) were allowed to fill out the questionnaire. The research framework explains the stages of the research process, from data collection and processing to the expected research results. Data obtained through observations, interviews, and questionnaires will be processed using several methods. The KANO method was used to process questionnaire data, which contained consumer perceptions of batik in *Kampung Batik Giriloyo*. The Activity-Based Costing (ABC) method was used to record costs by activity based on the main value chain activities for the activity of making one batik. The MFA method was used to determine the flow of waste and energy as additional data before determining the content of the collected waste. All of this data will be

used as a reference for developing the marketing strategies in *Kampung Batik Giriloyo* by the 8P marketing mix that helps to construct the strategic recommendations, focusing on the activities that are deemed to need improvement. This study is based on hypotheses related to consumer satisfaction and sustainable marketing theory: H1: Increasing value-adding activities and focusing on attractive and must-have KANO attributes increases consumer purchasing decisions for batik. This hypothesis is grounded in the premise that value chain efficiency (Porter, 1985), combined with consumer-oriented attribute prioritization (Kano *et al.*, 1984), leads to improved market performance in the cultural craft industry.

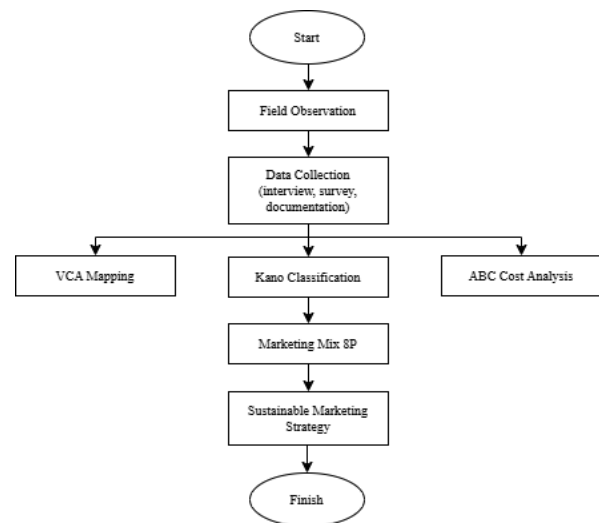


Figure 1. Framework of thought

The research framework demonstrates that marketing strategies can be developed through the application of primary value chain activity analysis. The research indicators, KANO model, ABC, and MFA, serve as the basis for developing a marketing strategy for *Kampung Batik Giriloyo*. Based on this framework, it can be concluded that the recommended strategies are expected to increase product sales, customer satisfaction and environmental performance. This framework combines consumer perceptions with recommendations to enhance the competitive advantage of Giriloyo Batik Village.

RESULT AND DISCUSSION

The value chain in *Kampung Batik Giriloyo* is divided into five primary activities: inbound logistics, production, outbound logistics, marketing and sales, and services. Inbound logistics focuses on the raw material supply stage for making hand-drawn batik, production focuses on the production stage of hand-

drawn batik, which is carried out using traditional processes, outbound logistics is related to the process of releasing products to the customer or to be displayed at the gallery display at *Kampung Batik Giriloyo*, marketing and sales focuses on sales methods or techniques both in the main gallery and small groups, and services also explain additional activities, such as batik classes and product curation.

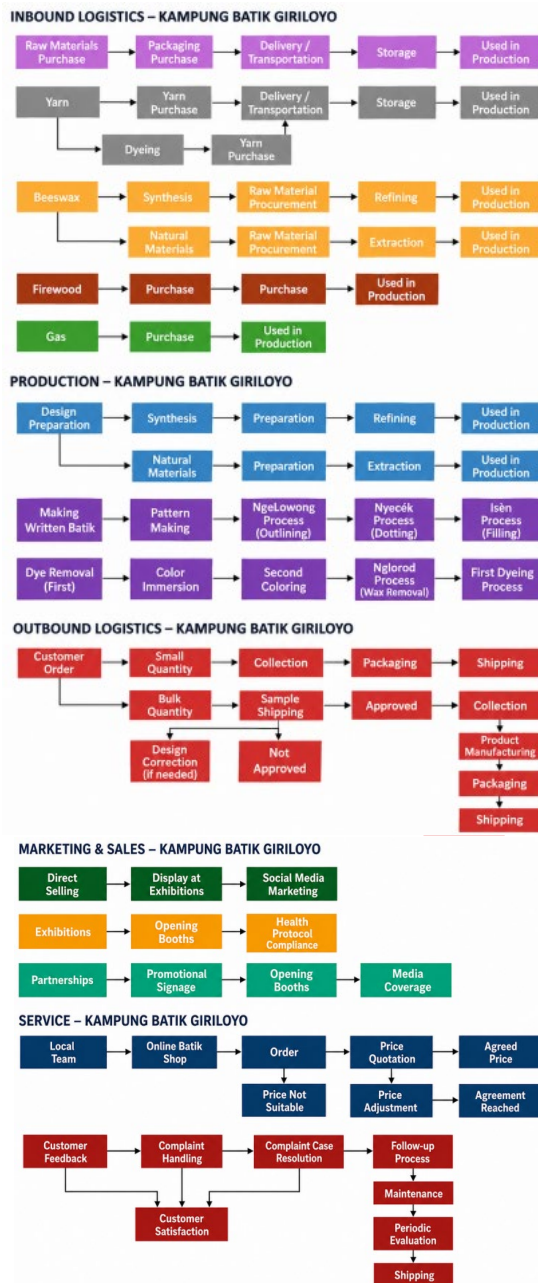


Figure 2. Value chain identification

Operations span the entire hand-drawn batik production, including motif planning, waxing, dyeing, and finishing. This is a skill-intensive bottleneck, adding aesthetically and artistically rich value for the customer/market, as well as cultural identity for the

Kampung Batik Giriloyo community as a key element in differentiating the offering. Outbound logistics, distribution activities, and marketing at local galleries and partners, as well as *Kampung Batik Giriloyo* brand strengthening and market reach at the national level, encapsulate marketing and sales. Digital marketing, exhibition segments/participation, and outreach collaborations complete this chain. These activities diversify customer segments and broaden the visibility of products in the market (Kristanti *et al.*, 2024). Service differentiation for *Kampung Batik Giriloyo* includes educating visitors and quality checking products prior to marketing. This effort is directed towards sustaining quality and maintaining *Kampung Batik Giriloyo*'s cultural tourism status and the authenticity of the heritage preserved. The value chain structure also aligns with Porter's (1985) value chain, which focuses on strategic choices with the potential for competitive value. In *Kampung Batik Giriloyo*, the competitive value is a combination of product quality, cultural significance, and sustainable education. The results also align with the side views of Kaplinsky and Morris (2018), where the combination of sustainability and cultural marketing is shown to strengthen the creative industries at the local level in response to global market changes.

Figures 3 and 4 show the breakdown of the KANO categories: 14% of the attributes are Must-Be (basic needs), 14% are One-Dimensional (performance), and 72% (10 of the total 14 attributes) are Attractive (enjoyment). Classifying the quality of hand-drawn batik fabric and the rationale for sustainability in the one-dimensional category means that these attributes will always have a positive and proportional relationship with customer satisfaction; the customer's presence will increase satisfaction, and the customer's absence will lead to dissatisfaction. This illustrates the need to maintain batik quality and effectively communicate the value of sustainability; performance attributes offer little or no competitive advantage in the market. The Must-Be categories for selling price and price compliance indicate that these factors are basic requirements; their absence leads to customer dissatisfaction. A careful balance must be achieved in the pricing strategy to align the perceived product quality, which is believed by visitors, with the price. The responses developed an 'agree' result of 76%. The fact that there are many attractive attributes (72%) means that the previously mentioned characteristics, Innovative and Value Added, are highly valued. Aligning price, quality, and experiential attributes ensures that the marketing strategy not only meets basic

expectations but also maximizes visitor delight and loyalty.

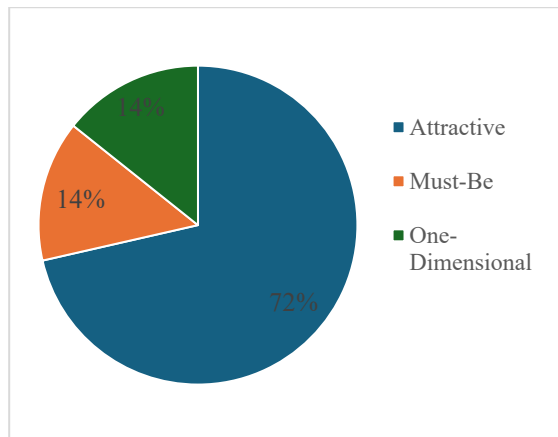


Figure 3. KANO result

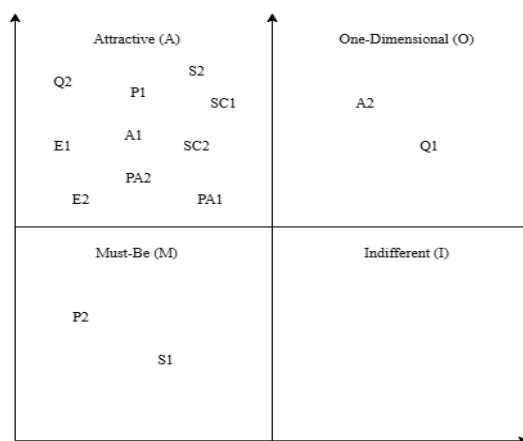


Figure 4. KANO classification

KANO analysis reveals that future emphasis on quality, service, and cultural value is critical for developing certain sustainable strategies. Maintaining price control is critical to sustaining the balance between the elements of product value and consumer

perception of price fairness, as explained by Kano (Kano, 1995). The analysis was conducted on 96 visitors to *Kampung Batik Giriloyo* using the Kano Model. The sample size was derived using the Slovin formula for an assumed infinite population with a Margin of Error (MoE) of 10%. After processing the questionnaire responses, most of the evaluated attributes were placed in the attractive category. The majority of the attributes evaluated (10) were placed in the attractive category. This suggests that, in general, most of the constituents driving batik customer satisfaction, in a non-functional capacity, are of non-essential yet exciting value. An example of this would be the aesthetic, cultural, and service value, in addition to the value of the shopping experience. Product strategies should primarily focus on innovation and increasing value in these areas to stimulate competitive differentiation.

The most consumed resources in the hand-drawn batik production process were identified using ABC analysis (Setyawan, 2025). According to calculations, *Kampung Batik Giriloyo* produces batik with a total production cost of IDR 1,411,360 per batik sheet. The operational stage incurs the highest costs because of the long process time. These results illustrate the special nature of batik as a craft-based production that requires high skill levels. The selling price of batik must consider the cost of raw materials, as well as the difficulty, time, and exclusiveness of the labor required to create the craft. These results align with the perspectives of Kaplan and Cooper (1998) and Cokins (2001), as cited in Setyawan (2025), who noted that the ABC method increases transparency and efficiency in production systems. This method empowers craftsmen to achieve justifiable prices and improve value-added activities, which are crucial for business sustainability.

Table 1. Activity based cost

Category	Activity	Unit (IDR)	Cost (IDR)
Inbound Logistics	2,5m mori	60,000 / meter	150,000
	1kg wax	50,000 / kg	50,000
	2gr dye	180 / gr	360
Subtotal Inbound			200,360
Operation	2 weeks drawing	Batik	200,000
	>2weeks nyeceki		200,000
	2 weeks isian		250,000
	>1 week coloring		140,000
	2 weeks tretes		400,000
Subtotal Operation			1,190,000
Outbound Logistics	Packaging	Batik	5,000
Marketing & Sales	Advertising	Post	16,000
Services	-	-	0
Grand Total			1,411,360

Construction of MFA, liquid waste, and energy within the *Kampung Batik Giriloyo* production system. The analysis identified two key points: the Main Joglo as the primary energy distributor in the batik production system and the Wastewater Treatment Plant (WWTP) as the primary liquid waste processor. Energy is efficiently delivered from the Main Joglo and received by the production and several support units. In small communities (home industries), the key point consisting of the production house, small WWTP, and small gallery has proven to be efficient for the community.

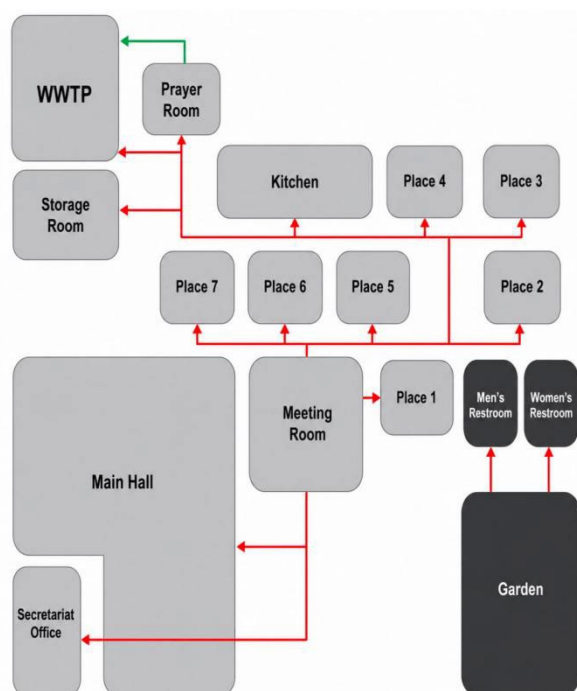


Figure 5. MFA *Paguyuban*

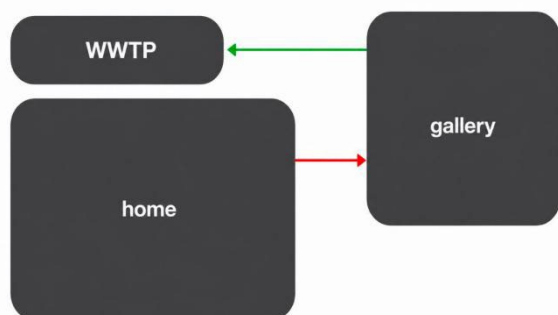


Figure 6. MFA small group

Laboratory tests of liquid waste samples indicated that several parameters exceeded the environmental quality standards of Yogyakarta Special Region Regulation Number 7 of 2016 concerning Wastewater Quality Standards. The standard of the Biochemical Oxygen Demand (BOD) level in dye effluent reached 2,618 mg/L, compared to the established standard of 250 mg/L. This indicates a high number of residues and chemicals and severe levels of organic pollution from production activity. From the perspective of environmental responsibility and sustainable management of the batik industry, these findings highlight the necessity of strengthening wastewater management.

Table 2 implies that the dyeing procedure is the main contributor to the creation of organic pollutants in the production system. The Total Suspended Solids (TSS) from the soap water sample was 1,700 mg/L, which is far greater than the quality standard of 60 mg/L. This indicates the presence of a high volume of solid particles from residual detergent and wax scraping. The results of the lab tests indicate that washing and dyeing are the stages of the production system that require the most attention in terms of environmental management. Enhancing the capacity of the WWTP and integrating the principles of cleaner production are the best means of ensuring batik production in *Kampung Batik Giriloyo*. The case of agro-ecosystems also presents a particularly complex case for developing a sustainable agro-industrial sector (Rachmanjaya *et al.*, 2020).

On October 17, 2025, a marketing strategy forum involving academics, local government, and batik artisans, focusing on the 8P Marketing Mix, was held at the *Kampung Batik Giriloyo*. *Kampung Batik Giriloyo* primarily produces *jarik batik*, and its promotional activities rely on individual WhatsApp groups and personal sites. Forum participants also raised concerns about declining batik sales due to the increasing demand for experiential tourism. Forum participants concluded that for marketing purposes, integrating hybrid sustainable production with experiential learning and providing a short story about the process and product identity should boost consumer trust and increase visitor engagement.

Table 2. Laboratory test

Waste	BOD (mg/L)		COD (mg/L)		TSS (mg/L)	
	Result	Standard	Result	Standard	Result	Standard
Wash waste	180	60	258	150	130	50
Dye waste	85	60	2,618	150	133	50
Soap water	59	30	116	100-200	1700	50-60

Table 3. Marketing mix 8P

8P	Discussion Output	Implication
Product	Products are still dominated by long fabrics (<i>kain panjang and jarik</i>). There is a need for diversification into derivative products such as keychains, wallets, tote bags, or home décor items. Recommended that a QR code containing the cultural narrative be prepared as an educational tool for buyers.	Product diversification expands the market segment and strengthens cultural value as well as consumers' emotional engagement through the understanding of history and culture.
Price	The price of batik is considered expensive for students/university students. Price segmentation based on product type (premium vs. mid-range) is recommended.	Sustainable pricing expands the market without diminishing the product's sustainability value by considering the social and ecological value of the product.
Place	Distribution is still centralized at the gallery and tourism location. Marketplace and social media development are necessary.	Digital distribution increases national and global market access while simultaneously reducing the carbon footprint of transportation.
Promotion	Promotion is still limited to Instagram. A digital promotion team is required to create cultural and environmental content on TikTok and YouTube.	Educational promotion reinforces the image of an eco-heritage brand and fosters awareness of cultural and environmental preservation.
People	The majority of artisans are over 50 years old. Regeneration is needed, along with the involvement of local youth organizations (<i>karang taruna</i>) in batik training and digital marketing.	Human resource regeneration strengthens social sustainability and the transfer of skills across generations.
Process	Some groups already possess a Wastewater Treatment Plant (WWTP/IPAL) resulting from collaboration with the Environmental Agency (DLH), but it is not utilized optimally. Waste data collection and simple technical training are needed.	Implementing the "3C" principles (Record/Note, Control, Collaboration) encourages efficiency and cleaner production in the batik sector.
Physical Evidence	The environment of the tourist village supports sustainability, but the gallery needs to be reorganized to be more informative and aesthetic.	The visual reorganization of the gallery and the use of environmentally friendly information boards reinforce the perception of quality and experience.
Partnership	Collaboration is required among artisans, the government, academics, and private institutions for joint promotion and training initiatives.	Inter-actor collaboration promotes co-branding and community-based marketing to strengthen local economic sustainability.

Scope of marketing strategies: A critical issue arises regarding the establishment of acceptable pricing structures in the market, and in this case, pricing will be outlined as an issue of increasing concern within the Giriloyo Batik Association. This can be correlated with existing data, namely consumer perception data derived from the Kano questionnaire (Table 1), ABC data related to each fabric (Table 3), and the results of discussions regarding the 8P marketing mix (Table 4). A paradox of educational tourism in *Kampung Batik Giriloyo* is evident in the significant number of visitors to attractions and the low conversion rate of visitors to buyers, which explains the “why” of visitors to educational tourism facilities. The number of visitors who purchased products annually decreased from 2.54% to 2.4%. It is anticipated that a marketing strategy formulated to address this issue will integrate cultural,

quality, and environmental components to increase their competitiveness. Managing Pricing and Segmentation Fair Pricing in *Kampung Batik Giriloyo* is a complicated process, especially since it is a Must-Be attribute in the Kano Model, and price management leads to dissatisfaction. Analysis shows that the total cost of production is IDR 1,411,360 per sheet, with the largest costs at the operation stage (IDR 1,190,000), which is quite high due to The ABC framework. A price that is perceived to be high due to cost differential (ABC) to perceived quality (76% visitor trust) and a price considered far beyond the reasonable price (the case of the student segment) price-student segment, high cost of production, and expensive, is justified.



Figure 7. Causal Loop Diagram

Sustainability, market accessibility, and price fairness are built on a solid price segmentation strategy and the segmentation of Premium (long batik fabrics)—high complexity and artistic value, and Mid-Range/Entry Level (derivative items like crafts)—lower priced, cost-effective, and more accessible. This segmentation sustains market reach, the value of price fairness, and cost transparency (reflecting material, labor, complexity, and exclusivity) (Kaplan and Cooper, 1998; Cokins, 2001).

Within the scope of marketing strategies, a critical issue arises regarding establishing acceptable pricing structures in the market. In this case, pricing will be outlined as an issue of increasing concern within the *Batik Giriloyo* Association. This can be correlated with existing data, namely consumer perception data derived from the Kano questionnaire (Table 1), ABC data related to each fabric (Table 3), and the results of discussions regarding the 8P marketing mix (Table 4). A paradox of educational tourism in *Giriloyo* is evident in the significant number of visitors to attractions and the low conversion rate of visitors to buyers; this explains why, of visitors to educational tourism facilities, the number of visitors who purchase products on an annual basis decreased from 2.54% to 2.4% in a year. It is anticipated that a marketing strategy formulated to address this issue will integrate cultural, quality, and environmental components to increase competitiveness.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This research provides a sustainable marketing strategy for *Kampung Batik Giriloyo* based on value chain analysis, consumer preferences, cost structure, and eco-impact assessment, by proposing it as an eco-

heritage brand for balanced economic, social, and environmental development through cultural differentiation and responsible production. The KANO model states that *Kampung Batik Giriloyo* possesses several outstanding qualities that make it unique and attractive to tourists. These qualities make its batik valuable to customers by maintaining affordable prices and offering a diverse range of products at reasonable rates. Simultaneously, the perception of high prices as a mandatory attribute is addressed through a differentiated batik pricing strategy between premium and mid-range products, supported by ABC, to ensure transparent and fair pricing without sacrificing exclusivity. The recommended marketing strategy was developed using the 8P marketing mix, while remaining committed to making *Kampung Batik Giriloyo* a unique destination for traditional products, yet accessible to a wide range of customers. The implementation of fair pricing based on product diversification is expected to increase sales, allowing *Kampung Batik Giriloyo* to maintain its distinctive batik heritage and further increase interest in batik classes, thereby eliminating the significant gap between the number of visitors and batik buyers. *Kampung Batik Giriloyo* has many different images with different perceptions for each consumer, making it worthy of being called an educational tourism village while still maintaining its cultural heritage.

Recommendations

A simple information system should be developed to support the recording of costs, material flows, and resource consumption. This system can serve as a foundation for implementing more advanced agricultural industrial technologies and supporting operational transparency and efficiency. Future

research can expand this study by analyzing the application of more efficient process technologies in the batik agro-industry, particularly in terms of water and energy usage. A comparative evaluation of traditional and semi-mechanical technologies can contribute to improving process efficiency without diminishing cultural values.

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