

A Development Model for Madura Batik Smes: the Roles of Brand Image, Product Quality, Customer Satisfaction, and Purchase Decisions

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KEYWORDS	ABSTRACT
Keywords: brand image; product quality; customer satisfaction; purchase decision; Madura Batik. Conflict of Interest Statement: The author(s) declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest. Copyright ©2026 Vifada Management and Digital Business. All rights reserved.	Purpose: This study examines the effects of brand image and product quality on customer satisfaction and purchase decisions among Madura Batik consumers, while also investigating the mediating role of customer satisfaction in these relationships. Research Method: A quantitative research design was employed involving 150 Madura Batik consumers in Pamekasan Regency, Indonesia. Data were collected through a structured questionnaire and analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) to assess both direct and indirect relationships among brand image, product quality, customer satisfaction, and purchase decisions. Results and Discussion: The findings indicate that brand image and product quality positively and significantly influence customer satisfaction. Brand image, product quality, and customer satisfaction also positively affect purchase decisions. Furthermore, customer satisfaction significantly mediates the relationship between brand image and purchase decisions, highlighting its important role in translating positive brand perceptions into purchasing behavior. Implications: Madura Batik businesses should strengthen brand positioning and maintain consistent product quality to enhance customer satisfaction and encourage purchase decisions. Future studies may examine additional behavioral and cultural factors across broader consumer segments. Originality: This study provides empirical evidence on customer satisfaction as a mediating mechanism linking brand image to purchase decisions within the culturally distinctive Madura Batik industry.

1) Introduction

Micro, Small, and Medium Enterprises (MSMEs) in Indonesia experience continuous annual growth, yielding positive impacts on the community's economy. MSMEs play a role in creating jobs, increasing public income, and supporting economic activities across various regions. One business sector flourishing in Indonesia is the creative industry, which leverages creativity and cultural richness in its products. Batik is a cultural product that holds economic, social, and cultural value for the Indonesian people. Indonesian Batik was designated by UNESCO as an Intangible Cultural Heritage of Humanity in 2009, demonstrating that it is not merely an item of clothing but also an integral part of the cultural identity of the Indonesian people ([UNESCO, 2009](#)). According to data from the Ministry of Industry, as of 2025, there are 5,946 batik industries spread across more than 200 production centers in 11 provinces, comprising approximately 47,000 business units and employing around 200,000 workers ([Direktorat Jenderal Industri Kecil, 2025](#)). Batik export value in the first quarter of 2025 reached US\$7.63 million, a 76.2% increase compared to the same period the previous year

(Direktorat Jenderal Industri Kecil, 2025). These conditions indicate that the batik industry holds significant potential for further development as an economic activity while simultaneously preserving Indonesian culture.

However, the batik industry also faces increasingly intense competition as it evolves. Consumers have a wide range of batik products to choose from—varying in motifs, colors, materials, quality, prices, and brands—making it essential for business owners to understand the factors consumers consider when making a purchase. Shifts in how batik is worn also present opportunities for business owners, as batik is increasingly used not only for formal occasions but also as part of everyday fashion (Direktorat Jenderal Industri Kecil, 2025). Consequently, business owners must adapt their products to meet consumer needs without compromising the characteristics that define batik's identity. The Ministry of Industry has also emphasized the importance of fresher designs, the use of digital marketing, and improvements in quality and competitiveness to ensure the batik industry can keep pace with market developments (Direktorat Jenderal Industri Kecil, 2025). With an increasing number of options available, consumers carefully consider their choices before selecting products that align with their needs and expectations.

The batik industry thrives in various regions across Indonesia, including Madura. Madura batik possesses distinctive characteristics that set it apart from batik produced in other regions, such as the use of bold colors, diverse motifs, and cultural elements embedded in the products. The presence of batik in Madura is linked not only to production and trade activities but also to the preservation of local culture. The batik industry serves as a growing economic activity in Madura, involving the local community in both production and marketing. Data from the Pamekasan Regency Government indicates that the workforce in the key batik industry stood at 6,550 people in 2019, rising to 6,846 in 2020, 7,051 in 2021, 7,506 in 2022, and reaching 7,677 in 2023 (Pamekasan, 2024). This growth in the workforce demonstrates the increasingly significant role the batik industry plays in the local economy of Pamekasan. Meanwhile, the distribution of batik centers in Pamekasan is illustrated in Table 1 below.

Table 1. Distribution of Batik Centers in Pamekasan

District	Village	Total
Pamekasan	Pamekasan	12
	Kowel	2
	Nyalabu Daya	1
Proppo	Candi Burung	3
	Klampar	27
	Larangan Badung	11
	Toket	18
Palengaan	Banyupelle	1
	Rangperang	3
	Toronan	1
	Akor	1
Pademawu	Murtajih	3
Larangan	Kadur	1
Galis	Pagendingan	4
Tlanakan	Tlanakan	4
Jumlah		92

Source: Dinas Perindustrian dan Perdagangan Kabupaten Pamekasan, 2026

One of the thriving batik centers in Pamekasan Regency is located in Klampar Village, Proppo District. The growth of this batik center offers the community opportunities to sustain production activities while simultaneously expanding the market for Madura batik. Klampar batik has also been the subject of research regarding consumer purchasing decisions, highlighting the importance of understanding consumer behavior toward Pamekasan batik products (Hidayat, 2025). While the development of the batik industry in Pamekasan presents opportunities for business owners to

expand their markets, it also intensifies competition among batik products. Consumers base their choices on various considerations; therefore, business owners cannot simply rely on maintaining product availability but must also pay attention to how their products are perceived and evaluated by consumers. Consequently, brand image and product quality emerge as two critical aspects in understanding consumer purchasing decisions.

One factor that can influence consumer decisions is brand image. Brand image refers to the perceptions and mental impressions consumers form about a brand based on the information and experiences they possess. A positive brand image helps consumers recognize a product and distinguish it from competitors' offerings. [Hughes et al. \(2019\)](#) explain that consumer knowledge of a brand shapes their responses to marketing efforts and their product choices. In the context of batik, brand image can be linked to regional identity, the character of motifs, colors, quality, and the overall impression formed when consumers encounter the brand. Research by [Waluya et al. \(2019\)](#) found that brand image influences customer satisfaction and purchasing decisions among automotive consumers in Indonesia. Conversely, a study by [Gulanang and Pramudena \(2019\)](#) found that brand image had no significant effect on purchasing decisions or customer satisfaction among customers of PT Wilo Pumps Indonesia. These contrasting findings indicate that the impact of brand image on satisfaction and purchasing decisions can vary depending on product and consumer characteristics.

In addition to brand image, product quality is another crucial aspect in determining how consumers evaluate a product. Product quality relates to a product's ability to meet consumer needs and expectations. [Kotler et al. \(2024\)](#) explain that product quality is a characteristic reflecting a product's capacity to deliver benefits that align with consumer needs. For Madura Batik products, quality is evident in the materials used, the precision of the patterns, color durability, fabric smoothness, design suitability, and the final product finish. Products that meet consumer quality expectations tend to garner more favorable evaluations. [Waluya et al. \(2019\)](#) found that product quality influences customer satisfaction and purchase decisions. Research on Shalempang Batik products in Sampang Regency also revealed that product quality has a partial effect on purchase decisions. Similarly, a study by [Agustina et al. \(2024\)](#) on Kampung Pesilat Batik found that product quality significantly influences purchase decisions. These findings indicate that product quality is a key factor consumers consider when selecting batik products to purchase.

Previous studies on brand image and product quality have examined the impact of these variables on customer satisfaction and purchase decisions. [Waluya et al. \(2019\)](#) investigated the relationship of product quality and brand image with purchase decisions, using customer satisfaction as a mediating variable among automotive consumers in Indonesia. Surveying 200 respondents, the study found that both product quality and brand image influence customer satisfaction and directly affect purchase decisions. Furthermore, the study demonstrated that product quality and brand image influence purchase decisions through customer satisfaction. These results suggest that consumer purchase decisions are shaped not only by assessments of product quality and brand image but also by the satisfaction experienced by the consumer.

In this phenomenon, customer satisfaction acts as a link between consumers' assessments of brand image and product quality and their purchasing decisions. Customer satisfaction arises when consumers feel that the product they have obtained aligns with their expectations. [Waluya et al. \(2019\)](#) explain that satisfaction relates to a consumer's assessment after comparing their actual experience with prior expectations. A strong brand image can foster positive expectations regarding a product, while product quality that meets those expectations can provide a positive post-purchase experience. When the experience aligns with expectations, consumers may feel satisfied and form a more positive assessment of the product. [Waluya et al. \(2019\)](#) demonstrated that customer satisfaction mediates the influence of brand image and product quality on purchasing decisions. These results indicate that customer satisfaction helps explain the process linking consumer assessments of the brand and product quality to the decision to purchase.

Studies on the relationships between brand image, product quality, customer satisfaction, and purchasing decisions have yielded varying findings. [Gulanang & Pramudena \(2019\)](#) found that product quality has a positive and significant effect on both purchasing decisions and customer

satisfaction, whereas brand image had no effect on either variable. In contrast, [Waluya et al. \(2019\)](#) found that both brand image and product quality influence customer satisfaction and purchasing decisions—both directly and through the mediating role of customer satisfaction. [Paludi and Nurchorimah \(2021\)](#) also found that product quality and brand image influence purchasing decisions and customer satisfaction; however, their analysis of indirect effects revealed that not all mediation pathways resulted in significant impacts. These divergent results indicate that the relationships between product quality, brand image, customer satisfaction, and purchasing decisions do not follow a uniform pattern across all studies.

Such variations in results are also evident in studies focusing on batik products. [Agustina et al. \(2024\)](#) found that brand image and product quality significantly influence purchasing decisions for "Batik Kampung Pesilat." Similarly, Sirait and Syarif found that product quality and brand image—both individually and simultaneously—influence purchasing decisions for "Batik Shalempang" in Sampang Regency. These results indicate that brand image and product quality can be significant factors in purchasing decisions for batik products. However, different results were observed in the case of Batik Klampar Pamekasan. [Hidayat, 2025](#)) found that brand image has a positive and significant effect on purchasing decisions, whereas product quality does not have a direct positive and significant effect on purchasing decisions. The study also found that product quality and brand image influence purchasing decisions through brand trust.

These findings demonstrate that the impact of product quality on purchasing decisions does not always occur directly. In the study by [Waluya et al. \(2019\)](#), product quality influenced purchasing decisions through customer satisfaction. In contrast, for Batik Klampar Pamekasan, the influence of product quality on purchasing decisions was found to operate through brand trust. This discrepancy suggests that there is more than one possible mechanism explaining the relationship between product quality and purchasing decisions. Atmaja and Irmawati also found that product quality and brand image influence customer satisfaction and purchasing behavior, highlighting the role of satisfaction in this relationship among consumers of thrift products. These findings reinforce the importance of re-examining the role of customer satisfaction in explaining the relationship between product quality, brand image, and purchasing decisions.

Differences in research findings can also be observed in the directional relationship between customer satisfaction and purchase decisions. [Paludi & Nurchorimah \(2021\)](#) positioned the purchase decision as an intervening variable in the relationship of product quality and brand image with customer satisfaction, finding that purchase decisions influence customer satisfaction. Conversely, [Waluya et al. \(2019\)](#) positioned customer satisfaction as a mediating variable between product quality and brand image and the purchase decision, finding evidence of a mediating effect. These differing variable placements indicate that the relationship between customer satisfaction and purchase decisions can still be examined from different directional perspectives. In this study, customer satisfaction is positioned as a mediating variable because satisfaction reflects a consumer's evaluation of a product—taking into account brand image and product quality—prior to the purchase decision.

This research gap is particularly relevant to Madura Batik products in Pamekasan. [Hidayat's \(2025\)](#) study focused on Klampar Batik in Pamekasan but utilized brand trust as an intervening variable between product quality, brand image, and purchase decisions. Meanwhile, [Waluya et al. \(2019\)](#) employed customer satisfaction as a mediating variable but focused on automotive consumers. Studies on Batik Kampung Pesilat and Batik Shalempang have also predominantly examined the direct effects of brand image and product quality on purchase decisions, without positioning customer satisfaction as a mediating variable. Thus, there remains an opportunity to examine whether customer satisfaction can explain the influence of brand image and product quality on purchase decisions among Madura Batik consumers in Pamekasan.

In the context of Madura Batik in Pamekasan, this issue is significant because the development of the batik industry requires not only increased production volume but also the ability of business operators to retain consumers. The workforce in Pamekasan's flagship batik industry grew from 6,550 people in 2019 to 7,677 in 2023, indicating continued industrial expansion in the region. This growth must be accompanied by the ability of business operators to preserve the identity

of Madura Batik while simultaneously meeting consumer expectations. A strong brand image helps consumers recognize and distinguish Madura Batik from other batik products, while high product quality ensures an experience that meets consumer expectations. When these conditions are met, customer satisfaction is fostered, ultimately driving consumers to make purchasing decisions.

Given this context, it is important to conduct research on customer satisfaction as a mediating variable between brand image and product quality regarding purchasing decisions for Madura Batik on Madura Island. This study aims to examine the influence of brand image and product quality on customer satisfaction; analyze the impact of brand image, product quality, and customer satisfaction on purchasing decisions; and investigate the role of customer satisfaction in mediating the effects of brand image and product quality on purchasing decisions. The study is expected to provide insight into the consumer decision-making process regarding Madura Batik, specifically concerning the roles of brand image, product quality, and customer satisfaction. Furthermore, the findings are intended to offer valuable guidance to Madura Batik businesses on Madura Island for building a strong brand image, maintaining product quality, and enhancing customer satisfaction, thereby boosting consumer purchasing decisions.

2) Literature Review and Hypothesis Development

The literature on consumer behavior emphasizes that purchase decisions are shaped not only by the functional characteristics of a product but also by consumers' perceptions, evaluations, and post-consumption experiences. In the context of Madura Batik, these processes are particularly relevant because batik represents both a commercial product and a cultural artifact. Consumers may evaluate Madura Batik based on its brand reputation, product quality, cultural uniqueness, aesthetic characteristics, and the satisfaction derived from their consumption experience. This study focuses on four key constructs: brand image, product quality, customer satisfaction, and purchase decision. Brand image represents consumers' overall perceptions and associations regarding a brand, including its reputation, uniqueness, quality, value, and cultural identity. Product quality reflects consumers' evaluation of the ability of Madura Batik products to meet their functional and aesthetic expectations. Customer satisfaction represents the evaluation resulting from comparing expectations with actual product experiences, while purchase decision reflects consumers' final choice to select and purchase a product after evaluating available alternatives. The theoretical relationships proposed in this study are primarily grounded in the expectation-confirmation/disconfirmation perspective. This perspective suggests that consumers develop expectations before consumption and subsequently compare these expectations with their actual experience. When perceived product performance meets or exceeds expectations, satisfaction is more likely to emerge. Satisfaction may subsequently influence consumers' behavioral responses, including their purchasing decisions. Within this framework, brand image contributes to expectation formation, whereas product quality represents an important element of the actual product experience. Customer satisfaction therefore serves as an evaluative mechanism through which these perceptions may translate into purchase decisions.

2.1 Brand Image and Customer Satisfaction

Brand image reflects consumers' perceptions, beliefs, and associations regarding a particular brand. A favorable brand image can create positive expectations regarding product quality, value, reputation, uniqueness, and the overall consumption experience. Previous studies have consistently demonstrated the importance of brand image in shaping customer evaluations. Dash et al. (2021) found that brand image plays an important role in determining customer satisfaction, while Khan et al. (2022) similarly reported a positive relationship between brand image and customer satisfaction using PLS-SEM. A systematic review by [Tahir et al. \(2024\)](#) further indicates that brand image is an important antecedent of customer satisfaction and subsequent consumer responses. In the Madura Batik context, brand image incorporates not only commercial reputation but also cultural associations reflected through distinctive motifs, colors, artisan reputation, authenticity, and Madurese identity. A strong brand image may therefore strengthen consumers' expectations regarding the quality and

cultural value of the product. When actual experiences are consistent with these expectations, higher customer satisfaction is expected.

Therefore, the following hypothesis is proposed:

H1: Brand image has a positive and significant effect on customer satisfaction among Madura Batik consumers.

2.2 Product Quality and Customer Satisfaction

Product quality refers to a product's ability to provide benefits and performance that meet consumer needs and expectations. It encompasses dimensions such as performance, reliability, durability, aesthetics, and suitability for consumer needs. In the context of Madura Batik, product quality can be reflected through fabric quality, texture, pattern precision, color durability, design, comfort, craftsmanship, and finishing quality. [Bhowmick and Seetharaman \(2023\)](#) highlight product quality as an important determinant of customer satisfaction because consumers evaluate whether product attributes deliver the expected benefits. Similarly, [Muthmainnah et al. \(2023\)](#) found that product quality significantly influences customer satisfaction. From the expectation-confirmation perspective, customers are more likely to experience satisfaction when the quality received corresponds to or exceeds their prior expectations. For Madura Batik consumers, superior quality may strengthen positive evaluations because the product combines functional characteristics with aesthetic and cultural values. Consequently, consumers who perceive higher product quality are expected to report higher levels of satisfaction.

Therefore, the following hypothesis is proposed:

H2: Product quality has a positive and significant effect on customer satisfaction among Madura Batik consumers.

2.3 Brand Image and Purchase Decision

Brand image provides information that consumers can use to differentiate products and reduce uncertainty during the decision-making process. A favorable brand image can strengthen consumer confidence because it communicates expected quality, credibility, symbolic meaning, and product uniqueness. Previous studies provide empirical support for this relationship. [Dash et al. \(2021\)](#) demonstrated that brand image is associated with stronger purchase intention, while [Budiyo and Sulistyo \(2022\)](#) found that brand image positively and significantly influences purchase decisions. Within the Madura Batik industry, brand image may be especially important because consumers are confronted with various batik products that differ in motifs, cultural associations, production origins, and artisan reputation. A recognizable and favorable Madura Batik brand can therefore reduce uncertainty and strengthen consumers' confidence in selecting the product. Elements such as regional identity, distinctive motifs and colors, artisan reputation, and perceived authenticity may serve as important cues during purchase evaluation.

Therefore, the following hypothesis is proposed:

H3: Brand image has a positive and significant effect on purchase decisions among Madura Batik consumers.

2.4 Product Quality and Purchase Decision

Product quality is another important factor that consumers consider when deciding whether to purchase a product. Consumers generally prefer products that are perceived as capable of satisfying their functional, aesthetic, and experiential needs. [Muthmainnah et al. \(2023\)](#) found that product quality significantly influences purchase decisions, while [Reva et al. \(2025\)](#) similarly demonstrated the importance of product quality in explaining consumer purchasing behavior. For Madura Batik, consumers can directly evaluate several tangible product attributes, including fabric quality, craftsmanship, color durability, pattern neatness, comfort, and design. As a result, higher

perceived quality may increase consumer confidence that the product provides appropriate value and meets expectations. The higher the perceived quality of Madura Batik, the stronger the likelihood that consumers will choose and purchase the product.

Therefore, the following hypothesis is proposed:

H4: Product quality has a positive and significant effect on purchase decisions among Madura Batik consumers.

2.5 Customer Satisfaction and Purchase Decision

Customer satisfaction represents a consumer's evaluation of whether the product experience corresponds to prior expectations. Satisfaction is important because it can shape subsequent behavioral responses. Consumers who are satisfied with a product are generally more confident in their product evaluations and are more likely to demonstrate favorable purchasing behavior. [Dash et al. \(2021\)](#) found that customer satisfaction significantly influences purchase intention, suggesting that satisfaction acts as an important mechanism connecting consumer experience with subsequent purchasing tendencies. [Reva et al. \(2025\)](#) also reported a strong relationship between customer satisfaction and purchase decisions. In the context of Madura Batik, consumers may develop satisfaction after evaluating product quality, design, comfort, cultural authenticity, and brand-related experience. Positive evaluations of these elements can reinforce their confidence in selecting Madura Batik products. The literature in the manuscript similarly positions customer satisfaction as more than an outcome of consumption; it can also predict subsequent consumer behavior.

Therefore, the following hypothesis is proposed:

H5: Customer satisfaction has a positive and significant effect on purchase decisions among Madura Batik consumers.

2.6 The Mediating Role of Customer Satisfaction

Customer satisfaction may function as an important mediating mechanism between consumers' product evaluations and their purchase decisions. Brand image primarily shapes consumers' expectations and perceptions before and during product evaluation. A favorable image may generate expectations regarding quality, reputation, authenticity, and cultural value. When consumers' actual experiences are consistent with these perceptions, satisfaction emerges and can subsequently strengthen purchasing decisions. [Dash et al. \(2021\)](#) provide support for this mechanism by demonstrating that brand image is associated with customer satisfaction and purchase intention, while satisfaction itself contributes to stronger purchasing tendencies. Accordingly, the influence of brand image on purchase decisions may operate not only directly but also indirectly through customer satisfaction. Thus, the following hypothesis is proposed:

H6: Customer satisfaction positively mediates the relationship between brand image and purchase decisions among Madura Batik consumers.

A similar mechanism may occur in the relationship between product quality and purchase decisions. Product quality provides consumers with direct evidence regarding whether the product meets their expectations. High-quality fabrics, durable colors, precise patterns, attractive designs, and appropriate finishing can generate positive consumption experiences and increase satisfaction. Satisfaction then strengthens consumers' positive evaluation of the product and may encourage purchase decisions. [Reva et al. \(2025\)](#) provide evidence supporting the mediating role of customer satisfaction between product quality and purchase decisions. However, previous studies have not always produced identical indirect-effect patterns. [Paludi and Nurchorimah \(2021\)](#), for example, found differences in the mediation patterns associated with brand image and product quality. Such inconsistencies indicate the need to examine these relationships within different product and cultural contexts. This issue is particularly relevant to Madura Batik because consumers assess both functional product characteristics and symbolic-cultural attributes. Thus, customer satisfaction may provide an

important mechanism through which perceived product quality is translated into purchasing behavior. Therefore, the following hypothesis is proposed:

H7: Customer satisfaction positively mediates the relationship between product quality and purchase decisions among Madura Batik consumers.

Overall, the proposed framework integrates brand-related perceptions, product evaluations, customer experience, and purchasing behavior within a culturally distinctive consumer context. By examining both direct and indirect relationships, this study seeks to extend existing consumer behavior research by clarifying how customer satisfaction translates brand image and product quality into purchase decisions in the Madura Batik industry. The framework therefore provides an empirical basis for understanding both the functional and symbolic mechanisms underlying consumer decisions toward culturally embedded products.

3) **Research Method**

3.1 Research Design

This study employs a quantitative approach with an explanatory research design. A quantitative approach is utilized because the study aims to examine causal relationships among brand image, product quality, customer satisfaction, and purchase decisions regarding Batik Madura consumers.

The study utilizes a cross-sectional design, meaning data is collected from respondents during a single research period. The unit of analysis consists of individual consumers who have purchased or used Batik Madura products. Consumers were selected as the unit of analysis because the study focuses on consumer perceptions and evaluations regarding brand image, product quality, satisfaction, and purchase decisions.

Partial Least Squares Structural Equation Modeling (PLS-SEM) was chosen because the study involves a model comprising multiple latent constructs and mediation relationships. PLS-SEM is also suitable for research that emphasizes a model's predictive capability and does not strictly require a multivariate normal distribution ([Hair et al., 2021](#); [Sarstedt et al., 2022](#)).

3.2 Population and Sample

The research population consists of consumers who have purchased Batik Madura products in Pamekasan. This population includes consumers who purchase batik for personal use, clothing, formal or informal events, and other purposes.

Since the exact size of the population of Batik Madura consumers who have made purchases across all batik centers in Madura cannot be determined precisely, the study employs a non-probability sampling technique—specifically, purposive sampling. This technique was selected because the study requires respondents with direct experience in evaluating Batik Madura products.

The sample size for this study is 150 respondents. Data collection was conducted between July and August 2026 in Pamekasan Regency.

3.3 Data Collection Techniques

The research data comprises both primary and secondary data. Primary data was obtained by distributing questionnaires to Batik Madura consumers. Secondary data was gathered from scientific literature, government reports, academic publications, and official sources related to the development of the batik industry and MSMEs in Pamekasan Regency. The questionnaire was developed based on indicators for each construct derived from existing literature and subsequently adapted to the context of Madura Batik. Each statement was measured using a five-point Likert scale:

- 1 = strongly disagree,
- 2 = disagree,
- 3 = neutral,
- 4 = agree, and
- 5 = strongly agree.

3.4 Variables and Measurement

This study employs four latent constructs: brand image, product quality, customer satisfaction, and purchase decision. All constructs in the study are treated as reflective constructs, as the indicators are considered manifestations of the latent constructs being measured.

Table 2. Measurement Model

Constructs	Code	Indicator	Measurement Statement
Brand Image	BI1	Recognition	I can easily recognize the brand/product of the Madura Batik I purchased.
	BI2	Reputation	The Madura Batik I purchased has a good reputation.
	BI3	Positive image	Madura Batik has a positive image among consumers.
	BI4	Uniqueness	Madura Batik possesses unique characteristics compared to other batik products.
	BI5	Local identity	Madura Batik embodies a strong Madurese cultural identity.
Product Quality	PQ1	Material quality	The material of the Madura Batik I purchased is of good quality.
	PQ2	Motif/design quality	The motifs and designs of the Madura Batik are well-crafted and attractive.
	PQ3	Color quality	The colors of the Madura Batik are of high quality and durable.
	PQ4	Neatness	The execution of the motifs and stitching on the Madura Batik appears neat and well-finished.
	PQ5	Durability	Madura Batik is durable.
	PQ6	Comfort	Madura Batik is comfortable to wear.
Customer Satisfaction	CS1	Overall satisfaction	Overall, I am satisfied with the Madura Batik I purchased.
	CS2	Expectation confirmation	The Madura Batik I purchased met my expectations.
	CS3	Right decision	I feel I made the right decision by purchasing Madura Batik.
	CS4	Positive experience	My experience purchasing and using Madura Batik has been pleasant.
	CS5	Satisfaction with choice	I am satisfied with the specific Madura Batik I chose to buy.
Purchase Decision	PD1	Product choice	I chose Madura Batik over other product alternatives.
	PD2	Purchase certainty	I am confident in my decision to purchase Madura Batik.
	PD3	Need suitability	The Madura Batik I purchased suits my needs.
	PD4	Purchase priority	Madura Batik is one of my top choices when buying batik.
	PD5	Purchase correctness	I feel that the decision to purchase Madura Batik was the right one.

3.5 Measurement Model (Outer Model)

The evaluation of the outer model is conducted to determine the validity and reliability of the constructs used in the study. Since the research constructs are reflective in nature, the evaluation encompasses indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

3.5.1 Indicator Reliability

Indicator reliability is evaluated via outer loading values. Indicators with loading values of approximately 0.70 or higher generally indicate an adequate contribution to explaining the construct (Hossan et al., 2025; Sarstedt et al., 2022). However, the decision to retain or remove an indicator is not based solely on loading values in a mechanical manner; it also takes into account AVE, construct reliability, and content validity.

3.5.2 Internal Consistency Reliability

Construct reliability is evaluated using Cronbach's alpha and composite reliability (CR). Reliability values of approximately 0.70 or higher generally indicate adequate internal consistency for confirmatory research. Sarstedt et al. (2022) emphasize the importance of reporting construct reliability alongside other validity evaluations when using PLS-SEM.

3.5.3 Convergent Validity

Convergent validity is evaluated using the Average Variance Extracted (AVE). A construct is considered to possess adequate convergent validity if the AVE reaches a minimum of 0.50, indicating that the construct explains at least 50% of the variance of its indicators (Hair et al., 2021; Sarstedt et al., 2022).

3.5.4 Discriminant Validity

Discriminant validity is used to ensure that each construct is empirically distinct from the other constructs. This study employs the Heterotrait-Monotrait Ratio (HTMT) as the primary measure of discriminant validity.

HTMT is currently one of the recommended criteria in PLS-SEM for evaluating discriminant validity. Methodological literature indicates that the Fornell-Larcker criterion and cross-loadings have limitations compared to HTMT in detecting discriminant validity issues (Hair et al., 2021).

HTMT values below the recommended thresholds indicate that the constructs possess adequate discriminant validity. A value of 0.85 can be used as a conservative criterion, whereas a value of 0.90 may serve as a more lenient threshold, depending on the conceptual closeness between the constructs.

3.6 Structural Model (Inner Model)

Once the measurement model meets the validity and reliability criteria, the analysis proceeds to the evaluation of the inner model. The structural model evaluation is conducted to examine the relationships between constructs and the model's ability to explain the endogenous variables.

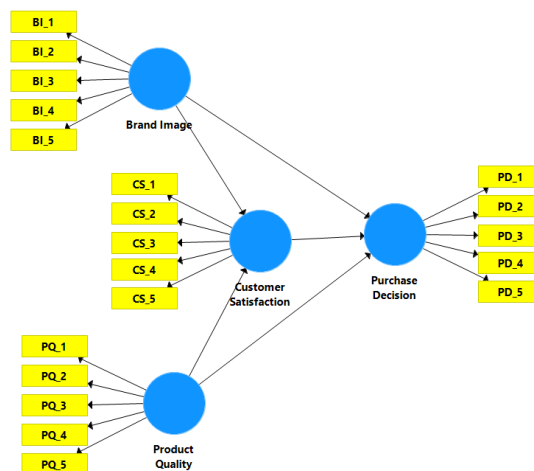


Figure 1. Research Structural Model

3.6.1 Collinearity

Collinearity was checked using the Variance Inflation Factor (VIF) on the predictor construct. This check is necessary to ensure that the relationship between predictor variables does not produce multicollinearity problems that can interfere with the estimation of path coefficients.

[Sarstedt et al. \(2022\)](#) recommend examining the VIF as part of PLS-SEM structural model evaluation. A low VIF value indicates the absence of serious collinearity problems ([Sarstedt et al., 2022](#)).

3.6.2 Coefficient of Determination (R^2)

The R^2 value is used to assess the ability of exogenous constructs to explain the variance of endogenous constructs. In this study, R^2 was evaluated for:

- 1) customer satisfaction; and
- 2) purchase decisions.

A higher R^2 value indicates greater explanatory power of the model. However, R^2 should not be used as the only indicator of model quality because R^2 indicates explanatory power and not predictive power ([Sarstedt et al., 2022](#)).

3.6.3 Effect Size (f^2)

Effect size f^2 is used to determine the relative contribution of each exogenous construct to the R^2 of the endogenous construct. This analysis helps explain whether the contribution of brand image, product quality, and customer satisfaction to the endogenous construct is small, medium, or large.

Thus, research not only tests whether a relationship is significant, but also evaluates how much each predictor contributes to the endogenous construct.

3.6.4 Predictive Relevance (Q^2)

Predictive relevance is used to evaluate the model's predictive ability against endogenous indicators or constructs. A positive Q^2 value indicates that the model has predictive relevance to the endogenous construct being evaluated.

When available in SmartPLS 4, research can also use PLSpredict to evaluate out-of-sample prediction capabilities. This approach is more informative than relying solely on R^2 because PLS-SEM is primarily oriented towards prediction and explanation of variance.

3.7 Hypothesis Testing

Hypothesis testing is carried out using bootstrapping in SmartPLS 4. Bootstrapping is a non-parametric procedure that re-samples the original data to produce standard errors, t-statistics, p-values, and confidence intervals.

For the final analysis, the study used 10,000 bootstrap subsamples as recommended to obtain more stable estimates. SmartPLS also recommends using percentile bootstrap confidence intervals as the default option, with BCa being used if the bootstrap distribution shows asymmetry problems. (SmartPLS)

The direct effect is declared significant if the p-value is smaller than 0.05 or the bootstrap confidence interval does not include zero. A positive path coefficient indicates that an increase in the predictor construct is followed by an increase in the endogenous construct, while a negative coefficient indicates the opposite relationship.

3.8 Mediation Testing

Mediation testing was carried out to find out whether customer satisfaction is a mechanism that connects brand image and product quality with purchase decisions.

The significance of the indirect effect was determined using bootstrap confidence interval. The bootstrapping approach is more suitable for testing indirect effects because it does not require that the distribution of mediating effects follow a normal distribution.

Mediation interpretation is carried out by considering the significance of indirect effects and direct effects. If the indirect effect is significant, customer satisfaction has a mediating role.

Furthermore, the presence or absence of direct effects is used to differentiate mediation patterns, such as complementary mediation, indirect-only mediation, direct-only nonmediation, or other patterns according to empirical results.

3.9 Research Ethics

Data collection was carried out by providing an explanation to respondents regarding the purpose of the research, the voluntary nature of participation, and the use of data only for academic purposes. Respondents are not required to provide personal identification that is not required in the analysis. Filling out the questionnaire was carried out after the respondent gave consent to participate.

With this procedure, the research seeks to maintain the confidentiality of respondent data and ensure that the data obtained is used responsibly for research purposes.

4) Results and Discussion

a) Result

Table 3. General description of research respondents

Characteristics	Category	Frequency (n)	Percentage (%)
Gender	Male	62	41,3
	Female	88	58,7
	Total	150	100,0
Age	17-25 years	38	25,3
	26-35 years	45	30,0
	36-45 years	37	24,7
	46-55 years old	21	14,0
	>55 years	9	6,0
	Total	150	100,0
Final Education	SMA/SMK equivalent	52	34,7
	Diploma	15	10,0
	S1/Equivalent	68	45,3
	S2/S3	15	10,0
	Total	150	100,0
Jobs	Student/Students	30	20,0
	Civil servants/ASN	29	19,3
	Private Employees	35	23,3
	Entrepreneurs/MSMEs	31	20,7
	Housewife	15	10,0
	Others	10	6,7
	Total	150	100,0
Income per Month	< Rp. 2,000,000	25	16,7
	IDR 2,000,000-IDR 3,999,999	42	28,0
	IDR 4,000,000-IDR 5,999,999	45	30,0
	IDR 6,000,000-IDR 7,999,999	22	14,7
	≥ IDR 8,000,000	16	10,6
	Total	150	100,0
Frequency of Purchasing Madura Batik Characteristics	1 time	43	28,7
	2-3 times	57	38,0
	4-5 times	30	20,0
	>5 times	20	13,3
	Total	150	100,0
Gender			

Source: Processed primary data, 2026.

Based on Table 3, this study involved 150 Madura Batik consumers as respondents. Regarding gender, female respondents constituted the largest group, numbering 88 individuals (58.7%), while male respondents numbered 62 (41.3%). This composition indicates that female consumers were relatively more dominant in the purchase of Madura Batik products within the study sample.

In terms of age, the largest group of respondents fell within the 26-35 age range, comprising 45 individuals (30.0%), followed by the 17-25 age group with 38 individuals (25.3%) and the 36-45 age group with 37 individuals (24.7%). Meanwhile, respondents aged 46-55 totaled 21 (14.0%), and those over 55 numbered 9 (6.0%). This composition demonstrates that the Madura Batik consumers in this study were predominantly from the productive age group.

Regarding the highest level of education attained, the majority of respondents held a Bachelor's degree (S1) or equivalent (68 individuals, or 45.3%), followed by those with a high school or vocational high school (SMA/SMK) education or equivalent (52 individuals, or 34.7%). Respondents with a Diploma and those with Master's (S2) or Doctoral (S3) degrees each numbered 15 (10.0%). This indicates that the majority of respondents possessed a secondary to higher level of education, making them relatively capable of evaluating brand image, product quality, customer satisfaction, and purchase decisions.

Based on occupation, the largest group of respondents consisted of private-sector employees (35 individuals, or 23.3%), followed by entrepreneurs/MSME owners (31 individuals, or 20.7%), students (30 individuals, or 20.0%), and civil servants (29 individuals, or 19.3%). Meanwhile, housewives numbered 15 (10.0%), and those with other occupations totaled 10 (6.7%). In terms of income, the largest group earned between IDR 4,000,000 and IDR 5,999,999 per month, comprising 45 individuals (30.0%). Next, 42 respondents (28.0%) earned between IDR 2,000,000 and IDR 3,999,999, while 25 respondents (16.7%) earned less than IDR 2,000,000. There were 22 respondents (14.7%) with an income of IDR 6,000,000-IDR 7,999,999, and 16 respondents (10.6%) earned IDR 8,000,000 or more.

Regarding purchasing experience, 57 respondents (38.0%) had purchased Madura Batik two to three times, while 43 respondents (28.7%) had made a purchase only once. A total of 30 respondents (20.0%) had purchased the product four to five times, and 20 respondents (13.3%) had purchased it more than five times. Thus, the majority of respondents possessed direct experience with Madura Batik products, making them well-suited to evaluate brand image, product quality, consumer satisfaction, and purchasing decisions.

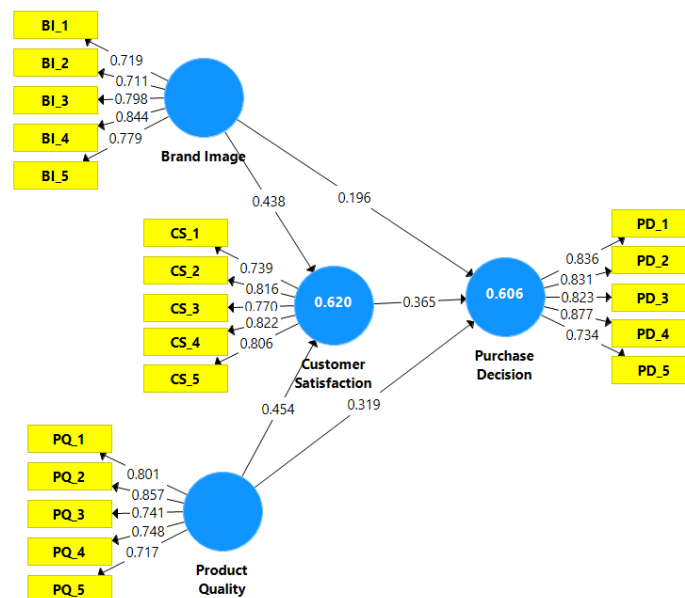


Figure 2. Structural Equation Modeling

Assessment of Measurement Model

All research constructs in Table 3 demonstrate good reliability and convergent validity. Cronbach's Alpha values range from 0.831 to 0.879, rho_A values from 0.845 to 0.880, and Composite Reliability values from 0.880 to 0.912. All these values exceed the minimum threshold of 0.70, indicating that the indicators for each construct possess good internal consistency.

Furthermore, the Average Variance Extracted (AVE) values for all constructs range from 0.596 to 0.675, exceeding the minimum threshold of 0.50. This indicates that each construct is capable of explaining more than 50% of the variance in its respective indicators. Consequently, Brand Image, Customer Satisfaction, Product Quality, and Purchase Decision meet the criteria for construct reliability and convergent validity, making them suitable for subsequent structural model analysis.

Table 4. Measurement Model

	FL	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
BI_1	0.719	0.831	0.845	0.880	0.596
BI_2	0.711				
BI_3	0.798				
BI_4	0.844				
BI_5	0.779				
CS_1	0.739	0.850	0.854	0.893	0.626
CS_2	0.816				
CS_3	0.770				
CS_4	0.822				
CS_5	0.806				
PD_1	0.836	0.836	0.851	0.882	0.600
PD_2	0.831				
PD_3	0.823				
PD_4	0.877				
PD_5	0.734				
PQ_1	0.801	0.879	0.880	0.912	0.675
PQ_2	0.857				
PQ_3	0.741				
PQ_4	0.748				
PQ_5	0.717				

Based on Table 4, all indicators exhibit outer loading values above 0.70, with the lowest value being 0.711 (BI_2) and the highest being 0.877 (PD_4). The Brand Image construct has loadings ranging from 0.711 to 0.844; Customer Satisfaction ranges from 0.739 to 0.822; Product Quality ranges from 0.717 to 0.857; and Purchase Decision ranges from 0.734 to 0.877. These results indicate that all indicators contribute adequately to reflecting their respective constructs. Consequently, all indicators meet the criteria for indicator reliability and are retained in the research model.

Assessment of Structural Model

The Fornell-Larcker Criterion results in Table 4 show that the square root of the AVE for each construct is higher than the correlation values between that construct and the others. The diagonal values for Brand Image (0.772), Customer Satisfaction (0.791), Product Quality (0.774), and Purchase Decision (0.822) are all greater than the inter-construct correlation values in the corresponding rows or columns.

These results demonstrate that each construct possesses a strong ability to distinguish itself from the other constructs. Thus, Brand Image, Customer Satisfaction, Product Quality, and Purchase Decision satisfy the discriminant validity criteria based on the Fornell-Larcker Criterion, making all constructs suitable for use in the subsequent structural model analysis.

Table 5. Discriminant Validity (Fornell-Larcker Criterion)

	Brand Image	Customer Satisfaction	Product Quality	Purchase Decision
Brand Image	0.772			
Customer Satisfaction	0.692	0.791		
Product Quality	0.560	0.699	0.774	
Purchase Decision	0.627	0.724	0.684	0.822

Based on Table 5, the Heterotrait-Monotrait Ratio (HTMT) values between constructs range from 0.633 to 0.825. The highest HTMT value is observed in the relationship between Customer Satisfaction and Purchase Decision (0.825), while the lowest is found in the relationship between Brand Image and Product Quality (0.633).

All HTMT values fall below the 0.90 threshold; thus, it can be concluded that there are no issues regarding discriminant validity among the constructs. Consequently, Brand Image, Customer Satisfaction, Product Quality, and Purchase Decision demonstrate adequate discriminant validity,

meaning each construct is empirically distinguishable and suitable for use in subsequent structural model testing.

Table 6. Discriminant Validity (HTMT Ratio)

	Brand Image	Customer Satisfaction	Product Quality	Purchase Decision
Brand Image				
Customer Satisfaction	0.800			
Product Quality	0.633	0.765		
Purchase Decision	0.710	0.825	0.766	

Hypothesis Testing

Based on Table 6, all relationships between variables in the research model demonstrate a positive and significant effect. Brand Image has a positive effect on Customer Satisfaction, with a path coefficient of 0.438, a t-statistic of 8.029, and a p-value of 0.000. Furthermore, Brand Image has a positive effect on Purchase Decision, with a coefficient of 0.196, a t-statistic of 3.172, and a p-value of 0.002.

Table 7. Path Coefficients

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
Brand Image → Customer Satisfaction	0.438	0.055	8.029	0.000	Supported
Brand Image → Purchase Decision	0.196	0.062	3.172	0.002	Supported
Customer Satisfaction → Purchase Decision	0.365	0.057	6.411	0.000	Supported
Product Quality → Customer Satisfaction	0.454	0.049	9.237	0.000	Supported
Product Quality → Purchase Decision	0.319	0.048	6.585	0.000	Supported

Customer Satisfaction has a positive and significant effect on Purchase Decision, with a path coefficient of 0.365, a t-statistic of 6.411, and a p-value of 0.000. Meanwhile, Product Quality has a positive effect on Customer Satisfaction, with a coefficient of 0.454, a t-statistic of 9.237, and a p-value of 0.000. Finally, Product Quality has a positive and significant effect on Purchase Decision, with a coefficient of 0.319, a t-statistic of 6.585, and a p-value of 0.000.

Thus, all direct relationships in the model are proven significant at the 5% level. The strongest direct influence on Customer Satisfaction comes from Product Quality ($\beta = 0.454$), while the strongest direct influence on Purchase Decision also comes from Product Quality ($\beta = 0.319$), followed by Customer Satisfaction ($\beta = 0.365$) and Brand Image ($\beta = 0.196$). These results indicate that product quality is a crucial factor in enhancing consumer satisfaction and purchase decisions regarding Batik Madura.

Table 7 (Indirect Effects) outlines the mediation relationships, wherein Customer Satisfaction acts as a mediating variable in the relationship between Brand Image and Product Quality and Purchase Decision.

Table 7. Indirect Effects

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
Brand Image → Customer Satisfaction → Purchase Decision	0.160	0.031	5.144	0.000	Supported
Product Quality → Customer Satisfaction → Purchase Decision	0.166	0.033	5.066	0.000	Supported

Regarding the relationship Brand Image → Customer Satisfaction → Purchase Decision, the original sample value was 0.160, the standard deviation was 0.031, and the T-statistic was 5.144 with a P-value of 0.000. Since the T-statistic exceeded 1.96 and the P-value was less than 0.05, this indirect effect is significant. This implies that Brand Image has a positive and significant effect on Purchase Decision through Customer Satisfaction. Thus, Customer Satisfaction is proven to mediate the relationship between Brand Image and Purchase Decision.

Furthermore, the relationship Product Quality → Customer Satisfaction → Purchase Decision yielded an original sample value of 0.166, a standard deviation of 0.033, a T-statistic of 5.066, and a P-value of 0.000. These results indicate that the indirect effect of Product Quality on Purchase Decision via Customer Satisfaction is also positive and significant, given that the T-statistic exceeded 1.96 and the P-value was less than 0.05. Consequently, Customer Satisfaction is proven to mediate the relationship between Product Quality and Purchase Decision.

Overall, the analysis of indirect effects demonstrates that Customer Satisfaction serves as a crucial mechanism bridging the influence of Brand Image and Product Quality on Purchase Decision. The mediation coefficient for Product Quality (0.166) is slightly higher than that for Brand Image (0.160); therefore, within this model, the indirect contribution of Product Quality to Purchase Decision—mediated by Customer Satisfaction—is relatively stronger.

Table 9. R-Square

	R Square	R Square Adjusted
Customer Satisfaction	0.620	0.617
Purchase Decision	0.606	0.601

Based on Table 9 (R-Square), the R-Square value for Customer Satisfaction is 0.620, and the Adjusted R-Square is 0.617. This indicates that the variables influencing Customer Satisfaction within the research model account for 62.0% of the variation in Customer Satisfaction, while the remaining 38.0% is explained by factors outside the model. These values demonstrate that the model's explanatory power regarding Customer Satisfaction is substantial or strong.

Furthermore, the R-Square value for Purchase Decision is 0.606, with an Adjusted R-Square of 0.601. This means the independent variables in the model explain 60.6% of the variation in Purchase Decision, while 39.4% is influenced by factors not included in the model. Thus, the model's ability to explain Purchase Decision can also be categorized as strong.

Overall, these R-Square values indicate that the research model possesses good predictive power, as it explains more than 60% of the variation in both Customer Satisfaction and Purchase Decision. The relatively small difference between the R-Square and Adjusted R-Square values also suggests that the model remains stable after accounting for the number of constructs or predictors used.

Table 10. f-Square

	Brand Image	Customer Satisfaction	Product Quality	Purchase Decision
Brand Image		0.347		0.050
Customer Satisfaction				0.129
Product Quality		0.372		0.129
Purchase Decision				

Based on Table 10 (f-square), the magnitude of the effect of each exogenous variable on the endogenous variable within the research model can be determined. The f-square value is used to assess the extent of an exogenous construct's contribution to an endogenous construct. Generally, a value of 0.02 indicates a small effect, 0.15 indicates a medium effect, and 0.35 indicates a large effect.

The analysis results show that the effect of Brand Image on Customer Satisfaction has an f-square value of 0.347. This value approaches 0.35, placing it in the category of a very strong medium effect—bordering on a large effect. This indicates that Brand Image makes a relatively significant contribution to explaining changes in Customer Satisfaction.

Furthermore, the effect of Brand Image on Purchase Decision has an f-square value of 0.050. This value falls between 0.02 and 0.15, classifying it as a small effect. Thus, Brand Image makes a relatively small direct contribution to Purchase Decision.

Meanwhile, the effect of Customer Satisfaction on Purchase Decision has an f-square value of 0.129. This value falls within the range between small and medium effects; based on the thresholds

of 0.02, 0.15, and 0.35, it is categorized as a small effect bordering on medium. This implies that Customer Satisfaction contributes to Purchase Decision, although the magnitude of the influence has not quite reached the medium category.

Regarding Product Quality and Customer Satisfaction, the f-square value is 0.372. This value exceeds 0.35, indicating a large effect. This suggests that Product Quality is one of the variables making the strongest contribution to explaining Customer Satisfaction.

Finally, the effect of Product Quality on Purchase Decision has an f-square value of 0.129, falling into the small effect category while bordering on the medium category. These results indicate that Product Quality makes a direct contribution to Purchase Decision, though this contribution is not as significant as the influence of Product Quality on Customer Satisfaction. Overall, the f-square results indicate that Product Quality and Brand Image make the strongest contributions to Customer Satisfaction, with values of 0.372 and 0.347, respectively. Meanwhile, the direct influence of Brand Image and Product Quality on Purchase Decision is relatively smaller. These findings reinforce earlier results regarding indirect effects, highlighting the pivotal role of Customer Satisfaction as a mediating variable in explaining how Brand Image and Product Quality influence Purchase Decision.

b) Discussion

This study examined how brand image and product quality shape purchase decisions among Madura Batik consumers, both directly and indirectly through customer satisfaction. The findings demonstrate that all hypothesized direct relationships are positive and significant. In addition, customer satisfaction significantly mediates the effects of both brand image and product quality on purchase decisions. These results indicate that consumer purchasing behavior toward Madura Batik is determined not only by evaluations of the brand and physical product attributes but also by the satisfaction generated from these evaluations.

Brand Image and Customer Satisfaction

The results show that brand image has a positive and significant effect on customer satisfaction ($\beta = 0.438$; $t = 8.029$; $p < 0.001$). This finding confirms that consumers who hold more favorable perceptions of Madura Batik tend to experience higher levels of satisfaction.

The result can be explained through the expectation-confirmation perspective. Brand image contributes to the formation of expectations before consumers evaluate or consume a product. A favorable image creates expectations regarding reputation, quality, uniqueness, authenticity, and overall product value. When consumers perceive that their actual experience with Madura Batik is consistent with these expectations, satisfaction is strengthened.

This relationship is particularly relevant in the Madura Batik context because brand image does not represent only a commercial identity. It can also communicate regional identity, cultural authenticity, distinctive motifs, artisan reputation, and traditional craftsmanship. Therefore, consumers may derive satisfaction not only from the functional benefits of batik but also from its symbolic and cultural meanings.

The relatively strong effect size of brand image on customer satisfaction ($f^2 = 0.347$) further demonstrates that brand-related perceptions make a substantial contribution to explaining consumer satisfaction. This finding is consistent with Dash et al. (2021), Khan et al. (2022), and Tahir et al. (2024), who emphasize the importance of brand image in shaping positive customer evaluations and satisfaction.

Product Quality and Customer Satisfaction

Product quality has a positive and significant effect on customer satisfaction ($\beta = 0.454$; $t = 9.237$; $p < 0.001$). Among the two antecedents of customer satisfaction, product quality exhibits a slightly stronger path coefficient than brand image. This suggests that consumers' satisfaction with Madura Batik is strongly rooted in their evaluation of the actual characteristics and performance of the product.

For batik products, quality can be experienced directly through fabric comfort, durability, color quality, motif precision, design attractiveness, craftsmanship, and finishing. Consumers are therefore

able to compare their expectations with tangible product characteristics. When these attributes meet or exceed expectations, consumers are more likely to form a favorable post-purchase evaluation.

The importance of product quality is further supported by its f^2 value of 0.372, indicating a large contribution to customer satisfaction. This finding suggests that, while cultural identity and brand reputation remain important, maintaining the tangible quality of Madura Batik remains fundamental to generating customer satisfaction.

The result supports Bhowmick and Seetharaman (2023) and Muthmainnah et al. (2023), who identify product quality as an important determinant of satisfaction. It also reinforces the expectation-confirmation perspective by demonstrating that satisfaction emerges when perceived product performance corresponds with consumers' expectations.

Brand Image and Purchase Decision

Brand image also has a positive and significant direct effect on purchase decision ($B = 0.196$; $t = 3.172$; $p = 0.002$). Thus, favorable perceptions of Madura Batik can directly encourage consumers to select and purchase the product.

Brand image may reduce uncertainty during consumer decision-making because a reputable and recognizable brand provides signals regarding expected product quality, credibility, authenticity, and value. This function may be particularly important in the batik market, where consumers encounter numerous products with different origins, motifs, levels of craftsmanship, and cultural associations.

However, the effect size of brand image on purchase decision is relatively small ($f^2 = 0.050$). This indicates that although brand image significantly influences purchasing decisions, its direct contribution is limited when customer satisfaction and product quality are simultaneously considered.

This result provides an important interpretation: a favorable brand image alone may not be sufficient to strongly determine consumers' actual purchasing decisions. Consumers may recognize and value a Madura Batik brand, but their decisions remain dependent on whether the product delivers satisfactory quality and an overall positive experience. This finding supports previous evidence from Budiyo and Sulisty (2022) regarding the positive role of brand image in consumer purchasing decisions.

Product Quality and Purchase Decision

Product quality positively and significantly influences purchase decision ($B = 0.319$; $t = 6.585$; $p < 0.001$). This result indicates that consumers are more likely to purchase Madura Batik when they perceive that the product possesses superior functional and aesthetic characteristics.

Unlike purely symbolic products, batik allows consumers to evaluate many quality attributes directly. Fabric quality, color durability, craftsmanship, pattern precision, comfort, and design can provide concrete information that reduces uncertainty in the purchasing process. Consequently, perceived product quality can increase confidence that the selected product provides appropriate value.

Nevertheless, the f^2 value of 0.129 indicates that the direct contribution of product quality to purchase decision is relatively modest compared with its contribution to customer satisfaction. This pattern suggests that part of the influence of product quality on purchasing behavior operates through consumers' satisfaction evaluations rather than solely through a direct decision-making mechanism.

The result is consistent with Muthmainnah et al. (2023) and Reva et al. (2025), who demonstrate that consumers' perceptions of product quality are relevant to purchase-related outcomes.

Customer Satisfaction and Purchase Decision

Customer satisfaction has a positive and significant effect on purchase decision ($B = 0.365$; $t = 6.411$; $p < 0.001$). Among the direct predictors of purchase decision reported in the structural model, customer satisfaction has the largest path coefficient, followed by product quality and brand image.

This finding highlights the importance of consumers' overall evaluative experience in the Madura Batik purchasing process. Consumers may initially be attracted by brand reputation or product attributes, but satisfaction consolidates these evaluations into greater confidence in the decision to purchase.

In the context of culturally embedded products such as Madura Batik, satisfaction may encompass more than functional performance. Consumers may evaluate whether the product meets expectations regarding aesthetics, cultural authenticity, identity expression, comfort, craftsmanship, and perceived value. When these dimensions produce a favorable experience, consumers become more confident in choosing the product.

The result therefore supports the argument that customer satisfaction should not be viewed merely as a post-purchase outcome. Rather, satisfaction can function as an important behavioral mechanism that strengthens subsequent purchase-related decisions. This interpretation is consistent with Dash et al. (2021) and Reva et al. (2025).

Mediating Role of Customer Satisfaction

The mediation analysis provides further insight into how brand image and product quality are translated into purchase decisions. Customer satisfaction significantly mediates the relationship between brand image and purchase decision ($B = 0.160$; $t = 5.144$; $p < 0.001$). Customer satisfaction also significantly mediates the relationship between product quality and purchase decision ($B = 0.166$; $t = 5.066$; $p < 0.001$).

Because both the direct and indirect effects remain positive and significant, the pattern indicates **complementary partial mediation**. In other words, brand image and product quality influence purchase decisions through two pathways: directly and indirectly by increasing customer satisfaction.

For brand image, the mediation result suggests that having a favorable image can influence purchase decisions directly, but part of its influence depends on whether the image is translated into a satisfying consumer experience. A strong cultural identity or positive reputation may attract consumers, but satisfaction reinforces the extent to which these positive perceptions lead to actual purchasing behavior.

A similar mechanism occurs for product quality. Consumers can directly use perceived quality as a basis for choosing Madura Batik, while high-quality experiences simultaneously enhance satisfaction, which then strengthens purchase decisions. The indirect effect of product quality ($B = 0.166$) is slightly larger than that of brand image ($B = 0.160$). Although the difference is small, it suggests that the satisfaction mechanism is particularly relevant in translating tangible product performance into purchasing behavior.

These findings also help explain why the direct effect of brand image on purchase decision has a relatively small effect size. Brand image may operate more effectively when consumers' favorable perceptions are confirmed through satisfying product experiences. Thus, customer satisfaction serves as an important psychological bridge connecting both symbolic evaluations of the brand and functional evaluations of product quality with consumer purchasing behavior.

Explanatory Power and Overall Interpretation

The structural model demonstrates substantial explanatory capability. Brand image and product quality jointly explain 62.0% of the variance in customer satisfaction ($R^2 = 0.620$), while brand image, product quality, and customer satisfaction explain 60.6% of the variance in purchase decision ($R^2 = 0.606$). These values indicate that the proposed model captures a meaningful proportion of consumer evaluations and purchasing behavior toward Madura Batik.

Taken together, the findings reveal a sequential consumer evaluation process. Brand image contributes to expectations and symbolic perceptions, while product quality provides consumers with more tangible evidence regarding the value and performance of Madura Batik. These evaluations contribute to customer satisfaction, which subsequently strengthens purchase decisions. Product

quality appears particularly important for generating satisfaction, while customer satisfaction plays a central role in translating both brand-related and quality-related evaluations into purchasing behavior.

The findings therefore extend the understanding of consumer behavior in culturally embedded products. In the Madura Batik industry, purchasing decisions cannot be explained solely by functional product attributes or branding activities. Instead, effective consumer responses emerge from the interaction between **cultural-symbolic brand perceptions, tangible product quality, and the satisfaction generated from the overall consumption experience**. This highlights the importance of managing Madura Batik simultaneously as a high-quality market offering and as a product carrying distinctive cultural identity.

5) **Concluding Remarks and Recommendation**

Based on the structural model testing using PLS-SEM, this study demonstrates that Brand Image, Product Quality, and Customer Satisfaction are key factors in shaping Purchase Decision. Overall, the results show that consumer perceptions of brand image and product quality not only play a direct role in purchase decisions but also operate through the enhancement of customer satisfaction. These findings align with previous research indicating that brand image and product quality are linked to both customer satisfaction and purchase decisions (Saputra & Syaefulloh, 2023).

First, Brand Image has a positive and significant effect on Customer Satisfaction. This result indicates that the more positive the brand image formed in consumers' perceptions, the higher the satisfaction experienced. A strong brand image can instill confidence, reduce uncertainty during product selection, and create the perception that the product meets consumer expectations. This finding is consistent with the research of Saputri and Tjahjaningsih (2022), which found that brand image has a positive and significant impact on customer satisfaction (Saputri & Tjahjaningsih, 2022).

Second, Product Quality has a positive and significant effect on Customer Satisfaction. Thus, the better the product quality received and perceived by consumers, the higher the resulting satisfaction. This finding is reinforced by previous research showing that product quality is a crucial determinant of customer satisfaction (Saputri & Tjahjaningsih, 2022).

Third, Brand Image and Product Quality positively influence Purchase Decision, while Customer Satisfaction also exerts a positive influence on Purchase Decision. These findings indicate that purchase decisions are formed through consumer evaluation of product attributes alongside perceptions of the brand. These results align with the research by Budiyo and Sulisty, which found that brand image and perceived product quality have a positive and significant effect on purchasing decisions (Budiyo & Sulisty, 2022).

Fourth, the indirect effects analysis demonstrates that Customer Satisfaction mediates the relationship between Brand Image and Purchase Decision, with an indirect effect value of 0.160, a T-statistic of 5.144, and a P-value of 0.000. Since the T-statistic exceeds 1.96 and the P-value is below 0.05, this mediating effect is statistically significant. This implies that a positive brand image enhances customer satisfaction, which in turn encourages consumers to make a purchase.

Fifth, Customer Satisfaction also mediates the relationship between Product Quality and Purchase Decision, with an indirect effect value of 0.166, a T-statistic of 5.066, and a P-value of 0.000. These figures indicate a significant mediating effect. The results demonstrate that product quality drives purchase decisions not only directly but also by fostering a satisfying consumption experience. These findings align with the study by Medrian & Tuti (2022), which identified an indirect effect of product quality on purchase decisions mediated by customer satisfaction.

Regarding the model's explanatory power, the R-Square value for Customer Satisfaction is 0.620, indicating that 62.0% of the variation in Customer Satisfaction is explained by the constructs within the model; meanwhile, the R-Square value for Purchase Decision is 0.606, indicating that 60.6% of the variation in Purchase Decision is explained by the model. Thus, the research model possesses relatively strong explanatory power, while the remaining variation may be attributed to factors not examined in this study.

The f-Square results further reinforce these findings. Product Quality exerts the strongest effect on Customer Satisfaction ($f^2 = 0.372$), followed by Brand Image ($f^2 = 0.347$). According to Cohen's criteria, an f^2 value of approximately 0.35 indicates a large effect, whereas a value of 0.15 indicates a medium effect (Gamil & Abd Rahman, 2023). Consequently, Product Quality is the most influential factor in shaping Customer Satisfaction within this research model, followed by Brand Image. Meanwhile, the direct influence of Brand Image on Purchase Decision (0.050), as well as that of Product Quality and Customer Satisfaction on Purchase Decision (0.129 each), indicates a relatively smaller effect compared to the influence exerted on Customer Satisfaction.

Overall, this study confirms that Customer Satisfaction holds a strategic position as a mediating variable in the relationship between Brand Image and Product Quality and Purchase Decision. The practical implication is that companies need to simultaneously focus on strengthening brand image and enhancing product quality, as both aspects can boost customer satisfaction, which in turn drives purchase decisions. Consequently, marketing strategies should not merely focus on building brand image or improving product quality in isolation; rather, they need to integrate both elements to foster sustainable customer satisfaction.

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Statement of Use of Generative AI

During the preparation of this work, the author used ChatGPT to assist in improving clarity and readability of the text. The author reviewed and edited the output and takes full responsibility for the content of the publication.

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