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Designing Value Creation for an Agro-Based Batik Product: A Design Thinking Approach for Batik Kota at Rumah Batik Palbatu

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***ABSTRACT**: Batik Kota is a line of contemporary batik products developed by Rumah Batik Palbatu, a creative SME in Jakarta, since mid-2025. These products highlight Jakarta's urban culture and target young professionals. Despite their distinctive designs, Batik Kota products have not yet become consumers' top choice. This situation indicates a gap between the value offered and the perceived value experienced by consumers. This study aims to identify the state of value creation at Batik Kota, understand consumer needs and expectations, design a conceptual value creation model, and conduct an initial validation of the designed model. The study employed a mixed-methods sequential exploratory approach within the Design Thinking framework, consisting of the Empathize, Define, Ideate, Prototype, and Test stages. Qualitative data were collected through semi-structured interviews with extreme users, mainstream users, non-buyer-aware users, and internal stakeholders, and were subsequently analyzed using thematic analysis. The resulting model was realized in the form of a men's shirt mockup and a product catalog, then validated through the Perceived Value Scale (PERVAL) measurement on 30 respondents for MVP 3 and qualitative assessment by two domain experts for MVP 2. The research results identified four pillars of value creation: Identity & Heritage, Storytelling & Culture, Lifestyle & Styling, and Social Proof & Experience. The PERVAL measurement results showed a Grand Mean perceived value of 4.37, falling into the "very high" category. The Quality/Performance Value dimension received the highest score of 4.51, while Price/Value for Money received the lowest score of 4.06, which still falls within the "high" category. All PERVAL dimensions had a Cronbach's Alpha value > 0.70. These results indicate that the designed model has the potential to strengthen consumers' perceived value, although the alignment of price with the benefits received still needs to be addressed in future development.*

***Keywords:** Batik Kota; Design Thinking; Perceived Value; PERVAL; Value Creation*

1. INTRODUCTION

The creative industry not only plays a role in driving economic growth but is also one of the sectors that helps preserve local cultural identity and values. In the case of cultural products such as batik, value creation is no longer limited to the product's function and appearance but also encompasses the experience, meaning, and emotional connection formed between the consumer and product (Li & Li, 2022). Batik is an intangible cultural heritage recognized by

UNESCO since 2009 and plays an important role in representing national identity and supporting the development of the creative economy (Prabhawati, 2022). As it has evolved, batik is no longer limited to traditional forms but has expanded into the realm of modern and contemporary fashion through a blend of cultural elements and design innovations that cater to the tastes of the younger generation (Anggorojati et al., 2025). Kementerian Perindustrian Republik Indonesia (2025), the value of batik exports reached US$7.63 million in the first quarter of 2025, an increase of 76.2% compared to the same period the previouse year. This indicates that batik still has potential for growth, particularly through design innovation and enhancing product value. A number of appoaches to formulating business strategies, such as the Business Model Canvas and the Analytical Hierarchy Process, have been aplied in the development and enhancement of the competitiveness of agriculture-based MSMEs in Indonesia in line with the evolution of that market (Kuswardhani et al., 2020; Asfan & Maflahah, 2021; Nurfadila et al., 2023). On the other hand, these opportunities are accompanied by increasingly fierce competition, both from mass-produced printed batik and other fashion products that offer similar functionality and aesthetics. As a result, consumers' purchasing decisions are influenced not only by visual appeal and material quality but also by the perceived value of the product as a whole (Li & Li, 2022). In the case of cultural products, value creation not only related to the product's benefits, but also to the meaning and experiences consumers perceive while using the product (Kurek et al., 2023). That value can be furter enhanced through a co-creation process that actively involves both producers and consumers, so that value creation does not occur solely in one direction from producers to consumers (Prahalad & Ramaswamy, 2004; Rahayu et al., 2020).

Although batik is more commoly known as part of the creative and fashion industries, its production process is linked to the agricultural sector because it uses raw materials derived from agricultural commodities. This makes batik relevant to the agroindustry sector. Austin (1992) explains that agroindustry refers to activities that process raw materials derived from plants or animals into higher-value products, with textiles being one of its subsectors. In the Indonesian context, agroindustry encompasses a range of activities from the upstream agricultural sector to the downstream product processing stage (Soekartawi, 2000). The connection between batik and the agricultural sector can be seen in three parts of its value chain. First, in the supply of raw materials, batik production utilizes natural-fiber fabrics and natural dyes that can be obtained from various parts of plants, such as bark, fruit peels, leaves, and roots (Kusumawardani et al., 2024). One example is the sap of the kepok banana tree, which has been studied as a natural dye for textiles (Nuriana & Winarni, 2020). Second, during the processing stage, the material is transformed into patterned fabric through the processes of batik-making, dyeing, and finishing, which add both economic and cultural value (Sari et al., 2020). Third, in the downstream stage, batik fabric can be developed into various fashion products, one of which is the "Batik Kota" men's shirt developed by Rumah Batik Palbatu (RBP). Batik Kota transforms the fabric into shirts that highlight elements of Jakarta's culture and urban identity, so that the product's value stems not only from its materials and manufacturing process but also from the functional and cultural value it offers consumers. Thus, RBP can be viewed as a downstream agro-industrial actor that connects agriculture-based materials and products with the textile and fashion sectors. In the context of this study, the design of value creation for the "Batik Kota" men's shirt is part of an effort to increase the added value of agro-industry-based products through an approach that takes consumer needs and perceptions into account.

As one of Jakarta's batik MSMEs that produces hand-drawn and stamped batik in

contemporary styles, Rumah Batik Palbatu (RBP) strives to preserve the tradition of batik while introducing its values and culture to today's consumers. In mid 2025, RBP launched a new product line called Batik Kota contemporary batik shirts that incorporate various aspects of Jakarta's identity, such as local cuisine, Betawi culture, and floral motifs, into modern batik designs. This product is aimed at young urban professionals aged 25-35 who need batik attire for work, semi-formal gatherings, and social events. Based on initial interviews with the owner and consumers, as well as observations at trade shows, Batik Kota was deemed to have "attractive" and "unique" designs, but it had not yet become consumers' top choice when making purchases. Consumers tended to appreciate the product's visual appeal but had not yet fully developed an emotional connection or a strong enough reason to own the product. A comparison between the value the owner aims to offer and the value perceived by consumers which includes product concept, differentation, brand purpose, emotional value, and market positioning reveals a gap between the two. On the other hand, research on value creation and innovation in MSMEs still largely focuses on managerial aspects, collaboration, and activities aimed at enhancing value creation capabilities (Azmy et al., 2023; Nurfadila et al., 2023; Rahayu et al., 2020). The use of Design Thinking in previous research has also been primarily focused on the development of sustainable business models (Kurek et al., 2023), whereas studies on the perceived value of cultural products tends to examine the influence of aesthetic design aspects on consumers' purchase intent (Li & Li, 2022; Liu & Hongxia, 2024). These findings indicate that there is still room for research to examine how consumer needs and perceptions can be systematically translated into value creation designs for contemporary batik products produced by MSMEs. In particular, research that links the stages of Design Thinking with thematic analysis and then validates the designed value using PERVAL and expert domain assessments remains limited. This gap forms the basis of this study to design a value creation model for the "Batik Kota" men's shirts developed by Rumah Batik Palbatu. The novelty of this research lies in the value design process, which begins with consumer needs and is translated through the four pillars of value creation: Identity & Heritage, Storytelling & Culture, Lifestyle & Styling, and Social Proof & Experience. This model is not only realized in the form of a prototype but is also validated through PERVAL to assess consumer perceived value and through expert evaluations to obtain feedback on the resulting design. With this approach, this study offers a more integrated perspective on designing and validating value creation in contemporary batik products as part of the downstream agroindustry. These conditions underscore the importance of this study in designing a value creation model that better aligns with consumer needs and perceptions.

The Design Thinking approach is widely used in user centered value design, both for product development and for crafting value propositions that align with consumer needs. The stages from Empathize to Prototype help business owners gain a deeper understanding of consumer needs and challenges, and then translate the into value that is relevant to current market conditions and culture (Henriksen et al., 2017; Kelley & Brown, 2018; Kurek et al., 2023; Liedtka, 2020). Based on the above description, the research questions in this study are (1) the design of an agroindustry-based batik product value creation model at Batik Kota in Rumah Batik Palbatu using the Design Thinking approach, and (2) the ability of the conceptual model to bridge the perceived value gap between producers and consumers. In line with these research questions, the primary objective of this study is to design a conceptual model for value creation of agro-industry-based Batik Kota products at Rumah Batik Palbatu using the Design Thinking approach. Specifically, this study aims to (a) identify the current state of value creation for Batik Kota at Rumah Batik Palbatu, (b) identify consumers' needs,

expectations, and issues regarding Batik Kota, (c) design a conceptual model of value creation using the Design Thinking approach, and (d) validate the resulting model based on consumer perceptions and expert evaluations. This study falls under conceptual design research, focusing on the formulation of a conceptual value creation model; it does not include the development of physical products or the operational implementation of business strategies. The designed model focuses on the development of cultural and symbolic value, as well as user experience, while taking consumer needs and perceptions into account.

2. METHODOLOGY

2.1. Research Design

This study employed a sequential exploratory mixed methods design (Creswell & Plano Clark, 2018) implemented across the five stages of Design Thinking. A qualitative approach was used in the Empathize and Define phases to understand consumers' perceptions, experiences, needs, and perceived value gaps. The results from these two phases were then used as the basis for concept development in the Ideate and Prototype phases. Subsequently, a quantitative approach was used in the Test phase to validate the conceptual model by measuring consumer acceptance and perceived value. This study is a conceptual design research project that produces a Minimum Viable Prototype (MVP) in conceptual form, not physical product. The study employs a pragmatic philosophy with an abductive theory building approach that is, constructing a model based on the theories of value creation, Design Thinking, and consumer behavior, and the adapting it the real-world conditions of MSMEs operating in the urban culture sector (Saunders et al., 2023). The research strategy employed was a single-case study of Rumah Batik Palbatu with a cross-sectional time frame. The study was conducted from February through May 2026. Perceived value was measured quantitatively once after the final prototype (MVP 3) using a post-test-only design, without a baseline measurement or a control group. The state of the value gap prior to the design phase was obtained qualitatively through preliminary interviews and observations, as presented in Table 1. Therefore, the measurement results in this study were used to assess consumers' initial acceptance of the designed model, rather than to measure changes in perceived value before and after the design phase.

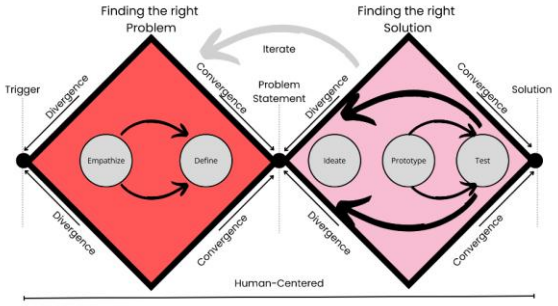


Figure 1. The Double Diamond Model of Design Thinking (*Source: adapted from the Design Council UK, 2005, in Kelley & Brown, 2018*)

Figure 1 shows the Design Thinking Process, which consists of the Empathize, Define, Ideate, Prototype and Test stages. This process moves from identifying the right problem in the Empathize and Define stages to finding the right solution in the Ideate, Prototype, and Test stages, through an iterative, user-centered process (Kelley & Brown, 2018). These five stages form the basis for conducting this research and are described in Subsections 2.2 through 2.5.

2.2. Research Subjects and Research Ethics

The research subjects consist of five categories of respondents determined based on the Design Thinking approach, namely extreme users (consumers with a high level of engagement with Batik Kota, identified by having made at least two repeat purchases), mainstream users (consumers who have made one purchases), non-buyer aware users (consumers who are familiar with Batik Kota but have never purchased it), internal stakeholders (owners and internal teams

onvolved in development, production, marketing, and exhibition activities), as well as domain experts with expertise in marketing, the creative industry, or batik. The first four categories of respondents were involved in the Empathize phase, while the two domain experts a batik industry practitioner (E1) and a brand marketing practitioner (E2) were involved in the Test phase to provide qualitative assessments of the MVP 2 prototype, which were then used as the basis for refining it into MVP 3. For the extreme users group, the criterion of having made at least two purchases was used as an initial indicator of higher engagement and experience with Batik Kota. This criterion was chosen because Batik Kota was only launched in mid-2025, so the number of consumers who had made more than one purchase was still limited. In the Design Thinking approach, extreme users were selected because their needs and behaviors tend to be more pronounced than those of the general user base, thereby helping to uncover needs that might not be apparent among average users (Kelley & Brown, 2018). However, these criteria do not specifically take into account the respondents' level of interest in the development of batik, making this aspect one of the limitations of this study. Data collection was conducted through semi-structured interviews and participatory observation. The number of respondents in the qualitative phase was determined based on the principle of data saturation (Braun & Clarke, 2019), while the quantitative validation phase involved 30 respondents from the categories of extreme users, mainstream users, and non-buyer-aware users, selected using purposive sampling. A total of 30 respondents were used in the Test phase, which is the minimum number commonly used in descriptive statistical analysis (Sekaran & Bougie, 2016). This sample size was determined based on the study's objective, which focused on the initial validation of a conceptual prototype; therefore, the study was not intended to test hypotheses or generalize the results to the entire population. Additionally, the number of consumers familiar with Batik Kota remains relatively limited, as the product was only launched in mid-2025. Prior to data collection, the study followed ethical procedures, including obtaining voluntary informed consent and ensuring the confidentiality of participants' data and identities (Joungtrakul et al., 2025; Xu et al., 2020; Yusof et al., 2022).

2.3. Qualitative Data Analysis

Qualitative data were analyzed using thematic analysis based on the stages outlined by Braun and Clarke (2006) in accordance with the guidekines for high quality practice in reflexive thematic analysis, namely data familirization, initial coding, theme identification, theme review, theme definition and naming, and interpretation and reporting of results. To enhance the credibility of the findings, source and method triangulation was conducted by comparing information from different respondent groups as well as the results from the data collection techniques used (Carter et al., 2014). The analysis yielded six themes, which are named and defined in Table 2 and describe consumers' needs, expectations, and concerns regarding Batik Kota. These six themes were then synthesized into four pillars of value creation: Identity & Heritage, Storytelling & Culture, Lifestyle & Styling, and Social Proof & Experience. These four pillars were subsequently used as the foundation for determining the value elements and features to be included in the conceptual MVP. Based on the results of the consumer needs analysis, this study developed MVP 1 as an initial design, which was then evaluated by extreme users and mainstream users. Feedback from that stage was used to refine MVP 1 into MVP 2. Subsequently, MVP 2 was qualitatively assessed by two domain experts (E1 and E2), and the results of that assessment were used to make further refinements until MVP 3 was obtained as the final conceptual model. MVP 3 was then quantitatively evaluated using PERVAL to assess consumers' perceived value. Each MVP version was presented in

the form of a mockup of a men's batik shirt and a product catalog, which served as tools to assist respondents and domain experts in providing their evaluations.

2.4. Quantitative Data Instruments and Analysis (PERVAL)

Quantitative validation was conducted using the Perceived Value Scale (PERVAL) developed by Sweeney and Soutar (2001). This instrument encompasses four dimensions: emotional value, social value, quality/performance value, and price/value for money. PERVAL is used as an alternative to the Net Promotore Score because it is more suitable for measuring perceived value from both theoretical and methodological perspectives. The use of this instrument is also supported by research showing that perceived value influences interest and purchasing decisions regarding cultural and creative products (Aliyyuldafa & Anjaningrum, 2025; Li & Li, 2022; Liu & Hongxia, 2024), and that it can be used in developing business models using a Design Thinking approach (Kurek et al., 2023). The research instrument combined open ended questions with closed-ended statements using a 1-5 Likert scale, where 1 = strongly disagree and 5 = strongly agree. The formulation of the statement items was based on the four PERVAL dimensions and findings from the qualitative phase, ensuring that the indicators used remained relevant to the context of Batik Kota. The instrument was used during the Test phase to determine consumer perceptions of MVP 1 as an initial prototype. The measurement was conducted once during the MVP 1 evaluation phase, without using a baseline measurement, a comparison group, or a follow-up measurement for MVP 3. Content validity of the instrument was assessed through expert judgment by at least three experts with expertise in marketing, research methods, and the creative industries. Content validity was evaluated using the Content Validity Index (CVI), with items deemed to meet the criteria if their Item-Content Validity Index (I-CVI) was ≥ 0.78 (Polit & Beck, 2006; Yusoff, 2019). Next the data were analyzed descriptively using the mean and standard deviation, while the reliability of the instrument was tested using Cronbach's alpha. The formulas used in the analysis are presented in equations (1)-(3):

$$\bar{X} = \Sigma Xi / N \quad (1)$$

$$SD = \sqrt{[\Sigma(Xi-\bar{X})^2 / (N-1)]} \quad (2)$$

$$\alpha = [k/(k-1)] \times [1-(\Sigma Si^2/St^2)] \quad (3)$$

The symbols in the equation are defined as follows: $\bar{X}$ represents the mean score, Xi represents the score given by respondent i, N represents the number of respondents, SD represents the standard deviation, α represents Cronbach's alpha, k represents the number of items, Si^2 represents the variance of each item, and St^2 represents the total variance. The instrument is considered reliable if the Cronbach's Alpha (α) value is ≥ 0.70. Next, the mean scores obtained are interpreted using five categories based on the Likert scale intervals. The class interval is calculated using the formula (5-1)/5 = 0.8, resulting in the categories Very Low (1.00-1.80), Low (1.81-2.60), Moderate (2.61-3.40), High (3.41-4.20), and Very High (4.21-5.00) (Boone & Boone, 2012).

2.5. Research Process

The research process began with a preliminary study that included a literature review, observations of Rumah Batik Palbatu's products and activities, and discussions with the owner and the internal team. Next, the research moved into the Empathize and Define phases to understand the needs, expectations, challenges, and perceived value gaps experienced by consumers. During the Ideate phase, alternative value concepts were developed based on the synthesis of qualitative themes, conceptual benchmarking against similar cultural products, and structured brainstorming sessions with internal stakeholders. These alternatives were then mapped onto the four dimensions of PERVAL as the foundation for developing the initial structure of the conceptual model

along with its evaluation indicators. In the Prototype phase, the conceptual model was visualized through mockups of men's batik shirts and a product catalog. Prototype development was conducted iteratively through three versions of the Minimum Viable Prototype (MVP). MVP 1 was the initial design that translated the results of the Empathize, Define, and Ideate stages into visual form. Next, MVP 1 was evaluated by 30 respondents comprising extreme users, mainstream users, and non-buyer-aware users using the PERVAL metric and open-ended statements. The results of this evaluation were used as the basis for developing MVP 2, primarily to improve the clarity of the value proposition, the visual design, and the completeness of the information. MVP 2 was then qualitatively validated by two domain experts (E1 and E2). Feedback from both domain experts was used to refine MVP 3, specifically regarding the model structure, value communication, and visual elements. MVP 3 was then designated as the final prototype in this study. The results of the PERVAL evaluation of MVP 1 are presented in subsection 3.2, while the results of the domain experts' validation of MVP 2 are discussed in subsection 3.3.

3. RESULTS AND DISCUSSION

3.1. The Gap Between Values and Consumers Needs (Empathize-Define)

Based on the results of preliminary interviews and observations during the exhibition, a gap was found between the value offered by the owners and the value perceived by consumers. This difference is show in Table 1.

The results of the thematic analysis of interviews with extreme users, mainstream users, non-buyer-aware users, and internal stakeholders yielded six themes, which were then synthesized into four pillars of value creation, as shown in Table 2. The table presents the names and definitions of the six themes identified, along with their mapping to the four pillars of value creation. Theme 3 and Theme 6 are each assigned to two pillars because the findings indicate a connection to both pillars.

Table 1. Perceived Value Gap Between Batik Business Owners and Urban Consumers

Value Aspects	Owner's Perspective (Value Proposition)	Consumer Perspective (Perceived Value)
Product Concept	Contemporary batik that represents Jakarta's identity	The design is attractive, but it doesn't fully reflect my personal identity
Differentiation	Incorporating elements of Jakarta's local culture into modern design.	It looks unique, but it's still comparable to other batik brands
Brand Objectives	Serving as a symbol of Jakarta's identity for the younger generation	It is not yet a top priority in purchasing decisions.
Emotional Value	Fostering a sense of pride in Jakarta's culture that resonates with the younger generation	A sense of pride and emotional attachment has not yet been strongly felt.
Market Positioning	Targeting man aged 25-35 with a modern style.	Visually appealing, but there's no immediate need to buy it.

(Source: preliminary interviews with the owner and team of Batik Kota, as well as observations at the exhibition, 2025)

Table 2. Synthesizing Themes into Pillars of Value Creation

Theme	Theme Name	Definition	Pillars of Value Creation
Theme 1	Perceptions of the Uniqueness of Jakarta's Motifs and Identity.	Consumers appreciate the unique motifs and identity of Jakarta (city icons, Betawi culture, traditional foods, and local flora) as what sets Batik Kota apart, but they do not yet have a deep understanding of its cultural significance.	Identity & Heritage
Theme 2	The Need for Storytelling and Cultural Meaning.	Consumer interest in and appreciation for Batik Kota tend to increase once they understand the stories, philosophies, and cultural meanings behind each motif. Therefore, media that can convey this information such as product labels, story cards, digital catalogs, and social media are needed.	Storytelling & Culture
Theme 3	Perception of Price and Perceived Value	Consumers who do not yet understand the quality, production process, and cultural value of Batik Kota tend to consider its price high, whereas consumers who do understand these aspects consider the price to be commensurate with the benefits they receive.	Storytelling & Culture; Social Proof & Experience
Theme 4	The Relevance of Products to Young People's Lifestyles	Young consumers need a selection of more casual styles, as well as a variety of sizes and colors, to suit their daily activities.	Lifestyle & Styling
Theme 5	Consumer Awareness of Batik Kota	Batik Kota is not yet widely known because its marketing and brand communication on social media and digital platforms have not been carried out consistently.	Identity & Heritage
Theme 6	The Need for a More Comprehensive Product Experience	Consumers need a more comprehensive experience before, during, and after their purchase through supporting elements such as hang tags, story cards, certificates of authenticity, and packaging.	Lidestyle & Styling; Social Proof & Experience

Identity & Heritage addresses findings regarding the uniqueness of Batik Kota in incorporating elements of Jakarta's culture into its batik motifs, which serves as one of the factors that sets it apart from other batik products. Howover, this uniqueness is still not supported by sufficient public awareness of the brand; therefore, this pillar is focused on strenghthening brand communication by highlighting the distinctiveness of Jakarta's culture to enhance Batik Kota's brand recognition and positioning. Futhermore, Storytelling & Culture is based on the finding that consumers who understand the philosophy and cultural significance behind each motif tend to appreciate the product more and consider its price to be commensurate with the value they receive. Conversely, consumers who lack information about these stories and meanings tend to judge products based on their physical appearance and compare prices with other fashion products. Therefore, this pillar emphasizes conveying the stories and

cultural values of Batik Kota through various touchpoints with consumers to enhance understanding and build an emotional connection to the products. Meanwhile, Lifestyle & Styling reflects young consumer's need for products that align with their daily activities and lifesyles a need that extends beyond design to include supporting experiences such as packaging, product information, and other amenities. This positions Batik Kota as an integral part of everyday style and self-expression, rather than merely as formal wear. As for Social Proof & Experience, this pillar stems from consumer's need for validation from other users through testimonials, reviews, and positive purchasing experiences to build trust in the product's quality and benefits before making a purchase. Overall, these four pillars serve as the bridge between the problems identified in the Empathize phase and development of solutions in the Ideate phase. Each pillar was then translated into a visual concept evaluated by respondents during the "Ideate" phase, before being developed into mockups and a catalog during the "Prototype" phase. The development process was carried out in stages MVP 1, MVP 2, and MVP 3 taking user feedback into account at each stage, ultimately resulting in MVP 3 as the final prototype.

3.2. Perceived Value Validation (PERVAL)

An evaluation using the PERVAL method was conducted on the initial prototype (MVP 1) by 30 respondents, consisting of 2 extreme users (6.7%), 10 mainstream users (33.3%), and 18 non-buyer-aware users (60.0%). The results of the descriptive analysis for each respondent group are presented in Table 3.

The results of the PERVAL evaluation show that the Quality/Performance Value dimension received the highest average score of 4.51, followed by Emotional Value at 4.47 and Social Value at 4.46. These three dimensions fall into the "Very High" category, while Price/Value for Money received the lowest average score of 4.06 and falls into the "High" categpry. The reliability test results show that all dimensions have Cronbach's Alpha values above 0.70, specifically 0.742 for Emotional Value, 0.717 for Social Value, 0.720 for Quality/Performance Value, and 0.905 for Price/Value for Money. Thus, all dimensions used in the evaluation are deemed reliable. Based on respondent characteristic, the Extreme Users group had the highest grand mean of 4.81, followed by Non-Buyer Aware Users at 4.36 and Mainstream Users at 4.31.

Table 3. Measurement Results for Perceived Value Based on PERVAL (All Respondents, N=30)

Dimensions	Mean	SD	Description
Emotional Value	4,47	0,45	Very High
Social Value	4,46	0,43	Very High
Quality/Performance Value	4,51	0,38	Very High
Price/Value for Money	4,06	0,72	High
Grand Mean (Perceived Value)	4,37	-	Very High

(*Source: primary data analysis, 2026*)

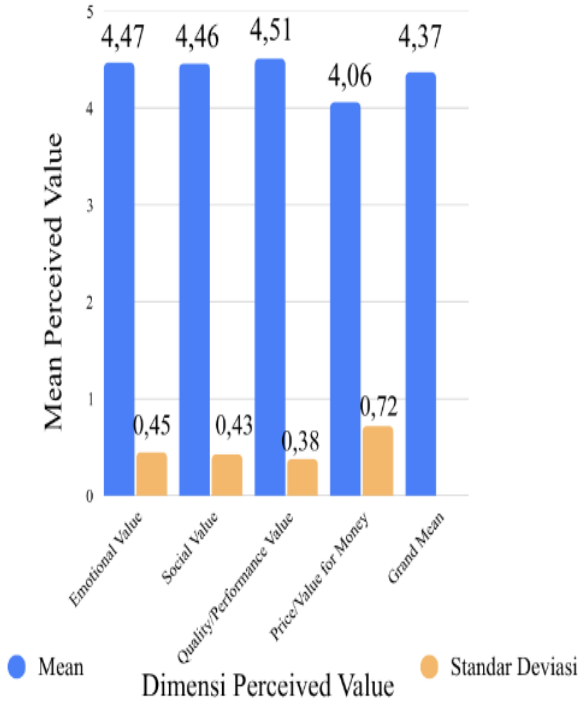


Figure 2. Graph of Perceived Value Measurement Results Based on Perval (N=30) (*Source: primary data analysis, 2026*)

The most notable difference in scores across groups was observed in the Price/Value for Money dimension, with an average of 4.75 for Extreme Users and 3.97 for Non-Buyer Aware Users. These findings indicate differences in perception among respondent groups, particularly in assessing the balance between price and product benefits. Although the overall average score reflects a relatively positive perception, the Non-Buyer Aware Users group gave a lower rating on the value for monet aspect, suggesting that consumers who have not yet made a purchase are more critical in weighing the benefits received against the price they must pay.

3.3. Domain Expert Validation



Figure 3. Visual Comparison of Prototypes Before and After Revision by the Domain Expert: MVP 2 and MVP 3
(Source: *researcher's documentation, 2026*)

The results of the evaluation by two domain experts indicate that the MVP 2 prototype consisting of a catalog and shirt mockups is deemed suitable for further development. Expert E1, a batik industry practitioner, deemed the prototype suitable with minor revisions. Some of the feedback provided included adding more variety and balance to the motifs in each series, strengthening the storytelling elements, and presenting more specific rather than general information about quality and the production process. Meanwhile, Expert E2, a brand marketing practitioner, deemed the prototype viable with major revisions. The suggested revisions included strengthening the visual hook, improving the typography and colors on the cover, adjusting the copywriting to be more user-oriented, replacing the models and enhancing photo contrast, separating the testimonial and size guide pages, and adding contact and social media information. Feedback from these two domain experts also reinforces the quantitative findings regarding the price gap among the "Non-Buyer Aware Users" group. This suggests that increasing the clarity of information about product quality, production processes, and cultural narratives could be one strategy to boost consumers' perceived value without having to lower the product's price. That feedback was then used as the basis for refining MVP 2, resulting in MVP 3 as the final prototype.

3.4. Discussion

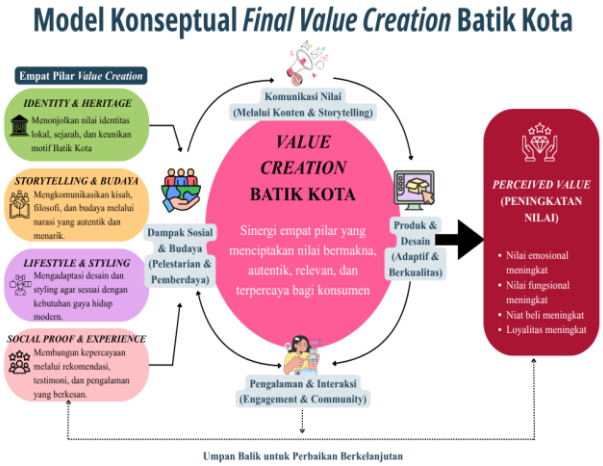


Figure 4. Conceptual Model of Value Creation in the Batik Industry
(*Source: researcher's synthesis, 2026*)

Overall, the conceptual model consisting of four pillars successfully addresses both research questions. "Identity & Heritage" and "Storytelling & Culture" play a role in building emotional and cultural value by

strengthening identity and conveying the meaning behind the product, while "Lifestyle & Styling" connects Batik Kota to consumers' daily needs and activities. Meanwhile, "Social Proof & Experience" plays a role in building consumer trust through experiences and validation from other users, which can support purchasing decisions. The application of these four pillars in the form of a prototype resulted in a perceived value with a grand mean of 4.37, which falls into the "Very High" category. These results indicate that the developed model is well-received by respondents and helps bridge the gap between the value expected by the brand owner and the value perceived by consumers, as shown in Table 1. These findings support previous research showing that perceived value plays a crucial role in purchasing decisions for cultural and creative products (Li & Li, 2022; Liu & Hongxia, 2024), as well as the fact that the Design Thinking approach can place consumer needs at the foundation of the value creation process (Kurek et al., 2023). Nevertheless, the Price/Value for Money dimension received a relatively lower score and showed variations in ratings across respondent groups. The results of the expert domain evaluation also indicated the need to strengthen information regarding product quality, production processes, and cultural value. These findings confirm that the alignment between price and perceived benefits remains the most sensitive aspect of Batik Kota's value proposition, particularly for consumers who are familiar with the product but have not yet made a purchase. Therefore, increasing perceived value depends not only on pricing but also on the brand's ability to communicate the product's benefits, quality, and cultural value clearly and convincingly. This aligns with the value chain perspective and value-based pricing, which emphasize the link between transparency regarding benefits and willingness to pay (Porter, 1985; Sari et al., 2020), as well as research indicating that batik, as a symbolic cultural product, requires active communication so that the value and meaning embedded within it can be understood by consumers (Sindu Kusuma Dewi & Muhajirin, 2024; Aliyyuldafa & Anjaningrum, 2013).

The difference in the grand mean between the Extreme Users and Non-Buyer Aware Users groups with a higher value among Extreme Users indicates a tendency that more intensive engagement with Batik Kota is associated with a higher perceived value compared to mere exposure to the catalog stimulus. This finding aligns with the co-creation perspective, which views value as not merely inherent in product attributes but as formed through interactions and experiences between producers and consumers (Azmy et al., 2023; Rahayu et al., 2020). However, these findings cannot yet be interpreted as evidence of a causal relationship because this research was limited to a single case study, used a conceptual MVP evaluated through descriptive statistical analysis, and measured perceived value only once for MVP 1 without a baseline, a comparison group, or a follow-up measurement for MVP 3. Furthermore, only two extreme users were involved, so differences in results between groups should be interpreted with caution. Thus, the resulting model is more appropriately positioned as a design that has received preliminary validation from users and domain experts, rather than as empirical evidence regarding the model's impact on actual sales. These limitations form the basis for future research to test the model's operational application through a pre-post measurement design and to evaluate its impact on purchasing behavior and Batik Kota's sales performance.

4. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the research results, both research questions were answered through the findings at each stage of the study. The first research question namely, how to design value creation for agro-industry-based batik products at Batik Kota to align with

consumer needs and expectations was addressed through the application of the Design Thinking method. The results of the Empathize and Define stages indicated that there remains a gap between the value offered by the business owners and the value perceived by consumers. This gap primarily relates to the clarity of the product's identity, differentiation, and consumers' emotional attachment to the product. These findings served as the basis for formulating the four pillars of value creation: Identity & Heritage, Storytelling & Culture, Lifestyle & Styling, and Social Proof & Experience. These four pillars were then applied in the design of shirt mockups and a product catalog, which were developed through three iterations of a Minimum Viable Product (MVP).

The second research question namely, how a value creation model can bridge the perceived value gap between producers and consumers was addressed through the evaluation and validation of the prototype. The results of the MVP 1 evaluation among 30 respondents showed a Grand Mean perceived value of 4.37, classified as "Very High." The highest score was in the Quality/Performance Value dimension at 4.51, while the lowest score was in the Price/Value for Money dimension at 4.06. These results indicate that the initial design received positive feedback from consumers, although the aspect of price alignment with perceived value still requires attention. Furthermore, validation results from two domain experts indicated that the MVP 2 design is viable for development with several improvements. These improvements then served as the basis for refinement, ultimately resulting in MVP 3 as the final prototype. Thus, the resulting conceptual model can serve as a reference in designing Batik Kota's value creation by considering consumer needs and expert input. However, this study cannot yet conclude that there was an increase in perceived value following prototype development because the PERVAL measurement was conducted only once on MVP 1, without a baseline measurement or a follow-up measurement on MVP 3.

Recommendations

For Rumah Batik Palbatu, the conceptual model developed can serve as a guideline for developing Batik Kota, particularly in conveying clearer information about material quality and the production process, highlighting the product's uniqueness compared to competitors, and improving the catalog based on feedback from domain experts. Catalog improvements can be made by strengthening visual hooks, adjusting the typography and cover colors, using copywriting that is more focused on consumer needs (user-centric), and adding testimonials and contact information. As for future research, it is recommended that the model be tested under operational conditions by comparing measurement results before and after development, including re-measuring MVP 3. Additionally, the study could involve a larger number of respondents with a more balanced distribution across each group to ensure more representative results. Inferential statistical analysis could also be used to determine whether there are significant differences in perceived value across consumer segments.

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