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Consumer Decision-Making for Tai Lue Woven Fabric Purchases: An Application of the AHP Methodology

Phanthipa Pansuwan[1] Aouypron Thawan[1*] Sirinat Chantanapelin[1]

[1]Faculty of Business Administration and Liberal Arts, Rajamangala University of Technology Lanna Chiang Rai

E-mail: aouypron@rmutl.ac.th

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Abstract

This study investigates the key factors influencing consumer decision-making when purchasing Tai Lue woven fabrics, a cultural heritage of the Lue community. Utilizing the Analytic Hierarchy Process (AHP) combined with the 4 Ps marketing framework, this research evaluates consumer preferences based on product quality, cultural significance, pricing, and demographic considerations. Data were collected from 900 participants in Chiang Rai, resulting in 2,700 survey responses. The results highlight that product quality, cultural relevance, and price competitiveness are the primary determinants of consumers' purchasing decisions. Notably, Type A Tai Lue fabric received the highest preference due to its superior craftsmanship and affordability. The findings provide valuable insights for textile businesses and policymakers to refine their strategies, supporting sustainable growth in the competitive woven fabric industry. This research offers a comprehensive approach to understanding consumer behavior and contributes to the development of market-oriented products that preserve cultural traditions.

Keywords: Consumer Behavior, Tai Lue Woven Fabric, AHP Methodology, Cultural Heritage, Purchasing Decision

Introduction

The Tai Lue woven fabric, a representation of the rich heritage, culture, and art of the Lue community, has witnessed a surge in popularity in recent years (Asinyo, Howard, & Seidu, 2021; Manote Nuansara, 2016). This resurgence has brought about a vibrant market filled with diverse and exquisite textile products. In this dynamic landscape, with numerous brands, unique design patterns, and distinct attributes, consumers are

* Corresponding author

increasingly faced with a complex decision-making process when selecting products (Chang, Bruess, Chong, & Foysal, 2020; Cobb & Orzada, 2018). For the industry to grow and remain sustainable within such a competitive textile market, understanding and simplifying this selection process is crucial (Rese, Baier, & Rausch, 2022; Safra & Ghachem, 2021). Moreover, aligning with the Sustainable Development Goals (SDGs), particularly Goal 12-Responsible Consumption and Production-promoting traditional textiles like Tai Lue fabric not only helps preserve cultural heritage but also encourages sustainable production practices that benefit local economies. This further aligns with SDG 8, which focuses on inclusive and sustainable economic growth, as the Tai Lue weaving industry creates livelihood opportunities for rural communities. Integrating these sustainability objectives into marketing strategies is essential for ensuring that the industry thrives in a socially and environmentally responsible manner. To study consumer behavior, various strategies have been utilized, such as general surveys, the 4P marketing mix framework (Product, Price, Place, Promotion), SWOT analyses, and the Analytic Hierarchy Process (AHP) (Benzaghta, Elwalda, Mousa, Erkan, & Rahman, 2021; Mas'Ari, Hamdy, & Safira, 2020; Šostar & Ristanović, 2023). Despite these efforts, the area of traditional weaving product selection remains relatively underexplored (Inocian, Cuestas, Carin, & Canoy, 2019). Therefore, it is critical to conduct an in-depth analysis of this specific market and its multitude of influencing factors, not only to enhance consumer decision-making but also to promote strategic, market-oriented product development and marketing within the Tai Lue weaving industry (Chen, Chen, & Chen, 2011; Khakhlari, 2020; Zulfikar, 2018).

Research on consumer decision-making in various markets has provided valuable insights into purchasing behavior. Studies have emphasized the importance of the marketing mix in shaping consumer choices, particularly for local and traditional products like 5-star OTOP items in Ubon Ratchathani, where factors such as product quality, price, and distribution channels play a critical role (Nipha Chunhapinyokul, Jidapa Konthong, Darunee Koson, & Nisachon Wanthawee, 2020). Similarly, research conducted in Chiang Rai underscores the importance of product and promotion in driving consumer preferences, particularly when products align with eco-friendly and health-conscious values (Nathamon Supbunto, Rosarin Johnson, Noparat Techapunratanakul, & Mongkonkorn Srivichai, 2022). Additionally, seamless marketing strategies, such as omni-channel approaches, have been found to strengthen brand loyalty through word-of-mouth communication, as demonstrated in the study of the 4U2 cosmetic brand (Noppawan Pongsiam, & Jaruporn Tangpattanakit, 2023).

Despite valuable contributions made by existing research on factors influencing decision-making in various industries, a research gap persists in the specific context of Tai Lue weaving fabric purchasing decisions. Previous studies have employed various methodologies, such as Leung and Mo (2019) novel approach of developing a fuzzy-AHP method to assist industry practitioners in systematically selecting digital marketing tools. This method not only streamlines the selection process but also enhances the effectiveness of achieving strategic marketing objectives. However, a research gap exists in investigating the practical implementation and adaptability of this method across diverse industries. In Chiang, Chiou, Doong, and Chang

(2020) work, the primary objective is to develop performance evaluation indicators for assessing marketing alliances between the catering industry and credit card issuing banks, employing expert Delphi, Fuzzy Analytic Hierarchy Process, and balanced scorecard methodologies. Notably, the key finding identifies 5 critical performance evaluation indicators encompassing customer factors, cooperative alliance factors, financial factors, learning and growth factors, and internal process factors, with 30 sub-factors underpinning these key indicators. Conversely, Goswami and Behera (2021) employed a combination of fuzzy analytical hierarchy process (FAHP) and PROMETHEE to rank smartphone models, revealing the best and worst models among the options.

The study highlights critical research gaps in understanding how model rankings influence consumer behavior, particularly in the context of Tai Lue woven fabric purchases. Despite the relevance, previous research has not thoroughly explored the application of the Analytic Hierarchy Process (AHP) alongside the 4Ps, Index of Coincidence (IOC), and rating scales to assess the factors shaping consumer purchasing decisions. This research introduces an innovative approach by integrating the AHP methodology with the 4P model within a structured questionnaire format, alongside the IOC, to streamline complex decision-making processes for Tai Lue fabric buyers. By identifying the core factors driving consumer choices, this study offers businesses actionable insights to refine their products, align with market demands, and strengthen marketing strategies-paving the way for growth and long-term sustainability in the competitive textile industry.

This research endeavor yields valuable insights that support industry stakeholders in making well-informed decisions, fostering growth, and ensuring the textile sector's sustainability amidst intense competition. The study underscores the significance of comprehending consumer preferences and the pivotal factors influencing their buying choices, enabling businesses to craft market-oriented products and efficient marketing approaches. In summary, this investigation significantly contributes to the enduring prosperity of the Tai Lue weaving fabric industry within the highly competitive textile market while aligning with the broader goals of sustainable development.

Literature Review

This study aims to explore the factors influencing consumer decision-making in Tai Lue woven fabric purchases by utilizing marketing theories and quantitative analytical techniques. The literature review is structured into two main sections: (1) Theoretical Foundations of Consumer Decision-Making, which emphasizes the role of the 4Ps marketing mix (Product, Price, Place, Promotion) in shaping purchasing behavior, and (2) The Application of Analytical Techniques in Consumer Decision-Making, with a particular focus on AHP (Analytic Hierarchy Process) as a tool for evaluating and analyzing consumer purchasing decisions.

1. Theoretical Foundations of Consumer Decision-Making

The 4Ps marketing mix is a widely recognized framework for analyzing consumer behavior. Previous studies have demonstrated its influence on purchasing decisions, particularly in the context of handicrafts and traditional textile products.

1.1 Product; Product quality is one of the most critical factors influencing consumer purchasing decisions in the textile industry (Ginting & Sembiring, 2018; Utami, Patwayati, Nur, & Suleman. 2022). Studies on traditional woven textiles indicate that durability, material selection, design patterns, and cultural significance are key determinants of consumer preferences (Orajit Chatchawan & Wanwisa Paisri, 2018; Septiyana, Shihab, Kusumah, Sugina, & Apriliasari, 2022). Additionally, the uniqueness of the product and traditional production techniques contribute to its perceived value and consumer appeal (Khare, Sadachar, & Manchiraju, 2020).

1.2 Price; Pricing has a direct impact on consumer decision-making (Arfan, Fauzi, & Rini, 2019). Consumers in the traditional textile market exhibit varying purchasing behaviors-some prioritize affordability, while others are willing to pay a premium for high-quality and culturally distinctive fabrics (Harpa, 2017). Research by Bahari, Basalamah, Murfat, Hasan, and Basalamah (2020) found that value for money is a key determinant in the selection of textile products. However, ensuring a balanced and flexible pricing strategy remains a challenge for producers and retailers.

1.3 Place; Distribution channels and product accessibility play a vital role in consumer purchasing decisions (Kasirye, 2022). Studies indicate that local markets and community-based stores continue to serve as primary distribution channels for traditional woven fabrics (Bahari et al., 2020). However, changing consumer behaviors in the digital era have led to the increasing importance of e-commerce and social media platforms as alternative sales channels (Hu, Wang, & Xu, 2023). To remain competitive, traditional textile producers must develop effective online marketing and e-commerce strategies.

1.4 Promotion; Effective marketing promotion enhances product visibility and brand recognition. Research by Noppawan Pongsiam ane Jaruporn Tangpattanakit (2023) highlights the impact of word-of-mouth marketing and cultural storytelling in shaping consumer perceptions of traditional textiles. Additionally, leveraging social media and influencer marketing has been shown to increase consumer engagement and sales (Akintayo, 2021).

In conclusion, while these studies enhance our understanding of consumer purchasing behavior, they reveal several research gaps, particularly in the areas of cultural values, psychological factors, and promotional strategies. The emphasis on product quality, price, and social value is consistent, but there is a need for further research into psychological, situational, and marketing dynamics to develop more effective marketing strategies for the textile industry.

2. Conceptual Framework Development

A well-structured conceptual framework is essential for aligning the study with established theories and synthesizing prior research to create a solid foundation for analyzing consumer decision-making. The framework for this research integrates the 4Ps marketing mix (Product, Price, Place, Promotion) and the Analytic Hierarchy Process (AHP) to systematically evaluate the factors influencing Tai Lue woven fabric purchases.

Several marketing and consumer behavior theories provide a basis for this study. The Consumer Decision-Making Process Model explains how consumers navigate various stages in selecting a product, from need recognition to post-purchase evaluation. The Theory of Planned Behavior (Ajzen, 1991) highlights how attitudes, subjective norms, and perceived behavioral control influence purchasing choices. Additionally, Brand Equity Theory (Aaker, 2014) suggests that product perception, cultural values, and marketing strategies affect consumer preferences.

While the 4Ps marketing mix is widely used to analyze consumer behavior (Hu et al., 2023; Kasirye, 2022), it does not explicitly account for the relative importance of different factors. The AHP methodology (Saaty & Vargas, 1980) enhances this framework by quantifying consumer preferences through a hierarchical structure, facilitating a comparative analysis of how product quality, price, accessibility, and promotional strategies impact decision-making.

Previous studies by Jayant (2018) and Oblak, Barčić, Klarić, Kuzman and Grošelj (2017) have demonstrated the effectiveness of AHP in evaluating decision-making criteria across industries, including textiles and handicrafts. However, few studies have systematically integrated AHP with the 4Ps framework in the context of traditional textile markets. This study bridges that gap by applying a Hybrid AHP (HyAHP) model to assess consumer preferences for Tai Lue woven fabrics while incorporating additional evaluation tools such as the Index of Coincidence (IOC) and Rating Scales to improve accuracy in consumer behavior analysis.

By establishing this conceptual framework, the study provides a structured approach to understanding how marketing strategies, cultural significance, and analytical tools interact to shape consumer purchasing decisions in the Tai Lue woven fabric market.

3. Application of Analytical Techniques in Consumer Decision-Making

3.1 The Importance of Analytical Tools in Consumer Behavior Studies; Understanding consumer decision-making involves multiple influencing factors, including psychological, social, cultural, and economic dimensions. Given this complexity, employing quantitative analytical techniques is essential to deriving accurate insights into purchasing patterns (Hanifah, Nuringwahyu, & Krisdianto, 2022; Kasirye, 2022). Several studies have utilized Multi-Criteria Decision-Making (MCDM) models to examine consumer behavior across industries, allowing for a structured prioritization of influencing variables and providing valuable input for businesses and marketing strategists (Sumitra Nuanmeesri, 2023; Hu et al., 2023). Key

studies include Hanifah et al. (2022), who investigated the impact of the 4Ps marketing mix on consumer purchase decisions in retail stores, highlighting that product and place had the most significant influence, whereas pricing and promotional efforts had a relatively lesser effect. Kasirye (2022) examined consumer behavior in university convenience stores and found that pricing and location accessibility played a pivotal role in purchasing choices. However, the study suggested that further cross-cultural analyses could provide a more comprehensive understanding of consumer behavior. Similarly, Hu et al. (2023) explored the evolution of online marketing and consumer communication strategies, emphasizing the effectiveness of integrating traditional marketing approaches with digital platforms. Although applying the 4Ps framework offers valuable insights into marketing-related factors influencing consumer decisions, it lacks the capability to systematically assess the hierarchical relationships among these factors. Therefore, employing AHP (Analytic Hierarchy Process) enhances the analytical depth by structuring and quantifying decision-making processes.

3.2 Application of AHP in Consumer Behavior Analysis; The Analytic Hierarchy Process (AHP), introduced by Saaty, and Vargas (1980), has been widely adopted in decision-making research, particularly when multiple factors must be evaluated in a structured manner (Jayant, 2018). AHP systematically breaks down decision-making into a hierarchical structure, pairwise comparisons, and weighted prioritization of influencing criteria. The method has been applied across various industries, including: Automotive Industry-Jayant (2018) employed AHP for supplier selection, demonstrating its effectiveness in refining decision-making processes and enhancing supply chain efficiency. Real Estate Sector-Ashaf, Hidayat, and Ahmadi (2019) integrated AHP with the Borda Method to assist homebuyers in selecting optimal properties based on their preferences. Textile and Apparel Industry-Oblak et al. (2017) investigated consumer preferences in furniture purchasing using AHP but did not account for post-purchase satisfaction factors. Despite its widespread application, AHP has been underutilized in traditional textile and craft markets, where purchasing decisions are influenced by factors such as fabric quality, design patterns, price, and rarity (Arfan et al., 2019; Utami et al., 2022). This study addresses this research gap by integrating AHP with the 4Ps marketing mix, creating a structured decision-making framework for evaluating consumer preferences toward Tai Lue woven fabric.

3.3 Enhancing Analytical Precision by Integrating AHP with Other Tools; While AHP provides a robust decision-making framework, several studies suggest that combining AHP with complementary analytical tools can improve accuracy in evaluating consumer behavior. For instance, Fischer et al. (2023) assessed the effectiveness of a training program using Kirkpatrick's Hierarchy, which provided insights into knowledge retention and skill enhancement. Saksena, Parida, Jain, and Gaind (2023) utilized AHP to examine medical students' understanding of antimicrobial resistance (AMR) and identified key areas for curriculum improvement. Vitianingsih, Krismantoro, Maukar, Aziiza, and Fitri (2023) compared AHP with Simple Additive Weighting (SAW) in supplier selection for poultry farming, concluding that AHP offered more

precise results. These studies indicate that integrating AHP with tools such as Fuzzy Logic, or hybrid decision-making models can enhance predictive accuracy and provide deeper insights into consumer preferences. Future research in textile consumer behavior could leverage such methodologies to refine decision-making models further.

3.4 Research Gap and the Importance of AHP in Traditional Textile Markets; Despite the extensive application of AHP in various industries, its implementation in the traditional textile sector remains limited. Most prior research on consumer decision-making in craft markets relies on survey-based approaches or qualitative assessments without employing systematic decision-making models (Leung & Mo, 2019). This study seeks to bridge this gap by (1) integrating AHP with the 4Ps marketing framework to establish a structured approach to analyzing consumer behavior in the Tai Lue woven fabric market, (2) incorporating the Index of Coincidence (IOC) and Rating Scales to enhance data accuracy and reliability, and (3) expanding the scope of AHP applications in the textile and cultural product industries to develop more effective marketing strategies.

This study applies AHP to assess the influence of 4Ps marketing factors on consumer decision-making regarding Tai Lue woven fabric, focusing on product quality, pricing, distribution channels, and promotional strategies. While previous research provides valuable insights into how marketing influences purchasing behavior, gaps remain in understanding the broader factors that shape consumer choices. Despite their contributions, existing studies often lack robust analytical tools for structuring decision-making processes. To address this gap, this research integrates AHP to develop a comprehensive decision-making framework, offering empirical insights that enhance market positioning and strategic planning in the textile sector.

Research Methodology

In this research, the conceptual framework, as shown in Figure 1, is utilized to guide the decision-making process for selecting Tai Lue weaving styles. The framework provides an approach to evaluate and analyze the factors influencing consumer preferences and purchasing decisions.The details of this process are as follows:

1. **Conceptual Framework**

Figure 1 illustrates the conceptual framework for examining consumer purchasing decisions related to Tai Lue woven fabrics. The framework's independent variables are derived from the 4Ps marketing model. These variables are analyzed through the Hybrid AHP (HyAHP) approach to measure their impact on the dependent variable, specifically consumer purchasing decisions for Tai Lue fabrics. Furthermore, consumer preferences are segmented into three fabric categories: Type A, Type B, and Type C. This framework

enables an in-depth analysis of the role marketing strategies and consumer evaluation methods play in influencing purchasing behaviors within the Tai Lue textile market.

To further clarify the segmentation, this study categorizes Tai Lue woven fabrics into three distinct types based on their weaving techniques, motif complexity, and cultural significance:

Type A-Comprises plain weave fabrics that do not emphasize Yok Dok (Supplementary Weft Weaving). The designs retain traditional artistic elements but incorporate modern adaptations for versatility. Common motifs include lotus flowers and diamond shapes, symbolizing purity, balance, and longevity. These fabrics are suitable for both traditional attire and contemporary fashion due to their aesthetic appeal and adaptability.

Type B-Intricate traditional patterns of cultural significance. Unlike Type A, Type B fabrics feature more complex motifs despite also using a plain weave structure. The designs hold deep cultural meaning, often depicting the King of Nagas (Serpents), river waves, and celestial patterns, which signify prosperity, protection, and spiritual harmony. Due to their intricate designs and bold color schemes, these fabrics are highly valued among collectors and cultural enthusiasts. They are frequently used in ceremonial settings and formal occasions.

Type C-Chiang Khong district signature patterns. Type C is distinct in its use of Yok Dok (Supplementary Weft Weaving), a technique requiring greater craftsmanship than Type A and Type B. The motifs blend contemporary aesthetics with Tai Lue cultural identity, typically featuring linear patterns, small diamond shapes, and checkerboard designs. These fabrics are designed for affordability and accessibility, catering to broader consumer markets while preserving traditional elements.

Note: Yok Dok is a technique in which additional weft threads are introduced to create raised decorative patterns, adding texture and depth to the fabric. Unlike plain weave structures, where warp and weft interlace uniformly, this method enables more elaborate designs that enhance the fabric's visual appeal and cultural richness.

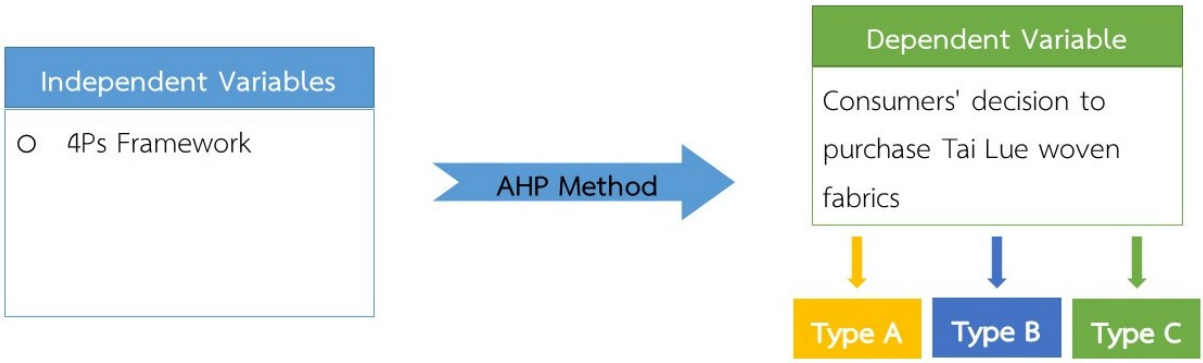

Figure 1 Conceptual framework for Tai Lue woven fabric purchasing research.

The decision-making process for selecting Tai Lue weaving fabric patterns, as shown in Figure 2, follows five key stages that ensure a comprehensive evaluation of consumer preferences and market trends. These stages include: 1) Designing Surveys Rooted in the 4Ps Framework, 2) Survey Validation using the Index of Item Objective Congruence (IOC), 3) Calculation of Mean Weightage from Rating Scales, 4) Implementation of the Analytic Hierarchy Process (AHP), and 5) Paired Sample T-Test for Categorization. This structured approach allows for an in-depth analysis of both consumer behavior and market conditions. By integrating AHP with the 4Ps framework, IOC, and Rating Scales, this methodology offers valuable insights into the factors driving Tai Lue fabric purchasing decisions. It equips industry stakeholders with actionable data to make informed decisions, supporting sustainable growth and enhancing competitiveness in the textile market.

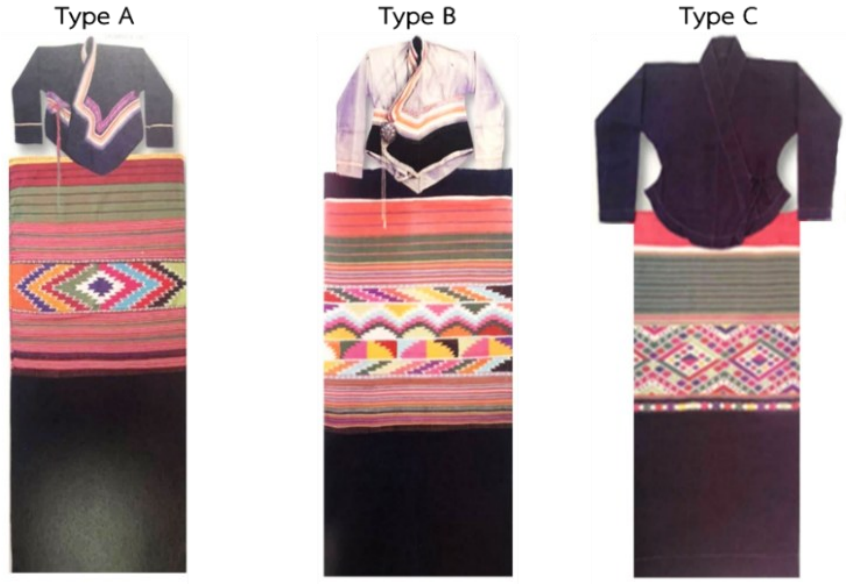

Figure 2 Types of Tai Lue weaving fabric patterns.

2. **Designing Surveys Rooted in the 4Ps Framework**

The survey was divided into two distinct sections. The initial part focused on gathering demographic information from Tai Lue weaving fabric customers. This information included factors such as gender, age, marital status, educational background, occupation, and income. The subsequent section delved into the factors that influence purchasing decisions for Tai Lue weaving fabrics in Chiang Rai Province. This section comprised 20 questions aimed at assessing the significance of these determinants. These elements were assessed within the framework of the 4Ps (Product, Price, Place, Promotion) and Cultural and Traditional Values. This systematic approach facilitated a thorough examination of purchasing trends, ensuring a comprehensive understanding of customer preferences and the current market dynamics.

3. Survey Validation using the Index of Item Objective Congruence (IOC)

To ensure academic rigor and reliability, our questionnaire was subjected to a comprehensive validation process using the Index of Item Objective Congruence (IOC). This validation was conducted in collaboration with five experts from various fields, including Market Research, Product Management, Academic Marketing, the Tai Lue Weaving Fabrics Association, and Marketing Analysis. Each expert carefully evaluated the questionnaire, assigning ratings ranging from -1 to +1 to indicate the degree of alignment with the research objectives. The resulting IOC values, which ranged from 0.50 to 1.00, demonstrated a strong alignment with the goals of the study. Any items receiving a score below 0.50 were identified as needing further refinement. This thorough evaluation using the IOC method strengthens the credibility of the questionnaire and ensures that it accurately captures insights into purchasing trends of Tai Lue weaving fabrics. By validating the survey through this method, we reinforce the foundational integrity of the research. The IOC calculation is represented by Equation (1):

$$IOC = \frac{\sum R}{N} \quad (1)$$

where $\sum R$ represents the summation of the expert reviews, and N is the number of specialists involved in the evaluation process.

4. Calculation of Mean Weightage from Rating Scales

In this phase of our research, we developed a well-structured questionnaire that integrates a 5-level Rating Scale, designed specifically to meet the objectives of our study. Additionally, we conducted an in-depth analysis of tourism data from Chiang Rai Province for the period of January to July 2023. During this timeframe, Chiang Rai welcomed a total of 3,580,717 tourists (Ministry of Tourism and Sports, 2023). To determine the appropriate sample size for our survey, we applied Yamane's random sampling equation with a 95% confidence level, as shown in Equation (2) (Chanuan Uakarn, Kajohnsak Chaokromthong, & Nittaya Sintao 2021). This calculation yielded an initial sample size of 399.9553 respondents. However, to strengthen the reliability and statistical power of our study, we opted for an increased sample size of 900 respondents for each type of Tai Lue woven fabric.

The decision to use a larger sample size than the calculated 399 respondents was driven by several key considerations. Firstly, increasing the sample size enhances the precision and confidence in our results, allowing for the detection of subtle effects and ensuring higher reliability. Secondly, it enables more detailed subgroup analysis, offering deeper insights into variations within the population. Thirdly, this larger sample size increases the generalizability of our findings, extending the external validity of our results beyond the specific sample. Furthermore, practical considerations, such as accounting for potential non-responses and accommodating the complexity of the analytical methods used, also contributed to this decision. Therefore, using

a sample size of 900 respondents was essential to fully achieve the research objectives and ensure robust findings.

$$n = \frac{N}{1+N(e)^2} \quad (2)$$

In Equation (2), n represents the sample size, N is the finite population size, and e refers to the margin of error, set at a 5% significance level.

After completing the survey phase, the research team calculated the mean scores for each questionnaire item and subsequently standardized these values by dividing each mean score by the maximum possible score of 5 points. This standardization process highlighted the importance of the scoring criteria. The standardized mean values were then integrated with the scores generated from the Analytic Hierarchy Process (AHP), resulting in a concise summary of our research findings. Detailed results of these calculations can be found in Table 5 of this document.

5. Implementation of the Analytic Hierarchy Process (AHP)

The Analytic Hierarchy Process (AHP) is a crucial decision-making tool that efficiently addresses complex problems by systematically evaluating the relative importance of various elements. This method, which incorporates decision matrices and weighted evaluations, is well-regarded for its accuracy in simplifying intricate scenarios. In our study on factors influencing consumer decisions regarding Tai Lue woven fabric, we identified a comprehensive set of 20 criteria spread across five key categories, as shown in Figure 3. These categories included: 1) product attributes (Product), 2) cost considerations (Price), 3) distribution channels (Place), 4) marketing strategies (Promotion), and 5) cultural values.

To ensure methodological rigor, the selection of these 20 criteria was based on a comprehensive literature review and expert consultation, incorporating key factors influencing consumer decision-making for Tai Lue woven fabric. Previous studies on textile consumer behavior have highlighted essential determinants, including product quality, cultural significance, pricing, distribution channels, and marketing strategies (Ginting & Sembiring, 2018; Utami et al., 2022). Drawing from these foundational elements, this research identified five key categories aligned with the 4Ps framework while integrating cultural and traditional values-a critical aspect in evaluating traditional textile markets.

To validate the selection of these criteria, a panel of 25 experts from diverse fields-including market research, textile production, cultural studies, and business strategy-participated in a structured evaluation process. Experts were selected based on their academic credentials, industry experience, and research contributions in textile marketing and decision-making methodologies. Through pairwise comparisons

and weighting analysis using the Analytic Hierarchy Process (AHP), these 20 criteria were systematically identified to represent the most influential factors in consumer decision-making.

By employing a structured selection and validation process, this study ensures that the chosen criteria comprehensively reflect the determinants of consumer decision-making in the Tai Lue woven fabric market. The incorporation of literature-based justifications, expert validation, and hierarchical decision-making techniques enhances the academic credibility of this research.

To ensure a thorough evaluation, we engaged the expertise of 25 professionals from diverse fields, including market analysis, product strategy, academic marketing, research analytics, and members of the Tai Lue community. The selection of these experts was based on four key criteria: (1) Academic Credentials-individuals with published research in textile marketing, consumer behavior, or decision-making methodologies; (2) Industry Experience-professionals with over five years of expertise in the woven textile industry, particularly in production, retail, or supply chain management; (3) Research Contributions-scholars who have conducted studies on cultural textiles, traditional crafts, or quantitative decision-making techniques such as AHP; and (4) Peer Recognition-experts acknowledged for their contributions by academic institutions, government agencies, or industry organizations. These professionals played a crucial role in pairwise comparisons and validating the weighting of decision-making criteria, ensuring the robustness and reliability of the AHP model employed in this study. Each expert contributed their knowledge in assessing the importance of these criteria, providing valuable insights into the decision-making process. The subsequent sections will offer a detailed explanation of the AHP methodology used in this research.

5.1 AHP Analysis: Weight Calculation and Eigenvector Determination

In the decision-making process for Tai Lue weaving fabric procurement, employing hierarchical structures is essential to fully understand the complexities involved. The hierarchical assessment, as illustrated in Figure 3, outlines the critical factors influencing these decisions. A panel of 25 experts was engaged, using a 1-9 scale to allocate weights to each factor. The results of this weighting process are summarized in Table 1, which serves as the basis for constructing the purchasing decision matrix. The table provides a comprehensive view of the weight scores and eigenvector metrics, offering key insights into the decision-making criteria. Figure 3 graphically represents the weight distribution for components B1-B5 and C1-C20.

The importance of each criterion was determined through pairwise comparisons, facilitated by matrix tables to ensure the consistency of rankings. This methodology includes calculating the principal eigenvalue of the judgment matrix and its corresponding eigenvectors. The goal is to validate the consistency of the eigenvectors, ensuring that the weight assignments across different hierarchical levels are accurate. Detailed explanations of the calculation process will be provided in subsequent sections.

Table 1 Displays the criteria used for weight assignment in pairwise comparisons of two components (Wang, Bai, & Liu, 2022).

Scale	Definition and Comparative Analysis of Two Elements
1	2 elements have the same importance compared
3	The first element is slightly more important than the latter.
5	The first element has moderate importance compared to the latter.
7	The first element is significantly more important than the latter.
9	The first element is obviously more important than the latter.
2, 4,6, and 8	The median value between the two aforementioned assessments.

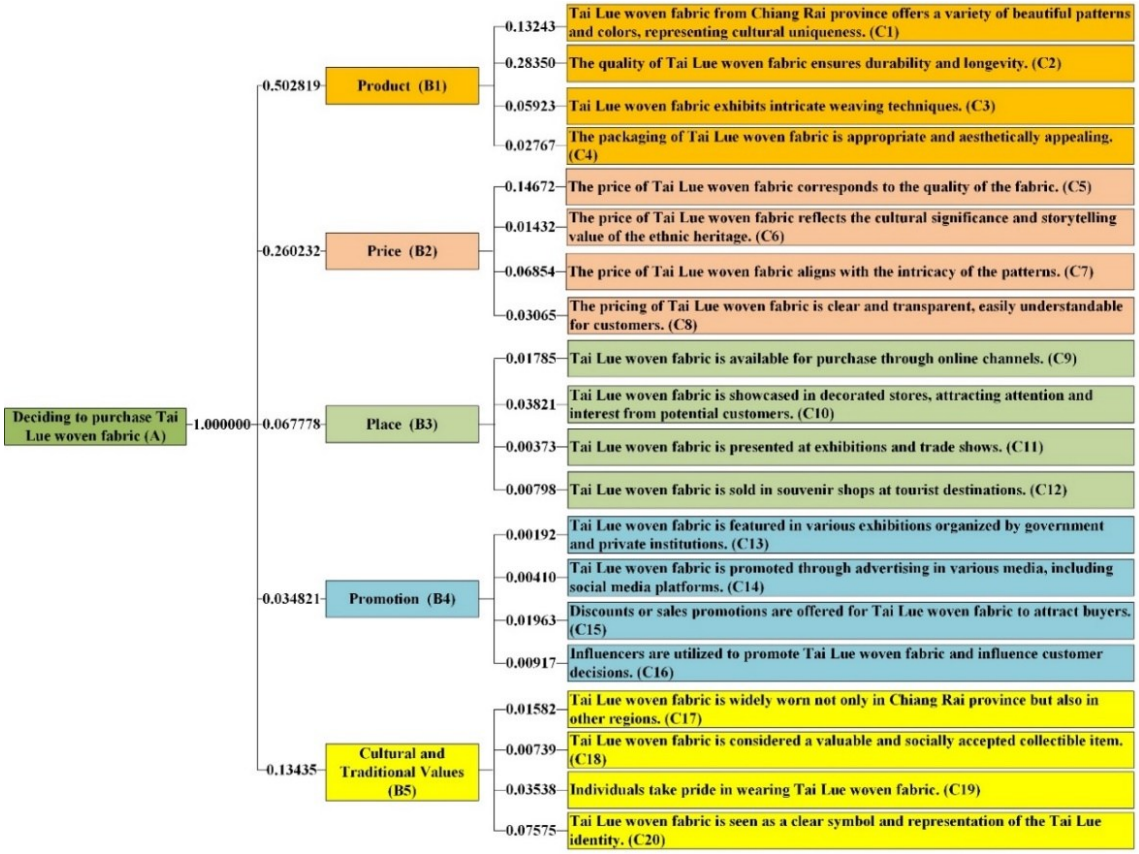

Figure 3 Hierarchical decision model for Tai Lue woven fabric procurement.

1. The components of the Evaluation Matrix V_i are calculated using Equation (3), where a_{ij} represents the individual numerical values within the matrix, V_i is the arithmetic mean, and nnn is the number of values included in the averaging process:

$$V_i = \left(\prod_{j=1}^{n} a_{ij}\right)^{1/n} \quad (3)$$

2. Standardizing the characteristic vector leads to the determination of the associated weight coefficients, as shown in Equations (4) and (5). In these equations, W_i represents the weight assigned to each criterion, V_i is the calculated arithmetic mean, and n is the total number of values used in the mean calculation:

$$W_i = \frac{V_i}{\sum_{i=1}^{n} V_i} \quad (4)$$

$$\sum_{i=1}^{n} W_i = 1.0 \quad (5)$$

$$A_{nxn}(a_{ij})_{nxn} = \begin{bmatrix} 1 & a_{12} & a_{\dots} & a_{1n} \\ 1/a_{12} & 1 & a_{\dots} & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ 1/a_{1n} & 1/a_{2n} & 1/a_{\dots} & 1 \end{bmatrix} a_i$$

Table 2 Evaluation of key decision criteria significance.

A	B1	B2	B3	B4	B5	Eigenvector
B1	1	3	7	9	5	0.50282
B2	1/3	1	5	7	3	0.26023
B3	1/7	1/5	1	3	1/3	0.06778
B4	1/9	1/7	1/3	1	1/5	0.03482
B5	1/5	1/3	3	5	1	0.13435
Total	**1.79**	**4.68**	**16.33**	**25.00**	**9.53**	**1.00000**

5.2 Consistency Ratio Validation

The computed weights, derived from the insights provided by 25 experts, are documented in Table 2. These weights were integral to constructing judgment matrices for individual criteria, allowing for the calculation of normalized vectors. These matrices are crucial for determining eigenvalues and eigenvectors, leading to the identification of the principal eigenvalue (λ_{max}). According to Equation (6), this value is associated with the eigenvector W, where b_{ij} represents the matrix entries, and n denotes the total number of values used to calculate the average b_{ij}. This computed average highlights the importance of each criterion in the evaluation and ranking process.

$$\lambda_{max} = \sum_{i=1}^{n}\left[\sum_{j=1}^{n} b_{ij} W_j\right] \quad (6)$$

Upon completing the data weighting process, it is essential to conduct consistency assessments to verify the accuracy of the weight calculations. The table provided presents the feature vectors within the judgment matrix alongside their respective weights. To ensure the reliability of the data, a consistency evaluation is performed after calculating the importance score weights. A Consistency Ratio (CR) value of $\leq$ 0.1 indicates an acceptable level of reliability, while values exceeding 0.1 suggest the data does not meet the required criteria. Lower CR values correspond to higher consistency.

$$CI = \frac{(\lambda_{max} - n)}{(n-1)} \quad (7)$$

$$CR = \frac{CI}{RI} \quad (8)$$

Equations (7) and (8) detail the calculations for the Consistency Index (CI) and the Consistency Ratio (CR), where λ_{max} represents the maximum eigenvalue of the matrix, and n refers to the number of elements in the matrix, as outlined in Table 3. The Random Index (RI) provides a reference for evaluating the consistency of the data. The conformity assessment results for various categories are shown in Table 4, where CR values below 0.1 confirm the accuracy of the analysis.

Table 3 Consistency test metrics and numerical values (Wang et al., 2022).

n	1	2	3	4	5	6
RI	0	0	0.58	0.90	1.12	1.24

Table 4 Assessment results for target categories.

Criteria	A	B1	B2	B3	B4	B5
λ_{max}	5.24261	4.11847	4.11847	4.11847	4.11847	4.11847
CI	0.06065	0.03949	0.03949	0.03949	0.03949	0.03949
CR	0.05415	0.04388	0.04388	0.04388	0.04388	0.04388

6. Paired Sample T-Test for Categorization

After determining the quantitative weights, as shown in Table 5, we moved to the next phase of the analysis, which involved conducting a paired sample T-test using data from each category. The objective was to evaluate hypotheses concerning the decision-making process for purchasing Tai Lue

weaving fabrics with three distinct patterns. The primary goal was to determine whether the mean scores from these assessments revealed statistically significant differences. In this analysis, a significance level of 0.05 was consistently applied to assess the results. If the calculated P-value was below the 0.05 threshold, it indicated that the results were statistically significant. This statistical outcome was crucial for identifying and selecting products that held significant importance in the decision-making process. The hypotheses (H_0 and H_1) were formulated as follows:

- Null Hypothesis (H_0): $\mu_1 = \mu_2 = \mu_3$ This null hypothesis assumes that there is no significant difference in the mean scores from the decision-making process for purchasing the three different patterns of Tai Lue weaving fabrics (Types A, B, and C).
- Alternative Hypothesis (H_1): $\mu_1 \neq \mu_2 \neq \mu_3$ This alternative hypothesis suggests that there is a statistically significant difference in the mean scores, indicating that at least one pair among the three types (A, B, and C) shows a significant disparity in the decision-making process.

Thus, in this study, two hypotheses were proposed: H_0, which assumes no difference between the means of the three Tai Lue fabric types, and H_1, which posits that at least one pair of fabric types exhibits a difference in mean scores. The assumptions in this study designated μ_1 as the mean outcome for purchasing Tai Lue fabric Type A, μ_2 for Type B, and μ_3 for Type C.

Results

This section presents a summary of the decision-making process for acquiring the three types of Tai Lue weaving fabrics, utilizing the Analytic Hierarchy Process (AHP) methodology. The AHP approach was employed to systematically evaluate and rank the factors influencing purchasing decisions for each type of fabric, providing insights into the relative importance of various criteria in the consumer selection process. The findings are outlined as follows:

1. Results of the 4Ps Framework Analysis

The questionnaire used in this study was divided into two sections, each providing valuable insights into the purchasing decisions related to Tai Lue weaving fabrics in Chiang Rai Province. The first section gathered demographic data, offering a detailed profile of potential buyers. The second section, consisting of 20 questions, explored factors influencing purchasing decisions, framed within the 4Ps marketing model (Product, Price, Place, Promotion) and considerations for Cultural and Traditional Values. The results provide a comprehensive understanding of consumer preferences and market dynamics specific to Tai Lue textiles, serving as a valuable resource for businesses and policymakers aiming to optimize their strategies in this niche market.

2. Insights from the Index of Coincidence (IOC) Evaluation

The IOC evaluation results emphasized the substantial influence of demographic and socioeconomic factors, such as gender, age, education, and income, on purchasing decisions for Tai Lue weaving fabric. These factors received a maximum importance score of 5.00, demonstrating expert consensus regarding their significance. An Opinion score of 1.00 further confirmed the positive perception of these factors among experts.

In the second part of the IOC evaluation, experts expressed favorable opinions on Tai Lue weaving fabric. High scores were awarded for product quality, cultural significance, and transparent pricing. However, factors such as weaving intricacy and price variations based on pattern complexity received slightly lower ratings. Product availability online and its presentation in physical stores were well-received, while its presence at exhibitions was rated less favorably. Promotional strategies, including discounts and influencer collaborations, were rated positively, although social media promotions garnered less enthusiasm. The textiles' cultural value in representing Tai Lue identity received a positive reception, though its collectibility as an item was rated somewhat lower. The overall average score across all sections stood at 0.88, indicating a generally favorable perception of Tai Lue weaving fabric.

3. Results from the Rating Scale Analysis

The survey conducted among 900 residents and tourists in Chiang Rai provided insightful data. A majority of respondents were female, making up 75.78% of the sample, with the largest age group being 40-49 years old (36.11%). Most respondents were married or cohabitating (35.67%) and held a bachelor's degree (34.67%). In terms of occupation, self-employed individuals (18.22%) and government employees (17.33%) were most represented. The predominant income range was 20,001-30,000 Baht, accounting for 32.56% of respondents. These demographics reflect a diverse population contributing to a balanced income distribution in Chiang Rai.

Further, we analyzed the evaluations for three distinct variants of Tai Lue weaving fabric—Type A, Type B, and Type C. Type A received the highest average rating of 4.758, with the highest individual score of 4.808 for factor C5 and the lowest score of 4.712 for factor C11. Type B averaged 4.687, with the highest score of 4.718 (C19) and the lowest score of 4.647 (C4). Type C had an average rating of 4.628, with the highest score of 4.685 (C5) and the lowest of 4.553 (C4). These findings highlight the preference for Type A among respondents, likely due to factors such as quality, price, or overall perception.

4. AHP Method Analysis Results

Using the Analytic Hierarchy Process (AHP) method and feedback from 25 experts, we identified key factors influencing the procurement of Tai Lue weaving fabric. Product quality (B1) emerged as the most critical factor, with a weight of 0.50282, emphasizing the importance of fabric quality and weaving

craftsmanship. Cultural values (B5) followed with a weight of 0.13435, highlighting their role in preserving cultural identity. Price (B2) was also significant, with a weight of 0.26023, underscoring its importance alongside product quality and cultural values. Place (B3) and promotion (B4) received weights of 0.06778 and 0.03482, respectively, indicating their lesser but still relevant roles in influencing purchasing decisions. Overall, the analysis underscores the importance of fabric quality, cultural values, and competitive pricing as the primary factors guiding consumer decisions.

The data in Table 5 showcases the average scores obtained from Rating Scales for each item across all three Tai Lue fabric types. These scores were multiplied by the corresponding AHP scores, providing an effective evaluation of the procurement process for Tai Lue weaving fabric. Notably, product durability (B1) was identified as a key factor contributing to fabric quality. Interestingly, within the Tai Lue segment (C13), promotion (B4) was deemed less critical, even though the products were featured at exhibitions. This finding suggests that consumers place a higher emphasis on practical quality over promotional displays.

The priority scores for the different Tai Lue fabric types reveal that Type A is the top preference, with a score of approximately 0.957, followed by Type B (0.939) and Type C (0.929). These rankings provide valuable insights for making informed purchasing decisions by emphasizing specific product categories, optimizing resource allocation, and understanding the varying importance of different weave types in the decision-making process. This scoring method ensures that critical fabric types receive appropriate attention, while the overall value of other fabric types is not overlooked.

Table 5 Weighted AHP method results for the three Tai Lue fabric types.

Specification			Type A			Type B			Type C		
Main Criteria	Second Criteria	AHP Score	Average Score	Weight Score	Weight AHP	Average Score	Weight Score	Weight AHP	Average Score	Weight Score	Weight AHP
Product	C1	0.13243	4.77556	0.95511	0.12649	4.68889	0.93778	0.12419	4.59111	0.91822	0.12160
(B1)	C2	0.28350	4.80333	0.96067	0.27235	4.69556	0.93911	0.26623	4.67222	0.93444	0.26491
0.50282	C3	0.05923	4.77444	0.95489	0.05655	4.66778	0.93356	0.05529	4.57667	0.91533	0.05421
	C4	0.02767	4.74778	0.94956	0.02627	4.64778	0.92956	0.02572	4.55333	0.91067	0.02519
Price (B2)	C5	0.14672	4.80889	0.96178	0.14111	4.69333	0.93867	0.13772	4.68556	0.93711	0.13749
0.26023	C6	0.01432	4.76889	0.95378	0.01366	4.67000	0.93400	0.01337	4.64889	0.92978	0.01331
	C7	0.06854	4.77778	0.95556	0.06549	4.69000	0.93800	0.06429	4.66556	0.93311	0.06395
	C8	0.03065	4.77111	0.95422	0.02925	4.67444	0.93489	0.02866	4.65444	0.93089	0.02853
Place (B3)	C9	0.01785	4.73778	0.94756	0.01691	4.69444	0.93889	0.01676	4.62222	0.92444	0.01650
0.06778	C10	0.03821	4.77222	0.95444	0.03647	4.71333	0.94267	0.03602	4.65444	0.93089	0.03557
	C11	0.00373	4.71222	0.94244	0.00351	4.67111	0.93422	0.00348	4.60111	0.92022	0.00343
	C12	0.00798	4.72222	0.94444	0.00754	4.68000	0.93600	0.00747	4.61333	0.92267	0.00737
Promotion	C13	0.00192	4.75000	0.95000	0.00182	4.67222	0.93444	0.00179	4.61111	0.92222	0.00177
(B4)	C14	0.00410	4.75444	0.95089	0.00390	4.68111	0.93622	0.00384	4.62556	0.92511	0.00379
0.03482	C15	0.01963	4.79111	0.95822	0.01881	4.71444	0.94289	0.01851	4.66556	0.93311	0.01832

Specification			Type A			Type B			Type C		
Main Criteria	Second Criteria	AHP Score	Average Score	Weight Score	Weight AHP	Average Score	Weight Score	Weight AHP	Average Score	Weight Score	Weight AHP
	C16	0.00917	4.77667	0.95533	0.00876	4.69889	0.93978	0.00862	4.65222	0.93044	0.00853
Cultural and Traditional Values (B5) 0.13435	C17	0.01582	4.71222	0.94244	0.01491	4.69111	0.93822	0.01485	4.60667	0.92133	0.01458
	C18	0.00739	4.69889	0.93978	0.00695	4.67556	0.93511	0.00691	4.58000	0.91600	0.00677
	C19	0.03538	4.73111	0.94622	0.03348	4.71889	0.94378	0.03340	4.62889	0.92578	0.03276
	C20	0.07575	4.77556	0.95511	0.07235	4.71778	0.94356	0.07147	4.66111	0.93222	0.07061
Type Selection Percentage					0.95660			0.93860			0.92923

5. Paired Sample T-Test Results for Fabric Type Selection

As presented in Table 6, a paired sample t-test was conducted based on the assumptions outlined in the study. The test involved calculating average scores from questionnaires administered to a sample of 900 individuals for each of the three Tai Lue weaving fabric types: A, B, and C. The purchasing score assigned to each pair of fabric types serves as a key statistical indicator of the model's ability to differentiate between products and its effectiveness in guiding product selection.

When the p-value calculated from the t-test falls below the 0.05 significance level, the null hypothesis (H_0) is rejected in favor of the alternative hypothesis (H_1). This outcome demonstrates that there are significant differences in the decision to purchase among the three Tai Lue fabric types at the 0.05 significance level, thereby reinforcing the reliability of the purchasing decision score for each fabric type.

Table 6 Hypothesis testing through paired sample T-Test.

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
TYPE_A - B	.07028	.03125	.00699	.05565	.08490	10.057	19	.000
TYPE_A - C	.12961	.02845	.00636	.11630	.14292	20.377	19	.000
TYPE_B - C	.05933	.02848	.00637	.04600	.07266	9.317	19	.000

Discussion

The AHP method applied in this study integrates various analytical techniques, including the 4Ps framework, Index of Coincidence (IOC), and Rating Scales, to thoroughly evaluate the factors influencing purchasing decisions for Tai Lue weaving fabric. Consistent with previous research by Bahari et al. (2020),

Dhiman, Chand, and Gupta (2018), and Kasirye (2022), consumers continue to prioritize product quality, pricing, accessibility, and promotion. The IOC results demonstrate unanimous expert agreement on the importance of demographic and socioeconomic factors, supporting findings by Arfan et al. (2019), Ginting and Sembiring (2018), and Hartika and Syamsuri (2022). Moreover, consumer preferences reflected through Rating Scales align with studies by Arora, Rani, Devi, and Gupta (2022), Septiyana et al. (2022), and Vitianingsih et al. (2023).

The AHP analysis further emphasizes product quality, cultural values, and pricing as key determinants, echoing the findings of Jain, Sangaiah, Sakhuja, Thoduka, and Aggarwal (2018) and Oblak et al. (2017). Product quality emerged as the most significant factor (0.50282), consistent with research by Arfan et al. (2019) and Septiyana et al. (2022). Cultural values also played a substantial role (0.13435), corroborating the work of Utami et al. (2022). Pricing remained a critical consideration (0.26023), as observed in studies by Arfan et al. (2019) and Khare et al. (2020). These findings collectively confirm that product quality, cultural values, and pricing are pivotal factors influencing Tai Lue weaving fabric purchases, reflecting universal trends in textile research (Orajit Chatchawan & Wanwisa Paisri, 2018; Septiyana et al., 2022).

This study expands upon prior research on textile consumer behavior by integrating AHP methodology with the 4Ps marketing mix, offering a structured decision-making framework specifically tailored to traditional textiles. Unlike previous studies that primarily focused on individual consumer motivations (Ginting & Sembiring, 2018; Khare et al., 2020), this research provides a hierarchical prioritization of purchasing factors, revealing that product quality outweighs price and promotional efforts in influencing purchase decisions.

An unexpected finding is the relatively low impact of promotional strategies (B4) in influencing purchasing decisions compared to cultural values (B5). While conventional marketing theories often emphasize the importance of advertising, discounts, and influencer marketing (Noppawan Pongsiam, & Jaruporn Tangpattanakit, 2023), this study suggests that consumers place greater importance on product authenticity and cultural heritage. This contradicts prior research that found promotional campaigns to be a key driver in fashion and textile purchasing behavior (Akintayo, 2021). The findings indicate that Tai Lue fabric businesses should shift from promotion-driven marketing to value-based branding, highlighting craftsmanship, sustainability, and cultural identity as primary selling points.

The findings of this study align with key marketing theories, particularly Consumer Behavior Theory, Brand Equity Theory, and Relationship Marketing Theory, which provide a structured framework for understanding how consumers evaluate and select products. The results support Consumer Behavior Theory (Solomon, 2020), which suggests that purchasing decisions are shaped by psychological, personal, and social influences. The strong emphasis on product quality (B1) and cultural values (B5) indicates that consumers value authenticity, craftsmanship, and heritage, consistent with prior research on traditional textile markets (Septiyana et al., 2022).

The high weight assigned to cultural values (B5) and product quality (B1) reinforces Brand Equity Theory (Aaker, 2014), which posits that brand recognition, perceived quality, and emotional attachment influence purchasing behavior. To enhance brand equity, Tai Lue textile producers should emphasize cultural storytelling, craftsmanship, and heritage-based branding strategies to build consumer trust and loyalty.

The study's findings also align with Relationship Marketing Theory (Morgan & Hunt, 1994), which emphasizes long-term consumer engagement over one-time transactions. Given the cultural significance of Tai Lue fabric, businesses should focus on community-driven marketing efforts, such as collaborations with cultural institutions, sustainability initiatives, and heritage tourism programs to foster deeper consumer connections.

To enhance the competitiveness of the Tai Lue textile industry, businesses should focus on strategic differentiation, pricing optimization, digital expansion, and sustainable practices. Emphasizing handwoven craftsmanship and traditional motifs in branding, along with obtaining Geographical Indications (GI) certification, can strengthen authenticity and cultural appeal, while premium product lines can cater to high-end markets. A tiered pricing strategy should be adopted, ensuring affordability for general consumers with Type A fabrics, while positioning Type B fabrics for collectors and heritage enthusiasts.

To expand market reach, businesses must leverage e-commerce platforms, employ social media storytelling and influencer marketing, and incorporate Augmented Reality (AR) technology to enhance the customer experience. Sustainability and ethical marketing should also be prioritized by promoting eco-friendly dyeing processes, forming partnerships with sustainable fashion brands, and showcasing the economic benefits to local weaving communities as part of Corporate Social Responsibility (CSR) initiatives. By implementing these strategies, businesses can strengthen their market positioning while preserving the cultural and economic significance of Tai Lue textiles.

In conclusion, the application of AHP methodology in this study enhances our understanding of key factors-product quality, cultural values, and pricing-that influence Tai Lue weaving fabric purchases. These elements play a crucial role in differentiating Tai Lue woven products within the textile market. Moreover, by integrating insights from Consumer Behavior Theory, Brand Equity Theory, and Relationship Marketing Theory, the findings provide a theoretical foundation for understanding consumer motivation, brand perception, and long-term customer engagement in the traditional textile industry.

Conclusion and Suggestions

This research explores the Tai Lue woven fabric, a product deeply embedded in the cultural heritage of the Lue ethnic group. As interest in Tai Lue weaving fabric continues to grow, competition in the textile sector has intensified. The primary objective of this study is to provide insights into the factors influencing consumer decisions in this unique market. By utilizing the Analytic Hierarchy Process (AHP) along with the 4Ps framework,

Index of Coincidence (IOC), and Rating Scales, this study offers a comprehensive understanding of the consumer decision-making process for Tai Lue weaving fabric.

Key findings from the research highlight the dominant role of product quality, which distinguishes Tai Lue fabrics through superior craftsmanship, durability, and intricate weaving techniques. This characteristic greatly influences consumer purchasing decisions. Additionally, the cultural and traditional significance of Tai Lue fabric (B5) is crucial, symbolizing cultural pride and identity. Price (B2) is another essential factor, particularly when considered in combination with product quality and cultural values. These elements together establish Tai Lue weaving fabric as a valuable proposition due to its combination of quality, cultural significance, and affordability. Furthermore, consumer preference for Tai Lue fabric is evident, with Type A receiving the highest priority score, indicating a strong preference for its quality, cultural significance, and price.

The study's findings align with global sustainability objectives, particularly SDG 12: Responsible Consumption and Production and SDG 8: Decent Work and Economic Growth. The promotion of Tai Lue weaving fabric directly supports sustainable production practices by preserving traditional craftsmanship, minimizing environmental impact, and promoting the use of natural fibers and dyes. Additionally, the Tai Lue textile industry plays a vital role in fostering local economic development, aligning with SDG 8, which emphasizes inclusive and sustainable economic growth. By encouraging ethical production methods, fair labor practices, and community-based entrepreneurship, businesses in the Tai Lue textile sector can enhance both economic resilience and cultural preservation. Policymakers and stakeholders should support capacity-building programs for weavers, implement sustainable sourcing practices, and establish market access opportunities that ensure long-term industry viability.

Future studies should explore the longitudinal impact of branding efforts on Tai Lue fabric sales and investigate cross-cultural comparisons in traditional textile markets. Additionally, integrating fuzzy-AHP models or machine learning techniques could further refine decision-making models, offering enhanced precision in understanding consumer preferences.

By leveraging the AHP methodology, businesses can make more data-driven decisions and tailor their marketing strategies to better align with consumer preferences. The practical recommendations outlined in this study offer valuable guidance for industry stakeholders, enabling them to enhance product positioning, strengthen brand loyalty, and ensure long-term competitiveness in the evolving textile market. Furthermore, aligning business strategies with SDG principles will promote sustainable development, economic inclusivity, and cultural preservation, ensuring that Tai Lue textiles remain relevant in the modern marketplace.

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