



RESEARCH ARTICLE

Factors Influencing Consumers' Willingness to Purchase Yunnan Tie-Dye Products

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ARTICLE INFO	ABSTRACT
Received: Oct 14, 2024 Accepted: Dec 5, 2024	Current research on Yunnan tie-dye as an intangible cultural heritage primarily focuses on aspects such as craftsmanship, preservation, and artistic value, with limited exploration from a market-oriented perspective. The purposes of this study are 1) to identify the impact of consumer identification and perceived value on consumers' willingness to purchase Yunnan Tie-Dye products, 2) to explore the effects of Attitude, perceived behavioural control, and subjective norms on consumers' willingness to purchase Yunnan Tie-Dye products, 3) to verify the moderating role of social media. We used online and onsite survey methods to recover 432 valid responses within a convenient sampling method who are the potential consumers of Yunnan Tie-Dye products. Data analysis involved descriptive statistics, reliability analysis, and structural equation modelling (SEM). Results show that consumer identification indirectly influences purchase intention through Attitude, while perceived value has both direct and indirect effects. Additionally, Attitude, perceived behavioural control, and subjective norms directly impact purchase intention. Social media significantly moderates the effects of Attitude and perceived behavioural control on purchase intention. These findings emphasize the complex interplay of psychological and social factors affecting consumer decisions regarding Yunnan tie-dye products.
Keywords Yunnan tie-dye products Purchase intention Social media influence Consumer identification Perceived value Structural equation modelling	
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INTRODUCTION

In recent years, with the rapid advancement of globalization and the surge in cultural consumption, traditional craft industries have garnered renewed attention, especially within China's growing cultural and creative sectors (Liang & Wang, 2020). As an integral part of China's intangible cultural heritage, Yunnan tie-dye, mainly practised by the Bai and Yi ethnic groups, is renowned for its intricate craftsmanship, rich cultural symbolism, and artistic value (Tang, 2023). This traditional craft not only reflects China's deep cultural heritage but also plays a significant role in driving local economic development through cultural tourism (Chen et al., 2021). However, despite its historical and cultural significance, the Yunnan tie-dye industry is currently facing substantial challenges, such as intense competition from mass-produced industrial goods, fluctuating consumer demand, and a lack of innovative marketing strategies (Xu, 2021).

Yunnan's tie-dye industry experienced fluctuating sales from 2018 to 2023. The annual sales volume increased steadily from 1.2 million pieces in 2018 to a peak of 2.3 million pieces in 2019. However, the COVID-19 pandemic in 2020 caused a sharp decline to 800,000 pieces. Despite partial recovery to pre-pandemic levels by 2022, sales have not yet reached the previous peak, indicating ongoing challenges in market demand and consumer engagement. The Yunnan tie-dye industry generated approximately 900 million RMB in revenue in 2023. Yet, this figure underscores the need for more robust market strategies to

capitalize on the growing consumer interest in culturally rich, handcrafted products (China Textile Magazine, 2024).

In response to these market challenges, the Chinese government has intensified efforts to protect and promote traditional crafts like Yunnan tie-dye. Policies under the "Law on Intangible Cultural Heritage" have provided financial support, policy guidance, and legal protections to bolster the sector (Jing et al., 2024). Additionally, government-backed initiatives have sought to integrate Yunnan tie-dye into the broader cultural tourism industry. In the first half of 2023 alone, major cultural tourism sites in Yunnan, including those promoting traditional crafts, attracted nearly 16 million visitors, generating over 823 million RMB in revenue—a year-on-year increase of 264.94%. This highlights the potential of cultural tourism to drive economic growth, provided that consumer engagement can be effectively harnessed (Chen & Yu, 2024).

Despite government support, sustaining growth in the Yunnan tie-dye market remains a challenge. One key factor influencing consumer behaviour is the role of social media in shaping perceptions and driving purchase decisions (Palalic et al., 2021). Platforms like WeChat, Xiaohongshu, and Douyin (TikTok) have proven instrumental in promoting traditional crafts by increasing their visibility and fostering deeper consumer connections (Yi & Xian, 2024). These platforms not only facilitate information sharing but also enhance the perceived value and emotional appeal of traditional crafts, thereby encouraging consumer purchases.

Existing research, however, has primarily focused on the historical and artistic aspects of Yunnan tie-dye, such as its ethnobotanical roots and traditional dyeing techniques used by ethnic communities like the Landian Yao (Iu Mien) in Southwest China (Qian et al., 2024). While studies have explored the integration of intangible cultural heritage with the tourism industry and collaborations between ethnic artisans and fashion designers, there has been limited exploration from a consumer behaviour perspective (Chen et al., 2021). Understanding the factors that drive purchase intentions is crucial for developing effective marketing strategies that align with modern consumer preferences. Drawing on the theory of planned behaviour, consumer value theory, and consumer identity theory, this study constructs a comprehensive framework to analyze the roles of consumer identification, perceived value, Attitude, perceived behavioural control, subjective norms, and social media influence on purchase intentions. The specific objectives are:

to explore how consumer identification and perceived value affect purchase intention;

to assess the influence of Attitude, perceived behavioural control, and subjective norms;

to examine the moderating effect of social media on these relationships.

After the introduction, section 2 reviews the literature and theoretical frameworks; Section 3 outlines the research methodology, including data collection and analysis techniques; Section 4 presents the findings; Section 5 discusses implications for theory and practice; and Section 6 concludes with recommendations for future research.

2 . LITERATURE REVIEW

The theory of planned behaviour posits that consumer behaviour is guided by three key determinants: Attitude, perceived behavioural control, and subjective norms (Ajzen, 2020). The Theory of Planned Behavior (TPB) has been effectively applied to cultural product consumption, confirming its predictive power on purchase intentions. Consumer attitudes significantly drive the purchase of Yunnan's indigo-dyed crafts, especially among those valuing cultural heritage (Chen et al., 2021). Attitudes, subjective norms, and perceived behavioural control are crucial in encouraging purchases of traditional handcrafted textiles (Xue et al., 2022). Positive perceptions of a product's cultural and artistic value enhance purchase intentions, with factors like affordability and accessibility playing critical roles in consumer decisions (Cuong, 2024). These studies highlight TPB's relevance in guiding effective marketing strategies for cultural products.

Attitude reflects an individual's evaluation of engaging in a particular behaviour, which in this case involves purchasing (Li et al., 2021). When consumers perceive such products as culturally significant and aesthetically valuable, their positive Attitude enhances their likelihood of purchase. This positive assessment influences consumers' decision-making processes and is linked to increased behavioural intention. Perceived behavioural control refers to consumers' perceptions of the ease or difficulty of purchasing, which is shaped by the availability of resources and opportunities (Ding et al., 2022). When consumers feel they can easily access cultural products online or offline and find them affordable, they experience greater perceived control, which positively impacts their willingness to purchase. Subjective norms pertain to perceived social pressures to engage in a particular behaviour (Van Tonder et al., 2023). In the context of cultural products, consumers often consider the opinions of their family, friends, and social media influencers, which can significantly shape their purchasing decisions. Hence, this study posits:

H1: Attitude positively influences purchase willingness towards Yunnan tie-dye products.

H2: Perceived behavioural control positively influences purchase willingness towards Yunnan tie-dye products.

H3: Subjective norms positively influence purchase willingness towards Yunnan tie-dye products.

Consumer identification refers to the degree to which individuals perceive a product or brand as reflecting their self-concept, values, and cultural identity (Fazli-Salehi et al., 2021). According to consumer identity theory, this identification is a crucial determinant of consumer behaviour, particularly in contexts involving cultural or heritage products (Zhang et al., 2023). When consumers recognize a strong alignment between their own cultural identity and the values embodied by a product, such as those associated with intangible cultural heritage, it enhances their emotional connection and fosters a sense of belonging. This emotional resonance not only increases the likelihood of purchase but also deepens consumer loyalty towards the product.

In the context of intangible cultural heritage (ICH) products, consumer identification plays a significant role in driving purchase intentions. When consumers identify with the cultural significance of heritage products, such as Yunnan tie-dye, they are more inclined to support these products as a means of preserving cultural traditions. This alignment is especially evident in markets where traditional crafts are perceived as symbols of cultural pride and heritage, as demonstrated in studies focusing on ethnic textiles and handmade crafts (Taheri et al., 2024).

Consumer identification has been validated as an influential factor in various contexts, such as cultural tourism and traditional craft consumption (Zhang et al., 2023). For instance, studies on ethnic textiles in Yunnan have demonstrated that tourists with a high degree of cultural identification are more likely to purchase tie-dye products, driven by their desire to support local craftsmanship and sustain cultural heritage. This relationship is further supported by research indicating that consumer identification enhances attitudes, perceived behavioural control, and subjective norms, thereby influencing overall purchase behaviour (Ajzen, 2020).

In addition to directly impacting purchase intentions, consumer identification also influences other behavioural determinants. It enhances attitudes by fostering positive evaluations of cultural products, increases perceived behavioural control by instilling confidence in supporting meaningful purchases, and strengthens subjective norms by aligning consumer behaviour with social expectations of cultural preservation. Based on these theoretical insights and empirical evidence, the following hypotheses are proposed:

H4: Consumer identification positively correlates with purchase willingness towards Yunnan tie-dye products.

H5: Consumer identification positively influences Attitude.

H6: Consumer identification positively influences perceived behavioural control.

H7: Consumer identification positively influences subjective norms.

Perceived value is rooted in the Consumer Value Theory, which defines it as consumers' overall evaluation of the benefits relative to the costs of purchasing a product (Holbrook, 1999). This concept encompasses functional, emotional, and social dimensions. Functional value refers to the practical benefits and quality of the product, and emotional value relates to the feelings and experiences the product evokes. In contrast, social value concerns the product's contribution to social identity and recognition (Le, 2024). These dimensions are particularly significant for cultural products like Yunnan tie-dye. When consumers perceive high value in cultural products, their purchase intentions increase significantly (Tang, 2023). In the context of intangible cultural heritage, such as handcrafted textiles, consumers are more likely to purchase items that resonate with cultural heritage and emotional connection (Taheri et al., 2024). The influence of perceived value has been validated across various contexts, including cultural tourism and traditional crafts, demonstrating its role in enhancing purchase intentions and shaping positive attitudes (Ajzen, 2020). Based on these theoretical insights and empirical evidence, the following hypotheses are proposed:

H8: Perceived value positively influences purchase willingness.

H9: Perceived value positively influences Attitude.

H10: Perceived value positively influences perceived behavioural control.

H11: Perceived value positively influences subjective norms.

The theory of planned behaviour (TPB) suggests that variables such as attitude, perceived behavioural control, and subjective norms can serve as mediators, particularly in contexts where external factors like consumer identification and perceived value influence behaviour. These mediating roles have been extensively validated in studies on cultural product consumption, where emotional resonance, social expectations, and perceived control are crucial in shaping consumer decisions (Ajzen, 2020). Typically, these variables mediate the effects of consumer identification and perceived value on purchase intentions in scenarios where consumers are driven by cultural alignment and perceived benefits.

Attitude acts as a bridge by transforming consumers' cultural identification and perceived value into stronger purchase intentions (Bilal et al., 2023). When consumers have a positive attitude towards culturally significant products, it directly translates into a higher willingness to buy. Perceived behavioural control enhances the relationship between consumer identification and purchase intentions when consumers feel confident in their ability to support these products (Aslan, 2023). Meanwhile, subjective norms mediate the influence of consumer identification and perceived value by aligning consumers' actions with social expectations, particularly in situations where cultural and social identity play a significant role (Van Tonder et al., 2023).

These mediating roles have been validated in various contexts, such as cultural tourism and the consumption of traditional crafts, where attitudes, perceived behavioural control, and subjective norms significantly influence purchase decisions (Lee et al., 2020). For example, attitudes can effectively mediate the relationship between consumer identification and purchase intentions for heritage products. At the same time, perceived behavioural control is crucial when consumers assess their ability to make purchases based on available resources (Zhang et al., 2023). Based on these insights, this study proposes the following hypotheses:

H12: Attitude mediates the relationship between consumer identification and purchase willingness.

H13: Attitudemediates the relationship between perceived value and purchase willingness.

H14: Perceived behavioural control mediates the relationship between consumer identification and purchase willingness.

H15: Perceived behavioural control mediates the relationship between perceived value and purchase willingness.

H16: Subjective norms mediate the relationship between consumer identification and purchase willingness.

H17: Subjective norms mediate the relationship between perceived value and purchase willingness.

Social media refers to online platforms that enable users to create, share, and interact with content. Social media has been validated as an influential moderating variable in numerous fields, particularly in consumer behaviour and marketing research (Cao et al., 2021). Social media can enhance consumer attitudes by offering social validation and increasing the emotional appeal of products (Waqas et al., 2021). For instance, in the context of intangible cultural heritage, platforms can highlight the authenticity and cultural significance of products like Yunnan tie-dye, thereby amplifying consumer interest and willingness to purchase.

Social media is particularly effective as a moderator when consumer decisions are driven by emotional connections, social influence, and peer recommendations (Cao et al., 2021). In the case of Yunnan tie-dye products, social media can strengthen the relationship between attitude and purchase willingness by creating a sense of community and validation through positive endorsements from peers. Additionally, social media can enhance perceived behavioural control by providing accessible information on product availability, simplifying purchase processes, and showcasing customer experiences (Pappas et al., 2023). In turn, it reduces perceived risks and enhances consumers' confidence in making purchasing decisions.

The impact of social media on marketing cultural products is profound. It not only expands the reach to a broader audience but also builds a deeper emotional connection with consumers by showcasing the cultural heritage behind products (Zhou et al., 2021). By sharing stories, behind-the-scenes content, and the craftsmanship involved in creating Yunnan tie-dye, social media platforms help foster an appreciation of the product's cultural value, thereby strengthening consumers' purchase intentions. Therefore, we posit:

H18: Social media moderates the relationship between Attitude and purchase willingness towards Yunnan tie-dye products.

H19: Social media moderates the relationship between perceived behavioural control and purchase willingness.

This integrated theoretical framework allows for a nuanced understanding of the factors that drive consumer purchase intentions for Yunnan tie-dye products, thereby offering practical insights for effective marketing strategies and sustainable cultural heritage promotion.

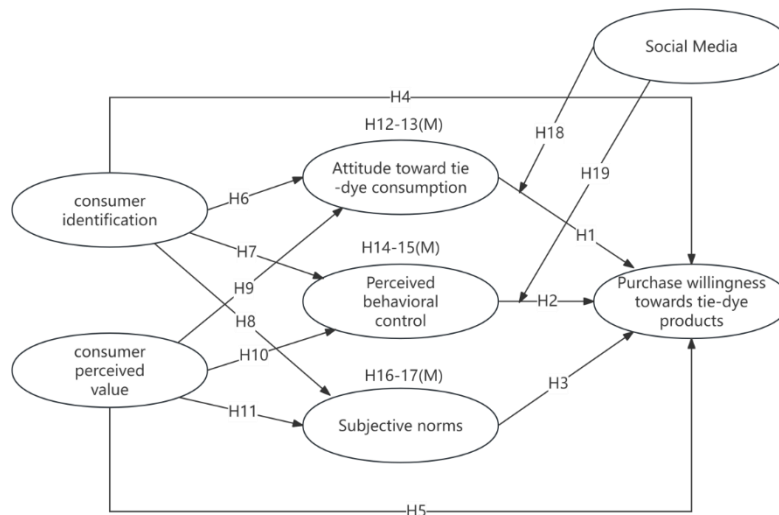


Figure 1. The empirical framework of the Consumer Purchase Willingness towards tie-dye products

3. Research method

This study employed a combined online and offline survey approach, utilizing convenience sampling to collect a total of 432 valid responses. The respondents were primarily tourists in Yunnan and identified as potential consumers of Yunnan tie-dye products. In addition to distributing questionnaires on social media platforms such as Xiaohongshu, Weibo, WeChat, and Douyin, we also set up QR codes at popular locations like Lijiang Old Town, Kunming Cultural and Creative Park, and Dali Old Town, as well as near museums. Small incentives were offered to encourage participation. The data collection period lasted for approximately 20 days.

Table 1 presents the demographic profile of the sample, revealing a balanced gender distribution, with male respondents making up 53.0% (n=229) and female respondents comprising 47.0% (n=203). This near-equilibrium ensures a comprehensive representation of consumer perspectives. The age distribution was diverse, with the largest group aged 26-30 years (25.2%, n=109), followed by those aged 18-25 years (20.4%, n=88). Participants aged 31-40 years constituted 18.5% (n=80), while those aged 41-50 years accounted for 15.7% (n=68), and individuals over 50 years represented 20.1% (n=87). This broad age range highlights the cross-generational appeal of Yunnan tie-dye products.

In terms of marital status, the majority of respondents were either married (39.4%, n=170) or single (36.1%, n=156), with a notable portion being divorced (24.5%, n=106). This diversity in marital status may influence purchase motivations, reflecting different lifestyle perspectives. The study also examined respondents' financial capacity and spending patterns on Yunnan tie-dye products. The analysis showed that 25.9% (n=112) of participants reported spending over 3000 yuan on these products, while 23.6% (n=102) spent between 500-1000 yuan. Other segments included those spending 2000-3000 yuan (22.9%, n=99), 1000-2000 yuan (13.9%, n=60), and under 500 yuan (13.7%, n=59).

This range reflects varied spending capacities and potential market segments. Regarding purchase motivations, multiple-choice responses indicated that recommendations by friends, family members, and colleagues significantly influenced consumer decisions, as reported by 73.4% (n=317) of respondents. Personal interests and hobbies were also a strong motivator for 73.1% (n=316). Social media promotion emerged as a critical factor, affecting 68.8% (n=297) of respondents, which highlights the importance of digital marketing strategies in promoting traditional crafts. While economic capability was a driving factor for 52.5% (n=227) of participants, cultural identity was a motivator for a smaller segment (35.9%, n=155), suggesting that while cultural affinity plays a role, it is not the primary driver for most consumers. Functional, emotional, and social value considerations, along with reasonable pricing, were acknowledged by 48.8% (n=211), indicating that perceived value is also a significant determinant of purchase intention.

Table 1. Sample Information

Information		Frequency	Percentage
Gender	Male	229	53.0
	Female	203	47.0
Age	18-25 years	88	20.4
	26-30 years	109	25.2
	31-40 years	80	18.5
	41-50 years	68	15.7

	Above 50 years		87	20.1
Marital Status	Single		156	36.1
	Married		170	39.4
	Divorced		106	24.5
Sum of consumption	<500 yuan		59	13.7
	500-1000 yuan		102	23.6
	1000-2000 yuan		60	13.9
	2000-3000 yuan		99	22.9
	>3000 yuan		112	25.9
Purchase motivation (multiple choices)	Cultural identity	Yes	155	35.9
		No	277	64.1
	Functional value, emotional value, social value, and reasonable price	Yes	211	48.8
		No	221	51.2
	Recommended by your friends, family members, and colleagues	Yes	317	73.4
		No	115	26.6
	Have enough economic conditions and the ability to buy them	Yes	227	52.5
		No	205	47.5
	Because of interests and hobbies	Yes	316	73.1
		No	116	26.9
	Social media promotion and publicity	Yes	297	68.8
		No	135	31.3

3.2 Instrument

The instrument was divided into sections focusing on distinct constructs relevant to consumer behaviour, with responses measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Detailed measurement items are provided in the appendix.

The first section collected demographic data, such as gender, age, marital status, and expenditure on Yunnan tie-dye products. The second section assessed consumer identification using six items, adapted from Shafqat et al. (2023) based on Smith et al. (2016). This section measured cultural identity, personal values, and lifestyle compatibility, focusing on alignment with product design, values, and fashion trends. Consumer perceived value was measured using six items adapted from Mujcic et al. (2022) and Yang et al. (2021). This section evaluated functional, emotional, and social value dimensions, examining the cost-performance ratio, satisfaction, and value relative to price. Attitude towards Yunnan tie-dye was evaluated with six items adapted from Du (2022) and Fan et al. (2020), focusing on product image, reliability, reputation, quality, and ability to meet consumer needs. Perceived behavioural control was measured using six items adapted

from Du (2022) and de Bellis and Venkataramani Johar (2020), capturing consumers' perceived ability to control their purchasing behaviour and overcome potential barriers. The subjective norms construct consisted of six items adapted from Aziz et al. (2020) and Cho and Chan (2021), measuring the influence of social pressures from significant others on purchase intentions. Purchase willingness was assessed with five items adapted from Peña-García et al. (2020) and Kamalanon et al. (2022), focusing on consumers' future purchasing plans and intentions. Lastly, the impact of social media influence was measured using four items adapted from Castronovo and Huang (2012), assessing social media engagement and its effect on consumer awareness and purchase decisions. As shown in Appendix 1.

This structured approach ensured comprehensive coverage of relevant constructs, providing robust data for analyzing the factors influencing consumer behaviour toward Yunnan tie-dye products.

3.3 Data Analysis Tool

A pilot test was conducted with 44 respondents who had previously purchased or used Yunnan tie-dye products to assess the reliability and validity of the questionnaire. Descriptive statistics and reliability analysis confirmed strong internal consistency, with Cronbach's alpha values for all constructs ranging from 0.902 to 0.933, surpassing the 0.7 threshold. The Kaiser-Meyer-Olkin (KMO) measure was 0.748, and Bartlett's test of sphericity was significant ($\chi^2 = 3218.348$, $df = 861$, $p < 0.001$), indicating the data's suitability for factor analysis. Based on these results, confirmatory factor analysis (CFA) will validate the measurement model, followed by structural equation modelling (SEM) to test the hypothesized relationships and interaction effects, ensuring a robust analysis of the factors influencing consumer purchase intentions towards Yunnan tie-dye products.

4. RESULTS

4.1 Reliability Test

Table 2 presents the Cronbach's alpha coefficients for each construct measured in this study, assessing the internal consistency of the questionnaire items. All constructs demonstrate high reliability, with Cronbach's α values well above the accepted threshold of 0.7 (Cheung et al., 2024). The highest reliability is observed for subjective norms ($\alpha = 0.892$) and perceived behavioural control ($\alpha = 0.888$), indicating strong internal consistency among the six items used to measure these variables. Similarly, consumer identification ($\alpha = 0.884$), purchase willingness ($\alpha = 0.887$), and consumer perceived value ($\alpha = 0.875$) also exhibit robust reliability, suggesting consistent responses across items within these scales. The Attitude toward tie-dye consumption construct shows a Cronbach's α of 0.872, further confirming the reliability of this measure. Although the social media influence construct has a slightly lower α of 0.840, it remains above the acceptable threshold, affirming the consistency of the items measuring this variable. Overall, these results confirm that the questionnaire items reliably measure the intended constructs, supporting the validity of the data for subsequent analyses.

Table 2. Reliability Statistics

Variables	Number of questions	Cronbach's α
Consumer identification	6	0.884
Consumer perceived value	6	0.875
Attitude toward tie-dye consumption	6	0.872
Perceived behavioural control	6	0.888
Subjective norms	6	0.892
Purchase willingness toward tie-dye products	6	0.887
Social media	6	0.840

4.2 Validity analysis

Table 3 presents the results of the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity, which are essential in assessing the suitability of the data for factor analysis in this study. The KMO value achieved was 0.911, which indicates a "very suitable" level of sampling adequacy, significantly exceeding the acceptable threshold of 0.9. This high KMO value suggests that a substantial proportion of variance in the data can be attributed to common factors, providing a robust foundation for conducting factor analysis. It reflects that the variables in the dataset are well-suited for reliable factor extraction, as the high KMO value implies strong correlations among the variables without significant error. Additionally, Bartlett's Test of Sphericity produced an approximate chi-square value of 13,511.598 with 861 degrees of freedom and a significance level of 0.000. This significant result ($p < 0.001$) decisively rejects the null hypothesis that the correlation matrix is an identity matrix, indicating that the variables are sufficiently correlated to justify factor analysis. The statistical significance of Bartlett's test confirms that the data is appropriate for extracting meaningful factors, ensuring the robustness of subsequent analyses.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.911
Bartlett's Test of Sphericity	Approx. Chi-Square	13511.598
	df	861
	Sig.	0.000

4.3 Measurement model

Figure 2 illustrates a measurement model within the confirmatory factor analysis framework.

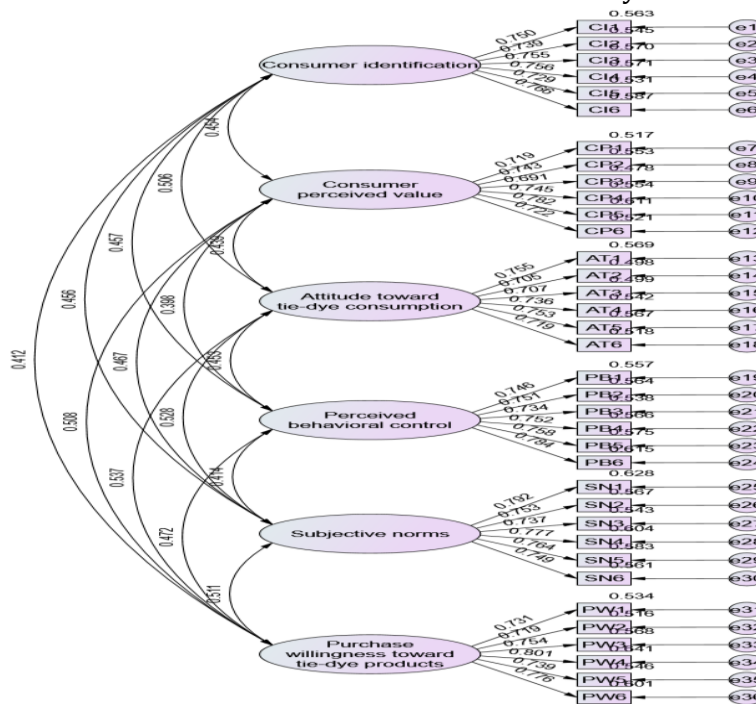


Figure 2. Measurement model

Table 4 presents the fit indices for the measurement model, demonstrating its adequacy in representing the data structure in this study. The chi-square to degrees of freedom ratio (χ^2/df) is 1.071 (<3), indicating an excellent fit between the model and the observed data. This low χ^2/df value suggests that the model closely aligns with the empirical data, minimizing discrepancies. The Root Mean Square Error of Approximation (RMSEA) is reported at 0.013 (<0.08), which indicates minimal error variance and a solid fit for the data. Additionally, the Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) yielded values of 0.927 and 0.916 (>0.9). These values confirm that the model provides a good representation of the empirical

data while accounting for model complexity. Incremental fit indices, including the Normed Fit Index (NFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI), also exhibit robust results, with values of 0.927, 0.994, and 0.995, respectively. These indices indicate a comparative solid fit between the hypothesized model and a null model, where higher values suggest that the model captures the covariance structure effectively. Notably, the TLI and CFI values close to 1 highlight the model's near-perfect fit, underscoring its robustness in explaining the relationships among the variables.

Table Error! No text of specified style in document.. Measure model fit index

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	TLI	CFI
Reference standards	<3	<0.08	>0.9	>0.9	>0.9	>0.9	>0.9
Result	1.071	0.013	0.927	0.916	0.927	0.994	0.995

Table 5 encapsulates the confirmatory factor analysis results, assessing the convergent validity of the measurement model for the constructs used in this study. Convergent validity is established by examining factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE) for each latent variable.

All factor loadings for the observed indicators are above the recommended threshold of 0.7, confirming strong associations between each item and its corresponding latent construct. This indicates that the measurement items are effective in capturing their respective constructs. The CR values for all constructs exceed the accepted benchmark of 0.7, reflecting internal solid consistency. Specifically, the CR values are as follows: consumer identification (0.872), consumer perceived value (0.885), attitude toward tie-dye consumption (0.875), perceived behavioural control (0.888), subjective norms (0.887), and purchase willingness (0.893). These high CR values demonstrate that the constructs are measured consistently and reliably.

Additionally, the AVE values for all constructs surpass the threshold of 0.50, which indicates that over half of the variance of the indicators is captured by their latent constructs rather than measurement error. The AVE values are as follows: consumer identification (0.532), consumer perceived value (0.562), attitude toward tie-dye consumption (0.539), perceived behavioural control (0.569), subjective norms (0.568), and purchase willingness (0.581). These AVE results confirm that the constructs are robustly measured and that the indicators accurately capture the underlying theoretical constructs.

Table 5. Convergence Validity

Latent variables	Observation indicators	Factor loading	CR	AVE
Consumer identification	CI1	0.755	0.872	0.532
	CI2	0.705		
	CI3	0.707		
	CI4	0.736		
	CI5	0.753		
	CI6	0.719		
Consumer perceived value	CP1	0.750	0.885	0.562
	CP2	0.739		
	CP3	0.755		
	CP4	0.756		
	CP5	0.729		
	CP6	0.766		
Attitude toward tie-dye consumption	AT1	0.719	0.875	0.539
	AT2	0.743		
	AT3	0.691		

	AT4	0.745		
	AT5	0.782		
	AT6	0.722		
Perceived behavioural control	PB1	0.746	0.888	0.569
	PB2	0.751		
	PB3	0.734		
	PB4	0.752		
	PB5	0.758		
	PB6	0.784		
Subjective norms	SN1	0.731	0.887	0.568
	SN2	0.719		
	SN3	0.754		
	SN4	0.801		
	SN5	0.739		
	SN6	0.776		
Purchase willingness toward tie-dye products	PW1	0.792	0.893	0.581
	PW2	0.753		
	PW3	0.737		
	PW4	0.777		
	PW5	0.764		
	PW6	0.749		

Table 6 presents the results of the discriminant validity test, which is crucial for confirming that each construct in the model is distinct from the others. Discriminant validity was assessed using the Fornell-Larcker criterion, where the square root of the Average Variance Extracted (AVE) for each construct (shown on the diagonal) should be greater than its correlations with other constructs (off-diagonal values).

As demonstrated in Table 6, the square root of the AVE for each latent variable is consistently higher than its correlations with other variables, thereby supporting the discriminant validity of the constructs. For example, the square root of the AVE for consumer identification (0.729) exceeds its correlations with consumer perceived value (0.454), Attitude toward tie-dye consumption (0.506), perceived behavioural control (0.457), subjective norms (0.456), and purchase willingness (0.412). Similarly, consumer perceived value has a square root of AVE of 0.750, which is greater than its correlations with other variables such as Attitude toward tie-dye consumption (0.439) and purchase willingness (0.508). The same pattern is observed for other constructs, with the square roots of AVE for Attitude toward tie-dye consumption (0.734), perceived behavioural control (0.754), subjective norms (0.754), and purchase willingness (0.762) all surpassing their inter-construct correlations. These results confirm that each construct measures a unique aspect of consumer behaviour, reinforcing the distinctiveness of the constructs within the model.

Table 6. Discriminant validity test

Latent variables	CI	CP	AT	PB	SN	PW
Consumer identification	0.729					
Consumer perceived value	0.454	0.750				
Attitude toward tie-dye consumption	0.506	0.439	0.734			

Perceived behavioural control	0.457	0.398	0.453	0.754		
Subjective norms	0.456	0.467	0.528	0.414	0.754	
Purchase willingness toward tie-dye products	0.412	0.508	0.537	0.472	0.511	0.762
Note: The diagonal is the square root of the corresponding variable's AVE.						

4.4 Structural Equation Model

Figure 3 illustrates the structural equation model and path analysis diagram.

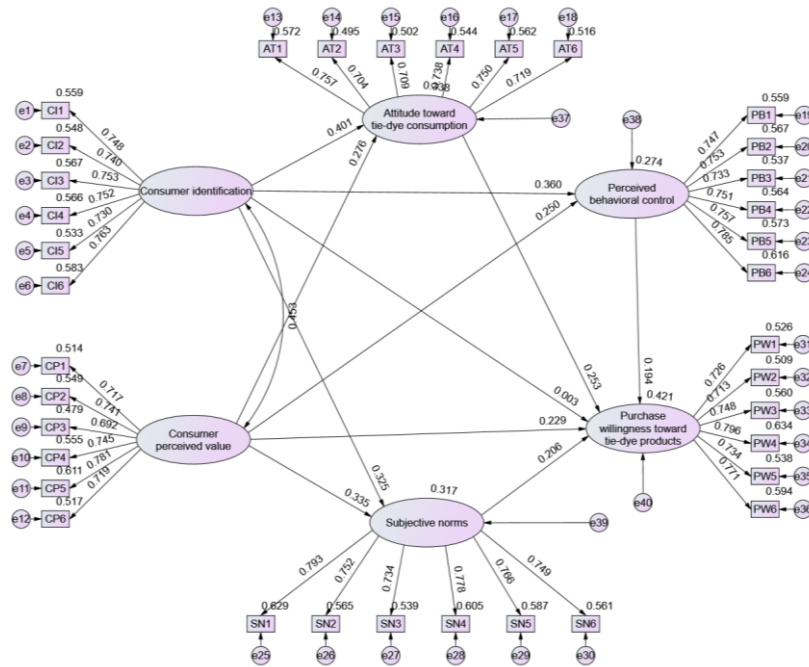


Figure 3. Structural equation model

Table 7 presents the model fit indices for the structural equation model, confirming its adequacy in representing the relationships among the latent constructs in this study. The chi-square to degrees of freedom ratio (χ^2/df) is 1.156, which is well below the accepted threshold of 3, indicating an excellent fit between the hypothesized model and the observed data. This low χ^2/df value suggests that the model is well-specified and efficiently captures the complexity of the data without unnecessary overfitting.

The RMSEA=0.019 (<0.08), indicating a minimal level of discrepancy and supporting the model's close fit to the data structure. Additionally, the GFI and AGFI are 0.920 and 0.909, respectively, both exceeding the threshold of 0.9, which confirms that the model captures the variance and covariance of the data accurately while appropriately adjusting for model complexity. The incremental fit indices further validate the robustness of the model. NFI, TLI, and CFI are 0.920, 0.987, and 0.988, respectively, all surpassing the standard cutoff of 0.9. These high values confirm that the structural model performs significantly better than a baseline model with no hypothesized relationships, supporting the theoretical framework of this study.

Table 7. Model fit index

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	TLI	CFI
Reference standards	<3	<0.08	>0.9	>0.9	>0.9	>0.9	>0.9
Result	1.156	0.019	0.920	0.909	0.920	0.987	0.988

Table 8 presents the path analysis results for the direct effects within the structural equation model, examining the hypothesized relationships between key constructs influencing consumer purchase intentions toward Yunnan tie-dye products. Each path is evaluated using the unstandardized regression coefficient (Estimate), standardized regression coefficient (β), standard error (S.E.), critical ratio (C.R.), and p-value to determine statistical significance.

The analysis confirms that several hypothesized paths are statistically significant, as their critical ratios exceed the threshold of 1.96, and their p-values are less than 0.001. For instance, the path from Attitude toward tie-dye products to Purchase Willingness (H1) shows a significant positive effect with an estimate of 0.269, $\beta = 0.253$, C.R. = 4.271, and $p < 0.001$. This indicates that a positive attitude significantly enhances purchase willingness. Similarly, Perceived Behavioral Control (H2) and Subjective Norms (H3) also positively influence purchase willingness, with C.R. values of 3.577 and 3.654, respectively, supporting their hypothesized effects. However, not all paths are supported. For example, Consumer Identification to Purchase Willingness (H4) is not statistically significant, with a critical ratio of 0.054 and $p = 0.957$, suggesting that consumer identification does not have a direct impact on purchase willingness in this context. Other significant paths include Consumer Perceived Value to Purchase Willingness (H5), which demonstrates a strong positive relationship (Estimate = 0.248, $\beta = 0.229$, C.R. = 3.756, $p < 0.001$). Additionally, Consumer Identification positively influences Attitude (H6), Perceived Behavioral Control (H7), and Subjective Norms (H8), with high critical ratios of 6.725, 6.124, and 5.686, respectively, confirming their substantial impact.

These results underscore the importance of factors such as perceived value, behavioural control, and social norms in shaping consumer intentions to purchase traditional cultural products while also highlighting that direct consumer identification may not always translate into purchase intentions.

Table 8. Direct path effects

Hypothesis	Path	Estimate	β	S.E.	C.R.	P	Results
H1	AT→PW	0.269	0.253	0.063	4.271	***	Supported
H2	PB→PW	0.188	0.194	0.052	3.577	***	Supported
H3	SN→PW	0.204	0.206	0.056	3.654	***	Supported
H4	CI→PW	0.004	0.003	0.068	0.054	0.957	Unsupported
H5	CP→PW	0.248	0.229	0.066	3.756	***	Supported
H6	CI→AT	0.403	0.401	0.060	6.725	***	Supported
H7	CI→PB	0.398	0.360	0.065	6.124	***	Supported
H8	CI→SN	0.351	0.325	0.062	5.686	***	Supported
H9	CP→AT	0.281	0.276	0.059	4.804	***	Supported
H10	CP→PB	0.280	0.250	0.065	4.339	***	Supported
H11	CP→SN	0.367	0.335	0.064	5.760	***	Supported

Table 9 presents the mediation effects within the structural model, analyzed using the bootstrap method to examine the indirect pathways among latent variables. This analysis explores how consumer identification and perceived value indirectly influence purchase willingness through mediators such as Attitude, perceived behavioural control, and subjective norms. The effect size represents the magnitude of the

indirect impact, while the standard error (S.E.) estimates the precision of these effects. The bias-corrected 95% confidence interval (CI) is used to determine statistical significance, with mediation effects confirmed when the CI does not include zero.

The results indicate that all hypothesized mediation paths (H12 through H17) are statistically significant, as their confidence intervals do not contain zero. For instance, the mediation effect of consumer identification on purchase willingness through Attitude (H12) is supported, with an effect size of 0.108, S.E. = 0.043, and a confidence interval of [0.036, 0.209]. This indicates that consumer identification significantly enhances purchase willingness by positively influencing attitudes. Similarly, consumer perceived value impacts purchase willingness through Attitude (H13) with an effect size of 0.076 and a CI of [0.028, 0.161]. In contrast, the path from consumer identification through perceived behavioural control (H14) shows an effect size of 0.075, S.E. = 0.035, and CI = [0.018, 0.156]. These results confirm that attitude and perceived behavioural control serve as effective mediators in translating consumer identification and perceived value into purchase intentions. Furthermore, consumer perceived value influences purchase willingness through perceived behavioural control (H15) with an effect size of 0.053 and CI = [0.015, 0.113] and through subjective norms (H17) with an effect size of 0.075 and CI = [0.023, 0.160]. The mediation effect of consumer identification on purchase willingness through subjective norms (H16) is also significant, with an effect size of 0.071, S.E. = 0.032, and CI = [0.019, 0.151].

Table 9. Mediation effect bootstrap test

Hypothesis	Mediation path	Effect size	S.E.	Bias-Corrected		Results
				95%CI		
H12	CI→AT→PW	0.108	0.043	0.036	0.209	Supported
H13	CP→AT→PW	0.076	0.032	0.028	0.161	Supported
H14	CI→PB→PW	0.075	0.035	0.018	0.156	Supported
H15	CP→PB→PW	0.053	0.023	0.015	0.113	Supported
H16	CI→SN→PW	0.071	0.032	0.019	0.151	Supported
H17	CP→SN→PW	0.075	0.033	0.023	0.160	Supported

Table 10 presents the results of the moderation analysis within the structural equation model, examining how social media influences the relationship between specific constructs. This analysis was conducted using the PROCESS 4.1 plugin, where the coefficient (Coeff) quantifies the strength of the moderation effect. A positive coefficient indicates that social media enhances the impact of the predictor on the outcome variable. The standard error (S.E.) provides an estimate of precision, while the T value and p-value determine the statistical significance of the moderation effect. A bias-corrected 95% confidence interval (CI) that does not include zero confirms the significance of the effect.

The results show that social media significantly moderates the relationship between attitude (AT) and purchase willingness (PW) (H18), with an interaction coefficient of 0.0371, S.E. = 0.0117, and T = 3.1585 (p = 0.0017). The bias-corrected confidence interval [0.0140, 0.0602] does not include zero, confirming the significance of this moderation effect. This suggests that as social media influence increases, the positive effect of Attitude on purchase willingness becomes stronger. Similarly, for the path from perceived behavioural control (PB) to purchase willingness (PW) (H19), the interaction term coefficient is 0.0372, with S.E. = 0.0117, T = 3.1888, and p = 0.0015. The confidence interval [0.0143, 0.0602] also confirms that social media significantly moderates this relationship. These results indicate that social media amplifies the effect of perceived behavioural control on purchase willingness, enhancing consumers' confidence in their purchasing decisions when social media influence is strong.

1. Table 10. Moderating effects

	Mv	Path	Coeff	S.E.	T	P	Bias-Corrected	Results
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Hypothesis							95%CI		
H18	SM	AT→PW	0.0371	0.0117	3.1585	0.0017	0.0140	0.0602	Supported
H19	SM	PB→PW	0.0372	0.0117	3.1888	0.0015	0.0143	0.0602	Supported

Table 11 presents the comprehensive analysis of the total effects within the structural model, combining both direct and indirect influences of consumer identification (CI), consumer perceived value (CP), subjective norms (SN), Attitude (AT), and perceived behavioural control (PB) on purchase willingness (PW). The effect size quantifies the overall impact each variable exerts on the outcome, while the standard error (SE) indicates the precision of these estimates. The Bias-Corrected 95% Confidence Interval (CI) confirms the statistical significance of the total effects, with significance established if the CI does not include zero.

The analysis reveals significant total effects across most pathways. For instance, the influence of consumer identification on Attitude (CI→AT) is substantial, with an effect size of 0.403, SE = 0.073, and a confidence interval of [0.259, 0.552], indicating a strong positive impact. Similarly, consumer perceived value on purchase willingness (CP→PW) demonstrates a substantial total effect of 0.451, SE = 0.085, and a confidence interval of [0.283, 0.626], underscoring the pivotal role of perceived value in shaping consumer purchasing decisions. Other significant pathways include the effects of subjective norms (SN) and perceived behavioral control (PB) on purchase willingness. For instance, the total effect of SN on PW is 0.204, with SE = 0.079 and a CI of [0.053, 0.374], while PB→PW shows an effect size of 0.188, SE = 0.075, and a CI of [0.049, 0.343]. These results highlight the importance of social influences and perceived control in consumer decision-making. Additionally, consumer identification and perceived value exhibit significant total effects on intermediate constructs, such as subjective norms, attitude, and perceived behavioural control, which further influence purchase willingness. For example, CI→PB has an effect size of 0.398, SE = 0.078, and CI = [0.247, 0.558], demonstrating the influence of consumer identification on perceived control.

Table 11. Total Effects

Effect path	Effect size	SE	Bias-Corrected	
			95%CI	
CI→SN	0.351	0.083	0.193	0.515
CP→SN	0.367	0.083	0.208	0.541
CI→AT	0.403	0.073	0.259	0.552
CP→AT	0.281	0.076	0.145	0.449
CI→PB	0.398	0.078	0.247	0.558
CP→PB	0.280	0.077	0.130	0.434
CI→PW	0.258	0.077	0.116	0.414
CP→PW	0.451	0.085	0.283	0.626
SN→PW	0.204	0.079	0.053	0.374
AT→PW	0.269	0.092	0.090	0.457
PB→PW	0.188	0.075	0.049	0.343

5. DISCUSSION

5.1 Theoretical Implications

This study contributes to the theoretical understanding of consumer behaviour by integrating the theory of planned behavior, consumer value theory, and consumer identity theory to develop a comprehensive model that explores factors influencing purchase willingness for Yunnan tie-dye products. The application of Structural Equation Modeling (SEM) uncovers the complex interactions among consumer identification,

perceived value, subjective norms, Attitude, and perceived behavioural control, thereby enriching discussions on traditional cultural product consumption.

Firstly, the findings confirm that consumer perceived value (CP) significantly influences purchase willingness both directly and indirectly through Attitude and perceived behavioural control (H5, H9, H10, H13, H15). This indicates that perceived value not only has a direct impact on purchasing decisions but also enhances attitudes and perceptions of control, thereby increasing consumer willingness to purchase. This aligns with consumer value theory, emphasizing that consumers are driven by both emotional and functional benefits when making purchase decisions related to cultural products (Yuan et al., 2022).

Secondly, the study reveals that consumer identification (CI) directly affects purchase willingness, perceived behavioural control, and subjective norms (H4, H7, H8). The findings suggest that a strong identification with Yunnan tie-dye products fosters a sense of personal alignment with the cultural and aesthetic values of these products, which enhances perceived control and social support, ultimately influencing purchase intentions. This extension of consumer identity theory highlights how cultural affinity strengthens consumer engagement with traditional crafts (Xue et al., 2022).

Moreover, the study demonstrates the mediating roles of Attitude, perceived behavioural control, and subjective norms in the relationships between consumer identification, perceived value, and purchase willingness (H12-H17). For example, the mediation effect of CI→PB→PW (H14) and CP→SN→PW (H17) illustrates that both consumer identification and perceived value indirectly influence purchase willingness by shaping consumers' perceptions of social expectations and control. This highlights the layered nature of consumer decision-making, where internal attitudes and external social factors interact to drive behaviour (Chae et al., 2024).

Additionally, the research underscores the moderating role of social media (SM) in strengthening the effects of Attitude and perceived behavioural control on purchase willingness (H18, H19). The findings indicate that social media enhances the positive influence of consumer attitudes and perceived control, suggesting that effective use of digital platforms can amplify marketing efforts for traditional cultural products (Varadarajan et al., 2022).

In conclusion, this study advances theoretical discussions by demonstrating how consumer identification, perceived value, and social influences collectively shape purchase intentions for Yunnan tie-dye products. By confirming the mediating roles of Attitude, perceived control, and subjective norms and highlighting the moderating effect of social media, this research offers more profound insights into the psychological and social mechanisms driving consumer behaviour. These findings not only expand the theoretical foundations of consumer behaviour in cultural markets but also provide practical implications for promoting traditional crafts in contemporary digital environments.

5.2 Practical implications

The findings provide actionable insights for various stakeholders, including marketers, business owners, policymakers, and cultural preservation advocates, to enhance the promotion and sales of Yunnan tie-dye products. By focusing on the key factors influencing consumer purchase willingness, stakeholders can leverage these insights to drive sustainable growth and market expansion for traditional crafts.

For marketers and business operators, it is crucial to emphasize the unique cultural and artistic value of Yunnan tie-dye products to elevate perceived value and positively influence consumer attitudes (H1, H5, H9). Marketing campaigns should focus on storytelling that highlights the rich heritage, craftsmanship, and cultural significance of the products. This can be achieved through visual content, online documentaries, and collaborations with cultural influencers who can help convey the products' authenticity. Such efforts can help consumers perceive Yunnan tie-dye as not just a product but a meaningful cultural artefact worth investing in.

Business owners should prioritize making the purchasing process for tie-dye products more accessible and convenient, as perceived behavioural control was shown to significantly impact purchase willingness (H2, H7, H10). Expanding e-commerce capabilities, offering multiple payment options, and ensuring a seamless online shopping experience can reduce barriers to purchase, thereby enhancing perceived behavioural control among consumers. Additionally, providing clear product information, transparent pricing, and efficient customer service can further empower consumers to make confident purchasing decisions.

Policymakers and cultural promotion agencies can play a significant role in leveraging subjective norms to boost consumer willingness to purchase Yunnan tie-dye products (H3, H8, H11). By organizing cultural festivals, exhibitions, and tie-dye workshops, they can create social environments that encourage group participation and foster social endorsement. Business operators can also benefit by using social proof strategies, such as customer testimonials and influencer endorsements, to enhance the social appeal of tie-dye products, making them a trend among consumers who are influenced by social networks.

To build a loyal customer base, business owners should focus on fostering a strong sense of consumer identification with Yunnan tie-dye products (H4, H6, H12). This can be achieved by engaging customers in interactive experiences, such as hands-on tie-dye workshops or virtual tours of the production process, which deepen their connection to the craft. Loyalty programs that reward repeat customers with exclusive offers, personalized content, or access to limited-edition products can further enhance consumer identification, encouraging long-term engagement.

Social media platforms play a critical role in moderating the relationship between consumer attitudes and purchase willingness (H18, H19). Marketers should invest in targeted social media campaigns that highlight the cultural uniqueness and high-quality craftsmanship of Yunnan tie-dye products. Leveraging platforms like Instagram, TikTok, and WeChat to share user-generated content, influencer collaborations, and behind-the-scenes videos can increase engagement and reach, ultimately driving consumer interest and sales. Social media contests and hashtag campaigns can also create buzz and encourage consumers to share their own experiences with Yunnan tie-dye, thus amplifying word-of-mouth marketing.

For policymakers, supporting the Yunnan tie-dye industry through incentives, subsidies, and grants can help sustain the craft's development and preserve cultural heritage. Establishing collaborative projects between local artisans, designers, and educational institutions can foster innovation while maintaining traditional techniques. Furthermore, integrating Yunnan tie-dye into tourism packages can attract visitors interested in cultural experiences, thereby generating additional revenue for the local economy.

In the context of cultural preservation, stakeholders should collaborate to create a sustainable ecosystem that supports both artisans and consumers. Business operators and policymakers can work together to ensure fair compensation for artisans, promote environmentally friendly production practices, and educate consumers about the cultural value of tie-dye. By focusing on sustainable practices and fair trade, stakeholders can attract socially conscious consumers who value ethical consumption.

In conclusion, these practical implications highlight the need for a collaborative approach among marketers, business owners, and policymakers to enhance consumer engagement with Yunnan tie-dye products. By focusing on perceived value, social influence, consumer identification, and digital marketing, stakeholders can effectively promote the sustainable growth of this traditional craft while preserving its cultural significance.

6. CONCLUSION

This study investigated the factors influencing consumer purchase willingness towards Yunnan tie-dye products by integrating constructs such as consumer identification, perceived value, attitude, subjective norms, and perceived behavioural control into a comprehensive model. The findings confirm that consumer identification and perceived value significantly enhance purchase willingness, mediated through critical variables such as attitude and perceived behavioural control. This highlights the crucial role that cultural

identity and perceived product value play in shaping consumer behaviour towards traditional crafts, emphasizing the need for businesses to align their strategies with these consumer motivations.

The study further demonstrates that social media moderates the relationships between consumer attitudes and perceived behavioural control with purchase willingness, suggesting that digital platforms can amplify consumer engagement and drive purchasing behaviour. These insights provide practical implications for stakeholders, including marketers, policymakers, and cultural promoters, by illustrating the importance of leveraging cultural identity and social influence to enhance consumer loyalty and increase sales of Yunnan tie-dye products.

However, the study is limited by its focus on a specific sample familiar with Yunnan tie-dye products, which may limit generalizability to other regions or cultural contexts. Future research could explore a more diverse demographic and employ longitudinal approaches to capture shifts in consumer behaviour over time. Additionally, integrating factors like economic conditions, market competition, and policy support could provide a more holistic view of consumer engagement, while qualitative methods could offer deeper insights into consumer motivations.

In conclusion, this study highlights the importance of consumer identification, perceived value, and social influence in shaping purchase intentions for culturally significant products like Yunnan tie-dye. By leveraging these insights, stakeholders can enhance their marketing strategies and product offerings, ensuring the sustainable development of traditional crafts in modern markets. Through targeted initiatives that emphasize cultural relevance and consumer engagement, businesses and policymakers can foster long-term loyalty, supporting the preservation and growth of heritage industries.

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APPENDIX 1. MEASUREMENT

Construct	Items
Consumer identification	I am satisfied with the design of the tie-dye products.
	I believe the tie-dye products align with my aesthetic.
	I feel that the tie-dye products match my image.
	I am satisfied with the style and fashion of the tie-dye products.
	I think the tie-dye products align with the fashion trends I pursue.
	I believe the tie-dye products represent the lifestyle I admire.
Consumer perceived value	I believe that the tie-dye product has a high cost-performance ratio.
	Purchasing the tie-dye product makes me feel like I am getting more than I expected in value.
	I think the tie-dye product's value is consistent with its price.
	I believe that buying the tie-dye product is a wise decision.
	The benefits provided by the tie-dye product are commensurate with its price.
	Buying the tie-dye product is a reasonable decision.
Attitude	I have a favourable view of the image of the tie-dye products.
	I believe the tie-dye products is a reliable brand.
	I have a positive evaluation of the tie-dye products' reputation.
	I believe the tie-dye products provide high-quality products.
	I think the tie-dye products can meet my needs.
	I have an excellent overall impression of the tie-dye products.
Perceived behavioural control	I believe that purchasing tie-dye products is under my control.
	I feel that I can control whether I buy tie-dye products.
	I have substantial control over purchasing tie-dye products.
	I can control my buying behaviour and decide whether to purchase tie-dye products.
	I believe that buying tie-dye products depends on my own choice.
	I can influence whether I purchase tie-dye products.
Subjective norms	I have positive thoughts about the willingness to buy tie-dye products.
	I feel pleasant about the willingness to buy tie-dye products.
	I believe that the willingness to buy tie-dye products will bring me joy.
	I think that the willingness to buy tie-dye products is a delightful decision.
	My Attitude towards the willingness to buy tie-dye products is positive.
	I consider the willingness to buy tie-dye products to be a satisfying experience.
Purchase willingness toward tie-dye products.	I have a high intention of willingness to buy tie-dye products.
	I plan to buy tie-dye products.
	I believe I am likely to buy tie-dye products in the future.
	I have a favourable opinion about buying tie-dye products.
	I have a strong interest in buying tie-dye products.

	I think I am very likely to buy tie-dye products in the future.
Social media toward tie-dye products	I provide detailed reports on social media user characteristics and behaviour towards tie-dye products.
	I provide critical social media follower information, including demographics and interests in tie-dye products.
	I track social media engagement and key statistics about tie-dye product posts' performance.
	I integrate social media follower information, engagement metrics, and content reach to aid in optimizing tie-dye product posts.
	I measure the social media popularity of tie-dye products.