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Article

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ABSTRACT

This study aims to realise the modern transformation of Jinxiu Yao ethnic costume patterns through consumer-oriented design. By applying the Affinity Diagram (KJ) method, it collects and quantifies the demand characteristics of tourists in Yao-inhabited areas for leather bags, and classifies these attributes by priority. The research selects matching pattern elements, reconstructs them using shape grammar, and applies the distinctive cultural symbols in Jinxiu Yao embroidery patterns, such as animal motifs, plant symbols and totemic elements, to modern design. By aligning demand priorities with transformed patterns, it proposes design schemes for women's leather bags targeting different income levels and regional preferences. The research results verify the effectiveness of the consumer-oriented model in stratifying and transforming traditional patterns, and construct a systematic pathway: "demand quantification - attribute deconstruction - cultural translation - design generation". This study provides a feasible solution for the modernisation of traditional patterns, offers ideas for designing cultural products with regional characteristics, and promotes the inheritance of Yao cultural genes as well as the integration of traditional craftsmanship with the contemporary market.

KEYWORDS

Yao clothing, embroidery patterns, consumer-oriented, leather women's bags

INTRODUCTION

The Yao are a representative ethnic minority in southern China and one of the country's four ancient ethnic groups. They are a typical migratory and transboundary people [1], tracing their origins to a branch of the "Jiu Li" tribe in the ancient Orient. Highly mobile geographically, the Yao have migrated across borders for

centuries, primarily settling in South China - a distribution pattern encapsulated in the saying "There's no mountain in the South Ridge without Yao people."

Jinxiu in Guangxi, located in the central Guidong area of the Dayao Mountains, serves as a major Yao settlement. Dubbed the "World Capital of Yao Culture", it represents the core area of Yao culture in China [2]. Jinxiu Yao culture is both vibrant and profound, manifested not only in religious ceremonies and daily customs but also deeply embedded in their costumes. Every sartorial element - from garment structures and pattern combinations to colour schemes and motif selections - embodies unique historical sedimentation and rich ideological significance.

These distinctive ethnic costumes serve as vessels carrying Yao cultural connotations, ethnic identity, artistic characteristics, psychological expressions, emotional representations, historical narratives, and ritual traditions [3]. Particularly, the dress patterns constitute crucial elements for cultural expression in Jinxiu Yao attire, encapsulating the group's unique aesthetic philosophy. Through centuries of historical development, Jinxiu Yao clothing has interacted with other ethnic cultures, developing unique production techniques. These costumes crystallise Yao aesthetic preferences and living habits, ultimately forming singular ethnic-cultural symbols.

The Yao's ancestral clans originally adopted the canine as their primal totem [4], and the Panhu (Discus Gourd) legend epitomises this totemic worship. The children and grandchildren of the gourd were "good at five-colour clothes" and "dressed in variegated clothes" [5], which reflects the Yao people's chromatic exuberance in their textile tradition. Jinxiu Yao's clothing patterns are mostly selected from poetic and auspicious themes, which either show the desire for a better life, praise hard work and wisdom, or celebrate the heroes and heroines in myths and legends. Yao weaving and embroidery patterns are mostly taken from the production life of the Yao people, and botanical and zoological motifs (flora, avifauna, entomological and ichthyic elements), mountains and rivers seen in daily life are all incorporated into the weaving and embroidery process by the embroiderers, and these patterns emphasise the Yao people's worship and beliefs about nature [6]. The Yao costumes are rich in patterns, vivid in shape and bright in colour, giving a strong visual impact and reflecting the unique aesthetic pursuit of the Yao people. To systematically decode this intangible heritage, our research methodology involves: (1) genealogical analysis of sartorial cultural codes; (2) multidimensional examination of the cultural genes of Jinxiu Yao costumes and exploring the inner aesthetics and historical

evolution of Jinxiu Yao costumes from various perspectives, such as colour, pattern, totem, and shape. In addition, through the excavation and application of these typical cultural genes, the Jinxiu Yao dress culture can be revitalised in contemporary society.

Jinxiu Yao's dress pattern is a remarkable embodiment of Yao cultural genes. Three archetypal motifs dominate Jinxiu Yao textiles: rich in deep cultural meanings, symbolising prosperity, harmony and reproduction, and are an important part of the cultural genes of Jinxiu Yao dress. Jinxiu Yao's weaving and embroidery technique was recognised as a provincial intangible cultural heritage of Guangxi Zhuang Autonomous Region in 2010, which combines various folk techniques and art forms, such as picking, embroidery, brocade weaving and batik. In the Yao Mountains, there is a saying that "Yao girls love to embroider, and it is difficult to get married if they are not good at embroidery", and embroidery is one of the "skills" that, as the Yao proverb attests: 'Needlework mastery determines marriageability' [7].

The inheritance of Jinxiu Yao costume weaving and embroidery is mainly passed down from generation to generation, and the number of inheritors of the weaving and embroidery skills has been declining sharply amidst modern cultural impacts. The vitality of national cultural heritage lies in its transmission, and the core of transmission is the people who transmit the culture. The self-awakening and self-action of the inheritors are an important force in the protection of non-heritage. [7] In order to make the Yao culture better disseminated and inherited, the inheritors and scholars in the Jinxiu Yao area are also realising the innovation and inheritance of Yao embroidery culture and the enhancement of the value of the products through the combination of theory and practice. Adopting a comprehensive research method, combining multidisciplinary theories of ethnology, anthropology and communication, and through the development of concepts of "tangible", "sensible" and "effective", the Yao embroidery culture is modernised and translated. Based on this, LIU Z M designed the Yao embroidery technology audio, which is innovative in terms of visual demand, functional demand and interactive level. [9] At the same time, in recent years, to develop the local economy of Jinxiu Yao and continue the inheritance of non-heritage skills, the local government and the inheritors of weaving and embroidery skills have developed a series of cultural and creative products in an attempt to combine traditional weaving and embroidery skills with modern life. However, due to the lack of product design, high handcraft costs and disconnection with the market and other problems, resulting in serious product homogenisation and low matching of user needs. A good tourism souvenir is firstly a product

that can attract users, and on this basis, it can better achieve the role of promoting culture [10]. LIANG Y M has carried out applied research on the design of leather products with the characteristics of Auyao Huangnian drum dance by using a leather bag as a carrier. With the design of plot story, unique sting point, appropriate width as the main method to form a series of audio-visual integration with the Auyao drumming characteristics of the leather bag products, completed the Auyao Huangni drumming culture output. So that the national culture of leather products, in breadth to realise the type of derivation, in depth to form and the audience's emotional resonance, enriched the expression of the purse [11]. Therefore, it is necessary to design cultural and creative products according to the needs of tourists. As a frequently used item in daily life, the leather bag has a huge market demand, and in recent years, consumers have shown a high degree of recognition for products incorporating "cultural symbols", which has a positive impact on the dissemination of non-heritage culture.

In this context, some scholars have actively explored the Jinxiu Yao ethnic group. Xu Yun [12] examined the cultural tourism of Jinxiu Yao Autonomous County and constructed a model for transforming the system from "planarisation" to "three-dimensionalisation". However, the study still has limitations: on the one hand, the model lacks an in-depth exploration of the specific implementation paths and effect evaluation mechanisms in the transformation process; on the other hand, the study fails to validate the validity of its viewpoints through systematic data collection and analysis, such as the collection of tourists' demands, the degree of perception of traditional culture, and other key indicators.

Liu Lingling [13] explores the application and innovation of Jinxiu Yao costume patterns in women's bag design, combining shape grammar with an in-depth discussion of Jinxiu Yao costume patterns, and innovatively applies Yao costume patterns to women's bag design. However, there is also the problem of emphasising applied innovations at the expense of feedback mechanisms for such innovations from consumer subjects. Chen Shuyuan et al [14] found that 87% of tourists can recognise the difference between simple attached cultural symbols and real cultural expressions, which means that Yao costume patterns are expected to be promoted to more consumer groups. Overall, although previous studies have explored and summarised the cultural connotation and application value of Jinxiu Yao clothing patterns, they have mostly focused on the theoretical elaboration of pattern symbol features and design transformation, such as the use of pattern styling syntax, etc. These studies have lacked empirical research to validate the market acceptance and user

experience of the actual products. In addition, previous studies did not have enough insight into consumer perception, did not point out the sensitivity of tourists to the authenticity of cultural symbols of ethnic minority clothing, and did not further explore the aesthetic preference and cultural identity mechanism of consumers for pattern innovation design.

Meanwhile. According to Muttiana Pramita Sari [15], the making of crafts is very different from the making of design items, and there are many factors that go into the creation of an image artist. Meanwhile, the design with the craft element will consider the aspects of function, innovation or improvement, aesthetic value, ergonomics or comfort, economy, market, and other considerations from the surrounding environment.

In recent years, the integration of ethnic minority cultural elements into modern product design has become an important means of cultural inheritance and innovation. A large number of studies have been devoted to exploring the design transformation of different ethnic cultures and have achieved certain results. For example, in terms of Zhuang culture, XU L J obtained 12 typical Zhuang brocade bird and flower patterns through collecting, organizing and screening, used KJ analysis to obtain 8 groups of perceptual imagery word pairs, and set up a 5-level Likert scale to extract the perceptual factors of Zhuang brocade bird and flower patterns, deduce the shape grammar, and design the intelligent innovation, which provides certain experimental basis and reference significance for the application of the traditional Zhuang brocade patterns in the modern design field [16], in terms of Mongolian culture, MU S used hierarchical analysis to obtain the design demand elements of consumers for Mongolian clothing fashion, and combined with the Kano model to optimize the attributes of each demand element. In terms of Mongolian culture, MU S uses hierarchical analysis to obtain the design demand elements of consumers for Mongolian fashion clothing, and combines the Kano model to optimise the classification and sorting of the attributes of the demand elements, and puts forward design suggestions to optimise the "fashionization" of Mongolian clothing [17]. However, compared with the Zhuang and Mongolian ethnic groups that have received much attention, the research on the application of Yao (especially the Jinxiu Yao branch) culture in the field of design is relatively weak and fragmented. Although the current research has confirmed the KJ method in tapping the subjective needs of users and the Shape Grammar method in systematically generating cultural innovation forms, most of these methods lack

organic integration. The core innovation of this study is that, for the first time, a systematic research framework of "user subjectivity (KJ method) - cultural ontology (shape grammar) - market objectivity (regression analysis)" is constructed, which breaks through the unidimensionality of existing studies that either emphasise theory generation or market analysis. This breaks through the one-dimensional limitation of existing studies, which either focus on theory generation or market analysis.

To sum up, this study starts from consumer perception and adopts the combination of shape grammar and the KJ method. The KJ method firstly collects materials from Jinxiu Yao people, conducts a field survey in Jinxiu Yao people's area, and extensively collects residents' original words, behavioral stories and video materials through contextual interviews, in-depth interviews and participatory observation, etc., to explore the cultural significance, beliefs, taboos, historical changes and their real views and needs for product modernization behind the products. Changes as well as their real views and needs for product modernisation. All the original information was recorded on separate cards, and then all the cards were spread out, collaboratively grouped according to the content of the cards, and a label that summarises their core insights was extracted for each group. Finally, the labeled cards were categorized at a higher level, and the core design and key contradictions were defined through a joint interpretation of the affinity diagrams, which were then transformed into specific design points that ultimately guided the product in terms of function, form, material and cultural narratives, and other dimensions, materials and cultural narratives to ensure that the design respects ethnic traditions and meets modern needs. The core value of the KJ method for ethnic minority product research lies in its ability to find a balance between cultural authenticity and design innovation through a set of systematised processes that transform complex cultural underpinnings and implicit cultural genes into clear needs. This study also adopts the shape grammar to analyse and reconstruct Jinxiu Yao patterns. The purpose of this study is that the shape grammar can systematically deconstruct and innovate cultural symbols to fundamentally avoid homogenization, and after defining the initial shapes and transformation rules, designers can systematically generate novel design solutions while maintaining cultural genes through operations such as parameter adjustments, rule nesting, and bone transformations. Finally, this study uses regression analysis of income/region factors to ensure demand matching in stratified markets, transforming vague "user needs" into precise, actionable data insights that can fundamentally improve demand matching. Using the above research methodology, a complete closed loop of "cultural analysis -

design - market validation" can be constructed, thus effectively solving the shortcomings and defects of the above research such as the lack of empirical evidence to support the transformation mode of cultural tourism, the ambiguity of evaluation indexes, and the serious disconnection between pattern innovation and user preference and market acceptance.

RESEARCH PURPOSE

This study aims to explore tourists' demand preferences and consumer behaviour influencing factors on Jinxiu Yao ethnic weaving and embroidery cultural and creative products through empirical methods, focusing on analysing the mechanism of the users' demographic characteristics, such as geography, income, and occupation, on consumers' purchasing decisions. By evaluating the market acceptance and user experience of the traditional pattern innovative design, revealing the consumers' sensitivity threshold to the authenticity of ethnic minority cultural symbols and their cultural identity formation paths, thus providing data support and theoretical basis for the differentiated design, market-oriented positioning and cultural dissemination efficacy enhancement of Jinxiu Yao non-heritage cultural and creative products, to solve the real problems of serious homogenisation of the current products and low matching degree of demand. Realise the effective connection between the protection of traditional skills and modern consumption demand.

Based on this, this study designed a corresponding questionnaire survey, through quantitative analysis, the research attention from the theoretical discussion to the market demand, the formation of the exploration of Jinxiu Yao embroidery techniques and contemporary design innovation and integration path. We identify and analyse the form, colour and pattern factors in Jinxiu Yao clothing, and use shape grammar translation design to realise the inheritance and innovation of Jinxiu Yao clothing culture, forming a systematic path of "quantification of demand - deconstruction of attributes - cultural translation - design generation". This forms a systematic path of "demand quantification-attribute deconstruction-cultural translation-design generation", which provides a feasible solution for the modernisation and transformation of traditional handicrafts. While promoting the inheritance of national aesthetic genes, it also builds a new model for the integration of traditional national culture and innovative design.

Materials and Methods

The KJ Method for Acquiring User Requirements

The "KJ method", also known as the "affinity diagram method", was proposed by Prof. Jiro Kawakita in 1964. Through a certain method to obtain the functional requirements, organise the functional cards, and finally obtain the list of requirements [18]. The KJ method can quickly collect requirements and, through the analysis of various factors, find the most appropriate product design solutions. Hu Haowei et al [19] used the KJ method to obtain the list of ageing-friendly products, home-grown products, and conducted a study of senior home-grown products. Liu Wenliang et al [20] collected the demand for parent-child home cultural and creative products based on the KJ method to obtain the demand for cultural and creative products from parent-child families with different populations. It can be seen that the application of the KJ method in the field of obtaining user demand is quite mature, so this paper chooses the KJ method to obtain consumer demand in the Jinxiu area.

The affinity diagram method can intuitively reflect the respondents' demand data for tattooed leather bags in the Jinxiu Yao region. Through the development and distribution of questionnaires to make statistics on consumer demand, several demand attributes are filtered out to determine the real consumer demand, and then design elements that are in line with the combination of modern aesthetic interests and traditional ethnic patterns are selected, to define the priority of design [21]. Firstly, research interviews were conducted with 8 users who had relevant product purchasing experience and 8 tourists from the Jinxiu Yao ethnic area who did not have relevant product purchasing experience, to record their needs for leather bag products. The interviews were conducted in two dimensions: artistic features and functional attributes. In addition to the traditional aesthetic analysis, elements such as functional expectations, visualisation in daily use, and comfort are among the needs that female tourists focus on. Afterwards, 17 experts, including 7 teachers of fashion majors, 6 teachers of design, and 4 product designers, were invited to comment and summarise the tourists' preferences, and the elements obtained from the interviews were recorded as the initial needs. The user research interviews were able to show consumers' acceptance of the integration of ethnic elements into purse design in a comprehensive way.

Shape Grammar and Translation Design of Jinxiu Yao Clothing Patterns

Shape Grammar is a rule-based design system that has received extensive attention in the field of design research in recent years. It transforms cultural symbols into an iterative design language through regularised geometric transformations and combinations, giving products systematic visual logic and ethnic characteristics. Based on the definition of Shape Grammar, we get the formula $SG=(S,L,R,I)$, in which S is the original shape, L is the symbolic marking, R is the rule of inference, and I is the original shape. In the context of product design of Jinxiu Yao clothing patterns, shape grammar provides a way to combine the unique weaving and embroidery pattern traditions of Yao clothing with modern design, so that these patterns are sublimated from purely decorative elements to cultural carriers and symbols of national characteristics that meet the expectations of consumers.

The patterns of Jinxiu Yao clothing are characterised by geometric natural imagery, such as mountains, rivers, grass, trees, animals, etc. Through abstraction and symmetry, they convey the historical memory and spiritual beliefs of the ethnic groups. Transforming these traditional patterns into a design language that meets modern aesthetic needs through shape grammar is a topic worth exploring. By analysing the compositional rules of patterns and reconstructing their generative logic, Shape Grammar provides methodological support for the fusion of tradition and modernity, thus realising the innovative inheritance of national culture.

The analysis of the cultural genes of Jinxiu Yao dress patterns can provide a rich "material library" for its modern application. However, if we want to transform them into cultural products and integrate them into the market, we must cross the gap from "cultural analysis" to "product design".

This means that we cannot simply paste traditional dress patterns, but should regard them as a source of inspiration that can be deconstructed, refined and re-created. The reconstruction process of combining the strongly contrasting colour system of Jinxiu Yao clothing with the aesthetic direction of consumers is to give the traditional cultural attributes of Jinxiu Yao to the actual products.

In order to accurately measure consumers' aesthetic needs, we designed a multi-perspective questionnaire survey (Supporting Information S1). The consumer demand survey will help us to grasp which elements of the reconstructed pattern are most attractive to the market, and how to balance the traditional handicraft weaving and embroidery skills with the modern market demand, and ultimately ensure that the design output not only strongly supports the inheritance of the traditional Yao culture, but also results in a market-

competitive, high-quality product that can satisfy both the aesthetic and practical needs of contemporary consumers.

Questionnaire Survey Demand Acquisition

In order to accurately capture consumer demand, we designed a randomly distributed questionnaire based on the Likert Scale. The questionnaire contains 25 core questions covering dimensions such as product preference, purchase motivation, satisfaction, and price sensitivity, each of which is quantitatively evaluated on a 1-5 scale (1=strongly disagree, 5=strongly agree). A total of 150 valid questionnaires were eventually returned to ensure that the data were representative and valuable for statistical analysis, providing a reliable basis for subsequent modelling.

The Relationship Between Consumer Purchase Intention and Ornament Design

Indicator Construction and Description

This study takes the adult consumer group as the survey object, focusing on the differentiated needs of consumers with different occupational backgrounds, geographical distribution and income levels in the choice of purse products, especially for the market acceptance of Jinxiu Yao pattern women's bags. By analysing the information of consumers' geography, purchasing expectation and purchasing ability, the study aims to find out the differences in consumers' demand preferences and the influence mechanism of income level on the preference of Jinxiu Yao tattooed women's handbags. The study focuses on consumers' recognition of the practicality and aesthetics of bags, as well as the value of regional cultural symbols in product design, and tries to establish a correlation model between consumers' social attributes and the acceptance of products with ethnic and cultural elements, to provide data support for the market segmentation of ethnic speciality leather goods. Three demand classifications and 18 secondary indicators were finally obtained, as shown in Table 1.

Table 1. Analytic hierarchy of user needs

Classification of Requirements	serial number	interrogation
design	f_1	Smooth lines

	f_2	Distinctive national characteristics
	f_3	Multi-pattern combination
	f_4	Atmospheric and deep patterns
	f_5	Interesting
	f_6	Lively colours
	f_7	Uniform colour tone
	f_8	No colour difference
	f_9	Strong practicality
	f_{10}	High comfort
fuction	f_{11}	Easy to carry
	f_{12}	Easy to store
	f_{13}	Various ways to use
	f_{14}	Life expectancy
	f_{15}	Glossiness
material	f_{16}	Wear-resistant
	f_{17}	Softness
	f_{18}	Skin-friendly

Firstly, the recovered data were tested for reliability and validity, and the results showed that the design of the questionnaire was reasonable, with a reliability of 0.7, and the validity test showed that the KMO was 0.786, and Bartlett's spherical test was significant at the 1% level, which indicated that the data had good structural validity. Liu Huichao [22] and others carried out research on consumer acceptance of women's leather bags from the aspects of purchasing power, purchase influencing factors, and preferred artistic style. This paper refers to their approach and combines the user preferences shown in the KJ method to construct a comprehensive attractiveness index for leather bags from three aspects: design, function and material, as shown in Table 2. Firstly, as a lady's consumer product, the design factor is an important observation index, this study constructs the design factor through the indexes of lines, patterns, colours, etc., to capture the visual style and aesthetic expression of the purse, and this index reflects the consumers' emotional appeal to

the symbols of fashion; secondly, the functionality of the bag is an important embodiment of the value of the purse, and this paper constructs the functionality factor from the indexes of practicability, comfort, and portability, etc., and examines the Consumers' consideration of the use experience; material is a factor that cannot be ignored in the design process of leather bags, this paper constructs material factors from gloss, wear resistance, skin comfort, etc., to examine the intensity of consumers' attention to the material when shopping for leather bags.

Table 2. Composition of leather bag design indicators

	level 1 indicators	secondary indicator	meaning or calculation	attributes		
Overall Attractiveness Index for Purses	design	smooth lines				
		distinctive national characteristics				
		multi-pattern combination				
		atmospheric and deep patterns				
		interesting				
		lively colours				
		uniform colour tone				
		no colour difference				
		strong practicality		weighted by respondents' feelings	positive	
	high comfort					
	function	easy to carry				
		easy to store				
		various ways to use				
	material	life expectancy				
		glossiness				
		wear-resistant				
		softness				
		skin-friendly				

The methods of calculating index weight coefficients mainly include two categories: subjective assignment method and objective assignment method, in which the entropy value method can determine the index

weights according to the degree of variation of the index value, which is widely used in the academic community because it avoids the bias brought by the human factor, and this paper adopts the entropy method to give the weights of each factor to get the comprehensive attractiveness index of the leather bag, and the results are shown in Table 3. The index is controlled by the Richter scale and is a constant in the range of 0-5.

Table 3. Comprehensive attractiveness index evaluation system of leather bags

tier 1 indicators	weight (%)	secondary indicators	the information entropy value	information utility value d	weight (%)	normalised weight
comprehensive evaluation index system for yao patterns design factor	0.400	smoothness of the lines of Jinxiu yao-patterned baggage	0.959	0.041	5.202	0.147
		ethnic characteristics of Jinxiu-yao pattern bags	0.957	0.043	5.412	0.109
		combination of various patterns of Jinxiu-yao pattern bags	0.963	0.037	4.737	0.112
		atmosphere and depth of Jinxiu yao-patterned bags	0.96	0.04	5.105	0.119
		interesting colour of Jinxiu yao-patterned bags and accessories	0.962	0.038	4.774	0.130
		the colourful performance of Jinxiu yao-patterned bags and wraps	0.964	0.036	4.521	0.118
		harmonisation of the colour tones of Jinxiu-yao pattern bags	0.966	0.034	4.368	0.135
		colour difference control of Jinxiu-yao pattern bags	0.954	0.046	5.891	0.127

functionality factor	0.355	practicality of Jinxiu yao-patterned bags and accessories	0.948	0.052	6.578	0.185
		high comfort of Jinxiu yao-patterned bags	0.944	0.056	7.129	0.200
		easy to carry Jinxiu yao-patterned bags	0.957	0.043	5.419	0.152
		easy storage of Jinxiu yao-patterned bags and accessories	0.958	0.042	5.332	0.150
		Jinxiu yao-patterned bags are used in various ways	0.957	0.043	5.431	0.153
		the expected long service life of Jinxiu yao-patterned bags	0.956	0.044	5.6	0.157
		glossiness of Jinxiu yao-patterned bags	0.952	0.048	6.075	0.247
		wear-resistant of Jinxiu yao-patterned bags	0.95	0.05	6.301	0.257
		softness of Jinxiu yao-patterned bags and accessories	0.956	0.044	5.556	0.226
		the skin friendliness of Jinxiu yao-patterned bags	0.948	0.052	6.569	0.268
material factor	0.245					

Benchmark Regression Analysis

This study uses a mathematical model to examine the effect of comprehensive attractiveness of a purse on consumers' purchase intention, and the model is set as follows:

$$Purchase = \beta_0 + \beta_1 + \sum_2^4 \beta_2 Control + \varepsilon_i \tag{1}$$

Purchase denotes consumers' willingness to buy, *index* is the index of comprehensive attractiveness of purses, *Control* is a series of income and region control variables, and ε_i is a random disturbance term.

In the model setting, the control variables include income level, geography, and occupation. Income indicators include: 1 represents a monthly income of 0-4,000 CNY, 2 is 4,001-8,000 CNY, 3 is 8,001-15,000 CNY, and 4 is more than 15,000 CNY. Geographical characteristics include: 1 represents East China, 2 is South China, 3 is West China, 4 is North China, and 5 is Central China. Occupational indicators include: 1 is a design student, 2 is engaged in the art and design industry, 3 is engaged in the non-art and design industry, and 4 is unemployed. As shown in Table 4.

Table 4. Descriptive statistics

variable name	average value	standard deviation	minimum	maximum	observations
willingness to buy	3.17	1.322	1	5	472
index	3.248	0.503	2.03	4.23	472
area	2.7	1.525	1	5	472
income	3.00	1.012	1	5	472
occupation	2.60	1.147	1	4	472

Table 5 shows the correlation matrix, and the results of correlation analysis show that the factor index is significantly positively correlated with willingness to buy ($p < 0.01$), the factor income is also significantly positively correlated with willingness to buy ($p < 0.01$), and the factor city is significantly negatively correlated with willingness to buy ($p < 0.01$). It is worth noting that although job is negatively correlated with willingness to buy, the strength of the correlation does not pass the statistical significance test, and the correlation is not yet statistically significant. However, the correlation coefficient matrix only takes into account the correlation coefficient between the two variables, and is only used as a preliminary basis for judgment; the specific influence of the factors on the willingness to buy needs to be further analysed.

Table 5. Purchase intent correlation analysis

	willingness to buy	index	city	income	job
willingness to buy	1				
index	0.640***	1			
city	-0.578***	-0.668***	1		
income	0.665***	0.650***	-0.553***	1	
job	-0.052	-0.153***	0.079*	-0.115**	1

Note: *p<0.05, **p<0.05, ***p<0.01, t-values in parentheses, same below.

To avoid possible covariance problems in the sample data, covariance diagnosis was performed using the variance inflation factor VIF (as shown in Table 5), and the variance inflation factor (VIF) of all independent variables in this study was less than the critical threshold of 10, indicating that there is no significant risk of covariance among the variables. As shown in Table 6.

Table 6. Collinearity test

	VIF	1/ VIF
Index	2.295	0.435
City	1.891	0.528
Income	1.813	0.551
Job	1.026	0.974

Panel data can be analysed empirically using a mixed effects model, random effects model or fixed effects model. This study uses the F-test and the Hausman test for judgmental selection, in which the F-number indicates that the fixed effect model is better than the mixed effect model, and the results of the Hausman test indicate that the fixed effect model is better than the random effect model. Fixed-effects modelling essentially "fixes" cultural factors such as cultural background, values, aesthetic traditions, etc., which are difficult to observe directly but highly stable, thus allowing researchers to analyse the effects of observable variables (e.g., design features, product attributes, etc.) on preferences within a framework of controlling for

cultural latent variables. This modelling approach is not only more robust in an econometric sense, but also has a significant advantage at the level of cultural analysis: it allows the researcher to operationalise "culture" as a set of stable and differentiated trajectories, which in turn reveals how different cultural groups systematically respond differently to the same design elements or cultural symbols.

Therefore, this paper uses the fixed effect model for regression analysis of panel data. As shown in Table 7.

Table 7. Baseline regression results

	(1)	(2)	(3)	(4)
index	1.680*** (18.06)	1.205*** (9.985)	0.684*** (5.491)	0.705*** (5.634)
city		-0.235*** (-5.896)	-1.162*** (-4.307)	-0.160*** (-4.254)
income			0.513*** (9.254)	0.515*** (9.308)
job				0.057 (1.550)
obs	472	472	472	472
fixed effect	yes	yes	yes	yes
F-number	326.152	192.176	179.779	135.839

From the regression results of models (1) to (4), it can be seen that the coefficient of index is positive in all models and passes the 1% significance test. It shows that under the condition of different control variables, the index presents a positive facilitating effect on purchase intention, and the results remain statistically significant. Therefore, it can be concluded that the most important thing for consumers to buy women's bags is the design, functionality and material of the goods. Further examination of Models 2-4 reveals that CITY and purchase intention are negatively correlated, a finding that suggests that consumers in cities in south-eastern China (e.g., Guangdong, Guangxi, Fujian, and other provinces) show a stronger willingness to purchase JINXIU YAO PATTERN BAGS, a phenomenon that is highly consistent with the geographic distribution of the Yao's main settlement areas. From the perspective of cultural cognition, consumers in this region, due to their long-term exposure to traditional Yao cultural elements, have a stronger aesthetic acceptance of Yao

patterns and a stronger sense of cultural identity, and therefore are more inclined to choose products that incorporate their ethnic designs in the process of consumer decision-making. The unique totem motifs and natural patterns in Yao patterns, such as the Pan Wang pattern, octagonal flower pattern, sun pattern, etc., are in the same lineage with the decorative elements such as carvings, repousse patterns, auspicious clouds, etc., which are commonly found in the ancestral temple buildings in the Southeast region, and all of them embody the figurative expression of the worship of nature and the wisdom of the ancestors. Its colour system of dark blue, vermilion, bright yellow and other bright colours are highly compatible with the traditional ceremonial costumes and ancestral hall paintings in Fujian, Guangdong and Gan areas, and this visual language can evoke the deep-seated identity of consumers in the Southeast region with the culture of their clans - just as they maintain the memory of their bloodline through the construction of ancestral halls, the Yao patterns also carry the history of their clans. The Yao pattern also carries the historical narrative and spiritual totem of the ethnic group. These visual elements have a high degree of cultural proximity to consumers in the Southeast region. In contrast, consumers in other regions may have a lower acceptance of Yao craft products due to a lack of knowledge of Yao culture. In addition, as an important inheritance place of Yao culture, local consumers' purchasing behaviour of ethnic speciality products is not only based on practical needs, but may also contain emotional factors such as cultural belonging and national pride. Under the inspiration of ethnic memory, the history of the ethnic group and its cultural genes are not only revitalised and energized; and also due to the existence of the memory, the history of the ethnic group and its cultural genes are and its cultural genes have been continuously continued and passed on [23], thus further strengthening its consumption willingness.

Interestingly, the coefficient of INCOME in Model 3 is slightly smaller than INDEX, which further suggests that the income level is also an important influence on people's purchase of goods, as per capita disposable income is generally higher in eastern China (e.g., provinces such as Guangdong, Jiangsu, and Zhejiang) than in other regions from 2018 to 2023 according to data from the National Bureau of Statistics [24]. This economic advantage allows local consumers to maintain strong consumption potential while focusing on cultural identity, confirming the key role of the income variable (INCOME) in the model. It is also observed that people in Southeast China, especially in the South, have higher income levels and the strongest purchase intentions.

The coefficient between occupation and willingness to buy in model 4, although positive, fails to pass a significance test of at least 10%, indicating that occupation and willingness to buy are not substantially related.

Table 8. Leather bag attractiveness breakdown regression table

	area	income	job
design index	-1.241*** (-13.466)	0.831*** (13.065)	-0.144 (-1.506)
function index	-0.117 (-1.195)	0.211** (3.135)	0.244 (2.413)
material index	-0.366*** (-4.677)	0.149* (2.753)	-0.245** (-3.027)

The relationship between secondary indicators and control variables was further examined. It is found that the region and all secondary indexes are negatively correlated, but among them, the function factor does not pass the significance test. The index coefficient is -1.241, which is the smallest, indicating that consumers in southern and eastern China pay more attention to the design of the bag, including colour, pattern, texture and other aspects of the elements, which provides a design basis for the application of the innovative design of the Yao pattern bag. In addition, bag material is also negatively correlated with region, but the coefficient is not so small, which means that not only consumers in the southeast region pay attention to the material, but also the rest of the other consumers pay more attention to the material of the bag, which provides evidence for the innovative design ideas of Yao bags throughout China.

Examining the relationship between income and the two-digit indicators, it is found that all three are positively correlated with income and pass at least a 10% significance test. The design factor has the largest coefficient, which implies that consumers with higher incomes pay more attention to design attributes. Interestingly, function and material pay much less attention than design attributes in the high-income group, indicating that the high-income group pays significantly more attention to the aesthetic value and cultural symbolic significance of the product than to function and material when shopping for bags. This finding provides a key basis for positioning Jinxiu Yao pattern bags for the high-net-worth segment: this group is more willing to pay for the unique design language and ethnic culture premium, so brands can focus on strengthening the artistry, narrative and history of the pattern. We are also concerned that the lower the income of consumers, the more they focus on functionality and materials when shopping for bags. Therefore, basic

bags should pay more attention to their practicality and longevity, and choosing wear-resistant materials may be a good choice.

Finally, the correlation between occupation and index is generally not strong, and only weak negative correlation with the material factor at 5% confidence interval, which may be because students in the design industry do not have strong overall consumption ability because they do not have income, so they will ignore the design elements when shopping for bags, and will consider the material of the goods more. The bag with a long service life and wear resistance will be more popular among consumers.

Extraction and Analysis of Jinxiu Yao Clothing Patterns

The drawing of patterns of Jinxiu Yao people mainly relies on three techniques: batik, brocade and embroidery. The method of needle embroidery is similar to that of cross-stitch, which skillfully draws symmetrical and elegant patterns by interweaving the warp and weft of the fabrics, which is simple and quick, and the use of colours is unrestrained, so it can freely produce various patterns. They are mainly sewn on the parts of the garment that are most prone to wear and tear, which enhances the wear resistance of the garment and also plays a protective role. With time, these primitive and simple patterns gradually become complex and perfect, and eventually become a kind of decoration.

Through systematic analysis of Jinxiu Yao textile patterns (Table 9), we categorise them into five typological groups:

(1) Animal Patterns. Animal images are the main ones, such as dog and bird patterns, frog patterns, etc. The patterns originated from the people of Jinxiu Yao. Patterns originated from the daily life of the Yao people in Jinxiu as well as animal images in myths and legends, reflecting the ethno-ecological worldview of harmony between man and nature.











(2) Plant Patterns. Patterns with plants as the theme, such as the octagonal pattern, tree pattern, etc., are the artistic reproduction of plant images in the region where the Jinxiu Yao people are located, showing the Yao people's praise and respect for the beauty of nature.


















(3) Natural Patterns. These patterns are inspired by the elements of nature, including cloud patterns, thunder patterns, sun patterns and so on. The patterns reflect the Jinxiu Yao's observation of natural phenomena and their reverence for the power of nature.

(4) Geometric Patterns. Abstract geometric patterns, such as the ten-thousand-character pattern that expresses peace and longevity, predominate. Simple and rhythmic, they embody the people's yearning and blessing for a better life.

(5) Totem Patterns. Totem worship as the theme of the pattern, most of them originated from the belief of Jinxiu Yao worship, carrying the spiritual beliefs of the Yao people and national identity.


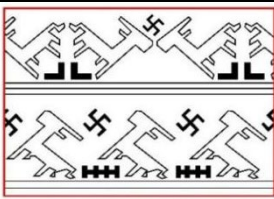

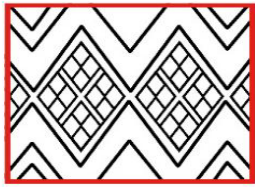

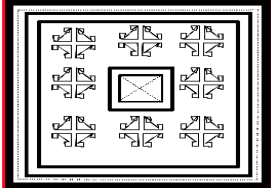
Table 9. Extraction and analysis of Jinxiu Yao weaving and embroidery patterns


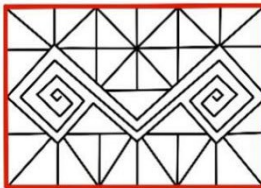

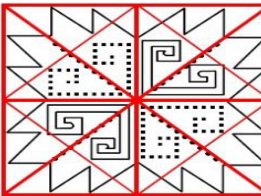

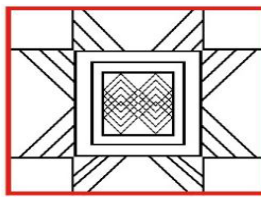
pattern category	number and name	pattern extraction	sample sources	symbolism	colour extraction
animal prints	c1 dog pattern			Yao ancestor worship	<div style="background-color: #e0e0e0; width: 20px; height: 10px; margin-bottom: 5px;"></div> R:253 G:253 B:254
	c2 bird			expecting refuge from the gods	<div style="background-color: #ffff00; width: 20px; height: 10px; margin-bottom: 5px;"></div> R:245 G:229 B:95
botanical patterns	c3 sycamore tree			Symbolise life force	<div style="background-color: #008000; width: 20px; height: 10px; margin-bottom: 5px;"></div> R: 95 G:172 B:87
	c4 octagonal pattern			respect for nature	<div style="background-color: #ff0000; width: 20px; height: 10px; margin-bottom: 5px;"></div> R:240 G:28 B:58
	c5 sunflower pattern			Eliminate disasters and bring good fortune	<div style="background-color: #ff4500; width: 20px; height: 10px; margin-bottom: 5px;"></div> R:246 G:99 B:48

				
	c6 harvest pattern			abundance of grains and cereals
				R:240 G:28 B:58
				
	c7 tic-tac-toe			worship of water
				R:52 G:90 B:152
geometric patterns	c8 ten thousand character pattern			representing all blessings
				R:231 G:185 B:112
				
	c9rhombus pattern			decorative patterns
				R:151 G:31 B:21
				
totem	c10 pan wang pattern			gratitude to pan wang
				R:177 G:29 B:109
				
human figure pattern	c11 man-shaped pattern			long life and happiness
				R:65 G:80 B:137

Pattern morphology constitutes a critical research dimension in the study of Jinxiu Yao traditional costumes. The patterns of Jinxiu Yao vary according to the occasions and festivals, including men's and women's costumes, dressy costumes, daily dresses, and wedding dresses. Various craft techniques such as printing, embossing, skeletonisation, collage and embroidery can be chosen for creative expression. Jinxiu Yao's pattern usually adopts cross-stitch (tiao hua), open-shuttle weaving (kai zhu), and picking needle and inserting thread techniques. Utilising the warp and weft of the fabric, reverse embroidery involves embroidering flowers on the reverse side of the clothes. In addition, seed-beating embroidery (da zhong xiu) and gold-pinning embroidery (ding jin xiu) are also used in the production process. Nowadays, the stitches are borrowed and learned from each other [25]. Repeated composition, centre-surrounded composition, symmetrical composition, radial composition, etc., are usually used in the pattern form. As shown in Table 10.

Table 10. Analysis of the Structural Patterns of the Jinxiuyiao Ethnic Group's Weaving and Embroidery

morphological	pattern prototype	pattern distribution	morphological structure extraction
number		patterns	
A1		repeated composition	
A2		symmetrical composition	
A3		center-around composition	

A4		bipartite composition	
A5		beige composition	
A6		center radial	

Translation Design of Women's Bag with Jinxiu Yao Patterns

Based on the definition of shape grammar, the formula $SG=(S,L,R,I)$ is obtained, where S is the original shape, L is the symbol labelling, R is the inference rule, and I is the original shape. Specifically, the mechanism is applied to the base shapes through successive reconstructions from the 1st to the nth layer using the following combinations: substitution, addition and deletion, geometric scaling, mirror symmetry, matrix replication, and so on, to finally form a sequence of shapes [26]. The shape grammar derivation rules are designated as: horizontal movement as R1, mirroring as R2, deletion as R3, tilt movement as R4, rotation as R5, duplication as R6, miscutting as R7, isometric scaling as R8; replacement of shapes as R9, addition of graphic commands as R10, and so on. As shown in Table 11.

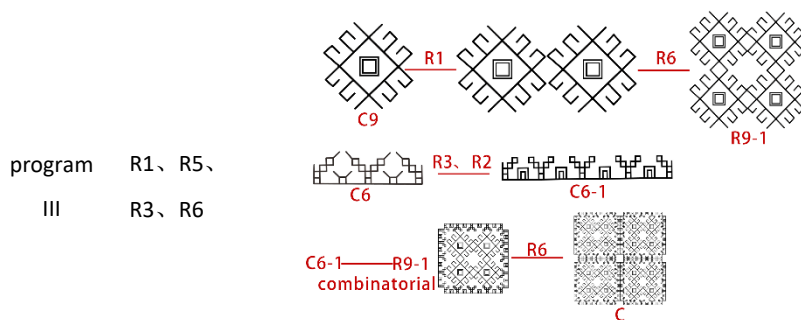
Program 1 uses the C4 octagonal pattern and the C3 sycamore tree pattern for deduction. C4 octagonal pattern for horizontal movement command R1, mirror movement R2, deletion command R3, to get the graphic C4-1. C3 sycamore tree pattern for the mirror movement R2, R5 rotary movement, R3 deletion command and R6 duplication command, to get the graphic C3-1, and will be combined with the C4-1 to get the image A.

Scheme 2 uses the C1 canine pattern and the C10 plate king pattern for deduction. C1 canine pattern for mirror command R2 to get the graphic C1-1, C10 plate king pattern for R5 rotate command, to get the graphic C10-1, and will be combined with the C1-1 graphic to perform R1 horizontal movement command to get the image B.

Scheme III uses a C9 diamond pattern, a C6 harvest pattern for deduction, diamond pattern R1, R6 command to get C9-1, harvest pattern performs R3 delete command, R2 mirror command to get C6-1 image, combines it and performs R6 copy command to get image C.

Table 11. The translation and design process of Jinxiu Yao patterns

serial number	translation rule commands	pattern translation process
program I	R1、R2、R3、R5、R6	
program II	R2、R5、R1	



Three groups of innovative patterns are obtained through shape grammar deduction. Based on the common use of colour in embroidery patterns and the demand of consumers for uniform hue, lively colour and no colour difference, the RGB values extracted from clothing embroidery patterns are used as the basis for the colour of leather bag patterns. The red colour is often used by the Jinxiu Yao people to symbolise joy and honoured status, and it occupies a pivotal and central place in the art of Jinxiu Yao embroidery. When a family welcomes its first child, a backpack with the main colour of big red is made to celebrate the occasion. In religious ceremonies, the one who wears red is usually the master of ceremonies, i.e., the executor and leader of ceremonies who enjoys high status among the Jinxiu Yao. The two major Yao branches in Jinxiu, Panyao and Huaban Yao, mostly live in flat areas or halfway up the mountains, where the sun shines and the trees are lush in all seasons. Surrounded by this natural environment, their visual world is characterised by yellow, green and blue colours. This way of using colours creates a unique style of embroidery with bright colours and lively jumps. Therefore, in the colour design of the bag body pattern with red to convey the core cultural symbols of dignity and joy, to ensure the cultural orthodoxy and depth of the design. Yellow, green, blue and then cash show the unique natural landscape of the region to ensure the authenticity and uniqueness of the design inspiration. From the aesthetic point of view, the "vivid and lively" style of Yao embroidery is inherited, and modern design techniques are used to make it conform to contemporary aesthetics.

The pattern structure chooses "repeated composition", "centre-around composition" and "symmetrical composition" in embroidery to satisfy the "distinctive ethnic characteristics" in the demand of charm type. Distinctive", bag style choose leather material, As a living symbol carrying history and national culture, traditional leather craft can be innovated by designers in terms of material, technique, form and function, etc. Through the exploration of the application of material and technique, the expansion of the modernity of form

and function, the synergistic expression of cultural connotation and modern aesthetics, and the innovative combination of science and technology and craftsmanship, etc., to realise the organic fusion between the traditional leather craft and modern design [27]. MI G X discusses the inheritance innovation ideas and design strategies of Maonan brocade non-legacy from the perspective of pattern design science. Constructing the pattern atlas of Maonan brocade, evolving and reconstructing new pattern groups with the help of shape grammar, and then combining with the needs of modern female consumers, integrating innovative patterns with women's handbags organically, providing a reference for the modern innovation of leather products [28]. In recent years, leather products have not only combined with the innovation of minority patterns, but also combined with the innovation of ancient Chinese patterns. WU K takes the phoenix bird pattern of the Western Zhou Dynasty as the object, and based on explaining its historical origin, modeling elements and cultural meaning, it combines with the research of consumer demand to clarify the design positioning; it extracts the initial pattern through the theory of shape grammar and carries out the derivative design with the help of the parameterization technology of Rhino and Grasshopper, by adjusting the parameters, it generates the pattern with the help of the parameterization technology of Rhino. The initial pattern is extracted through the theory of shape grammar, and the parameterization technology of Rhino and Grasshopper is used to carry out the derivation design, and the parameters are adjusted to generate the innovative pattern with both ethnicity and modern aesthetics; the derivation pattern is applied in the practice of leather bag design, which provides theoretical and technical references to the cultural innovation of the leather products [29]. Leather is known for its strong, wear-resistant and durable properties. Leather women's bags will produce a unique colour and texture with use. The leather surface is smooth, delicate and has a certain degree of ductility, making it the ideal carrier for presenting exquisite patterns. Whether by embossing, engraving, embroidery, or the splicing process, leather material can well carry the complex lines, rich geometric forms and deep colours of yao patterns, so that the patterns are clear, three-dimensional and rich in high-level texture. Based on this, this study adopts leather women's bags as the object of study. Handheld style, to meet the "portable", "practicality", "wear-resistant", and other needs. Finally came up with three groups of programs. As shown in Figure 1.

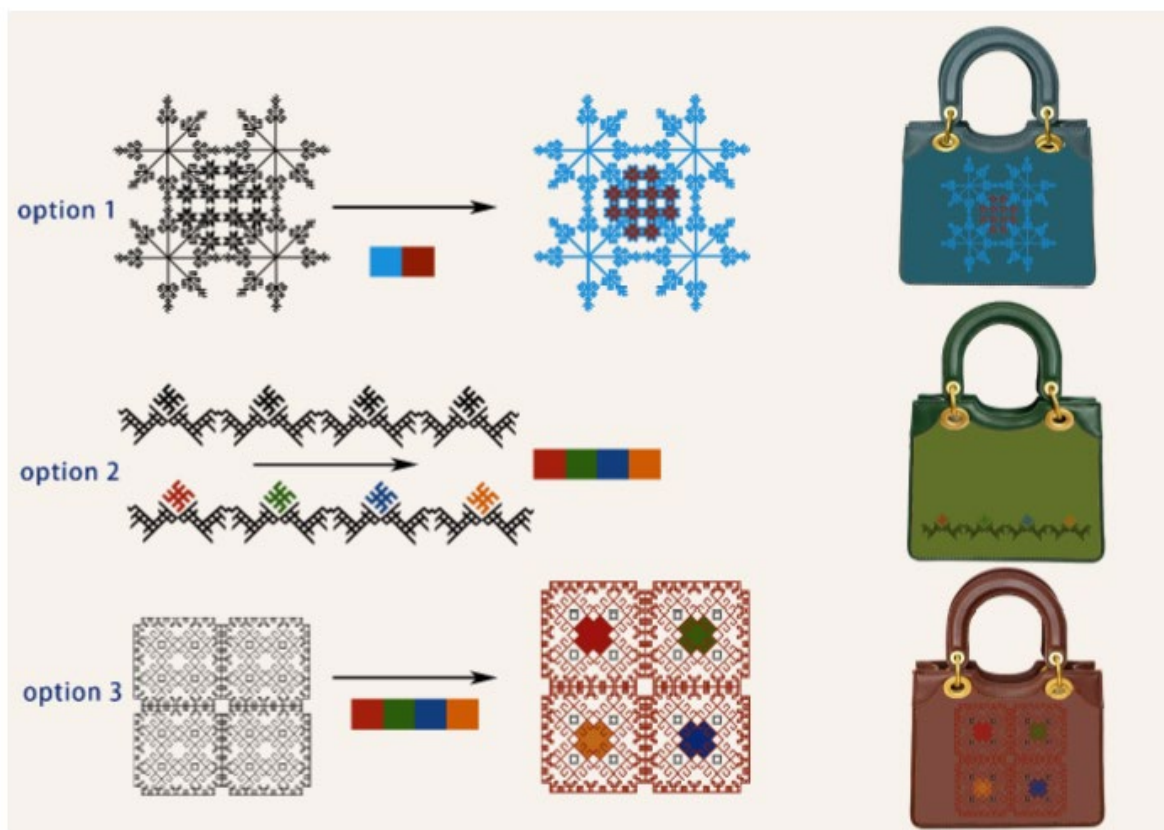


Figure 1. Jinxiu Yao Women's Bag Design Practice

The design of Yao-patterned leather women's bags for high-net-worth individuals is shown in Figure 2. Figure 2 illustrates the design of Yao-patterned leather handbags targeting high-net-worth individuals. This design utilitarian design paradigm turn to focus on the artistry of the bag body, the expression of the pattern cultural narrative - in terms of material, the bag body pattern selection of Yao brocade and embroidery techniques combined with the side of the bag body can be used to choose the leather material splicing, through vegetable-tanned with matte finishing to strengthen the texture of texture; pattern design to deconstruct the technique to reconstruct the Yao Panwang Seal (symbolising royal authority in Yao cosmology), Pattern design by deconstructing techniques to reconstruct the symbols such as Yao Panwang seal, octagonal flower, dog pattern; handle can be integrated into the bamboo handle in the design of the bag body, through the collision of materials and process upgrading to strengthen its value attributes, to meet the dual demands of high net worth consumers for cultural identity and identity symbols.



Figure 2. High-income people Yao pattern leather women's bag design

Figure 2 presents the luxury leather bag design incorporating Yao patterns. This design paradigm transcends traditional utilitarian frameworks by differentiated positioning, forming a complete product matrix. The design for lower-income groups emphasises practicality and cost-effectiveness, meeting both aesthetic requirements and ensuring their daily practical needs. While the version for high-net-worth individuals is upgraded to a single product for an art collection. This design strategy not only maintains the Yao cultural elements in the product, but also forms a complete spectrum from mass consumption to high-quality products through the gradient difference of material technology, design complexity and added value, so that people with different consumption ability can obtain cultural commodities that match their social status and at the same time promotes the three-dimensional survival of the non-heritage crafts in the contemporary market.

The most fundamental difference between the two lies in the different levels of demand they are designed to meet. The women's bag shown in Figure 1 meets the demand for "practicality" and "durability", and it uses standard leather and mechanised embroidery technology to control costs while guaranteeing product quality, and its target consumer group is the salaried people. Its composition is clear and straightforward, aiming to quickly build up the recognition of ethnic style and meet the consumers' demand for traditional ethnic elements in terms of aesthetics and practicality. Figure 2 raises the level of material, craftsmanship and pattern design, responding to the needs of high net worth consumers for "cultural identity", "uniqueness" and "identity symbols", thus realising the upgrading of value attributes. The value attributes have been

upgraded. In terms of materials, women's bags designed for high net-worth users abandon a single material and use a combination of multiple materials, such as Yao Jin, leather stitching, bamboo handles, etc., and strengthen the unique texture and collector's value of the products through traditional hand-embroidery, vegetable tanning, and matte finishing of the bag body pattern and other advanced crafts.

CONCLUSION

This study systematically explores the consumer-oriented transformation of Jinxiu Yao ethnic costume patterns and their application in women's leather bag design, aiming to bridge traditional cultural heritage with modern market demands. Through empirical research and design practice, it validates the effectiveness of integrating consumer demand analysis with traditional pattern innovation, constructing a feasible pathway for the modernisation of ethnic cultural symbols.

The research yields three key findings. Firstly, consumer demand analysis via the Affinity Diagram (KJ) method reveals clear stratified characteristics: tourists prioritise design attributes (e.g., ethnic distinctiveness, pattern aesthetics), functional performance (e.g., practicality, portability), and material quality (e.g., wear resistance, texture) in leather bag selection. Regional differences and income levels significantly influence the preferences of consumers in southeastern China, familiar with Yao culture, who show stronger acceptance of ethnic patterns, while high-income groups value design and cultural symbolism, and low-income groups focus more on functionality and durability. This quantification of demand provides a precise basis for targeted design.

Secondly, the extraction and transformation of Jinxiu Yao patterns via Shape Grammar effectively balance tradition and modernity. Typical patterns, such as animal motifs (dog, bird), plant symbols (octagonal flower, sycamore tree), and totemic elements (Pan Wang pattern), are deconstructed and reconstructed through rules like geometric scaling, mirror symmetry, and matrix replication. This process retains their cultural connotations (e.g., reverence for nature, ancestral worship) while adapting them to modern aesthetic norms, transforming decorative elements into carriers of ethnic identity.

Thirdly, the proposed women's leather bag designs, aligned with demand priorities, achieve market-oriented innovation. Differentiated schemes tailored to income levels and regional preferences—such as high-end designs emphasising artistic narrative and craftsmanship, and basic designs focusing on practicality—validate the “demand quantification-attribute deconstruction-cultural translation-design generation” framework. This

model not only solves problems of product homogenisation and low demand matching in current Yao cultural and creative products but also realises the effective integration of traditional craftsmanship protection and modern consumption needs.

Future research could further expand in two directions: firstly, integrating digital technologies (e.g., 3D modeling, virtual reality) to enhance the interactive experience of design schemes and optimise user participation in pattern customisation; secondly, extending the proposed framework to other ethnic cultural symbols, exploring its universality in the modernisation of intangible cultural heritage, and promoting broader inheritance and innovation of traditional crafts.

The above research not only provides theoretical support for the innovative product design of Jinxiu Yao traditional dress pattern, but also provides a replicable and scalable innovation framework for its cultural industry. Local governments and enterprises can adopt the following strategies: create high-value-added cultural IP, avoid homogenised competition, and get rid of the "tourist souvenir" mode of simply printing and pasting national cultural symbols on cheap materials. Guide enterprises to dig deeper similar to the "leather and Yao culture" of the origin of the connection, the local government or industry associations can take the lead in establishing "cultural materials database", not only can be included in the clothing pattern pattern, but also in-depth study of different materials, such as leather, silver, bamboo, indigo cloth and so on. , bamboo weaving, indigo cloth, etc., with the intrinsic connection to Yao folk culture and lifestyle, which can provide innovative inspiration and theoretical basis for the non-genetic inheritors and local enterprises. Due to the limitations of the research stage, the design solutions proposed in this paper have not been put into production and sales, and thus, the feedback data cannot be presented here. Therefore, the focus of the subsequent work will shift to the empirical testing stage, that is, through the design of experiments and market research to collect consumer feedback, to specifically assess the acceptance and effectiveness of the design scheme, to validate and optimise the generative logic proposed in this study, and to effectively build a closed loop of research.

Author Contributions

Conceptualisation – XIAO X, and WU XY; methodology – XIAO X and WU XY; formal analysis – XIAO X and WU XY; investigation – XIAO X; resources – XIAO X; writing-original draft preparation – XIAO X; writing-review and editing – XIAO X; visualisation – WU XY; supervision – XIAO X. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no competing financial interest.

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