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Chinese Traditional Cultural Elements in Modern Furniture: A Quantitative Analysis of Consumer Satisfaction

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Abstract

This study explores consumers' satisfaction towards integrating Chinese traditional cultural elements with modern furniture design in Jiangsu province, China. This study employs a quantitative research approach, utilising a survey-based method to assess consumer satisfaction. A five-point Likert scale was developed as the primary instrument for data collection, specifically measuring consumers' perceptions of the integration of Chinese traditional cultural elements in modern furniture design. A pilot test was conducted to evaluate the instrument's reliability and validity, with results indicating strong internal consistency and construct validity, ensuring its suitability for the main study. A total of 300 consumers from Nanjing City, Jiangsu Province , China were randomly selected as participants for the questionnaire survey. The findings indicate that the representativeness of design elements, symbolic meanings, material usage, design patterns, and sales interpretation positively influence consumer satisfaction regarding the integration of Chinese traditional cultural elements in furniture products. A regression analysis was conducted, and a regression equation was formulated to illustrate the relationship between consumer satisfaction and these five independent variables.

Keywords: *Consumers' satisfaction, Chinese traditional cultural elements, furniture products, regression analysis*

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Kepuasan Pengguna terhadap Elemen Budaya Cina dalam Rekabentuk Perabot Moden di Jiangsu

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Abstrak

Kajian ini bertujuan meneroka tahap kepuasan pengguna terhadap integrasi elemen budaya tradisional Cina dalam reka bentuk perabot moden di wilayah Jiangsu, China. Kajian ini menggunakan pendekatan penyelidikan secara kuantitatif dengan kaedah tinjauan soal selidik bagi menilai kepuasan pengguna. Skala Likert lima mata telah dibangunkan sebagai instrumen utama pengumpulan data, khusus untuk mengukur persepsi terhadap integrasi elemen budaya tradisional Cina dalam reka bentuk perabot moden. Ujian rintis telah dijalankan untuk menilai kebolehpercayaan dan kesahihan instrumen tersebut, dan keputusan menunjukkan konsistensi dalaman yang tinggi serta kesahihan konstruk yang kukuh, menjamin kesesuaian instrumen ini untuk kajian utama. Seramai 300 orang pengguna dari wilayah Jiangsu telah dipilih secara rawak sebagai peserta untuk tinjauan soal selidik ini. Dapatan kajian menunjukkan bahawa pemilihan elemen reka bentuk, makna simbolik, penggunaan bahan, corak reka bentuk, dan interpretasi jualan memberi pengaruh positif terhadap kepuasan pengguna berkenaan integrasi elemen budaya tradisional Cina dalam produk perabot. Analisis regresi telah dijalankan dan satu persamaan regresi telah dirumuskan bagi menggambarkan hubungan antara kepuasan pengguna dan lima pemboleh ubah bebas tersebut.

Kata Kunci: kepuasan pengguna, elemen budaya tradisional Cina, produk perabot, analisis regresi

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1.0 Introduction

Chinese traditional culture elements, bearing thousands of years of history and cultural accumulation, are the crystallisation of the wisdom of the Chinese nation(Bodde, 2014; Cao et al., 2024). Many researchers and designers focus on using Chinese traditional culture elements in modern design to increase the competitiveness of the products and, at the same time, to show China's cultural charm, enhancing the country's soft power(Pan & Wang, 2023).

Individuals spend over 90% of their daily time indoors(Mannan & Al-Ghamdi, 2021), making the quality and comfort of indoor spaces essential for well-being. As noted by Martín López and Fernández Díaz (2022), inadequate indoor comfort can negatively impact both physical and psychological health. Among the key elements shaping indoor environments, furniture plays a pivotal role in daily life, influencing user satisfaction and overall experience(Amoian, 2021; Erdoğan et al., 2022). Given the growing interest in integrating cultural heritage into contemporary design, this study examines consumer satisfaction with the incorporation of Chinese traditional cultural elements in modern furniture products, adopting a quantitative approach to assess key influencing factors. The Industrial Revolution (IR) significantly transformed the manufacturing landscape by introducing large-scale machinery that enabled mass production, replacing traditional handicraft methods(Kelly et al., 2023). In its early stages, consumer decisions were primarily driven by functional usability, as standardised furniture production focused solely on practicality and essential functions(Yu et al., 2023). However, with rapid advancements in economic development, science, and technology, global furniture production efficiency has increased, leading to a highly saturated market(Liu et al., 2022). The shift from a seller’s market to a buyer’s market,facilitated by abundant material resources, widespread access to information, and the rise of e-commerce has altered consumer expectations(Khojasteh-Khosro et al., 2022).

Contemporary consumers no longer prioritise functionality alone, instead, they seek furniture that fulfils aesthetic and emotional needs(Balicka & Niedbała, 2022; Ding et al., 2023). As a result, there is a growing demand for furniture that embodies cultural identity and personal expression(Wang et al., 2025). In recent years, both scholars and designers in the fields of art and design have increasingly emphasised the integration of Chinese traditional cultural elements into modern furniture design(Ye et al., 2022). This integration serves multiple purposes: it aligns with national policies on cultural preservation and dissemination(Repnikova, 2022), provides a means to sustain China’s rich heritage in contemporary forms(Hong et al., 2024), and strengthens the emotional and aesthetic connections between consumers and furniture products(Pan & Wang, 2023). (Dong & binti Jamali, 2025) further argue that the vast repertoire of Chinese cultural elements offers designers a rich source of inspiration for creating furniture that embodies national identity and spirit.

Despite the increasing presence of furniture products incorporating Chinese traditional cultural elements in the market, the extent to which these products satisfy consumers remains an open question. Thus, this study aims to investigate consumer satisfaction with the integration of Chinese traditional cultural elements in modern furniture, focusing on an eastern city in China. Understanding consumer preferences in this context is of

significant value to multiple stakeholders. For furniture designers, insights into consumer expectations can inform more targeted and culturally resonant design strategies. For furniture retailers, a deeper understanding of consumer preferences can help refine marketing strategies, ensuring alignment with the cultural and aesthetic values that drive purchasing decisions.

2.0 Literature Review

Many scholars in China have conducted relevant studies on the application of Chinese traditional cultural elements in many fields of design. For example, the research on the usage of Chinese traditional cultural elements in visual design(Li et al., 2020; Zheng, 2022). Some scholars focus on the usage of Chinese cultural elements in fashion design(Tomasic, 2023; Wang & Xun, 2023). Moreover, many scholars have researched the usage of Chinese traditional cultural elements in interior decoration design (Liu et al., 2021; Wang & Xun, 2023; Ye et al., 2022). However, in sharp contrast, the research on the application of Chinese traditional cultural elements in furniture product design is still insufficient and has not received enough attention.

The relative lack of this research may, to some extent, exacerbate the realistic predicament faced by the furniture industry. As Xue et al. (2024) highlighted that, Chinese traditional furniture art has thus faced a crisis of gradual decline and near stagnation in China, and there is a high degree of homogenization in furniture design. The reason for this, Suarez et al. (2021)pointed out from a global perspective, is that globalisation and mass production have led to the homogenization of furniture design, the weakening of cultural elements, and the lack of regional characteristics and innovation in design and new materials and technologies should be used to enhance design differentiation. On the other hand, Wu (2022)emphasized it from the perspective of cultural influence, the introduction and rapid development of Western culture have led to a blind pursuit of Western styles, resulting in a gradual decrease in the expression of traditional Chinese elements in furniture, a homogenization in furniture design, and a decline in the recognition of traditional cultural elements

Therefore, existing research not only identifies significant research gaps in the field of furniture design, but also reveals the intrinsic connection between these gaps and the homogenization of the industry and the predicament of cultural inheritance, highlighting the urgency and importance of strengthening research in this field. To focus on the usage of Chinese traditional cultural elements in furniture products, it is reasonably necessary to know consumers' satisfaction towards the usage of Chinese traditional cultural elements in furniture products nowadays. However, no research has focused on consumers' satisfaction with the usage of Chinese traditional cultural elements in furniture products nowadays.

The selection of Chinese traditional cultural elements in furniture design must prioritise representativeness to establish a strong emotional connection with consumers. As Wang et al. (2025) highlighted, the incorporation of culturally significant elements enhances resonance by reflecting shared heritage and identity. Similarly, Chan et al. (2024)argued that individuals develop deep emotional attachments to specific cultural elements over time, especially those tied to their geographical and historical contexts. Therefore, representative Chinese cultural motifs in furniture design serve as symbols of regional

identity and collective memory.

Beyond representativeness, symbolic meaning plays a crucial role in consumer perception. The symbolic meaning of Chinese traditional cultural elements embodies the spiritual core and philosophical accumulation of Chinese civilization. They are not only the condensation of moral concepts and aesthetic ideals over the past thousand years, but also carry unique cultural codes and beautiful visions in the collective consciousness of the nation(Li et al., 2024). Consumers' preference for the symbolic meanings of Chinese traditional cultural elements profoundly reflects their deep-seated psychological demands in terms of cultural identity, value recognition, emotional needs, and modern life practices(Wang et al., 2024).

Different combinations of Chinese traditional cultural elements often symbolize different meanings. For instance, the lotus often symbolizes moral integrity, uprightly conduct, self-purity and non-conformity with the mundane world(Yu & Bakhir, 2025). When paired with carp, it symbolizes an abundance every year. The combination of lotus flowers and lotus seeds symbolizes having many children and much happiness. The lotus flowers in pairs symbolize the affection between husband and wife(Wei & Booncham, 2024). Several Chinese scholars have emphasised that consumers highly value the symbolic significance of traditional cultural elements, as these elements align with their spiritual and aesthetic aspirations(Liu & Zhao, 2024; Wang et al., 2024). The deeper the cultural and historical connotations embedded in the design, the more likely consumers will develop an emotional connection with the furniture.

Material selection is another key consideration in integrating Chinese cultural elements into modern furniture. Consumers are particularly attentive to the materials used, as they serve as both physical carriers and symbolic representations of cultural heritage(Zheng, 2022). According toHong et al. (2024), materials are not merely structural components but also essential in preserving traditional aesthetics and enhancing visual appeal. The careful selection of materials ensures that cultural authenticity is maintained while achieving harmony between tradition and modernity.

Additionally, sales interpretation significantly influences consumer purchasing decisions. Onibokun et al. (2023)posited that compelling product storytelling can significantly enhance consumers' sense of participation, making them feel valued and understood, thereby improving emotional connection and satisfaction. Similarly, Cai and Yu (2022)indicated that the cultural interpretation of a product can deepen consumers' perception of cultural values, thereby enhancing consumer satisfaction and brand loyalty. The practical resonance and cultural resonance of consumers promote each other, forming a fusion resonance, and ultimately influencing purchasing behaviour.

Based on the literature review, this study identifies five independent variables in the multiple linear regression model: representativeness, symbolic meaning, material selection, design pattern, and sales interpretation. The dependent variable is consumer satisfaction with the integration of Chinese traditional cultural elements in modern furniture products. This framework provides a structured approach to examining the factors influencing consumer perceptions and preferences in the evolving furniture market.

3.0 Model of this Study

This study employs a structured model to investigate consumer satisfaction with the integration of Chinese traditional cultural elements in modern furniture products. The model is designed to establish the relationships between key independent variables, such as representativeness, symbolic meaning, material selection, design pattern, sales interpretation and the dependent variable, which is consumer satisfaction.

Conceptual Framework

The theoretical foundation of this study is based on consumer behaviour theories and product satisfaction models, which suggest that cultural and aesthetic factors significantly influence purchasing decisions(Kotler & Keller, 2016). The study proposes that consumer satisfaction is not only driven by the functional usability of furniture but also by the cultural resonance embedded in the design and marketing of the products.

The model follows a predictive relationship loop, illustrating how different aspects of cultural integration contribute to consumer satisfaction. There are five key factors in the model in total, namely representativeness, symbolic meaning, material selection, and design pattern. Representativeness refers to the extent to which the selected cultural elements reflect authentic Chinese heritage and traditions. More representative elements are expected to evoke stronger emotional engagement from consumers.

Symbolic meaning refers to the cultural and spiritual significance attached to the design. Products with deeper symbolic meaning are hypothesised to enhance consumer appreciatio(; Chen & Sharudin, 2024). This factor can mainly be measured from the following five dimensions: the recognizability of the symbol, the clarity of the meaning, the resonance of the value, the adaptability to he times, and the immersion of the experience.

Material selection signifies the choice of materials as a physical medium and a representation of traditional craftsmanship. Consumers are expected to prefer materials that align with cultural aesthetics and sustainability values(; Liu & Zhao, 2024). Design Pattern indicates the visual and structural design elements that translate cultural motifs into functional furniture. Well-executed design patterns should enhance both aesthetic appeal and usability(Bujimo et al., 2022; Duan et al., 2024).

Sales Interpretation represents the effectiveness of storytelling and product marketing in communicating the cultural essence of the furniture, including the explanation of the reasons for element selection, vivid conveyance of symbolic connotations, interpretation of the cultural relevance of materials, analysis of the implications of design patterns, and true presentation of the cultural identity of sales personnel. A strong narrative is likely to increase consumer attachment and perceived value(Zhao & Sahari, 2024).

The Loop of Relationships

This model conceptualises consumer satisfaction as part of a dynamic loop, where higher satisfaction levels lead to greater consumer engagement, repeat purchases, and positive word-of-mouth marketing. Feedback from satisfied consumers can, in turn, influence future product designs and cultural element selections, creating a continuous cycle of refinement.

By analysing the relationships between these independent variables and consumer satisfaction, the study aims to provide insights into the factors that most significantly impact the successful integration of Chinese traditional cultural elements in modern furniture products. The findings will contribute to the furniture industry's design strategies, marketing approaches, and consumer engagement techniques.

A multiple linear regression analysis method has been adopted to predict consumers' satisfaction with the traditional Chinese cultural elements used in furniture products nowadays. Meng et al. (2025)stated that a regression equation is a mathematical formula that describes the relationship between a dependent variable or variables and one or more independent variables, and the general form of a regression equation is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \epsilon$$

- ·Y： Dependent Variable
- ·β0： Intercept
- ·β1,β2,…,βn： Coefficients for each independent variable
- ·X1,X2,…,Xn ：Independent Variable
- ·ϵ: Error term

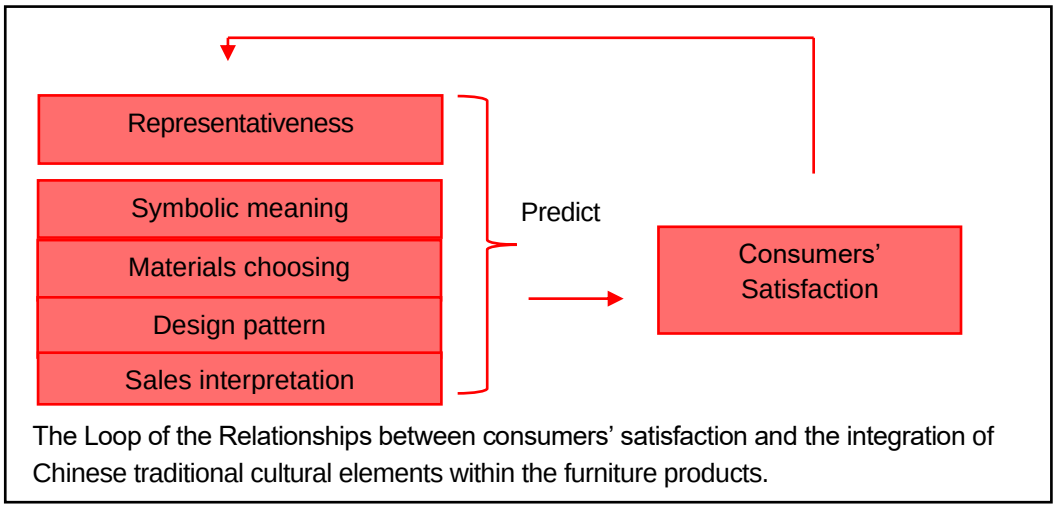

Figure 1: The Model of This Study for Investigating Consumers' Satisfaction

4.0 Data Analysis

The instrument for investigating consumers' satisfaction towards the usage of Chinese traditional cultural elements in furniture products is a self-designed scale. It includes five dimensions: the representativeness of elements chosen, the symbolic meaning of the Chinese traditional cultural elements, the materials that present the Chinese traditional

cultural elements, the design patterns of Chinese traditional cultural elements, and the sales interpretation of the Chinese traditional cultural elements used in the furniture products. For each dimension, there are five items that bring a total of 25 items in the whole scale.

Two experts are invited to do the expert validation. Based on the feedback of the expert comments, the scale will be revised. The revised scale will be used to conduct a pilot test to ensure the validity and reliability of the questionnaire.

Table 1: Reliability Statistics of the scale

Cronbach's Alpha	N of Items
.897	25

Whether a set of questions can measure the same concept and the degree of inner consistency of the items that make up the scale is related to the scale's reliability(Cronbach, 1951). This study employs Cronbach's Alpha coefficient, a widely used reliability measure. The pilot test survey results were processed and analysed using SPSS 24.0. As shown in Table 1, the internal consistency reliability is 0.897. According to Nunnally (1978), a Cronbach's Alpha value of 0.7 or higher indicates acceptable reliability. Therefore, the Cronbach's Alpha of 0.897 in this study confirms that the scale used demonstrates acceptable reliability.

Table 2：Reliability test analysis of questionnaire data

Dimensions	Cronbach's alpha	Number of terms
The representativeness of Chinese traditional cultural elements	.800	5
The symbolic meaning of the Chinese traditional cultural elements	.733	5
The materials that present the Chinese traditional cultural elements	.748	5
The design patterns of Chinese traditional cultural elements	.735	5
The sales interpretation of Chinese traditional elements	.727	5
The whole questionnaire	.897	25

As shown in Table 2, the Cronbach's alpha coefficients of each dimension of the scale are 0.800, 0.733, 0.748, 0.735, 0.727, and all values are higher than 0.7. This signifies the good internal consistency of the research data.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.749
Bartlett's Test of Sphericity	Approx. Chi-Square	593.290
	df	10
	Sig.	.000

From Table 3, it can be found that the KMO measure of sampling adequacy of the data is 0.749 > 0.5, indicating that the sample is at a suitable level for factor analysis. Moreover, Bartlett's sphericity test examines whether the correlation matrix is the identity matrix with a significance level of 0.000. This high significance ($p < 0.05$) confirms that the correlation matrix is not an identity matrix and that the correlation between variables is sufficient for factor analysis.

Following the pilot test, the scale was confirmed to be reliable. The formal survey was conducted primarily through offline questionnaire distribution. A total of 300 questionnaires were distributed, with 294 successfully collected, resulting in a recovery rate of 98%. However, 11 responses were deemed invalid, leaving 283 valid questionnaires, yielding a valid response rate of 94.33%. Among the respondents, 283 consumers expressed satisfaction with the integration of Chinese traditional cultural elements in modern furniture products. The demographic information of the participants is presented in Table 4.

Table 4: Descriptive Statistics of Consumers' Gender, Educational Level, Age bracket, and Monthly income

Demographic Information	Variables	Numbers	Percentage (%)
Gender	Female	156	55.1%
	Male	127	44.9%
Educational level	Junior high school or lower	1	0.4%
	Senior high school	23	8.1%
	Junior college graduate	125	44.2%
	College graduate	118	41.7%
	Masters graduate or higher	16	5.7%

Age	15-19 years old	0	0.0%
	20-29 years old	95	33.6%
	30-39 years old	114	40.3%
	40-49 years old	68	24.0%
	50-59 years old	6	2.1%
Monthly income	3000 or lower yuan	15	5.3%
	3001-5000 yuan	156	55.1%
	5001-7000 yuan	100	35.3%
	7001-10000 yuan	11	3.9%
	10001 yuan	1	0.4%

As shown in Table 4, demographic variables such as gender, education level, age and monthly income of all 283 consumers participated in the questionnaires.

According to the 283 consumers, there are 156 female and 127 male consumers. The sample consists of 55.12% female consumers and 44.88% male consumers, indicating a relatively balanced gender distribution. Although there is a slightly higher representation of female respondents, the difference is not substantial enough to suggest a strong gender bias. Therefore, the data can be considered reasonably representative of both genders.

Regarding consumers' educational levels, only one respondent has a junior high school education or lower. A total of 23 consumers have completed senior high school, while 125 have a junior college education. Additionally, 118 respondents are college graduates, and 16 hold a master's degree or higher. The majority of respondents in this survey are junior college graduates, followed by college graduates. Notably, 91.52% of the participants have some level of college education, indicating a highly educated sample. This suggests that most respondents possess a sufficient level of knowledge and comprehension, enabling them to accurately understand the questionnaire and provide reliable responses.

From the perspective of age, the majority of consumers are in the 20-49 age group, accounting for 97.1%, indicating that the main force of furniture consumption are consumers in the 20-49 age group. What’s more, the number of consumers at the age of 30-39 years old is 114, making up 40.3% of the total.

A number of 156 consumers, making up 55.1 % of the total number, pointed out that their monthly income is about 3001 to 5000 yuan. Meanwhile, 35.3% of consumers’ monthly income is about 5001 to 7000 yuan. A total of 90.4 % consumers’ monthly income is about 3001 to 7000 yuan.

Table 5: The mean value of consumers' satisfaction for each part.

	Representativeness	Symbolic meaning	Materials usage	Design pattern	Sales interpretation
Mean	3.874	2.347	2.482	2.310	2.185
N	283	283	283	283	283
Std. Deviation	.3822	.3409	.3586	.3266	.3582

As shown in Table 5, the mean values for the evaluated aspects are as follows: representativeness (3.8742), symbolic meaning (2.347), material usage (2.482), design pattern (2.310), and sales interpretation (2.185). The ranking of mean values from highest to lowest is representativeness, material usage, symbolic meaning, design pattern, and sales interpretation. Notably, the representativeness of element selection has the highest mean value, while sales interpretation has the lowest. As for a Likert five-point scale, a mean value of 3.5 or above means a high level, and a mean value of 2.5 to 3.5 indicates a moderate level, while a mean value is below or equal to 2.4 represents a low level (Allen & Seaman, 2007).

The mean value of the part 1 elements chosen is higher than 3.5, which means that consumers express a high level of satisfaction towards this part. This part mainly investigates consumers' satisfaction with the degree of representativeness of the Chinese traditional cultural elements within furniture products. Obviously, the representativeness of using traditional Chinese cultural elements in furniture products satisfies the consumers.

However, the mean value of the material usage part, design pattern part, symbolic meaning part and sales interpretation part are all below 2.5, indicating that consumers' satisfaction towards the symbolic meaning of Chinese traditional cultural elements used in furniture products and consumers' satisfaction towards sales interpretation of the Chinese traditional cultural elements used in furniture products, materials using to carry out the Chinese traditional cultural elements in furniture products and design pattern of Chinese traditional cultural elements are in low level. More attention should be focused on these four parts. Especially the sales interpretation part, consumers expressed the most dissatisfaction towards this part.

Table 6: The correlations of the Variables.

		Representativeness	Symbolic meaning	Materials usage	Design pattern	Sales interpretation
Representativeness	Pearson Correlation	1	.440**	.321**	.455**	.335**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	283	283	283	283	283
Symbolic meaning	Pearson Correlation	.440**	1	.469**	.771**	.451**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	283	283	283	283	283
Materials usage	Pearson Correlation	.321**	.469**	1	.499**	.356**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	283	283	283	283	283
Design pattern	Pearson Correlation	.455**	.771**	.499**	1	.677**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	283	283	283	283	283
Sales interpretation	Pearson Correlation	.335**	.451**	.356**	.677**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	283	283	283	283	283

The Pearson correlation measures the strength of the linear relationship between the variables, which has a value between -1 and 1. A value of 1 means a total positive correlation, while -1 means a total negative linear correlation(Pearson, 1896). Generally, a Pearson correlation of r value is between 0.1 and 0.3, indicating a weak correlation, and if r value is between 0.3 and 0.5, indicating a moderate correlation, and if it is equal to or above 0.5, indicating a strong correlation (Cohen, 2013).

As shown in Table 6, all the variables are pairwise correlated, and all the variables are positively correlated. There is a significant moderate correlation between variable of representativeness and the variable of symbolic meaning, variable of materials usage, the variable of design pattern, and the variable of sales interpretation, as the correlation coefficient are 0.440, 0.321, 0.455, 0.335 respectively, which are all in the range of 0.3 to 0.5, and the p value are all less than 0.05.

What's more, the variable of symbolic meaning and the variable of materials usage, the variable of symbolic meaning and the variable of sales interpretation have a significant moderate correlation, as correlation coefficients are 0.469 and 0.451, p value< 0.05. However, the variable of symbolic meaning strongly correlates with the variable of design pattern, and their correlation coefficient is 0.771, and the p-value is < 0.05.

Besides, the variable of materials usage and variable of design pattern, and the variable of sales interpretation have a moderate correlation, as correlation coefficients are 0.499 and 0.356, p value<0.05.

The variable of design pattern and the variable of sales interpretation have a strong correlation, and the correlation coefficient is 0.677, p-value <0.05.

Table 7: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.923a	.851	.849	.11196	1.934
Dependent Variable : Consumers satisfaction b. Predictors: (Constant), elements chosen, symbolic meaning, materials usage, design pattern, sales interpretation.					

In regression analysis, R-square (R2), also called the coefficient of determination, is a statistical measure that indicates the proportion of the variance in the dependent variable (Y) that is explained by the independent variable or variables (X) in the regression model.

If the value of R2 =1, it indicates the model explains 100% of the variance in Y (perfect fit), while if the value of R2 =0, it means the model explains 0% of the variance in Y (no fit). The closer R-square is to 1, the better the model fit. Generally speaking, the R-square value greater than 0.7 indicates that the model has a good fit (Cohen et al., 2013).

As shown in Table 7, the value of R Square is 0.851, signifying that the four constants can reflect 85.1% of the degree of change of the dependent variable.

The Durbin-Watson statistic is used to detect the presence of autocorrelation in the residuals of a regression analysis. The value of Durbin-Watson ranges from 0 to 4. If the value is approximately equal to 2 indicates that the residuals are independent. (Durbin & Watson, 1992).

In this study, the Durbin-Watson value is 1.934, which is close to 2, indicating that there is almost no autocorrelation between the model residuals, and they are independent.

Table 8: ANOVA coefficient distribution

Model		Sum of Squares	d f	Mean Square	F	Sig.
1	Regression	19.880	5	3.976	317.185	.000b
	Residual	3.472	277	.013		
	Total	23.352	282			
Dependent Variable : Consumers overall satisfaction Predictors: (Constant), elements chosen, symbolic meaning, materials usage, design pattern sales interpretation						

From Table 8, we can see that the p-value is 0.000 < 0.5, indicating that at least one of the four predictive variables can significantly influence the consumers' overall satisfaction. Independent variables can account for changes in dependent variables. The model is statistically significant.

Table 9: Coefficient Distribution

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	.023	.074		.310	.757		
	symbolic meaning	.168	.032	.199	5.278	.000	.377	2.650
	materials usage	.178	.022	.222	8.140	.000	.725	1.380
	design pattern	.232	.040	.264	5.784	.000	.258	3.877
	Sales interpretation	.201	.026	.251	7.842	.000	.526	1.902
	Representativeness,	.207	.020	.275	10.385	.000	.763	1.310
Dependent Variable : Consumers overall satisfaction Predictors: (Constant), representativeness,, symbolic meaning, materials usage, design pattern, sales interpretation.								

As shown in Table 9, all values of the Variance Inflation Factor (VIF) are less than 5, indicating no multicollinearity between variables. Besides, the p-value of all the independent variables is less than 0.05, indicating that the model is significant and the independent variable can explain the change of the dependent variable.

The regression equation can be summarised as : Consumer satisfaction =0.023+ Symbolic meaning × ×0.168+ Materials usage ×0.178+ Design pattern ×0.232+ Sales interpretation × 0.201+ Representativeness × ×0.207.

5.0 Conclusion

The variables of the representativeness of the elements chosen, the symbolic meaning, the materials usage, the design pattern, and the sales interpretation all significantly positively impact consumers' satisfaction.

Consumers exhibit a high level of satisfaction with the representativeness of the selected elements used in furniture products. Although there is still room for improvement to achieve perfection, the current selection of elements aligns well with consumer expectations. Future research should focus on incorporating regional Chinese traditional cultural elements to make the selection more relatable to consumers' daily lives.

However, consumers' satisfaction towards the symbolic meaning of the Chinese traditional cultural elements chosen is quite low. Those symbolic meanings are not the ideal symbolic meanings that consumers want, and they cannot keep pace with consumers' spiritual needs. Moreover, the materials used and design patterns cannot satisfy consumers. The materials used to carry out the Chinese traditional cultural elements are not what consumers want, and the design pattern also cannot meet their aesthetic demands. Those aspects deeply influence consumers' satisfaction with the integration of Chinese traditional cultural elements within furniture products. Moreover, the symbolic meaning and design pattern are strongly correlated to each other, whether the design pattern can vividly and illustrate entirely the metaphorical meaning should be highly valued. For future studies, Consumers' favourite materials and design patterns should also be investigated more to make the targeted design.

Sales interpretation is also an important variable that cannot be neglected in influencing consumers' satisfaction. The results show that the most dissatisfied part is the sales interpretation part. However, the sales interpretation is strongly correlated to the design pattern. For future studies, the concepts of the usage of Chinese traditional cultural elements should be explained in detail and deeply to the sales, and more training on how to interpret the design pattern should also be paid attention to.

The regression equation confirms the theoretical framework that enhancing the representativeness, the symbolic meaning, material usage, design patterns, and sales interpretation of Chinese traditional cultural elements can statistically significantly increase consumer satisfaction. However, among all the five variables, four of them (symbolic meaning, material usage, design patterns, and sales interpretation) is lower than the median value (2.5). This result reflects that the application of Chinese traditional cultural elements in the current furniture design field is still in a relatively superficial and neglected state, which in turn leads to significant problem of poor consumer satisfaction issues. This discovery also directly confirms at the empirical level the industry crisis

warned by Xue et al. (2024), that is, furniture design is facing the realistic predicament of intensified homogenization.

The relatively low mean value further indicates the furniture industry's practice of integrating Chinese traditional cultural elements in products is far from meeting consumers' expectations. The contradiction between the statistical importance and actual low satisfaction reveals the bottlenecks and opportunities for the development of furniture products integrated with Chinese traditional culture.

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