A Comparative Study on the Renewal of Traditional Food Markets from the Perspective of Cultural Adaptation: A Case Study of the Old Town of Chengdu

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Abstract. The quality of food market renovation is crucial to public well-being. From the perspective of cultural adaptation, this study examines four old and new markets in Chengdu's Old Town, using questionnaire surveys and semi-structured interviews to compare and analyse spatial satisfaction and influencing factors of cultural adaptation. Based on the findings, the study ultimately proposes renewal strategies to achieve a balance between functional enhancement and cultural continuity.

1 Introduction

In recent years, China's urban development has shifted toward stock optimization, with a people-oriented approach and improving people's well-being becoming the core of the new urbanization strategy [1]. As important public spaces that meet daily needs and carry social interactions, food markets are an important part of urban regeneration.

With the continuous upgrading of consumption and the improvement of material living standards, the old and outdated food markets, characterized by poor environments and chaotic order, no longer meet residents' needs. In response, various localities have launched renewal initiatives such as "farmer's market change into supermarket" projects to improve their previously "dirty, messy, and unhygienic" image. However, during the renewal process, problems such as a decline in the utilization rate of new vegetable markets and changes in consumers' purchasing habits have emerged. As a result, the renewal of food markets has become a major challenge in urban regeneration.

2 Theoretical Foundation

Cultural adaptation refers to a dynamic and bidirectional process experienced in new cultural environments [2][3]. This process not only affects all interacting parties but also manifests as an evolution from conflict to acceptance, identification, and eventual integration. The agents involved in cultural adaptation include individuals, communities, governments, and various types of organizations. Adaptation may occur either actively or passively, and can emerge spontaneously or through planned interventions. Outcomes may range from conflict and confrontation due to cultural maladjustment to acceptance, identification, and integration of cultures [4].

This paper conceptualizes food market spaces as a specific type of user product and introduces cultural adaptation theory for investigation. Drawing on the five evaluation dimensions of product usability theory—visibility, efficiency, appeal, error tolerance, and effectiveness [5] (Figure 1) —the study analyses the usage conditions of food market spaces and further explores differences in user satisfaction between renewed and traditional markets.

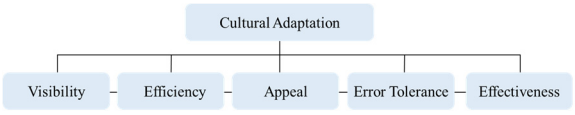

Figure 1. Spatial cultural adaptability based on product usability

3 Research Design

3.1 Study Site Selection and Overview

Chengdu's Old Town encompasses the districts of Qingyang, Jinjiang, Jinniu, Wuhou, and Chenghua. These area features well-established communities and represents a typical geographical unit characterized by cultural representativeness, and continuity of daily life.

Based on the above, this study selects Xiaojiahe Food Market (renewed), Wansheng Food Market (renewed), Yulin Food Market(old), and Balizhuang Food Market(old) as research subjects (Figure 2). The selection criteria are as follows:①Typicality: All selected cases are stable food markets with regular customer flow within Chengdu's Old Town;②Comparability: The renewed markets represent

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standardized renovation projects promoted by government, while the old markets retain their original architectural forms and spontaneously formed spatial patterns; ③Geographic Coverage: The cases are distributed across three different administrative districts within the Old Town, enhancing the persuasiveness of the study.

Figure 2. Distribution map of research sites

3.2 Data Collection and Methods

A total of 200 questionnaires were distributed, with 50 allocated to each market, equally split between renewed and old markets. The questionnaire utilized a seven-point Likert scale.

4 Research Analysis

4.1 Analysis of Spatial Usage Satisfaction

Descriptive statistical analysis was conducted to assess satisfaction across five dimensions: "Spatial Layout", "Spatial Circulation and Facilities", "Spatial Aesthetics", "Place Experience" and "Humanistic Care".

In terms of spatial layout (Figure 3）, renewed markets demonstrate higher satisfaction than old markets in spatial form, functional layout, and scale design, reflecting more reasonable functional zoning and more appropriate dimensional control. These enhance the convenience for consumers and the user experience.

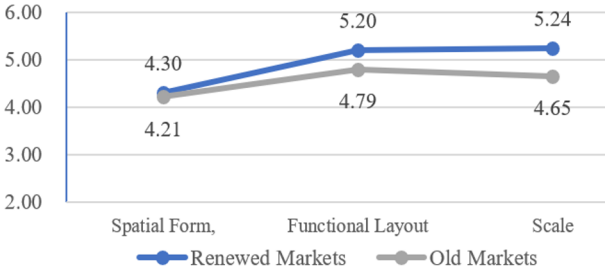

Figure 3. Comparison of Spatial Layout Satisfaction

Regarding spatial circulation and facilities (Figure 4), renewed markets show superior satisfaction in circulation systems, lighting configuration, and accessibility facilities, significantly enhancing user convenience. However, both market types received low satisfaction ratings for rest facilities. Thereby enhancing comfort and convenience of use and better addressing the shopping needs of groups such as the elderly and people with disabilities.

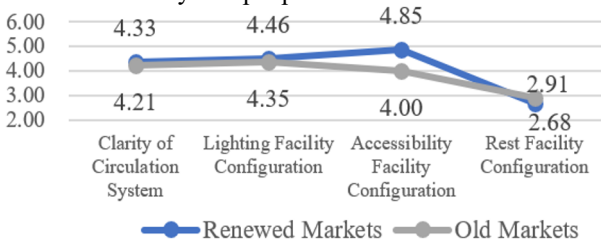

Figure 4. Comparison of Spatial Circulation and Facilities Satisfaction

Spatial aesthetics represents the most notable difference between market types (Figure 5). Renewed markets scored significantly higher than traditional markets in cleanliness management, color coordination, and environmental harmony. These enhancements strengthen the space's appeal and sense of coherence, allowing it to maintain distinctiveness while integrating well with the adjacent areas.

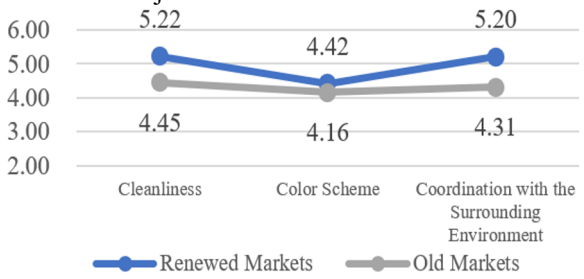

Figure 5. Comparison of Spatial Aesthetics Satisfaction

In the dimension of place experience (Figure 6), old markets outperform renewed markets in place identity, place attachment, and cultural continuity. It shows the unique value of old markets in maintaining the warmth of daily life and human touch. This indicates that the renewal process of the new markets has insufficiently considered local cultural characteristics and traditional consumption habits, which has weakened the original emotional connection of residents.

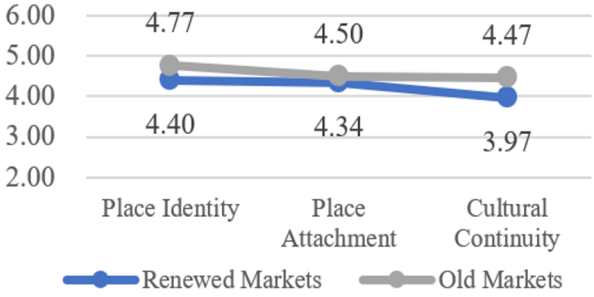

Figure 6. Comparison of Place Experience Satisfaction

The humanistic care dimension shows minimal overall difference (Figure 7). While renewed markets hold a slight advantage, both types exhibit deficiencies in creating spatial distinctiveness, revealing a common shortcoming in personalized expression among current food markets.

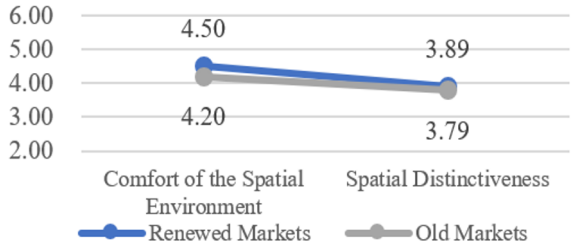

Figure 7. Comparison of Humanistic Care Satisfaction

In summary, renewed markets demonstrate clear advantages in physical environment and functional efficiency, while traditional markets hold greater value in emotional connection and cultural preservation. With the exception of the "Place Experience" dimension, satisfaction levels across the four dimensions—"Spatial Layout", "Spatial Circulation and Facilities", "Spatial Aesthetics" and "Humanistic Care"—are notably higher in renewed markets than in old markets. Among these, the most pronounced satisfaction gap is observed in the "Coordination with the Surrounding Environment" sub-dimension under the "Spatial Aesthetics" dimension.

4.2 Analysis of Influencing Factors on Cultural Adaptation in Food Market Spaces

To identify the key factors influencing cultural adaptation in food market spaces, this study conducted a correlation analysis between five spatial dimensions and cultural adaptation. The results (Table 1) indicate that three dimensions-"Spatial Circulation and Facilities", "Place Experience" and "Humanistic Care"-demonstrated significant correlations with cultural adaptation, while "Spatial Layout" and "Spatial Aesthetics" did not pass the significance test. This suggests that the first three dimensions are the primary factors affecting cultural adaptation.

Table 1. Correlation Analysis Between Various Dimensions of Food Market Space and Cultural Adaptation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	**(Constant)**	-.939	.174		-5.415	.000		
	Spatial Layout	.024	.028	.059	.844	.400	.803	1.245
	Spatial Circulation and Facilities	.105	.033	.267	3.216	**.002**	.580	1.725
	Spatial Aesthetics	-.014	.010	-.105	-1.436	.153	.743	1.345
	Place Experience	.032	.014	.189	2.348	**.020**	.613	1.632
	Humanistic Care	.025	.009	.194	2.958	**.003**	.929	1.076

a. Dependent Variable: Cultural Adaptation

As shown in Figure 8, "Spatial Circulation and Facilities" does not show a significant correlation with "Effectiveness", but it demonstrates significant correlations with "Visibility", "Error Tolerance", "Appeal", and "Efficiency", with the strongest correlation observed with "Efficiency". This indicates that guidance facilities, lighting facilities, and accessibility facilities within the space significantly impact the spatial circulation and facilities of food markets. Optimizing the clarity of the circulation system and the safety of facilities can help improve satisfaction in this dimension, thereby enhancing the cultural adaptation of the space.

As shown in Figure 9, "Place Experience" shows no significant correlation with "Effectiveness", but demonstrates significant correlations with "Visibility", "Error Tolerance", "Appeal" and "Efficiency", with the strongest correlation observed with "Error Tolerance." Food markets feature diverse interface types, including street-facing lanes/roads, fixed storefronts, and mobile stalls, along with frequent pedestrian flow, which collectively influence spatial efficiency and visibility. Furthermore, sensory elements such as acoustic environment, lighting conditions, and odors constitute important aspects of place experience, where the characteristic "social ambiance and human touch" becomes a key attribute attracting people to linger. By optimizing spatial form and functional layout, enhancing visibility, and preserving the unique social ambiance and human touch of the place, satisfaction in the place experience dimension can be effectively enhanced.

As shown in Figure 10, "Humanistic Care" shows no significant correlation with "Visibility", "Error Tolerance", "Appeal" or "Effectiveness", but demonstrates a significant correlation only with "Efficiency". The humanistic care embodied in food market spaces is an important factor affecting shopping efficiency for residents. As spatial carriers of grocery shopping activities, food markets should serve as vital venues characterized by social ambiance, historical and cultural features, and social interactions. Their easily accessible and recognizable spatial characteristics also directly influence user efficiency. A food market space that exemplifies humanistic care should facilitate efficient completion of purchasing activities while simultaneously supporting social and cultural functions.

In conclusion, the cultural adaptation of food markets relies not only on the improvement of physical conditions such as circulation and facilities , but is also closely linked to the emotional resonance embedded in place experience and humanistic care.

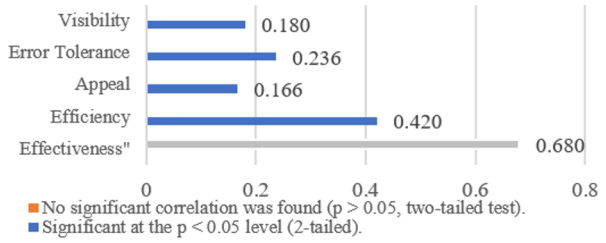

Figure 8. Analysis of Correlation Between Spatial Circulation and Facilities and Cultural Adaptation

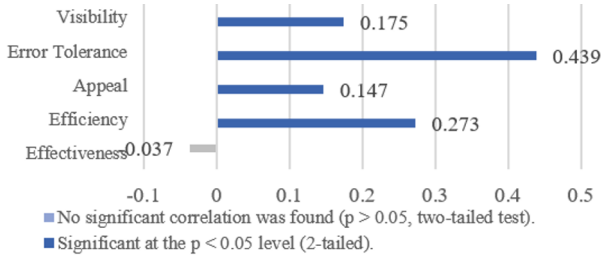

Figure 9. Analysis of Correlation Between Place Experience and Cultural Adaptation

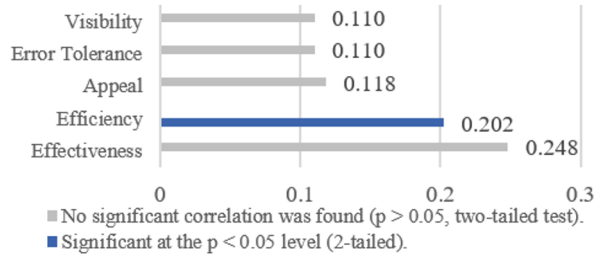

Figure 10. Analysis of Correlation Between Humanistic Care and Cultural Adaptation

5 Conclusions

Through systematic analysis, this study has drawn the following main conclusions:

First, structural Differences in Spatial Usage Satisfaction Between Renewed and Traditional Markets. In the four dimensions of spatial layout, spatial circulation and facilities, spatial aesthetics, and humanistic care, user satisfaction with renewed markets is generally higher than with traditional markets. This indicates significant improvements in the functional completeness of physical spaces, environmental cleanliness, and usage comfort in renewed markets. However, in the critical dimension of "place experience," traditional markets received markedly higher satisfaction ratings than renewed markets, reflecting residents' persistent strong emotional identification with and preference for the unique "social ambiance" and "human touch" found in traditional market spaces.

Second, cultural Adaptation in Food Market Spaces is Influenced by Multiple Dimensions. As important public service and social venues in the urban renewal process, the cultural adaptation of food market spaces is shaped by multiple dimensional factors. Correlation analysis reveals that the three dimensions of "spatial circulation and facilities," "place experience," and "humanistic care" show statistically significant relationships with cultural adaptation, indicating their pivotal role in forming the cultural adaptability of food markets and identifying them as core variables influencing cultural continuity and functional integration.

Based on these findings, this paper proposes the following renewal recommendations:

First, construct public spaces capable of fostering emotional connections and reshape the "acquaintance society". During the renewal of food markets, a people-oriented approach should be prioritized, incorporating local cultural elements and enhancing the visibility of cultural expression to shape a market atmosphere that combines social ambiance with human touch. By enhancing residents' spatial participation and fostering emotional interactions within the community, the weakened "acquaintance society" network due to spatial renewal can be restored.

Second, create multifunctional composite spaces to respond to the needs of diverse groups. As spatial carriers serving different user groups and accommodating varied activities, food markets should emphasize functional complexity and spatial flexibility during renewal to better meet diverse usage needs. The study found that middle-aged and elderly groups constitute the main users of current food markets, with behavioral characteristics such as slower pace, reliance on assistive tools, and group outings. Therefore, renewal initiatives should fully consider the physiological characteristics and shopping habits of this group and optimize corresponding spatial configurations. Addressing the currently low participation rate among younger groups, personalized interactions and social experiences in offline shopping can be enhanced by integrating modern consumption habits. Furthermore, for non-mainstream shopping groups such as children and accompanying family members, their activity needs within the market space should also be considered, with supporting functional spaces (e.g., waiting areas) provided to enhance overall inclusivity and humanistic care.

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