

Study on the Spatial Representation and District Layout of Commercial Halls in the Perspective of Trade Flows

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Abstract: With the implementation of the "the Silk Road Economic Belt and the 21st-Century Maritime Silk Road" strategy, China is destined to strengthen economic ties with countries along the route, and commercial facilities will also usher in a period of opportunity for construction. This article researched the relationship between trade flows and the spatial representation and location layout of commercial halls from the perspective of the disciplines of economics, historical geography and architectural history, to establish a spatial distribution framework between modern commercial flows and infrastructure distribution, and to provide a basis for decision-making on the layout of modern commercial facilities.

Keywords: Trade flow, Commercial Hall, District layout

1. Introduction

As a kind of public building, the commercial hall was representative in the history of Chinese architecture. It was a special kind of architecture between the folk architecture and the official architecture, which had both regional and official characteristics. As the businessmen from all over the world created it in a different place, it also bears the traces of regional cultural intermingling. The hall, as a place of exchange for merchants, also contained information about economic activities and social activities. After entering the 1990s, with the gradual reform of China's socialist market economy system, the study of guild houses had become one of the hot issues of academic research with notable achievements since the Ming and Qing dynasties.

This thesis discussed the spatial representation and locational layout of Shan-Shaan halls from the perspective of trade flows and concluded that trade flows between regions are the main factors affecting the locational layout of Shan-Shaan halls [1]. To analyze the types of commodities (tea, silk), commodity characteristics (storable, long-distance transport), trade scale (large amount of small) and spatial flow paths of Shan-Shan merchants mainly engaged in is an important factor in determining the layout of the guild hall. Our paper provided an enrichment to the history of architecture and expanded the study of commercial halls.

2. Present Situation of Domestic and International Research

According to Wang Rigen (1996), commercial halls were important platforms for out-of-town merchants to connect with their local feelings. From the perspective of macroscopic research, the understanding of the guild house is elevated to the level of "a social organization set up by the Yi hometown scholars in the guest place". It reflected a new stage of development in the study of halls in the 20th century. After entering the 21st century, academic research on halls was mostly linked to the market economy. The halls were urban "grassroots social management organizations" in parallel with rural township conventions since the Ming and Qing dynasties. The halls were "commercial", a "logistical" organization and a "support" organization for the merchants of fellow townsmen. After the Chinese Opium War, the halls "were transitional hometown groups that in some ways incorporated modern elements." Since then, a new dissection of the clubhouse was made more on the level of the market property rights system, linking it to market integration. [2] The building was established by

merchants of the same nationality in a foreign land as "a solid barrier for self-protection, survival and development, in order to gain more market share and greater economic benefits."

There were related scholars who carried out more in-depth analysis and research on the building and its conservation and repair. The architectural perspective mainly focused on the spatial representation of commercial halls, such as architectural styles and features, spatial forms, etc., especially mapping and analyzing the architectural planning, architectural forms and systems of halls, while some studies analyzed from the perspective of their graphic design, architectural culture, etc. However, there was a lack of analysis of the causes of their spatial morphological characteristics. [3]

The spatial distribution of economic activity strongholds was an important representation of the distribution of economic activities, and during the Ming and Qing dynasties, the spatial distribution of Shan-Shanxi Halls had an obvious spatial dependence. [4] Economic factors such as the place of origin of goods, commercial routes or important transit markets for goods were the main factors in determining the distribution of commercial halls. Commercial halls' architecture was an important spatial morphological feature to reveal the evolution history of inter-regional trade flows, and it also has strong explanatory power for trade flows.

With the implementation of the "the Silk Road Economic Belt and the 21st-Century Maritime Silk Road" strategy, China is bound to strengthen economic ties with countries along the route, and commercial facilities will also usher in a period of construction opportunities.

3. Research Content

3.1 Spatial morphological characteristics and layout features of the Shan-Shan Association Hall.

From the perspective of geography, we analyzed its location layout characteristics and established its location layout geographic information database. To analyze the quantitative characteristics of trade flows between their zones from historical sources. [5] From the information of inscriptions of Shan-Shaan Association Hall in different regions, we analyze the characteristics of their trade flows and establish a database of historical information of trade flows between regions.

The spatial characterization features were obtained from an architectural perspective, and a spatial characterization library was established. It provided the foundation for analyzing the relationship between spatial form and trade flow.

3.2 The Relationship between Regional Trade Flows and the Spatial Layout of Commercial Halls

The analysis focused on the relationship between the spatial form of the Shan-Shaan Association Hall and the volume of trade that it underwent. By using GIS data, we analyzed the data of the location layout of Shan-Shaan Association Hall and established the quantitative relationship between the scale of special product flow between regions and the location layout of Shan-Shaan Association Hall. A multiple linear regression model was developed.

$$y_{it} = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + u_i$$

y_{it} indicated the spatial layout of Shan-Shaan Hall and was set as a dummy variable. If there was a Shan-Shanxi Hall built between the two selected areas, the value is assigned to 1, and the other values are assigned to 0. X_{1t} for interregional trade flows in period t, denotes trade flows for specific products in the two selected study regions. X_{2t} , X_{3t} were the control variables. The hypothetical relationship between the spatial layout of the hall reflecting the trade flow characteristics was verified by Eq.

3.3 The Relationship between Regional Trade Flows and the Spatial Form of the Commercial Hall

The quantity of its trade was estimated qualitatively through inscriptional materials, and its spatial morphological characteristics were estimated according to historical materials. Quantitative analysis of the quantitative relationship between spatial patterns and trade flows: A multiple linear regression model was developed.

$$y_{it} = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + u_i$$

y_{it} indicated the spatial form of Shan-Shaan Association Hall, which was set as a dummy variable. X_{1t} denotes the trade flows between regions in period t. It indicated the trade flows of particular products in two selected study regions.

4. Insights from the Construction of Contemporary Commercial Facilities

The relationship between trade flows and the spatial representation and locational layout of commercial halls was studied from the multidisciplinary perspectives of economics, historical geography and architectural history to establish a spatial distribution framework between modern commercial flows and infrastructure distribution. [6] To provide a decision basis for the layout of modern commercial facilities, promote the flow of trade between regions, and provide a reference for the government to make decisions. As an autonomous organization of the inflowing population, the hall still had very important practical roles in binding fellow villagers, arranging employment and defending their own interests, i.e., it was an effective organizational form to strengthen the management of mobile businessmen and one of the important ways to build a harmonious society.

4.1 Insights into the Cultural Aspects of Regional Architecture

When examining the historical materials and relics of specific hall, we found that the buildings of the hall were not set up in a neat and uniform manner, but in a variety of forms and in the process of change from time to time. But were varied and in change from time to time. But this change was based on a certain regional architectural culture. The hall was not only a symbol of regional identity for immigrants and merchants, but also a new understanding of the history, culture, and natural environment of the base area, and its study would help further excavation and exploration of the local regional culture.

4.2 Insights into the Architectural Technology of Commercial Buildings

Ancient commercial buildings, especially the Shan-Shanxi Hall, were characterized by technological inheritance and cultural fusion, and were the "windows" of regional foreign exchange. The construction of the Shan-Shanxi Hall followed the historical and cultural lineage of the commercial and commercial immigrant population, which was the main subject of use, and was characterized by the "model" inherent in the immigrant cluster. At the same time, because they were located in a foreign country, they were influenced by the natural environment of the region and the humanistic atmosphere, and the cross influence of the construction technology, the local assimilation in form and connotation also became inevitable, so the immigrant hall has a dialogue function of the integration and coexistence of "native culture" and "regional culture", thus forming a multi-level and diversified rich connotation and form The expressions of the immigrants' association hall.

5. Conclusions

Through the collection of data on the characteristics of the spatial form and location layout of Shan-Shaan Hall, we firstly, established a database of spatial form and location layout; secondly, established a database of historical information on the trade flow between regions; thirdly, established a quantitative law between the two; fourthly, provided a basis for decision-making on the layout of modern commercial facilities. For the research on the spatial distribution and geographical differences of Shan-Shanxi halls, the number of halls were counted and the balance of the distribution of halls were analyzed to further improve the scientific and credible degree of the research.

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