

The Mosque-centered Trade as a Spatial Model in China: Mosque Proximity, Market Proximity and Cultural Embeddedness

Shaowei Ai

Center for Yellow River Civilization and Sustainable Development and Collaborative
Innovation Center for Yellow River Civilization,
Henan University, Kaifeng, Henan Province, China
E-Mail Address: aishaowei@163.com aishaowei@henu.edu.cn

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ABSTRACT

The "mosque-centered trade is an important and impressive feature of the urban Hui Muslims in China, but it is a big open question and has not been paid enough attention by the academic circle for a long time. Based on the observations on the complication and variability of "mosque-centered trade", the theoretical debates on spatial agglomeration, the focus on cultural construction or cultural embeddedness, and the deep investigation and spatial analysis on the typical case of Eastern Grand Mosque of Shunhe Hui District in Kaifeng, our aim in this paper is, firstly, to highlight the unresolved issues on the spatial pattern of "mosque-centered trade" and, secondly, to made a heuristic theoretical explanation on its spatial characteristics, co-occurring conditions and mechanisms. When doing so, the paper highlights the conditions under which the spatial model of "mosque-centered trade" can be represented geographically and culturally. The findings have been shown as follows: 1) It is argued that the spatial pattern of "mosque-centered trade" can be demonstrated as the variable "mosque-market-proximity" configuration which is contingent on the interactive spatial relationship between the mosque and local markets and its relation to the cultural embeddedness and spatiality of commercial traditions of Hui Muslims

in China. According to the case study, a "two-centers and one-belt" "mosque-market-proximity" configuration can be identified spatially surrounding the Eastern Grand Mosque, but, at the same time, due to the obvious differences on the different types and sizes, the "mosque-market-proximity" configuration will be close or loose spatially; 2) The co-occurring conditions can be classified in terms of how the "mosque-market-proximity" configuration occurs. The spatial forms of "mosque-market-proximity" configuration are not only geographically dependent on the market-oriented proximity, but also culturally dependent on the mosque-centered proximity. Additionally, it seems to be controlled by the external conditions which are related to a temporal and spatial context, such as local government and urbanization. In these conditions, none of the three is dispensable and the market-oriented proximity is just as equally important to the formation of the "mosque-market-proximity" configuration as the mosque-centered proximity. On the other hand, the temporal-spatial context is considerable as well; 3) Proximity, location and space play a geographically decisive role in the formation of "mosque-centered trade" and its "mosque-market-proximity" configuration. At the same time, the multi-markets structure, market differentiation and the irreplaceability of the local "Halal markets" play a basic role in the formation of "mosque-market-proximity" configuration. Additionally, cultural embeddedness, place identity and path dependence to the "mosque-market-proximity" configuration for the Hui Muslims play a culturally decisive role in the spatial pattern of the "mosque-centered trade". We argue that the "mosque-market-proximity" (MMP) model may provide an important theoretical basis for understanding the spatial pattern of the "mosque-centered trades" and, therefore, it will be seen as an exploration or a heuristic breakthrough of doing research on the Hui community in the geography circle.

Key words: Mosque-market-adjacency Model; Mosque-centered buying-and-selling; Spatial Pattern; Mosque-centered proximity; Market-oriented proximity

1. Introduction

Since the Hui people comprise a predominantly Muslim ethnic group, one of the 56 ethnic groups recognized by Chinese Government, the topic on the structural changes of economic, social and cultural activities of Hui people has received growing attention from the ethnology, sociology, anthropology and religious studies over the past few decades. This is generally linked with the interconnection between the mosque and business activities (Hussein Ahmed, 1999), especially the phenomenon of "doing business around mosques" which is usually called the "mosque-centered trade" by Chinese people. The particular significance for analysis of the spatial pattern of Hui-specific business activities lies in a longstanding emphasis on the role played by "mosque-centered trade" in maintaining the stability of Hui-specific religion and cultural traditions within the dominant Chinese civilization.

The observations have shown that the "mosque-centered trade" is a specific form of the business activities of urban Hui Muslims and a particular way of forming Hui communities. Due to the long-term encountering of Chinese Muslims with the dominant Chinese civilization and the continuous combination of "Muslimness" and "Chineseness", the "mosque-centered trade" becomes one of the most important and impressive features of the urban Hui Muslims in China which are more prominent in some cities, such as Xi'an, Kaifeng, Luoyang, Beijing, Nanjing, Linxia, where the Hui people are concentrated. This kind of phenomenon has been summed up as the Hui-specific "entrepreneurialism" by Dru C. Gladney (1993), American anthropologist, but its focus is to highlight the importance of Hui "entrepreneurialism" for the identity of urban Hui Muslims and the relationship between the ethno-religious identity and ethnic economy.

Over the past decades, in the areas of ethnology, sociology and anthropology, some scholars focused on China's Islamic history, historiography and cultural identity (Millward, 1993; Rudelson, 1992; Stahlberg, 1995), and the other scholars paid more

attention to the ethnic identity and urbanization of Hui people (Dru C. Gladney, 1998; Maris Boyd Gillette, 2000), the history of urban Hui Muslims (Jonathan N., 1997; Jingyu Liang, 2006), the changes of social-economic-cultural structures of urban Hui Muslims (Wenjiong Yang, 2008, 2009; Youtao Bai, 2007), and the structure and form of urban Hui districts (Jiaying Huang, 2010). However, these debates on the multi-dimensional structure of the urban Hui community (Chuanbin Zhou, 2004; Wenjiong Yang, 2008) failed to produce a satisfactory explanation for the "mosque-centered trade". Additionally, some Chinese sociologists and ethnologists have developed a "mosque-community structure model" (Chuanbin Zhou, 2005) which is a useful framework to understand the structural changes of Hui communities, but this model which is confined to the narrow-scoped or overstated monographies cannot be used to explain the spatial pattern of mosque-centered trade. As a matter of fact, this spatial agglomeration phenomenon about the "mosque-centered trade" has not been given sufficient research attention by most scholars.

Due to the different discipline paradigm, geography pays more attention to the issues on spatial agglomeration. Seen from the critical review of the theory development, the classic agglomeration theories focus on the fundamental role of external economy (Marshall A., 1961), location choice (Weber A., 1909), economies of agglomeration (Hoover E., 1984), and the modern agglomeration theories focus on the important role of market demand (Krugman P., 1991), transaction cost (Scott A. 1988), knowledge spillover (Lyons D., 2000), competitive advantage (Porter, M. E., 1990), and embeddedness (Granovetter, M., 1985). However, these theories usually become inadequate when explaining the spatial agglomeration of commercial activities with the culture-specific characteristics of ethnic minorities.

To sum up, the literature review and a limited body of research has shown that there is not enough comprehensive account of the "mosque-centered trade". Additionally, some Chinese scholars have confined their works to either narrow-scoped monographs or overstated theoretical models. At the same time, the geographers have

not yet made significant contributions to this new field of scholarship. Therefore, there is an imperative need to devote more scholarly attention not only to the geographical proximity, but also to contextual research, especially the interplay of geography and ethnic culture in explaining the spatial pattern of the "mosque-centered trade".

Based on the above debates, this paper will make an exploration and attempt to address the challenging questions that include: what are the spatial characteristics of the "mosque-centered trade" and why will "mosque-centered trade" occur under these specific conditions?

2. Theoretical framework and research method

2.1 Theory building

As a specific form of the business activities of urban Hui Muslims and a particular way of forming Hui communities, "mosque-centered trade" and its issues on the spatial pattern can be considered an opportunity to understand the Hui communities and Hui-specific cultural identity and business activities in the context of the geographical lens. The long-term interaction of a variety of mosques and local markets and Hui-specific cultural traditions which operate at multi-scalar territorialities produce a specific geographical outcome: the "mosque-centered" world where the urban Hui Muslims struggle to make their lives through buying and selling, especially "mosque-centered trade". Therefore, it is not only one of the geographical configurations, but also one of the cultural forms. On the other hand, the spatial forms of "mosque-centered trade" are complex and variable in the real world and not all the urban Hui communities must have a typical spatial configuration surrounding the mosque. Hui people are always in the process of "becoming" geographically, historically, and socially integrated. Accordingly, some urban Hui communities are long-lived and the local "Halal" markets have matured; some are geographically extensive, but the local "Halal" markets surrounding the mosque are affected by

government intervention; some are more geographically concentrated, but the "Halal" markets are not located surrounding the mosque. Due to the complication and variability of "mosque-centered trade", unravelling and understanding the spatial pattern of "mosque-centered trade" poses immense conceptual and empirical difficulties.

In order to better understand and describe the spatial pattern of "mosque-centered trade", there is a need to construct a comprehensive framework by integrating geographical proximity and spatial agglomeration and cultural embeddedness and this spatial pattern can be called the "mosque-market-proximity" (MMP) model which may demonstrate what is the spatial characteristics of the "mosque-centered trade" and why it will occur under specific conditions (Figure 1). Based on some basic theoretical concepts from geography and other disciplines, it may be more helpful to view the "mosque-centered trade" as the results of the interaction and combination of "mosque-centered proximity" and "market-oriented proximity" and "cultural embeddedness". The "mosque-market-proximity" model actually can be viewed as the spatial configuration of business activities surrounding the mosque where the occurrence of "mosque-centered trade" is not only dependent on the size and reputation of the mosque and Hui community, cultural embeddedness of business activities, but also dependent on spatial proximity to the geographical location and local markets for the Hui Muslims and the surrounding residents. On the other hand, more attention is paid to the importance of "mosque-centered proximity" and "market-oriented proximity" for the occurrence of "mosque-centered trade". At the same time, it is highlighted in this model that if there is no coupling and interconnection of "mosque-centered proximity" and "market-oriented proximity", the "mosque-centered trades" will not occur. Additionally, the spatial pattern of "mosque-centered trade" will be changeable in some ways due to the intervention of local government and other external factors which can be called the temporal-spatial context of its occurrence. Therefore, the "mosque-market-proximity" model basically is a theoretical model that is based on the location choice of the business activities of

Hui Muslims and the co-occurring conditions of "mosque-centered trade", but in the meantime, it highlights the commercial traditions and cultural embeddedness and the temporal-spatial context of "mosque-centered trade".

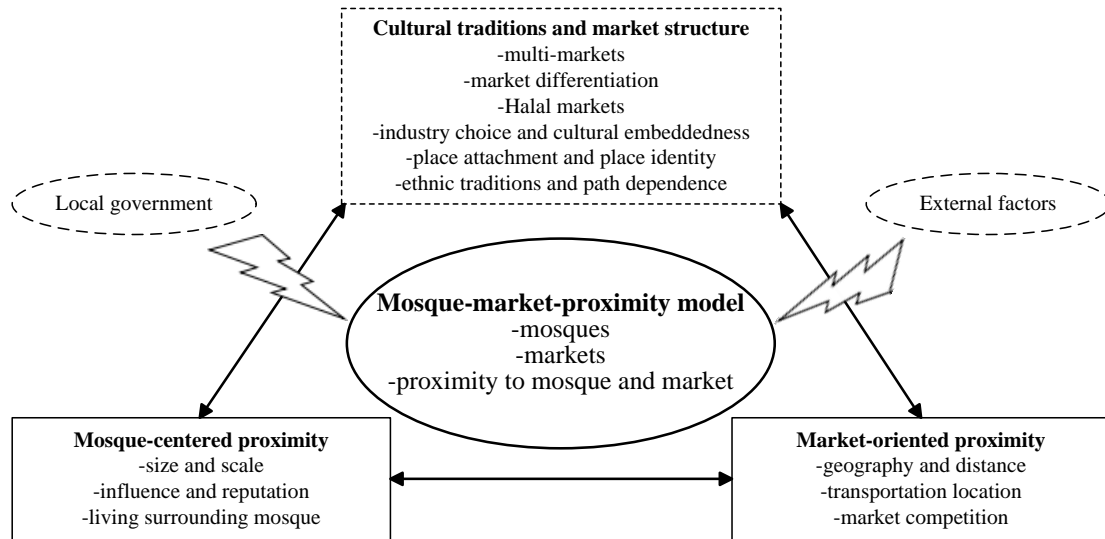


Figure 1. The illustration of the mosque-market-proximity model on the mosque-centered trade

In this model, the basis for business activities of Hui Muslims is spatial proximity to geographical factors and local markets and the core is rooted naturally in spatial proximity to the mosque and cultural embeddedness of ethnic traditions. Obviously, the spatial pattern of "mosque-centered trade" follows the internal logic of "from location choice to market proximity to geographical agglomeration" and the similar logic of "from mosque-centered proximity to cultural embeddedness to mosque-centered trade". Based on this model, the spatial patterns of "mosque-centered trade" may occur by the following ways:

- If the Hui community and local market spatially interplay and interweave, a close spatial configuration of the "mosque-market-proximity" will occur surrounding the mosque;
- If the Hui community is spatially located within reach of some important competitive markets, the spatial configuration will have a couple of possibilities in terms of the distance from the mosque to local markets;
- If the mosque-centered proximity and cultural embeddedness of the business

activities is strong enough to create some local "Halal" markets for Hui Muslims and surrounding urban residents, a close spatial configuration will also occur but it will be dependent on the structure of the "Halal" markets;

- If the size of the mosque and Hui community is smaller but close to the urban market center or commercial heart, the spatial configuration of the "mosque-market-proximity" may occur but there will be some immature Halal markets;
- If the business activities of Hui traders are affected or intervened by local government and other external factors, the "mosque-market-proximity" configuration will be reinforced or weakened or even completely changed.

The spatial pattern of "mosque-centered trade" is inherently variable and geographically contingent. The adjustments of the spatial configuration of "mosque-market-proximity", some close, some loose, are continuously being made in response to both internal and external conditions. It is argued here that the "mosque-market-proximity" model (MMP) constitutes such a time-sensitive and space-sensitive framework which attempts to capture some of the complicated spatial processes and spatial relationships shaping and reshaping the spatial pattern of "mosque-centered trade" in China. The "mosque-market-proximity" analysis will focus on the interplay of different variables which are embedded in the broader social and cultural circumstances, and aim to both illustrate some important attributes of the spatial pattern of the "mosque-centered trade", including complication and variability, and verify the spatial configuration of "mosque-market-proximity", including heterogeneity and contingency.

2.2 Case selection

In order to match with the theoretical model, the size and reputation of the mosque and the development of local markets surrounding the mosque should be considered. Based on this, we select Eastern Grand Mosque of Shunhe Hui District in Kaifeng as

the case which is the most densely populated area where there live many Hui Muslims in this old city.

Firstly, Eastern Grand Mosque is the biggest one among the 23 local mosques in Kaifeng and has more than 600 years of history. As a famous old mosque, Eastern Grand Mosque occupies an important position in Central China. Secondly, the current living set-up around Eastern Grand Mosque has not significantly changed since more and more Muslims settled down. At the same time, some of the commercial traditions, especially Hui-specific Halal snacks become very popular and some Halal markets surrounding Eastern Grand Mosque are created by the local Hui Muslims. This is helpful to study the spatial interconnection between the mosque and business activities. Thirdly, Eastern Grand Mosque is conveniently accessible to the major public transport and near to the big commercial centers of the city and there exists the intense competition between the Halal markets and those commercial centers.

Therefore, the selected case is better suited than any other cases to undertake the study. Due to the obvious concentration of business activities, together with some of the conditions expected to favor the "mosque-centered trade", the 790,000 m² area surrounding Eastern Grand Mosque provides an interesting case study of how the spatial configuration may matter.



Figure 2. The spatial scope of case study

2.3 Research methods

After the discussion of the theoretical model we are now ready to illustrate the main characteristics of the case and data information used in our empirical investigation.

The special subject investigation was carried out about the issues on business type and size, transportation location, rent level, resident income, consumption level, visitor flowrate, market competition, micro location, ethnic tradition, proximity effect to the mosque, faith demand of the practitioner, and government behavior. At the same time, the structured questionnaire was worked out to bring into correspondence with the theory building and "mosque-market-proximity" model.

Methodologically, it mainly included focus group discussion, questionnaire survey, participatory observation, personal interview and spatial analysis and the empirical data supporting this study. The data were collected through person-level surveys and face-to-face interviews with Hui traders located in the case scope. Additionally, the methods of Kernel analysis and Nearest neighbor index will be used to illustrate the spatial characteristic of the "mosque-centered trade" and answer the question about the spatial interconnection between the mosque and local markets.

This investigation is carried out from August to October 2014. The questionnaires were sent out to Hui traders and 109 questionnaires were taken back, among which 98 questionnaires were effective, with an effective rate of 90%.

3. The spatial expression: "mosque-market-proximity"

As is known to all, "mosque-centered trade" is a summary of the observation based on the reality of the business activities of Hui people. However, How to describe the "mosque-centered trade" spatially? What is its spatial characteristic? These questions need to be answered scientifically.

3.1 The characteristic of business types and sizes

Hui business groups allow us to identify two important aspects: i) the degree of diversification of business activities; ii) the spatial location of these activities.

There are 303 Hui traders located in the case scope with different sizes and diverse business types and these business activities can be classified into two main categories: Hui-specific goods and services and normal goods and services (Table 1). Obviously, the ratio of Hui-specific goods and services is very high with more than 80% and this is greatly related to the ethnic traditions of Hui Muslims who are very good at Halal processed foods and Halal restaurants.

On the other hand, the business activities can be classified into three categories in terms of the size: mobile vendors, small-size stores and medium-large-size stores which respectively account for 71%, 24% and 5% of the total. This feature is consistent with the market demand and the unique "snack culture" of the local residents in Kaifeng.

Table 1. The statistics of business types and Hui traders number

Business types		Products	Number	ratio
Hui-specific goods and services	Halal processed foods	peanut cake, spring chicken in salt, quick-frozen food	132	43.6%
	Slaughter and wholesale of beef and mutton	slaughter of beef and mutton, wholesale of beef and mutton	11	3.6%
	living supplies for Muslims	hijab, Muslim clothing	3	1.0%
	Halal catering industry	hand-pulled noodles, mutton soup, breakfast shop	102	33.6%
Normal goods and services	Subsidiary agricultural products	grain and oil, vegetable,spices, tea	5	1.7%
	Living services for residents	Barbershop, photo studio, education training	15	5.0%
	Consumer products	corner shop, dress shop, electrical equipment	35	11.5%
The total			303	100%

Source: The Survey on Hui traders from August to October 2014 in Kaifeng.

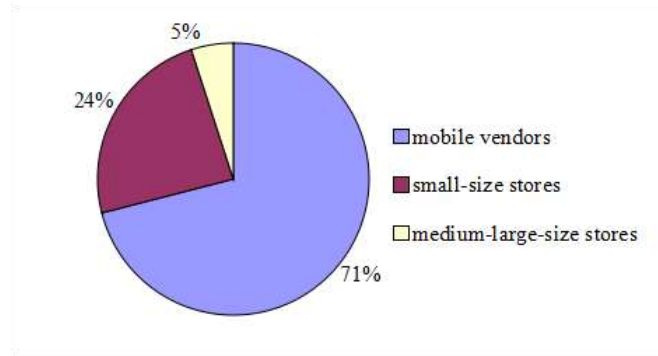


Figure 3. The respective proportion of the sizes of Hui traders

3.2 Spatial configuration: characteristics, difference and intensity

According to Kernel analysis, there spatially exists a close "two-centers and one-belt" "mosque-market-proximity" configuration surrounding the Eastern Grand Mosque (Figure 4). The mosque and the local markets are adjacent to each other and rely on each other. The "two-centers and one-belt" actually are the three local markets for both the Hui people and the local residents: one center is called "Simen" Halal market which is famous for Halal processed foods and Halal catering industry and located in the intersection of Qingping street and Mujiaqiao street, and the other center include lots of subsidiary agricultural products, living services for residents and consumer products and is located in the intersection of Yangshi street, Weizhong street and Dahuangjia street, and the "one-belt" located in Neihuan east road belongs to a part of the traditional commercial street. All of the local residents and the tourists from other places would like to come to this place and taste and enjoy the Hui-specific snacks, and Eastern Grand Mosque has been viewed as a kind of cultural symbol and brand image.

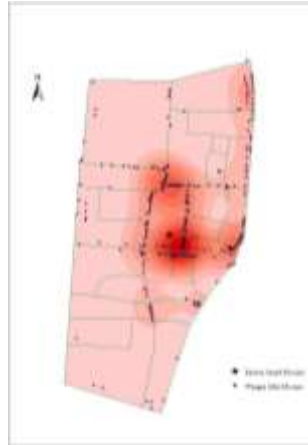


Figure 4. The mosque-market spatial configuration of the Hui traders as a whole

Different business types have obviously different "mosque-market-proximity" configurations with the complicated spatial interconnections between the mosque and local markets. The spatial distribution of Halal processed foods and consumer goods has shown similar configurations, but the Halal processed foods, relying on the "front shop, back house" or "down shop, up house" small family workshops in the local Muslim community, have a more closely "mosque-market-proximity" configuration than the consumer goods with a more flexible spatial configuration (Figure 5). Different from Halal processed foods and consumer goods, the spatial distribution of Halal catering industry has shown a loose spatial interconnection between Eastern Grand Mosque and the local markets with no obvious "mosque-market-proximity" configuration.

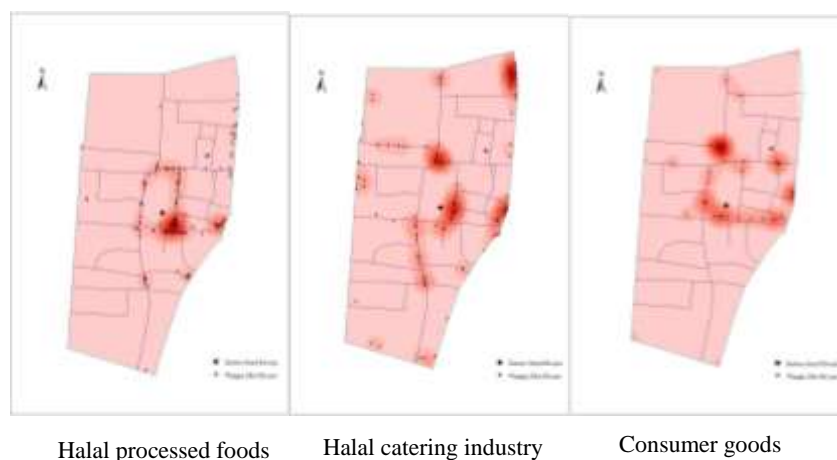


Figure 5. The business-type difference of the mosque-market spatial configuration

Compared with the business types, the distribution based on the different sizes has

shown the relatively simple spatial interconnection between Eastern Grand Mosque and the local markets. Obviously, the "mosque-market-proximity" configurations of mobile vendors and small-size stores basically have shown the same spatial interconnection. However, the spatial proximity to the better transportation location is the main characteristic for medium-large-size stores whose spatial distribution is more discrete. (Figure 6)

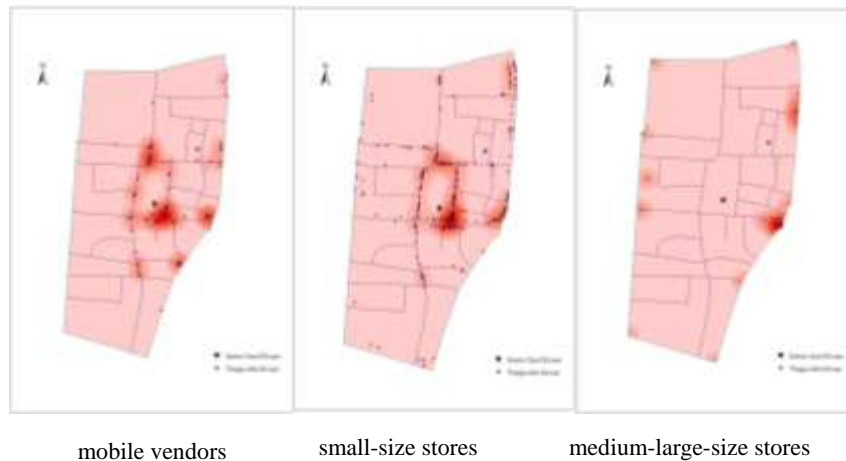


Figure 6. The size difference of the mosque-market spatial configuration

The intensity of the "mosque-market-proximity" configuration can be measured by use of Nearest Neighbor Index (NNI) (random distribution, $0.75 < \text{NNI} < 1.25$; discrete distribution, $\text{NNI} \geq 1.25$; aggregated distribution, $\text{NNI} \leq 0.75$). The NNI analysis has shown that the spatial intensities of both the business types and business sizes reach a very high level except for medium-large-size stores ($\text{NNI}=0.82$) and Halal catering industry ($\text{NNI}=0.17$) with exceptional value. There are two main reasons which can explain why the intensity of Halal catering industry is so higher than the intensity of other business types and medium-large-size stores show random distribution. The first reason is that there are no more bigger rooms for medium-large-size stores in the local Hui community surrounding Eastern Grand Mosque, and the second reason is that the main streets and the intersections are well suited for Halal catering industry, but they are a little far from Eastern Grand Mosque. (Table 2 and table 3)

Table 2. The NNI in different business sizes

The sizes	Average observation distance	Expected average distance	NNI
The total	13.529619	24.882733	0.543735
Mobile vendors	20.369836	50.260657	0.405284
Small-size stores	16.160156	29.616376	0.545649
Medium-large-size stores	92.415839	112.386246	0.822306

Source: The Survey on Hui traders from August to October 2014 in Kaifeng.

Table 3. The NNI in different business types

The types	Average observation distance	Expected average distance	NNI
Halal processed foods	15.501228	38.623972	0.401337
Slaughter and wholesale of beef and mutton	103.262456	251.303285	0.410908
living supplies for Muslims	24.153076	42.888433	0.563161
Halal catering industry	30.190921	177.698257	0.169900
Subsidiary agricultural products	57.742167	108.817515	0.530633
Living services for residents	31.083737	72.545010	0.428475
Consumer products	85.654558	131.238861	0.652662

Source: The Survey on Hui traders from August to October 2014 in Kaifeng.

4. Co-occurring conditions of "mosque-centered trade"

Undoubtedly, the concrete spatial form of the "mosque-market-proximity" configuration cannot come into being without specific conditions. If the market-oriented proximity and mosque-centered proximity and external factors can be respectively viewed as the basic condition, core condition and temporal-spatial context, the spatial pattern of the "mosque-centered trade" will be theoretically explained.

4.1 The basic condition: market-oriented proximity

It is obvious that the spatial proximity to the markets is the basic condition for Hui Muslims to do business for a living. However, it must be said that the formation of the local market is closely related to two factors: one is spatial location and geographical distance, the other is market competition.

The case area surrounding Eastern Grand Mosque is located in the heart of the inner-city and has better traffic accessibility than other areas in Kaifeng. The rent level is not very high and even lower for some Hui traders relying on small family workshops with the "front shop, back house" or "down shop, up house". At the same time, there are one big Hui community and eight schools surrounding Eastern Grand Mosque and a large number of consumer demands for Halal products, which can create the conditions for the formation of the local Halal markets.

Additionally, the formation of the local market has favorable conditions on market demand and market competition. The lower income level and fewer barriers to entry into local Halal markets can be considered as the important foundation for the prosperous Hui-specific "snack culture". On the other hand, with the convenience of transportation and brand promotion, the Halal markets are also expanding in recent years. For example, the shopkeeper of Zhengjia mutton soup restaurant said, "many people like our soup very much and some of them have become the regular customers who often drive the car here every weekend far away from Zhengzhou, the capital of Henan province".

4.2 The core condition: mosque-centered proximity

Except for the spatial proximity to the local markets, another occurring condition of "mosque-centered trade" is mosque-centered spatial proximity.

There are two reasons why the business activities of Hui traders are more spatially close to the mosque in the location choice. The first reason is that the mosque is the landmark and cultural symbol for the local Hui Muslims and it is helpful to improve the credibility and visibility in the name of the mosque, like Eastern Grand Mosque. The second reason is that the spatial proximity to the mosque can be derived from the business-type choice of Hui traders with the Hui-specific commercial culture and the spatial proximity to the mosque can satisfy the faith demand of Hui traders.

The choice of business activities is generally consistent with the ethnic and religious traditions of Hui Muslims so that the trades around the mosque normally take the form of the ethnic-cultural attributes and faith demands of the traders. Based on this, these business types, such as Halal processed foods, slaughter and wholesale of beef and mutton, living supplies for Muslims and Halal catering industry, have become the major choice of the local Hui Muslims and have natural closeness to the surrounding mosque and Hui community. Accordingly, the location choice and spatial distribution are culturally determined by the choice of business activities with Hui-specific characteristics. For most of the local residents, the closer Hui traders are to the Eastern Grand Mosque, the more authentic and recognizable the Halal foods will be.

The "mosque-community" form of Hui people has been passed down in specific circumstances in China and the mosque always occupies the center of the social and cultural structure of the Hui community dating back more than six hundred years. Therefore, the cohesion will be strongly strengthened if the Hui traders surround the mosque. The accessible location will be maximized due to the existence of Eastern Grand Mosque which is close to the center of the inner city and the advantages accessible to Eastern Grand Mosque may well be found within the transportation ring. Even for some of local Hui traders who make a living in other places, Eastern Grand Mosque remains a natural ground and a key location for exchange of business information from the Hui-specific social and cultural networks. Most of the Hui traders said, "Eastern Grand Mosque is here, our home is here from generation to generation, what is the better place than Eastern Grand Mosque for us to do business?" The Imam Zhao of the Eastern Grand Mosque said, "Eastern Grand Mosque is a support of the local Hui community. The mosque and Hui Muslims rely on each other for survival. The mosque is an invaluable asset and their business is booming relying on this mosque. The foods and goods are absolutely authentic and the quality is guaranteed surrounding Eastern Grand Mosque. Without Eastern Grand Mosque, who knows what it's going to be for the local Hui traders?"

4.3 The temporal-spatial context

The external factors such as local government behavior and urban renewal may change the overall pattern of the city, change the living and commercial activities of Hui community, and then change the spatial configuration of the "mosque-market-proximity". These external factors can be called the temporal-spatial context which may affect the occurring probability of "mosque-centered trade".

According to our survey, since the 1990s, Shunhe Hui District government and many developers have repeatedly tried to push forward the urban renewal of the local Hui community surrounding Eastern Grand Mosque, but until now there has been no success, which objectively protects the existing spatial pattern of the mosque and the local markets. Due to the failure to urban renewal and new national policy in recent years, more attention has been paid to the protection of urban cultural diversity with ethnic characteristics and "Development planning of commercial street of Shunhe Hui District in Kaifeng in 2013" has been introduced. In the planning, the Hui community surrounding Eastern Grand Mosque has been identified as an important commercial street which is planned for the combination of halal foods, religious tourism, Islamic culture, leisure and entertainment and the integration of the small, scattered, chaotic business resources to speed up the business clustering of Hui traders. At the same time, the local government allows the existence of mobile vendors, which is an important external condition for the formation and prosperity of the local Halal markets.

4.4 Are these conditions equally important?

In order to address this question of whether these conditions are equally important, the assignment method can be taken to estimate and compare the relative importance of these occurring conditions of "mosque-centered trade".

The results have shown that:

- 1) The average value of the 6 main clustering factors are higher than 3;
- 2) The importance of market-oriented proximity can be reflected in visitor flowrate, transportation location, resident income and consumption level, and the importance of mosque-centered proximity can be reflected in proximity effect, proximity to Hui community and ethnic traditions of "mosque-centered trade".
- 3) The difference between the former value and the latter value is only 0.17 which means market-oriented proximity and mosque-centered proximity are almost equally important.

Table 4. The relative importance of occurring conditions of "mosque-centered trade"

Clustering factors	The ranking	Average value	Standard deviation
visitor flowrate	1	4.0385	1.1315
proximity effect to the mosque	2	3.9438	0.9889
proximity to Hui community	3	3.6385	1.2037
proximity to the main street	4	3.4067	1.2564
ethnic traditions	5	3.1231	0.8454
income and consumption level of residents nearby	6	3.0462	1.17
faith demand of the practitioner	7	2.9768	1.3585
market demand	8	2.4592	1.1538
rent level	9	2.3579	0.7632
visibility, portability and convenience	10	2.1385	0.8366
the competition with peer-to-peer	11	1.9753	0.9283
government policy	12	1.8476	1.0682
Business type	13	1.5962	0.9588
market area and market potential	14	1.3615	0.6534
the size of the stores	15	1.0603	0.7398
proximity to the school	16	0.8354	0.8556

Source: The Survey on Hui traders from August to October 2014 in Kaifeng.

However, in addition, the external conditions also cannot be neglected. Without these external conditions, the current pattern of "mosque-centered trade" is no longer in existence.

5. Why will "mosque-centered trade" occur?

As a matter of fact, the "mosque-market-proximity" configuration implies that there

must be a multi-markets structure around the mosque and the Halal market surrounding the mosque is unique and irreplaceable. At the same time, it also implies that there exist the local consumers' recognition to the Halal markets and the dependence on the Hui-specific cultural traditions.

5.1 The importance of geography, location and space

Geography, location and space are very important to the "mosque-centered trade" and the formation of "mosque-market-proximity" configuration.

There is no doubt that the mosque and its location has a decisive significance for the formation of the "mosque-centered trade". That is why the phenomenon of the "mosque-centered trade" around the other mosques, located in Kaifeng, is not prominent. On the other hand, even if the difference between urban and rural areas is not considered, the geographical factors, especially the distance from the "mosque" to "market", are the basic premise of the formation of the "mosque-centered trade" and the geographical concentration of the business activities. Just as the "mosque-market-proximity model" stresses the importance of "mosque-centered proximity" and "market-oriented proximity", the spatial proximity between the "mosque" and "market" is the fundamental reason.

The location choice is the important basis of the formation of the "mosque-centered trade" and is also the important factor to decide the spatial structure of the "mosque-centered trade". If the location of the "Halal market" is close to the mosque, there will be a close "mosque-market-proximity" configuration; If the location of the "Halal market" is far away from the mosque, there will be a relatively loose "mosque-market-proximity" configuration.

Space has a special significance for the different industries and sizes of the Hui traders. The Eastern Grand Mosque provide a lot of living space for many street

vendors and small Hui traders. However, for larger traders such as Muslim restaurants, the larger space, more parking spaces and better location are more important but more far from the mosque.

5.2 Multi-markets structure, market differentiation and the irreplaceability of the Halal markets surrounding the mosque

The three Halal markets including the Halal food street, divergence market and comprehensive market have shown clearly a multi-markets structure whose distinctive characteristic is the spatial proximity to Eastern Grand Mosque. On the other hand, the majority of Hui traders are the small-size and low-class shopkeepers who do business closely related to the daily life of the local Hui Muslims with the ethnic traditional culture.

At the same time, there exist some competitive urban commercial centers close to the case area, such as Gulou Square market, one of the biggest traditional markets in the inner city. Gulou Square market is not too far from Eastern Grand Mosque, only 750 meters away, has more high-class stores than the three Halal markets and attracts a lot of Hui traders surrounding Eastern Grand Mosque as well. Based on this, the sporadic distribution of some Hui traders in the case area can be well explained by the competition between Gulou Square market and the Halal markets. However, the market competition and market differentiation are simultaneously in existence. Night Market is the key feature of Gulou Square market for the urban residents, especially the tourists from other cities, but the Halal markets are more authentic and irreplaceable for the local residents. It is not hard to find that the market competition and market differentiation and halal markets' irreplaceability provide an important geographical foundation for the formation of "mosque-centered trade".

Tab.5 The street distribution of the different business types in the Hui traders

Business types	Spatial distribution
Halal processed foods	Mujiaqiao street, Qingping street, Inner East road, Weizhong Front street, Nothern Yangshi street
Slaughter and wholesale of beef and mutton	Inner East road, Nothern Yangshi street
living supplies for Muslims	Weizhong Front street, Qingping street
Halal catering industry	Inner East road, Jiefang road, Qingping street, SothernYangshi street, Ziyou road
Subsidiary agricultural products	Nothern Yangshi street
Living services for residents	Weizhong Front street, Lishiting street, Nothern Yangshi street, Leguan street
Consumer products	Mujiaqiao street, Lishiting street ,Nothern Yangshi street

Source: The Survey on Hui traders from August to October 2014 in Kaifeng.

However, it must be pointed out that the waste issues have been very prominent in the Halal markets surrounding Eastern Grand Mosque and some local Hui Muslims have moved to the urban New District for a better environment. At the same time, environmental regulation and urban renewal is just a matter of time in the foresee-able future. Therefore, how long this spatial configuration of "mosque-market-proximity" can be maintained remains to be seen.

5.3 Cultural embeddedness, place identity and path dependence

Economic activities are often rooted in the specific social-cultural and localized context. The business activities of Hui Muslims have strong cultural embeddedness with no exception. On the one hand, the mosque, just like Eastern Grand Mosque with great influence, is the center of the daily life of Hui Muslims and plays an important role in attracting Hui traders. On the other hand, in the Hui-specific commercial traditions, due to the survival pressure, gathering into a cluster is the best choice relying on the mosque for Hui traders as a relatively small minority. This is the important cultural foundation for the formation of the local Halal markets surrounding the mosque.

Additionally, why the "mosque-centered trade" will occur is contingent on place identity to the spatial configuration of the "mosque-market-proximity". The place

identity lies in three aspects:

- 1) Place identity of the local Hui Muslims. Eastern Grand Mosque together with the Hui community is old and shabby, but most of the local Hui Muslims still live here and are not willing to leave.
- 2) Place identity of the Hui traders. Many Hui traders do business surrounding Eastern Grand Mosque for tens or even hundreds of years and are reluctant to leave here.
- 3) Place identity to the Halal foods for the local urban residents. One of the reasons why they are willing to consume here is that they can eat and enjoy the Hui-specific authentic foods.

This positive emotional connection to the mosque results in a strong cumulative effect for the formation of the "mosque-market-proximity" configuration.

In fact, the "mosque-market-proximity" configuration is a result of mosque-centered path dependence on the Hui people's beliefs, institutions, values and behaviors which are an important foundation for the survival and development of Hui people in the cities and the key guarantee of maintaining the Hui-specific cultural traditions. The path dependence to the mosque for Hui people has been proven in the studies about the spatial agglomeration of the Halal catering industries surrounding the mosque in Lanzhou, the capital of Gansu province (Xiang Gao, 2010) and path dependence to the mosque for the interpersonal network of urban floating Hui population (Xiaoyu Li, Youtao Bai, 2009). Similar to the dependence of regional economy on the development path, the cultural tradition of making a living for survival surrounding the mosque in the cities leads to the spatial dependence on the "mosque-market-proximity" configuration for most Hui traders.

6. Discussion and conclusion

To sum up, our aim in this paper is, firstly, to highlight the unresolved issues on the spatial pattern of "mosque-centered trade" and, secondly, to make a heuristic theoretical explanation on its spatial characteristics, co-occurring conditions and mechanisms. When doing so, the paper highlights the conditions under which the spatial patterns of "mosque-centered trade" can be represented geographically and culturally.

Compared with the simple description on the spatial relationship between the "mosque" and "market", this study argues that the "mosque-market-proximity" (MMP) model promotes the academic theory on the "mosque-centered trade" and provides a very useful framework which can demonstrate the complexity, variability and spatial pattern of the "mosque-centered trade" and answer the questions on the spatial expression, occurring conditions and mechanisms of the "mosque-centered trade". In the case of Eastern Grand Mosque, the spatial patterns of the "mosque-centered trade" can be well explained largely based on the "mosque-markets-proximity" model. The key findings can be summarized as follows:

- 1) It is argued that the spatial pattern of "mosque-centered trade" can be demonstrated as a variable "mosque-market-proximity" configuration which is contingent on the interactive spatial relationship between the mosque and local markets and its relation to the cultural embeddedness and spatiality of commercial traditions of Hui Muslims in China. According to the case study, a "two-centers and one-belt" "mosque-market-proximity" configuration can be identified spatially surrounding the Eastern Grand Mosque, but, at the same time, due to the obvious differences on the different types and sizes, the "mosque-market-proximity" configuration will be close or loose spatially;
- 2) The co-occurring conditions can be classified in terms of how the "mosque-market-proximity" configuration occurs. The spatial forms of "mosque-market-proximity" configuration are not only geographically dependent on the market-oriented proximity, but also culturally dependent on the mosque-centered

proximity. Additionally, it seems to be controlled by the external conditions which are related to a temporal and spatial context, such as local government and urbanization. In these conditions, none of the three is dispensable and the market-oriented proximity is just as equally important to the formation of the "mosque-market-proximity" configuration as the mosque-centered proximity. On the other hand, the temporal-spatial context is considerable as well;

3) The multi-markets structure, market differentiation and the irreplaceability of the local "Halal markets" play a geographically basic role in the formation of "mosque-market-proximity" configuration. At the same time, cultural embeddedness, place identity and path dependence to the "mosque-market-proximity" configuration for the Hui Muslims play a culturally decisive role in the spatial pattern of the "mosque-centered trade".

We argue that the "mosque-market-proximity" model may provide an important theoretical basis for understanding the spatial patterns of the "mosque-centered trade" and, therefore, it will be seen as an exploration or a heuristic breakthrough of doing research on the Hui community in the geography circle. Moreover, it may bridge the debates on the spatial patterns of the mosque-centered Hui communities in different disciplines, such as ethnology, anthropology, sociology, and cultural geography.

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