Analysis on the Ethnic Food Economy Consumption of Cities along the Belt and Road initiative in China

Jiuding Zhang¹, Robert Tian²*, and Ahsan Nawaz³

¹Yinchuan University of Energy, China
²Huaihua University; China
³Hebei University, China

*Corresponding author e-mail: rgtian@yahoo.com

Abstract. This paper explores the reasons why consumers patronize ethnic food services, analyzes the characteristics of ethnic food consumption behaviors, summarizes the current status and existing problems of “the Belt and Road” ethnic food industry, and puts forward some constructive suggestions to help ethnic food service providers to better satisfy the customers’ needs, encourage consumers to re-patronize, and recommend ethnic food services to everyone to achieve the best-selling brand value.

1. Introduction

Diet is the primary material basis for human survival and development and one of the basic forms of social life, which has attracted the attention of economic anthropologists for a long time. In addition to its natural attributes, diet also has a more extensive social attribute, as it is endowed with and reflects people's consciousness, thinking and psychological state. Moreover, it combines and integrates the spiritual wealth in terms of history, geography, literature, art, education and other aspects, and thus it has distinct national characteristics[1]. The typical food of national characteristics studied in this paper refers to the dietary products that meet the Islamic catering standards, which are slaughtered, processed and produced in accordance with the dietary habits of specific ethnic minorities believing in Islam, such as Hui, Dongxiang and Baoan nationalities, while it is the food with the dietary characteristics of these specific ethnic minorities[2].

According to relevant statistics, more than 30 million residents in China belong to the group, and there are more than one million merchants engaged in the operation of Ethnic food, mainly in the form of family workshops for production, processing and sales[3]. As for the definition of typical Muslim food as a specific ethnic group, there are relatively unified standards in the international community, which are mainly to restrict all the environments in contact with food, including material composition,
utensils or facilities and so on, based on the conformity with the provisions of Shariah Law and the customs and eating habits of specific ethnic groups\cite{4}. At present, there has not yet been a clear and unified definition in China, and there are mainly three points of view, theory of folklore, theory of religion and theory of folklore and religion, among which the second one is recognized by more scholars in academic circles\cite{5,6}.

2. Sampling and Methodology

This study is based on the authors’ field investigation in the Ethnic food industry in a Southern China City (hereafter referred as SCC), and the first-hand information is mainly obtained by means of questionnaires, in-depth interviews, and participatory observation. In the process of the questionnaire survey, 350 copies were distributed, 326 copies were recovered, among which 306 were valid, with a valid rate of 93.9%. The basic information of 306 samples obtained from the survey is shown in Table 1.

| Survey content  | Option                        | Frequency | Valid percentage | Survey content  | Option                        | Frequency | Valid percentage |
|-----------------|-------------------------------|-----------|------------------|-----------------|-------------------------------|-----------|------------------|
| Gender          | Male                          | 163       | 53.3%            | Age             | 15-24 years old               | 67        | 21.9%            |
|                 | Female                        | 143       | 46.7%            | 25-34 years old  | 126                           | 41.2%     |                  |
|                 | Students                      | 75        | 24.7%            | 35-44 years old  | 77                            | 25.2%     |                  |
|                 | Ordinary office workers       | 159       | 52.6%            | 45 years old and above | 26       | 11.8%            |
|                 | Self-employed businessmen     | 16        | 5.2%             | High or secondary school or below | 44       | 14.4%            |
|                 | Freelancers                   | 35        | 11.4%            | Junior college degree | 77       | 25.2%            |
|                 | Others                        | 21        | 6.2%             | Bachelor’s degree | 152                           | 49.7%     |                  |
| Monthly income  | 1,500 Yuan and below          | 61        | 19.9%            | Master’s degree and above | 33       | 10.8%            |
|                 | 1,501-3,000 Yuan              | 64        | 20.9%            | In SCC City      | 197                           | 64.4%     |                  |
|                 | 3,001-6,000 Yuan              | 122       | 39.9%            | In Guangdong Province (other than SCC City) | 76       | 24.8%            |
|                 | 6,001 Yuan and above          | 59        | 19.3%            | Outside Guangdong Province | 33       | 10.8%            |

Among the 306 samples, male respondents are more than female respondents, accounting for 53.3%. The respondents are mainly between 25 and 34 years old, accounting for 41.2%. The educational level is dominated by the bachelor’s degree, accounting for 49.7%. Most of the respondents are ordinary office workers, including those in enterprises and institutions, accounting for 52%. Their monthly income is between 3,001 and 6,000 Yuan at most, accounting for 39.9%. The respondents are mainly residents in SCC, accounting for 64.4. The respondents who choose the option of “Others” in occupation are mainly retirees, housewives and migrant workers.

In the analysis of consumers’ understanding and preference to Ethnic food in the Ethnic food industry in SCC, the respondents have a low understanding of the Ethnic food culture, and the respondents who like Ethnic food account for 46.5% of the total respondents, and those who do not like Ethnic food account for 6.5%. The author conducted the analysis of variance (ANOVA) on the degree of understanding and preference. According to the homogeneity test of variance, the significance is 0 < 0.05, and the variance is equal. In ANOVA, the significance is 0 < 0.05, rejecting the null hypothesis. Based on the multiple comparative analyses, it can be concluded that the degree of understanding of Ethnic food culture has a significant impact on the degree of preference. As can be
seen from the Xbar Chart in Figure 1 that the higher understanding the respondent has of the Ethnic food culture, the higher his preference to such food will be.

![Xbar Chart](image)

Your understanding of Halal food (Halal food refers to the food that is slaughtered, processed and made in accordance with the eating habits of Chinese Muslims, based on the Muslim requirements)

3. Findings and Discussion

In catering consumption, there is a close relationship between the object of purchase and the place of purchase. Among the special Halal restaurants that respondents visit in daily life, consumers in SCC visit the Halal hand-pulled noodle restaurants most frequently, with a percentage of response of 42% and a percentage of cases of 63%, followed by the special restaurants of Halal fried dishes with a percentage of response of 20% and a percentage of cases of 30%, and then the special restaurants of Halal fast food with a percentage of response of 17% and a percentage of cases of 25%, then the hot pot restaurants of the Halal style with a percentage of response of 15% and a percentage of cases of 23%, and finally the spicy hot pot restaurants with a percentage of response of 7% and a percentage of cases of 10%.

| Special restaurants    | No.  | % of response | % of cases |
|------------------------|------|---------------|------------|
| Hand-pulled noodles    | 194  | 42%           | 63%        |
| Fast food              | 77   | 17%           | 25%        |
| Hot pot                | 71   | 15%           | 23%        |
| Fried dishes           | 91   | 20%           | 30%        |
| Spicy hot pot          | 32   | 7%            | 10%        |
| **Total**              | 465  | 100%          | 152%       |
To further analyze the object of purchases, the cross-tabulation analysis is carried out on the relationship between the basic information of the respondents and the object of purchases to study the impact of the basic characteristics of the respondents on the consumption choice. Gender can influence the choice of the special Halal restaurants, among which the top three Halal restaurants that male respondents choose are noodle restaurants, stir-fry restaurants and hot pot restaurants, while those of the female respondents are noodle restaurants, fast food restaurants and stir-fry restaurants, which may be related to the psychological needs and consumption concepts of the male and the female in catering.

Age has an impact on the choice of special Halal restaurants. Among the respondents, the top three special Halal restaurants that consumers aged between 15 and 24 choose are noodle restaurants, fast food restaurants, and stir-fry restaurants, and those for the consumers aged between 25 and 34 are noodle restaurants, stir-fry restaurants and hot pot restaurants, and those for consumers aged between 35 and 44 are noodle restaurants, stir-fry restaurants and fast food restaurants, while those of consumers aged at 45 and above are hot pot restaurants, noodle restaurants and fast food restaurants. Consumers of different age groups vary greatly in the choice of Halal restaurants, which may be related to economic capability. The consumers aged between 15 and 24 mainly pursue the taste and the cost performance, and thus they buy more hand-pulled noodles at lower unit prices. The consumers of 25-44 years old have a variety of choices, which may be related to their diverse career choices.

### Table 3 Cross Table of Halal Restaurants Chosen by Consumers (By Gender)

| Special restaurants | Gender | Total |
|---------------------|--------|-------|
|                     | Male   | Female |       |
| Hand-pulled noodles | 99     | 95     | 194   |
| Fast food           | 32     | 45     | 77    |
| Hot pot             | 40     | 31     | 71    |
| Fried dishes        | 57     | 34     | 91    |
| Spicy hot pot       | 19     | 13     | 32    |

### Table 4 Cross Table of Halal Restaurants Chosen by Consumers (By Age)

| Special restaurants | 15-24 | 25-34 | Age 35-44 | 45 and above | Total |
|---------------------|-------|-------|-----------|--------------|-------|
| Hand-pulled noodles | 60    | 67    | 55        | 12           | 194   |
| Fast food           | 11    | 34    | 21        | 11           | 77    |
| Hot pot             | 5     | 41    | 15        | 10           | 71    |
| Fried dishes        | 10    | 52    | 22        | 7            | 91    |
| Spicy hot pot       | 0     | 11    | 3         | 18           | 32    |

Educational level has an impact on the choice of special Halal restaurants. Among the respondents,
the top three special Halal restaurants that consumers with a degree of high school or secondary school or below are noodle restaurants, fast food restaurants and stir-fry restaurants, those of consumers with a junior college degree are noodle restaurants, stir-fry restaurants and fast food restaurants, and those of consumers with a bachelor degree are noodle restaurants, stir-fry restaurants and hot pot restaurants, while those of consumers with a master degree and above are noodle restaurants, spicy hot pot restaurants and hot pot restaurants.

Occupation has an impact on the choice of special Halal restaurants. Among the respondents, the top three special Halal restaurants that students choose are noodle restaurants, fast food restaurants and stir-fry restaurants, and those of ordinary office workers are noodle restaurants, stir-fry restaurants and hot pot restaurants, and those of self-employed businessmen (entrepreneurs) are noodle restaurants, spicy hot pot restaurants, hot pot restaurants and stir-fry restaurants, while those of freelancers are noodle restaurants, spicy hot pot restaurants, hot pot restaurants and stir-fry restaurants, and those of others are fast food restaurants, noodle restaurants and hot pot restaurants or stir-fry restaurants. Because of the varied occupations, consumers’ consumption choices are also influenced by the characteristics of the surrounding restaurants, and consumers mostly have meals in the neighborhood.

| Special restaurants | Educational level | Hi. And 2nd school or below | Junior college degree | Bachelor’s degree | Master’s degree and above | Total |
|---------------------|-------------------|-----------------------------|----------------------|------------------|---------------------------|-------|
| Hand-pulled noodles | Count             | 26                          | 46                   | 104              | 18                        | 194   |
|                     | Percentage in the educational level | 41%                       | 37%                  | 46%              | 35%                       |       |
| Fast food           | Count             | 18                          | 24                   | 33               | 2                         | 77    |
|                     | Percentage in the educational level | 28%                       | 20%                  | 15%              | 4%                        |       |
| Hot pot             | Count             | 4                           | 16                   | 41               | 10                        | 71    |
|                     | Percentage in the educational level | 6%                        | 13%                  | 18%              | 20%                       |       |
| Fried dishes        | Count             | 9                           | 30                   | 44               | 8                         | 91    |
|                     | Percentage in the educational level | 14%                       | 24%                  | 19%              | 16%                       |       |
| Spicy hot pot       | Count             | 7                           | 7                    | 5                | 13                        | 32    |
|                     | Percentage in the educational level | 11%                       | 6%                   | 2%               | 25%                       |       |

Table 5 Cross Table of Halal Restaurants Chosen by Consumers (By Educational level)
Table 6 Cross Table of Halal Restaurants Chosen by Consumers (By Occupation)

| Special restaurants       | Students | Office workers | Self-employed businessmen | Freelancers | Other | Total |
|---------------------------|----------|----------------|---------------------------|-------------|-------|-------|
| Hand-pulled noodles       | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | 67      | 93     | 8     | 18     | 8     | 194   |
| Fast food                 | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | 14      | 42     | 0     | 8      | 8     | 77    |
| Hot pot                   | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | 2       | 46     | 5     | 11     | 7     | 71    |
| Fried dishes              | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | 14      | 61     | 5     | 4      | 7     | 91    |
| Spicy hot pot             | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | Count    | % in the occupation | 0       | 21     | 7     | 4      | 10    | 32    |

Monthly income has an impact on the choice of special Halal restaurants. Among the respondents, the top three special Halal restaurants that the respondents with a monthly income of 1,500 Yuan and below are noodle restaurants, fast food restaurants and stir-fry restaurants, those of respondents with a monthly income of 1,501-3,000 Yuan are noodle restaurants, fast food restaurants and stir-fry restaurants, those of respondents with a monthly income of 3,001-6,000 Yuan are noodle restaurants, hot pot restaurants and stir-fry restaurants, and those of respondents with a monthly income of 6,001 Yuan and above are noodle restaurants, stir-fry restaurants and hot pot restaurants. Because of the diverse expected economic income in the future, the respondents will also vary in consumption capacity, while there is slight difference in the consumption of the respondents with a monthly income less than 3,000 Yuan.

Region has an impact on the choice of special Halal restaurants. Among the respondents, the top three special Halal restaurants that the local respondents in SCC are noodle restaurants, stir-fry restaurants and fast food restaurants, those of respondents from Guangdong Province other than SCC are noodle restaurants, stir-fry restaurants and hot pot restaurants, while those of respondents from the region outside Guangdong Province are noodle restaurants, hot pot restaurants, fast food restaurants or stir-fry restaurants. It may be because people from different regions have varied tastes and eating habits.
Table 7 Cross Table of Halal Restaurants Chosen by Consumers (By Monthly Income)

| Special restaurants | 1,500 Yuan and below | 1,501-3,000 Yuan | 3,001-6,000 Yuan | 6,001 Yuan and above | Total |
|---------------------|----------------------|------------------|------------------|----------------------|-------|
| Hand-pulled noodles| Count: 51%           | Count: 63%       | Count: 10%       | Count: 6%            | 194   |
|                     | in monthly income   | in monthly income| in monthly income| in monthly income   |       |
| Fast food           | Count: 12%          | Count: 25%       | Count: 16%       | Count: 21%          | 77    |
|                     | in monthly income   | in monthly income| in monthly income| in monthly income   |       |
| Hot pot             | Count: 7%           | Count: 6%        | Count: 21%       | Count: 20%          | 71    |
|                     | in monthly income   | in monthly income| in monthly income| in monthly income   |       |
| Fried dishes        | Count: 12%          | Count: 23%       | Count: 19%       | Count: 23%          | 91    |
|                     | in monthly income   | in monthly income| in monthly income| in monthly income   |       |
| Spicy hot pot       | Count: 4%           | Count: 2%        | Count: 6%        | Count: 14%          | 32    |
|                     | in monthly income   | in monthly income| in monthly income| in monthly income   |       |

Table 8 Cross Table of Halal Restaurants Chosen by Consumers (By Region)

| Special restaurants | SCC City | Guangdong Province (Excluding SCC) | Outside Guangdong Province | Total |
|---------------------|----------|------------------------------------|-----------------------------|-------|
| Hand-pulled noodles| Count: 123% | Count: 42% | Count: 47% | Count: 17% | 194   |
|                     | in the region | in the region | in the region | in the region |       |
| Fast food           | Count: 51% | Count: 18% | Count: 13% | Count: 19% | 77    |
|                     | in the region | in the region | in the region | in the region |       |
| Hot pot             | Count: 38% | Count: 13% | Count: 16% | Count: 24% | 71    |
|                     | in the region | in the region | in the region | in the region |       |
| Fried dishes        | Count: 54% | Count: 19% | Count: 22% | Count: 19% | 91    |
|                     | in the region | in the region | in the region | in the region |       |
| Spicy hot pot       | Count: 25% | Count: 9% | Count: 2% | Count: 9% | 32    |
|                     | in the region | in the region | in the region | in the region |       |

When choosing what food to buy, consumers will be affected by the internal factors, purchasing power and other external factors, such as consumers' gender, age, educational level, occupation, monthly income and region, which result in different choices of objects of purchase. Owners of Halal restaurants may target their target consumers according to their own positioning, develop their own characteristics, and provide personalized services, to gradually establish a clear image in the minds of consumers.

4. Conclusions and Suggestions

At present, consumers in SCC for ethnic food are mainly non-ethnics, and as such, they have limited awareness of the Ethnic food culture. According to the survey data, non-Ethnic consumers' awareness of Ethnic food culture has a significant impact on consumers' preferences. With the increase of awareness and understanding, consumers' preferences for Ethnic food will also increase. Currently, the non-Ethnic consumers in SCC are less satisfied with Halal restaurants overall, especially for service and environment, but they are more or less satisfied with the food they consumed.
Environmental factors have the greatest impact on overall customer satisfaction; while food satisfaction has the greatest impact on repurchase intention and recommendation intention. For this reason, the following suggestions are put forward for managers of Ethnic food industry in the non-ethnic concentrated areas:

First, it is necessary to popularize the Ethnic food culture and make full use of the characteristic resources of food culture. Ethnic food culture is a relatively strange field to consumers in SCC, and it will be conducive to improving consumers’ preference for products in SCC by increasing their understanding for the Ethnic food culture. Businessmen may display their differences from the local culinary culture from the decoration style of the restaurant and the special Ethnic food and services, such as Hui dance and improvisation of music.

Second, the traditional management ideas should be replaced by modern management ideas. Most of the Halal restaurants in SCC are small in scale, strong in independence, and strong in the awareness of household management, with a lack of modern management ideas and awareness of product R&D, resulting in the lack of uniqueness in products, high similarity, and the failure for consumers to distinguish one from another. Muslim businessmen should not only change their tastes properly based on the original products and the eating habits of residents but should also create more flavors based on the characteristics of local culinary culture, thereby increasing product diversity.

Third, it is necessary to improve the business environment and service quality: with the improvement of living standards, consumers pay more attention to food hygiene and safety. Dining out is no longer to simply have a meal, but also to enjoy the characteristic services. Practitioners in the Ethnic food industry should first exercise strict control over the hygienic situation of food, service personnel and dining environment to ensure the hygienic condition of food in the entire process of making and before it is served. Second, the dining environment should be improved. It should not only keep clean and tidy in terms of hygiene, but also highlight the Muslim characteristics in dining facilities to ensure that consumers feel comfortable when dining. Finally, it is important to lay stress on improving the service quality, as the service personnel should use civilized and standardized reception etiquette and service terms, be warm and thoughtful to customers and take the initiative to introduce the specialties.

Fourth, an effective Halal Certificate and licensed management mechanism should be established. The hygiene and safety of Ethnic food are constrained by Muslim beliefs, so that consumers can rest assured, while there is no lack of the non-ethnic restaurants that disturb consumers’ audio-visual judgment. Therefore, an effective Halal Certificate and licensed management mechanism should be established to guarantee that the Ethnic food is true and to protect the rights of Muslims and consumers.

References
[1] Tian, Guang, Kathy Tian, Zhao Dandan and Camilla H. Wang (2018). Food Culture in China: From Social Political Perspectives. Trames: A Journal of the Humanities and Social Sciences, Vol. 22 (4):345–364.
[2] Zong, Xiaoli (2015). The Research on Marketing Strategy of Ethnic food – Taking JW Corporation As an Example. Suzhou: Soochow University.
[3] Yang, Haijuan and Huang, Lijun (2015). Overview of Studies on Ethnic food Industry at Home and Abroad. World Agriculture, Vol. 2015 (11): 58-62.
[4] Yang, Qun and Yang, Zhongjian (2015). Finance and Taxation Policy Support to the Development of Ethnic food Industry in Ningxia, Journal of Hui Muslim Minority Studies, Vol. 2015 (03): 112-118.

[5] Wang, Ping (2010). The Survey and Analysis of Ethnic food Industry’s Development and Situation of the Southeast Coastal Cities – Xiamen’s Ethnic food Industry as an Example. Journal of Hui Muslim Minority Studies, Vol. 2010 (4): 137-144.

[6] Lan, Xuehua and Tian, Guang (2015). Ethnography of Foodservice: Case Study of a Hui Muslim Restaurant in Lishui. Journal of Hui Muslim Minority Studies, Vol. 2015 (02): 88-96.