QUALITATIVE ANALYSIS OF RESTAURANT CONSUMERS' PERCEPTIONS FOR DIFFERENTIATION OF TARGET CLIENTS UNDER MULTI-CATERING CULTURE

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Abstract: The COVID-19 epidemic has rapidly changed the catering industry and food delivery platforms. Different food delivery platforms aim to different consumer groups, especially in metropolises, where different catering cultures interact. How to designate a targeted marketing strategy is vitally important for restaurant managers. Using the webQDA software and TripAdvisor network resources, we propose a qualitative analysis of consumers' perceptions to three Chinese restaurants in Milan. The results reveal the apparent divergence in target clients of different Chinese restaurants. Cultural background is one of the factors affecting customers' sentiments towards the food.
Keywords: Consumers' perceptions; Qualitative analysis; webQDA; TripAdvisor

1 INTRODUCTION

Food meets basic human needs and contributes to a sustainable element of destination tourism [1]. By investigating 24 countries, the YouGov team finds that Italian food is the most popular worldwide [2], and Chinese cuisine ranks second. The novelty of this study is that, since there are few studies concerning the interaction between these two typical cuisines from the view of qualitative analysis grounded on customers' perceptions, hence, through examining the survival of Chinese restaurants in Italy, we can better understand the conflict and coexistence of two distinct food cultures. Since Milan is one of the cities in Italy where the Chinese are concentrated and achieves a high reputation for tourism to attract tourists worldwide with multi-cultural backgrounds, the data from the Chinese restaurants in Milan is considered. Besides, a more realistic motivation for this research is that, due to the COVID-19 pandemic, takeaway mobile phone apps increasingly emerge, such as 'Foodora', 'Fork' mainly for Italian consumers, 'Bentobus', and 'Guagua' mostly for Chinese consumers. Therefore, restaurant managers need to distinguish their audience customers and invest limited resources in suitable apps. This study classifies consumers with network resources, discovers the characteristics of potential clients, and then helps managers to formulate appropriate marketing strategies.

This qualitative study is conducted with the webQDA software and TripAdvisor website. The suitability of webQDA in qualitative data analysis is verified [3]. Ribiero et al. apply webQDA to analyse customers' reviews to accommodation in Portugal on the website of Booking [4]. We extend this research to the catering field and perform the content analysis to classify and label the target clients under multi-catering culture. Additionally, the webQDA software is widely applied in the research of multiple disciplines, such as education [5], nursing [6], and philology [7].

In qualitative analysis concerning catering, two main approaches of data acquisition were adopted in previous literatures. One is through questionnaires and interviews to obtain behaviour information. With the in-depth interviews and a questionnaire in Spain, Cantarero et al. confirm the high correlation between cultural identity and food choices [8]. Chen & Huang proposed the questionnaires to investigate 565 visitors in Chongqing city of China [9], and reveal that food imposes a variety of effects in different stages of travel. The other approach is collecting the user-generated data with network resources. The rapid development of the Internet profoundly influences the tourism industry [10]. Customers prefer to express the emotions via online platforms, thus forming user-generated data, which has the advantages of accessible collection, low cost, and openness. Jia proposed 49,080 reviews and ratings of restaurants on Dianping.com, and concludes that taste [11], environment, and service are the most influencing factors on ratings. Yu et al. analyse the reviews on Yelp.com and conclude that the restaurant features the customers perceived are different [12]. As the world's largest travel review site [13], the user-generated data on TripAdvisor is approved by the relevant research. The idea of employing TripAdvisor for the qualitative analysis in food tourism is inspired by Lin et al. [14]. Comparing the 17,214 reviews of TripAdvisor in two regions, Taiwan region and Catalonia, they find that the satisfaction of restaurants holds the positive relationship with the number of reviews before the COVID-19 pandemic. Considering the rating and reviews on TripAdvisor simultaneously to qualitatively analyse the interaction of different food cultures is also one of the contributions of this research.

The paper is organized as follows. In Section 2, the method and data collection process are described. Section 3 provides the data analysis. Section 5 concludes the principal results and further discussion.

2 METHOD AND DATA

2.1 Guiding Questions and Objectives

Since the issue concerns restaurant customers' distinction, the following questions are proposed before the data processing.

Q1: Is there a structural difference in the general comments to Chinese restaurants by customers of different nationalities?

Q2: Is there a structural difference in evaluating different types of Chinese restaurants by customers of different nationalities?

Q3: Are there significant differences between customers' positive and negative comments on different Chinese restaurants?

With the above questions, this study explores the divergence of customers' comments on three types of Chinese restaurants: Xi'er, a buffet restaurant serving both Chinese and Italian cuisines; WangJiao, a popular adapted Chinese restaurant having four branches in Milan; Chongqing Impression, a Sichuan cuisine Chinese restaurant being preferred by local Chinese, thereby to identify the different target clients. Hence, managers can formulate effective marketing strategies when considering the delivery platforms for different audiences. The other objective is to identify the differentiation in positive and negative reviews of different types of restaurants, and to provide reasonable suggestions for managers in subsequent operations.

2.2 Data Collection

Backward from May 28, 2020, the most recent 25 observations for each restaurant on TripAdvisor are collected. Only the complete data, containing the nationality of the reviewer, the time of the review, the rating (1-5 points), and the apparent overall evaluation, are included in the data set. For discovering the differences in evaluations by customers from different countries (i.e., from different food cultures), local Italians, Chinese and other nationalities should be considered when selecting reviews. Since the research is operated in Milan, Italians make up 50% of total collections, and non-Italians account for about 50%, where at least contains one-third of Chinese customers. Figure 1 presents the basic statistical characteristics of the nationality of the selected data. The remarkable point is that Xi'er restaurant locates near Milan Central Station and serves tourists primarily. Therefore, foreign tourists account for a more substantial proportion of its reviews.
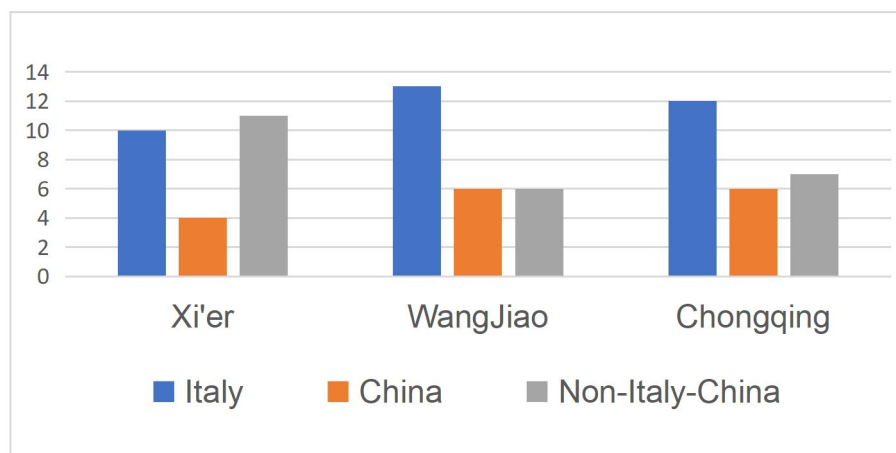

Figure 1 Proportion of Nationalities

2.3 Data Processing

The collected data is imported into webQDA as the internal resource. Descriptors are automatically generated by using restaurant (name of restaurants), date (time when the review was issued), country (reviewer's nationality), and rating (rating given by each reviewer, 1-5 points) as indicators. Then, the tree model is constructed to encode the three restaurants' overall evaluations, positive and negative comments.

3 RESULTS

After completing the above coding work, further data analysis through the matrix function and most frequent word function in webQDA is implemented.

3.1 Sentiment Analysis

The sentiment analysis through the ratings reflects the emotional changes of customers during the restaurant experience. The high or low scores indicate their praise or criticism of the restaurant. The role of sentiment analysis is to classify customers into different groups by emotional features of perceptions. The fact that sentiment analysis with ratings

makes the customer segmentation more accurate is confirmed in European markets [15]. In operations, we did manual marking of reviews and imported ratings into webQDA software, such that the matrix is generated.

First, the matrix is created to explore the differences in rating to overall Chinese restaurants of customers from different countries. Table 1 shows that the ratings of foreign tourists to Chinese restaurants are friendlier, mainly distributed at 3, 4 and 5 points. Since Italians are proud of the native food culture, their assessment of foreign catering is rigorous. 1 and 2 points appear in their ratings. Due to the familiarity with Chinese food, Chinese customers' evaluations are more objective and scattered at each level.

Table 1 Rating vs Country (Overall)

Country / Rating	Italy	China	Non-Italy-China
1	4	2	0
2	2	1	0
3	5	1	4
4	17	5	12
5	7	7	8

Table 2 Rating vs Country (Xi'er)

Country / Rating	Italy	China	Non-Italy-China
1	3	0	0
2	2	0	0
3	3	1	2
4	1	1	7
5	1	2	2

Then the same analysis is applied to different types of Chinese restaurants for checking the distinct differences among the target customer. In Table 2, some Italian customers give Xi'er low ratings since the restaurant also offers the Italian meals. Italians are highly loyal to their native cuisine and hard to accept the Italian meals made by Chinese restaurants. Conversely, foreign tourists' rating is much better. The following process with the most frequent words can indicate this disagreement between Italians and foreigners.

Table 3 Rating vs Country (WangJiao)

Country / Rating	Italy	China	Non-Italy-China
1	0	2	0
2	0	1	0
3	1	0	1
4	9	3	4
5	3	0	1

Table 4 Rating vs Country (Chongqing)

Country / Rating	Italy	China	Non-Italy-China
1	1	0	0
2	0	0	0
3	1	0	1
4	7	1	1
5	3	5	5

WangJiao, the new fusion with a lighter and sweeter flavour style, is deeply fascinated by the Italians. Table 3 presents that the Italians evaluate this restaurant highly, with 4 or 5, and no low ratings. However, the Chinese who live in Italy give some poor ratings because this adapted Chinese food loses its appeal. The Chongqing Impression restaurant is well known for its strong personality of Sichuan cuisine. Due to its authenticity, the Chinese appreciate it with the high scores, centred on 4 and 5 points. Meanwhile, highly contrary to the Italian food culture, Chongqing Impression obtains some comparably low ratings by the Italians who obey the native Italian eating habits, and some positive evaluations by the Italians who hold an open mind with the authentic Chinese food (Table 4).

3.2 Most Frequent Words

The most frequent words help to identify the main positive and negative comments. Figure 2 provides the most frequent positive comments for three Chinese restaurants. Xi'er restaurant is popular among foreign tourists because of the variety of food and affordable price, which meet the needs of major tourists. Keywords in WangJiao's positive evaluations are 'delicious' and 'food'. This adapted Chinese food with an exotic flavour satisfies the taste of local

Italians. The frequent positive comments of Chongqing Impression restaurant are 'authentic', 'original', 'Chinese', which mainly reflect the loyalty to native Chinese food culture.

Figure 2 Most Frequent Words of Positive Comments

Figure 3 shows the most frequent words of negative comments to these three restaurants. The main negative evaluations of Xi'er restaurant are 'food' and 'poor'. Typically, customers criticize the food quality in buffet restaurants. The most frequent negative comments on WangJiao focus on the hardware facilities and services. The waiting time is too long, and the restaurant is crowded. The negative evaluation in terms of dishes is mainly related to oil. As for the Chongqing Impression restaurant, significant negative comments are 'spicy' and 'informal', reflecting its characteristics, heavy oil, and strong taste. This feature will cause its evaluations to be highly diverse, but it also helps distinguish target consumers of Chongqing Impression more precisely.

Figure 3 Most Frequent Words of Negative Comments

4 CONCLUSIONS

This study confirms an apparent divergence in target clients of different Chinese restaurants. This divergence emphasizes that the original cultural background affects customers' perceptions to restaurants under multi-culture of food, which should be an important factor for managers formulating the marketing strategy. Xi'er, the Chinese buffet restaurant, offers both Chinese and Italian meals, which can meet the needs of foreign tourists in pursuit of satiety and novelty. Hence, the location of this type of restaurant is better to close to stations. The marketing budgets should be more involved in the physical advertising of public transportation, such as airports and railway stations. Most customers of adapted Chinese restaurants like WangJiao are local Italians, so the marketing strategy of restaurant managers should focus on local popular takeaway apps, such as 'Foodora'. Authentic restaurants like Chongqing Impression mainly attract Chinese students living in Italy and Chinese tourists. Therefore, advertisements on some Chinese version apps, such as 'Bentobus', could be better. Meanwhile, considering the limited budget of overseas Chinese students and tourists, more discount marketing strategies should be formulated.

There exist some limitations in this study. The small amount of data may lead to some qualitative analysis deflections. Therefore, further discussion should focus on enriching the amount of data, including increasing the number of various types of Chinese restaurants in other European cities where Chinese gather and the number of selected reviews.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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