

# How Does Restaurant Attribute Importance Differ by the Type of Customer and Restaurant? Exploring TripAdvisor Reviews

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## Abstract

This exploratory study choose three restaurants to compare restaurant attributes (value, service, atmosphere, and food). By applying a conjoint analysis, the comparative salience of the four key attributes are evaluated according to (1) an overall travellers group; (2) two different country-of-residence groups (foreign and domestic); (3) three different types of restaurants (low-priced food stance, low-priced indoor, and high-priced indoor); and (4) two different country-of-residence groups for each of three different restaurant type, with the collected reviews from TripAdvisor. The study findings may help restaurant managers develop specified strategies that fit the needs and expectations of different customer groups, with respect to their different restaurant types.

**Keywords:** restaurant attribute importance; traveller type; restaurant type; conjoint analysis; case study.

## 1 Introduction

People all around the world enjoy eating out, whichever it is with family members, friends, or business associates. With the advent of the Internet, people are exposed to a variety of information on eateries including professional and peer reviews on them. Especially, food aficionados would go through an extensive information search to find a great place to eat. Likewise, some travellers would be inclined to stop by at famous or popular eateries as this activity would probably place at the top of their 'to-do-list' along with sightseeing and shopping, while others would be more concerned about the price. This exploratory multiple-case study focuses on three particular restaurants in New York City of the U.S. that serve nice hamburgers, one of quintessential foods in the world with mass appeal, to compare restaurant attributes (i.e., value, service, atmosphere, and food) from the perspectives of foreign and domestic travellers. The comparative salience of the four key attributes are evaluated according to (1) an overall travellers group (Study 1); (2) two different country-of-residence groups (foreign and domestic travellers) (Study 2); (3) three different types of restaurants (low-priced food stance, low-priced indoor, and high-priced indoor) (Study 3); and (4) two different country-of-residence groups for each of three

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different restaurant type (Study 4). The data are collected during the year of 2013 from TripAdvisor, a global leading travel review websites. Using a conjoint analysis, a method to decompose an overall rating into four sub-categorical attribute values, this study tries to reveal how restaurant attribute importance differs by the type of customer group as well as restaurant. Based on the results of the four combined studies and their discussions, some meaningful propositions will be suggested for future empirical studies. The study findings and provided propositions may help restaurant managers develop specified strategies that fit the needs and expectations of different customer groups, with respect to their different restaurant types.

## **2 Literature Review**

### **2.1 Restaurant Research Using a Conjoint Analysis**

A conjoint analysis has not been widely used in the studies for restaurant service and dining. Among few studies, Becker-Suttle, Weaver, & Crawford-Welch (1994) conducted a pilot study on two different age segmentations (senior citizens and non-senior citizens) regarding customers' expectations on full service restaurant dining experience. Differences were found between two age groups in some attributes, but not all the attributes. Dube, Renaghan, & Miller (1994) developed 16 restaurant dining scenarios consisting of seven attributes and two levels for each attribute. Using a conjoint analysis, they investigated the relative importance of restaurant service attributes that impact consumers' repeat-purchase intention. As a result, pleasure and business purpose experiences generated different preferences by consumers. For both groups, the tasty food and attentive server attribute were, in respective order, the most important factors for their revisit intentions. However, for pleasure occasions, helpful server, atmosphere, and consistent food, in respective order, were next important factors. For business occasions, atmosphere, consistent food, and then helpful server were next three important factors, respectively. Alan (2001) designed an experiment to explore the trade-off between the service quality and price regarding the restaurant dining experience. He constructed nine hypothetical scenarios involving the three levels of the service quality (equivalent of five-star hotel service, regular restaurant service, and fast food service) and the three levels of the price for a lunch set (\$30, \$70, and \$180). Potential customers were asked what combinational levels of restaurants' service quality and price they rather prefer by ranking each scenario. A conjoint analysis on the interview questionnaire revealed the relative importance of price was greater than the same of service quality. However, the application of demographic data produced an interesting outcome. Although both female and male customers considered the price to be more important than the service quality, the difference between two attributes was much smaller for the females. Such prior research found that restaurant attribute importance differs by the various type of customer group, but most of the findings were from a survey methods, which leads to a lack of research focusing on traveller's online ratings (not answers from a survey), through which a more natural and truthful interpretation could be conveyed. Therefore, this study is to fill this gap by relying on customers' online ratings.

## 2.2 Restaurant Attributes

Among a variety of restaurant attributes identified and validated from extant research, four attributes (i.e., value, service, atmosphere, and food) were adopted in the study.

**Value.** Value is such a broad term, yet people instinctively associate it with the price one has to pay to obtain a product or service. It is a net benefit customers can gain after total costs incurred. Within the total costs, there are many variables one could perceive depending on personal preferences on which attributes are more important to self. In a restaurant dining experience, one customer could place the utmost importance on the price and quick and attentive service, while the other customer could stress on the quality of food and atmosphere of the premise in deciding whether they received good value for their money spent. Even if the customers feel the price is on a high side, if they realize they are getting good quality of food and service, they could feel they are receiving a good value for the money. Naturally, people who perceived to receive greater value for the money would feel more satisfaction than ones felt otherwise. Another aspect involves a competition. Consumers would compare one's value with competitors' and decide whether they received good value or not. Consumers' future intention and behaviour could be impacted by their perception of value in the present situation.

**Service.** Ladhari, Brun, & Morales (2008) categorized 29 items into five dimensions (tangibles, reliability, responsiveness, assurance, and empathy) to represent the perceived service quality for restaurants. The tangibles dimension deals with the customers' detection of the restaurant's appearance, cleanliness, comfortable seating area, and attractive and legible menu. The reliability measures the restaurant's dependable operation whether the ordered food correctly served on time and any mistakes are corrected without delay. The staff's attentiveness and expeditious action in serving customers are the focus of the responsiveness, whereas the servers' detailed knowledge of the menu items as well as their professional mannerism in answering customers' inquiries are the main element of the assurance. The employees' sensitivity in sincerely caring for customers' needs and wants is assessed by the empathy. All 29 items have statistically significant effects on both positive and negative emotions of consumers that would determine their satisfaction level, which in turn, would influence whether customers would recommend the restaurant to others, become a loyal patron, and spend more money on the menu.

**Atmosphere.** Atmosphere pertains to a surrounding area and its overall quality including cleanliness and comfortableness. The interior design of the premise could evoke certain emotions from consumers that would positively affect their purchasing behaviour. The elements (music, lighting, colour, and scent) that would stimulate a human's five major sensing organs are part of the atmospheric environment. These elements have a significant impact of consumers, emotions, attitudes, and behaviour. Customers inside the restaurant could be pleased or aroused by the restaurant's atmosphere or completely turned off by it. People could not return to the restaurant due to dismal atmospheric conditions. In the research by Liu & Jang (2009) on upscale restaurants, music, aroma, temperature, and the employees' appearance showed statistically significant relationship with the customers' emotions, which in turn would affect the future behavioural intentions.

**Food.** The term ‘food quality’ is such a general concept that lacks precise information. An inquiry of more detailed attributes within the term could suggest meaningful information. Kivela, Inbakaran, & Reece (1999) realized the importance of this problem and recommended presentation, tastiness, menu item variety, and temperature as critical sub-attributes that would contribute toward influencing the diners’ satisfaction and return possibility. Healthy options and freshness are other two attributes mentioned by them to be parts of the food quality attribute. In conducting a survey questionnaire on 300 patronages of five mid to upper scale restaurants located in the Midwest and eastern part of the U.S., the results indicated that presentation, taste and temperature, in respective order, had significant impacts on customer satisfaction, whereas healthy options replaced temperature in influencing return intentions (Namkung & Jang, 2007).

### **3 Research Methodology**

This research follows the format of exploratory multiple-case studies, encompassing three eateries located in New York City, the U.S. Shake Shack (SS), Burger Joint (BJ), and The Spotted Pig (TSP) were selected because their main dish is a hamburger (cheeseburger), a quintessential food in the world, of which the price is generally economical to appeal to the mass. In addition, the set-up for each eatery is different from one another as SS is large-sized food stance located in the middle of the park; BS is a small-sized fast-food type restaurant located inside the midtown hotel; and TSP is a stand-alone, full-scale restaurant with a full-service wait staff. Furthermore, the signature burgers’ (cheeseburgers) price differentiation is apparent among three eateries. Employing the information from the ‘restaurants travellers recommend’ section of Tripadvisor website, the importance values of four attributes (value, service, atmosphere, and food) are calculated using a conjoint analysis. A conjoint analysis is a de-compositional statistical method to examine the values of each attributes based on the overall ratings or rankings of each combination of attributes. This method portrays a real-life situation of consumers’ mind-set when selecting a particular product or service because consumers usually evaluate a product or service as a whole instead of scrutinizing each of its attributes and summing them up to arrive at a conclusive rating. For this research, travellers’ reviews on three eateries, expressed in the numerical ratings (i.e., integer) of one through five (i.e., one being the lowest and five being the highest scores), are de-composed into four attribute categories (value, service, atmosphere, and food) with one overall rating. By applying the scores of these five categories into a conjoint analysis, the importance value of each attribute is generated. Greater the importance value of attribute is, greater a traveller considers that attribute in providing an optimum rating for an eatery/restaurant. In other words, from the eatery/restaurant perspective, management should carefully control the combination values of four attributes in order to maintain the most favourable total part-worth values with consistency.

### **4 Data Collection**

The data for three restaurants were collected from Tripadvisor.com, a global leader in online travel sites, through a data parsing technique. Since the data covers one year period from January 1, 2013 to December 31, 2013, any possible biased reviews

resulting from seasonal factors could be minimized. The total of 471 reviews of which 212, 131, and 128 belong to SS, BG, and TSP respectively was qualified for the research after the data purification process. In diving the data set into two groups (domestic and foreign travellers), the tallies of domestic travellers for SS, BG, and TSP are 76, 51, and 41, and the same of foreign travellers are 136, 80, and 87 in a succeeding manner. The results of a conjoint analysis and propositions developed are not included in the current manuscript because analysis is still in the process of being completed.

## 5 Conclusion

The findings from the study are expected to contribute to both academy and practice. First of all, restaurant management is able to evaluate importance of each attribute. By comparing total importance with importance of each attribute, restaurant management could efficiently allocate resources. Restaurant managers must realize foreign and domestic travellers emphasize different attributes when dining. Second, a conjoint analysis was used on voluntary data (restaurant customers willingly expressing their opinions) for evaluation of the four attributes (value, service, atmosphere, and food) of restaurants. Compared to survey questionnaire and scenario based experiments, online product reviews (OPRs) better represent real thinking and intentions of customers. Unlike survey questionnaire which causes social desirability effect and common method bias, OPR data does not have to deal with this type of problem.

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