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# THE DIFFERENCE OF RESIDENT AND NON-RESIDENT CUSTOMER BASED ON SERVICE QUALITY IN THE RESTAURANT BUSINESS USING CART METHODOLOGY

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## **Abstract**

This study examined dining preferences of resident and non-resident groups when selecting a full-service restaurant in South Miami. The research objectives were (1) to examine the differences of restaurant dining preferences between resident and non-resident groups using independent samples *t*-test (2) to segment resident and non-resident groups on the basis of dining preferences using CART analysis. Independent samples *t*-test result indicated that there were statistically significant differences in two dining preferences between resident and non-resident groups: enough parking space, friendly and courteous service. Furthermore, CART analysis showed that five factors (enough parking space, friendly and courteous service, easy to understand menu, prompt service, and convenient location) most affected to segment resident and non-resident groups based on dining preferences. The result of this study will help tourist restaurants in making differentiated marketing strategies aimed at resident and non-resident groups.

**Keywords:** Customer segmentation, dining preference, resident and non-resident group, CART analysis

As the United States is experiencing a remarkable growth in the restaurant market, now nationally, there are over 945,000 restaurant locations making profits about \$566 billion a year (National Restaurant Association, 2009). There is a great deal of competition in order to survive in the restaurant industry. It is, therefore, necessary to understand how customers are targeted in order to sustain their status in a competitive restaurant market (Yüksel & Yüksel, 2002a). As identifying customer segmentation in the service area is the best way to develop more precise marketing strategies (Reid, 1983; Swinyard & Struman, 1986; Woo, 1998),

Customer segmentation is being spotlighted as the means to obtain a better understanding of a target market (Bowen, 1998; Richard & Sundaram, 1994). According to Lewis and Nightingale (1991), analysis of customer segmentation can provide plenty of benefits to the restaurant business. For example, it allows a restaurant manager to apply marketing strategies by adapting specific service variables sought by each segment. Thus, it is not surprising that marketers and scholars are interested in customer segmentation to succeed in making effective marketing strategies. In addition, dining preferences had the most significant effect on dining satisfaction in the restaurant business (Yüksel & Yüksel, 2002b); thus, measuring dining preferences also has become one of the most used theories in the restaurant business (e.g. Carman, 1990; Fu & Parks, 2001; Heung, Wong, & Qu, 2000; Tam, 2000).

Unlike previous studies, resident and non-resident groups were the focus in this study. Because food is a crucial part of attracting outside visitors, dining is perceived important to the overall satisfaction of the customer's trip (Gyimothy, Rassing, & Wanhill, 2000). Particularly in recent years, as the economy and society have grown, tourists are more likely to consider food among the many tourist attractions such as weather, beaches, theme parks, and beauty of the scenery when planning to travel (Sparks, Bowen, & Klag, 2003). According to Hjalager and Corigliano (2000), food has a close relationship with tourism because food is a critical factor which affects the tourist's decision-making. There are other studies to support this proposition. In Gyimothy et al.'s study (2000) approximately 34 to 54 percent of tourists considered dining options as an important factor. Similarly, in Sparks et al.'s study (2003), restaurants are chosen according to the attractiveness of a destination. Since food is an attractive element for tourists, it can in turn influence the choice of a destination location. Furthermore, tourists spend large sums of money on consuming food (Batra, 2008). In summary, as experiencing good restaurants results in revisits to the same location, restaurants play a critical part in the tourism industry. Therefore, restaurant owners and managers need to consider the basis of tourist's perception and the way tourism plays a critical role to the restaurant business. In addition, knowing the difference between resident and non-resident groups will be beneficial to restaurant owners who want to know resident preferences when making an ideal marketing strategy. Thus, understanding the difference in dining preferences between resident and non-resident is very meaningful.

We must emphasize that despite the importance of dining preference toward resident and non-resident groups, studies on resident versus non-resident are virtually unavailable. Thus, a better understanding of resident and non-resident groups based on dining preference is necessary in order to develop effective marketing strategies. The aim of this study, therefore, was to identify dining preferences of resident and non-resident groups when selecting a restaurant. More specifically, the research objectives are (1) to examine the differences of dining preferences between resident and non-resident groups (2) to segment resident and non-resident groups on the basis of dining preferences. Study results reveal which dining preferences are more important for resident or non-resident groups. Furthermore, study results will help tourist restaurants in making differentiated marketing strategies aimed at resident and non-resident groups.

## **Literature review**

### *Customer Segmentation*

Since the introduction of segmentation by Wendell R. Smith in the 1950s, the concept of segmentation played an important role in the competitive restaurant business (Nairn & Berthon, 2003). It is currently accepted that customer segmentation is a key factor in making successful service strategy (Lewis & Nightingale, 1991). According to Kotler, Bowen, and Makens (2005), segmentation is "dividing a market into distinct groups who might require separate products and/or marketing mixes" (p. 262). As the segmentation process is a way to divide groups into subgroups, which share common characteristics or behavior (Haley, 1968; Marcus, 1998), segmentation has benefits as follows: (1) saving marketing expenses and time (2) making efficient marketing strategies when targeting customer segmentation (Dickson & Ginter, 1987; Baalbaki & Malhotra, 1993; Wu & Lin, 2005). Thus, if the restaurant owner recognizes the targeting customer segmentation, marketing efforts can be more effective and profitable (Abell & Hammond, 1979; Reibstein, 1985). With analyzing customer segmentation, restaurant owners can also provide better service<sup>2</sup>, which could be differentiated from rival restaurants in the competitive hospitality industry (Kara, Kaynak, & Kucukemiroglu, 1997).

Because dividing the segmentation clearly is a significant way to understand targeting groups, customer segmentation has been studied for a long time by many researchers in the hospitality industry. Lewis (1981) used discriminant analysis to examine dining preference to segment goers and non-goers in family restaurants, popular restaurants, atmosphere restaurants, and gourmet restaurants. Study results showed that there were differences between goers and non-goers based on dining preference (food quality, menu variety, price, atmosphere, and convenience).

### *Dining preference*

Dining preferences is a critical determinant for sustaining the existence and development of the food industry (Chow et al., 2007; Heskett, Sasser, & Schlesinger, 1997). As the number of restaurants shows a rapid rise since 1970 (NRA, 2009), there is intense competition to survive in the restaurant business. Being able to satisfy customers' fundamental expectations in today's situation at best is one of the ways to assure business successful survival. Thus, to be successful in the restaurant business, first and foremost, restaurateurs should identify customers' dining preference to be able to exceed customers' expectation (Clark & Wood, 1998; Koo, Tao, & Yeung, 1999). As hospitality service is an aggregate of complex mixture (Reuland, Coudrey, & Fagel, 1985), restaurateurs focus on quality and style of food as well as other attributes such as attitude of the employees and the environment when making marketing strategies (Kivela, 1997).

Gregoire et al. (1995) studied tourists' dining expectations. Using data collected from 2,712 tourists who stop at visitor information centers, they found that cleanliness, food quality, and friendliness of staff were the most important factors when tourists select a restaurant. Qu (1997) used multiple regression analysis to examine important selection attributes when customers dine to Chinese restaurants in the state of Indiana. As a result, a four-dimension (food and environment, service and courtesy, price and value, location, and advertising and promotion) were established as important selection attributes from 14 selection attributes. Kivela (1997) examined dining preferences focusing on fine dining/gourmet, theme/atmosphere, family/popular, and convenience/fast-food restaurants in Hong Kong. Study results showed that customers' dining preference varied considerably by restaurant type, dining-out occasion, age, and occupation suggesting that the food quality and type of food should not be the only important attributes when making marketing strategies.

### **Methodology**

To find the differences between resident and non-resident based on service quality factors, the major analytical measurement will use CART methodology. As CART methodology in AnswerTree program allows the researcher to efficiently find the targeting group (SPSS, 2009), it is an excellent tool to divide resident and non-resident groups.

CART analysis has been widely applied in various areas like Medicine, Meteorology, Biology, Pollution or Image Coding (Chaudhuri, Huang, Loh, & Yao, 1994; Gey & Nedelec, 2001). CART method consists of two variables which are outcome (dependent) variable and predictor (independent) variable. Both qualitative and quantitative can be used with CART as independent variable or dependent variable (Breiman et al., 1984; Haughton & Oulabi, 1997; Thrasher, 1991). According to Lewis (2000), CART methodology can be defined as a form of binary recursive partitioning set into regions of increasing purity. The variable that can divide a group to increase purity stands for a classifying variable. A binary means the original group (parent node) can only be pruned by two groups (child node) (Jang, 1994; Lewis, 2000; Rovnyak, Kretsinger, Thorp, & Brown, 1994; Yeh et al., 2008). As the term of "increasing purity" is to divide segment into homogeneous group, the child node will be divided by homogeneity until a node meets a terminal node where there is no longer improvement for the homogeneity (Breiman et al., 1984; Denison, Mallick, & Smith, 1998).

### **Implication**

The results of this study will reveal the variable in service quality preferred by both the resident and non-resident group. Finally, this research will provide meaningful information for restaurant managers who want to know the characteristics of the resident or non-resident customer when making marketing strategies.

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