

# Gen Y consumers' perceptions of quick service restaurant and the mediating role of purchase intentions – A case study of McDonald's in Singapore

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Received: 07/02/2013 Accepted: 12/06/2013

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## Abstract

This paper examines purchase intentions and brand loyalty with five dimensions of Quick Service Restaurant. The objectives of the study are to investigate the associations between consumers' perceptions of Quick Service Restaurant and brand loyalty, and whether purchase intentions mediate these relationships. The measures used for the constructs were adapted from past studies and our hypotheses were tested using online survey data. This research was conducted from the perspective of Generation Y consumers in Singapore and we used McDonald's, the market leader in the Singapore fast food industry, as the context for this study. The findings provided support for all the hypotheses, namely, that consumers' perceptions of location, product menu, food quality, service crew and collectibles were positively related to purchase intentions. Moreover, the results indicate that the purchase intention variable played a mediating role in the relationship between location, product menu, food quality and brand loyalty. The findings have some useful managerial implications for the foodservice industry.

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**Keywords:** quick service restaurant, consumers' attribute perceptions, purchase intentions, brand loyalty, mediating role

**Citation:** Lim, C., S. Loh (2014) Gen Y consumers' perceptions of quick service restaurant and the mediating role of purchase intentions – A case study of McDonald's in Singapore. *European Journal of Tourism Research* 7, pp. 31-44

## Introduction

The food services business is one of the most diverse and fastest-growing segments of the hospitality industry (USDA, 2010). According to

the United States Department of Agriculture (USDA), the food service sector encompasses full service restaurants, limited service eating places, foodservice operators in education

institutions, lodging, recreational and other outlets. Quick Service Restaurants or QSRs (also referred to as fast food restaurants) are characterised by limited menu selections, prompt service, low prices, self-service facilities and product homogeneity within each fast food brand (Thomadsen, 2007). They can operate as independent businesses, local or international chain stores directly by the company or by franchisees. As the industry is highly competitive, QSRs try to differentiate their products in a variety of ways from their competitors to attract customers.

QSRs predominantly target the time-constrained value-seeking market and they serve what is widely known as convenience food. The food that QSRs sell is generally considered as low-involvement product; as such, customer's perception is an important element in their consumption and decision-making behaviour. In a recent MasterCard global survey on dining out, it was reported that Singaporeans ate at QSRs approximately seven times a month, second only to food courts and hawker centres (Lim, 2013). Evidently, the top three industry players in the local fast food industry include McDonald's, Kentucky Fried Chicken and Burger King (GoodFood.SG, 2012). As one of the world's largest QSR chains (QSR Magazine, 2012), it is not surprising that McDonald's is the market leader in the Singapore fast food industry in terms of outlet count. McDonald's operates 140 outlets in Singapore, followed by Kentucky Fried Chicken and Burger King as distant second and third QSR, with 68 and 42 outlets, respectively (GoodFood.SG, 2012).

According to Kurtz (2012), McDonald's astounding success is attributed to their core principles of quality, service, cleanliness and value. Some work needs to be done to further our understanding of QSR attributes which are perceived to be motivating factors to customers in Singapore. The purpose of this paper is to examine consumers' perceptions of QSR in terms of location (including ambience), food quality, product menu, service crew and collectibles. Generation (Gen) Y consumers are the market segment selected for this study. People in Generation Y are frequent diners,

particularly in fast food outlets, and they eat out more than any other generation (Gale, 2007). Given the exploratory nature of this study, we seek to investigate the relationship between Gen Y perceptions of QSR attributes and their purchase intentions in the context of McDonald's in Singapore. If these attributes motivate them to patronise McDonald's, their behaviour can lead to customer loyalty over time. Hence, we also aim to investigate the mediating role of purchase intentions in the relationship between QSR's attributes and brand loyalty.

#### Literature review & hypothesis development

Past research on Gen Y consumers in the foodservice industry is scarce. Hence the literature review is drawn from a mix of studies on QSR attributes and consumers' perceptions not necessarily related to Gen Y. Previous research has found that motivational factors for consumers to visit QSRs include location, ambience, convenience, service quality and product offerings. Consumers' perceptions of these factors can influence their intentions to purchase fast food products, which in turn can encourage re-patronage. Some studies have identified the dimensions of fast food demand and their implications on customer satisfaction and/or brand loyalty (see for instance Jain, 2008; Min and Min, 2011; Reich et al, 2010; Thomadsen, 2007). The literature review of the QSR attributes of interest underpins the formulation of hypotheses for the current study.

#### *Location*

In the marketing and consumer research literature, locational convenience typically involves consumers' perceptions of time and effort saving to reach the product/service provider (Berry et al, 2002; Wu, 2011). Accessibility influences consumers' choice of dining, and can be a crucial factor in determining the success of a restaurant (Parsa et al, 2005; Wu, 2011). Retail outlet location is an important attribute in product positioning as it reduces the non-monetary costs of consumption (Berry et al, 2002). QSRs situated at convenient locations where their products are easily available determine the type of fast food choices among the various brands consumers can purchase.

As a low-involvement product, the perceived benefits of locational convenience can be high for QSRs (Wu, 2011). When convenience is seen as an important consideration for consumers, Jones et al (2003) argue that the tendency for dissatisfied consumers to change their service provider may be low due to the high perceived switching cost involved. Customers also tend to remain loyal to the specific QSR outlet they frequent, as familiarity of the outlet influences consumers' evaluation of convenience and reduces the need to locate new dining places (Wu, 2011). Hence, fast food providers can utilize locational convenience for restaurant patronage, to retain customers, to improve their market share and encourage consumers to re-patronize.

While the perception of a convenient location influences purchase intentions, QSRs with attractive ambience may also draw customers to their location. Food service operators can add value to customers' purchase by improving the ambience of the restaurant (Shaharudin et al, 2011). Ambience factors include conditions in the environment such as temperature, lighting, cleanliness and general maintenance. By redesigning their restaurants, revamping its interior and image, the improvement in physical environment can enhance consumers' dining experience and purchase intentions. Hence, we hypothesise that:

H1: Consumers' perceptions of location (which include ambience of restaurant) are positively related to purchase intentions at McDonald's.

#### *Food quality and product menu*

Product or food quality is also regarded as a significant attribute to diners (Heide et al, 2008). Shaharudin et al (2011) point out that food quality perception is multidimensional. Taste, variety, freshness and presentation are often used to describe food quality. Perception of taste is subjective, and is often influenced by culture and geography. Importantly, the taste of food is correlated with consumers' satisfaction and it is the most important attribute in attracting customers' revisit to the eateries (Min and Min, 2011; Shaharudin et al, 2011).

Freshness of food affects food quality perception (Shaharudin et al, 2011; Richards

and Padilla, 2009). However, in satisfying consumers' demand for food freshness, fast food operators will inevitably incur higher costs. Conversely, QSRs that fall short of consumers' expectation could run the risk of losing their customers to competitors. Consumers' perceptions of food quality are also affected by the presentation of restaurants' food. Well-presented food can be associated with high quality ingredients used. QSRs have designed new innovative menus to address consumers' concern over nutritional diet (Richards and Padilla, 2009). As consumers value personal benefits, the perceptions of nutritional value in fast food consequently influence their satisfaction from consumption. Other food quality attributes include portion size and consistent temperature of food (Reich et al, 2010).

According to Richards and Padilla (2009), families also seek variety when it comes to the selection of QSRs, and meal choices at these restaurants. Menu variety and availability are also an issue associated with customer satisfaction. Therefore,

H2: Consumers' perceptions of food quality are positively related to purchase intentions at McDonald's.

H3: Consumers' perceptions of product menu are positively related to purchase intentions at McDonald's.

#### *Service crew*

As consumers become more conscious of food quality, most would also assess the value of a transaction by intangible aspects, such as service quality and value creation through interaction with the service crew (Oslen and Zhao, 2001). Cronin and Taylor (1994) defined service quality perceptions as "a consumer's evaluative perceptions of a service encounter at a specific point in time" (p. 127). Because of the heterogeneity characteristic of service, consistency in employees' service performance can be difficult to achieve. Thus, service quality "must be carefully guarded because a bad experience in one outlet can affect business in other outlets" (Zeithaml et al, 1985, p. 38). Ironically, Pine II & Gilmore (2011) comment that "Companies that falter on the service front

discover the hard way that the easiest way to turn a service into an experience is to provide poor service, ..." (p. 107). This comment applies to QSRs as much as to any companies.

The foodservice literature distinguishes between interpersonal service quality and service performance. Consumers' expectations of interpersonal service quality attributes include employees' greeting, responsiveness, assurance (knowledge, courtesy) and access (Parasuraman et al., 1988; Cronin and Taylor, 1992; Reich et al, 2010). Being the first point of contact in the transaction, frontline service employees play an important role. Often, it is the encounter with the visible part of the service process that could be the deciding factor in shaping a consumer's positive experience in a transaction, indirectly influencing customer loyalty and the firm's profitability. Even for customers who encounter standardised services at the McDonald's, the performance of individual employee can affect the interactive dimension of marketing and hence consumer's perception of service quality (Normann, 2000).

Customers' perceptions of service performance include tasks performed by employees such as quick food delivery and promptness (Reich et al, 2010). Even though QSR managers recognize the importance of delivering high service standards, Jain (2008) asserts that they are seldom aware of customer perceptions of quality service attributes. Customers' service quality perceptions are the result of the evaluations they make based on their expectation and experience (Caruana, 2002).

The SERVQUAL instrument has been used extensively to measure customers' perceptions of service quality in the restaurant industry. However, past studies display some discrepancies in the findings among the five service dimensions. For instance, the service quality which is ranked first in the respective studies include: empathy in Bojanic & Rosen (1994), reliability in Stevens et al (1995); assurance in Lee & Hing (1995); empathy (involving access) in Heung et al (2000). In their study on the influence of cultural dimensions, Kueh & Voon (2007) find that Gen

Y consumers in Asia have high expectations of service quality. They expect prompt reliable service, and the employees to be courteous, caring and competent. To stay competitive, a QSR must establish service excellence in relation to its customers' needs and expectations. Hence,

H4: Consumers' perceptions of service crew are positively related to purchase intentions at McDonald's.

#### *Collectibles*

Collectibles refer to toys that QSRs use to incentivize meal purchases (Lambert and Mizerski, 2005; McAlister and Cornwell, 2011). Since 1995, McDonald's in Singapore has used collectible toys in product bundling promotional strategies and target marketing to increase their sales of Happy Meal and Extra Value Meal products (Dhankar, 2011). Collectibles include popular Disney (Winnie the Pooh, Snoopy, Sesame Street characters), "Hello Kitty" and "Dear Daniel" toys, among others. The target markets are children, teenagers and young adults.

Evidently, McDonald's has achieved significant increases in sales. For instance, the record sales of Hello Kitty and Dear Daniel collectibles in Singapore made world headlines in 2000 (Dhankar, 2011). Subsequently, the new "Royal" series was launched the following year ahead of other countries. Recently, Hello Kitty plush toys were re-introduced with Extra Value Meal or beverage purchase. Obviously, a match between McDonald's offerings and the consumers' desires for collectibles has kept them or their parents interested in patronising the QSR.

These marketing practices have raised concerns about the habitual consumption of fast food (Richards and Padilla, 2009); that recurring exposure to food engendered by regular purchases to obtain collectibles may in turn result in real food preferences through 'associative learning experience' (Calvert, 2008; McAlister and Cornwell, 2011). We hypothesize that:

H5: Consumers' perceptions of collectibles' availability are positively related to purchase intentions at McDonald's.

#### *Purchase intentions and brand loyalty*

The relationship between purchase intentions and brand loyalty has been widely discussed in the marketing literature. Intention is concerned with consumers' expressed likelihood of purchase (Reich et al, 2010). Customer loyalty is characterised by re-purchase behaviour and brand loyalty over time. Brand loyalty is defined as repatronage or repetitive same-brand purchasing in the future (Balaji, 2011). Studies have shown that positive evaluation and high satisfaction of consumers' purchase experiences give rise to a higher probability of repurchase (Ruyter et al, 1998; Williams and Soutar, 2009). It is also suggested that brand loyalty results in positive word-of-mouth recommendations.

Brand loyalty includes behavioural and/or attitudinal dimensions. The behavioural component of loyalty is measured in terms of outcome (purchase) while the attitudinal dimension is a function of psychological processes (Caruana, 2002). A third aspect is identified as cognitive loyalty which involves conscious decision-making processes when consumers evaluate alternative brands before making a purchase. Most studies, as cited in Reich et al (2010), maintained that brand attitudes and consumption history denote brand loyalty. Likewise, we measure brand loyalty as a single construct. Therefore,

H6: Consumers' purchase intentions are positively related to loyalty to the McDonald's brand.

#### **Generation Y**

There are a number of competing definitions of Generation Y in terms of the birth years. Some refer Gen Y to people born between 1977 and 2003 (Benckendorff et al, 2010); between 1977 and 2000 (Kotler & Armstrong, 2012); or those born in 1977 and 1994 (Hawkins & Mothersbaugh, 2010; Johnson Controls, 2010). Our study focused on members of Gen Y aged 18 to 30 years old in 2012. The target consumers are characterized as late teens and young adults. This generational cohort born

after Generation X is also referred to as Millennials or Echo Boomers.

Several key characteristics of Gen Y have been identified, some of which seem to be somewhat conflicting (Benckendorff et al, 2010). Many Gen Y have more discretionary income than members of the previous generations because they grow up in dual-income household (Hawkins & Mothersbaugh, 2010). They are regarded as *special* and *sheltered* by their indulgent protective parents. Members of Gen Y are highly educated, ambitious, more entrepreneurial and focused on *achievement*. They have grown up with the internet and mobile communications (Kotler & Armstrong, 2012). They are extremely *confident*, socially concerned and emotional. Unlike their baby boomer parents, they are very technology-savvy and comfortable with digital technology. It is not surprising that the Y Generation is also known as Web Gen and Digital Gen. Some describe Gen Y members as individualistic, which seems to contradict their *team-oriented* and collaborative traits. They are highly connected to their social networks. Social networking sites like Facebook and Twitter, give members of Y Gen a sense of community, enable them to stay connected with friends and interact with others they have come to know as members of the same community. This generation is *unconventional*, who prefers flexible working and work-life balance.

In summary, the objectives of the current study are to examine the following research propositions:

- 1) Gen Y consumers' perceptions of QSR's dimensions (location, product menu, food quality, service crew, collectibles) are positively related to their purchase intentions at McDonald's.
- 2) purchase intentions mediate the relationship between QSR's dimensions and brand loyalty.

The conceptual model in Figure 1 shows the mediation process in which an independent variable (X) affects a dependent variable (Y) through the mediator (M). Path *a* represents the effect of X on M and path *b* is the effect of M on Y. The direct effect of X on Y is given by path *c*, and the indirect effect of X on Y via the

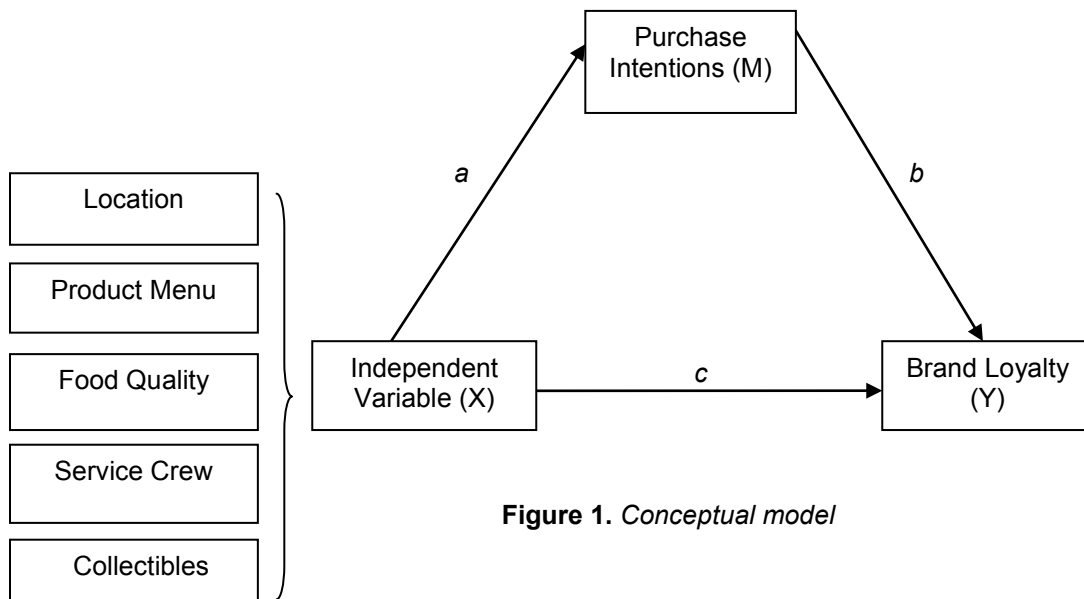


Figure 1. Conceptual model

mediator (M) is represented by the *ab*-path. The effects of *a*, *b*, *c* are estimated, and indirect effects are tested using the following equations:

$$M = \alpha_1 + aX + \varepsilon_1 \quad (1)$$

$$Y = \alpha_2 + cX + bM + \varepsilon_2 \quad (2)$$

Equation (2) shows that the independent and the mediator variables are included in the regression simultaneously (path *c*). For purchase intentions to function as a mediator, the indirect effect (given by the *ab*-path) must be significant (Zhao et al, 2010; Preacher and Hayes, 2008).

### Methodology

Convenience sampling method was used in the exploratory study. An online-based survey approach was adopted in which the Qualtrics Survey Software was used to administer web questionnaire. Participants were asked to rate the McDonald's products and brand in Singapore based on their perceptions of the attributes under study. A cover letter that assured respondents of confidentiality accompanied the questionnaire. The web surveys were disseminated through Facebook.com because the social networking site (SNS) was widely accessible by internet

and supported by mobile interactions. There were more than 2.6 million Facebook users in Singapore in 2011 (about 55% penetration of online population) and about 60% belonged to the 18- to 30-year-old demographic segment (Internet World Stats, 2011).

Using online platform to conduct the survey has speed, cost and flexibility advantages in implementation (Illum et al, 2010). It was extremely fast to launch the questionnaire with practically little or no cost involved; data were collected efficiently without the need for interviewers and data entry. We could also upload pictures of McDonald's collectible toys sold in Singapore, create an appealing questionnaire using colour and invite respondents to write about their experiences (if any). Unlike person-administered survey, using internet-based Facebook was less intrusive as respondents could participate in the survey at their own time. Furthermore, people with mobile phone access to the SNS could do the online survey anywhere, even while travelling on the mass rapid transport. Since our target population has high internet access rates and skill levels, this survey mode is efficient and cost-effective procedure for us.

The questionnaire was pre-tested on a group of 20 participants prior to implementation. The

feedback which was used to revise the questionnaire was mainly concerned with the lack of consistency in the wording and organization of some items. Moving forward, we rephrased all the items in 'positive' statements, and improved the layout of the questionnaire by placing the factors and related items in separate sections. The definition of collectibles along with sample pictures of past McDonald's collectible toys were provided. A detailed list of the variables and multi-item scales used can be seen in Appendix A.

Seven factors were measured and the participants were asked to respond to a list of descriptors (i.e. items) related to the constructs of interest. Standard scales were used to measure each item on a 5-point Likert scale that ranged from 1 ('strongly disagree') to 5 ('strongly agree'). The number of scale items used for each factor ranged from two to seven. Location and product menu were each measured by three items whereas service crew and collectibles were captured by four items each. Seven scale-items were developed to measure the food quality and brand loyalty dimensions. The purchase intention construct was measured by two items.

There were screening questions to determine respondents' appropriateness for the study. Respondents were asked if they had previously visited McDonald's and purchased collectibles from McDonald's. Only completed surveys with 'yes' responses to both questions were included in the database. We have a total sample of 179 respondents for our survey, most of whom were young adults of Gen Y aged 21-30.

The survey also gathered demographic information about the respondents and their frequency of patronage. According to Table 1, the majority of respondents were female (62.6%). About 56% of respondents had attained a college/diploma or bachelor degree. For income, the majority of respondents were in the low income category, earning less than \$1000 per month (52%). About 22% of respondents were middle-income earners of \$2000-\$3999. Additionally, 57% of the respondents patronized McDonald's about one to three times a month and most of them

purchased the Extra Value Meal (64%) as shown in Table 2.

**Table 1.** Demographic information of respondents

Variable	Category	Percent
Gender	Male	37.4
	Female	62.6
Education	Middle & High School	1.1
	College/Diploma	55.9
	Undergraduate	41.3
	Postgraduate	1.7
Monthly income	Under \$1000	52.0
	\$1000-\$1999	6.1
	\$2000-\$2999	10.6
	\$3000-\$3999	10.6
	\$4000-\$4999	2.8
	\$5000 and above	1.1
	Do not wish to disclose	16.8

**Table 2A.** Frequency of visit to McDonald's by respondents

	Frequency	Percent
1- 3 times a week	45	25.1
More than 3 times a week	1	0.6
1- 3 times a month	101	56.4
1- 5 times a year	32	17.9
Total	179	100.0

**Table 2B.** Type of meal most frequently purchased at McDonald's by respondents

	Frequency	Percent
Extra Value Meal	114	63.7
Upsized Extra Value Meal	48	26.8
A la Carte	17	9.5
Total	179	100.0

### Results and discussion

Principal components analysis (PCA), a data reduction method, was applied to the set of factors under study. For a sample of about 200 respondents, factor loadings of 0.4 or above are considered significant at the 5% level (Hair et al, 2010). Six of the initial 36 items were eliminated because they failed to have factor loadings of 0.4. Principal component factor

**Table 3.** Factor analysis results

Factor	Mean	Cronbach's alpha	Eigen value	% of variance
Location	4.0633	0.736	1.269	4.094
Product menu	3.6201	0.703	1.169	3.771
Food quality	3.3089	0.793	2.944	9.498
Service crew	3.6578	0.849	2.070	6.676
Collectibles	3.1718	0.810	1.868	6.026
Purchase intentions	4.0335	0.907	1.490	4.806
Brand loyalty	3.3094	0.878	9.154	29.529

**Table 4.** Hypothesis testing results

		Standardised coefficient
H1	Location → Purchase intentions	0.274*
H2	Food quality → Purchase intentions	0.385*
H3	Product menu → Purchase intentions	0.213*
H4	Service crew → Purchase intentions	0.144*
H5	Collectibles → Purchase intentions	0.178*
H6	Purchase intentions → Brand loyalty	0.505*

\* denotes  $p \leq 0.05$

analysis with varimax orthogonal rotation was conducted on the remaining 30 items to identify the underlying dimensions. The varimax rotation is regarded as the most efficient procedure to obtain orthogonal (uncorrelated) factors and the communalities are identical to the original estimates. Table 3 shows the mean score, Cronbach's alpha coefficient and eigenvalue of the factors. The mean of the factors ranged between 3.17 and 4.06. Location had a mean score above 4.0, which shows that this dimension was ranked highly in comparison with the other factors.

We examined the internal consistency of the items within each factor. For exploratory research, Cronbach's alpha of 0.60 is generally acceptable (Hair et al, 2010). An overall reliability coefficient of 0.91 was obtained. As shown in Table 3, Cronbach's alpha for each of the seven factors ranged between 0.70 and 0.91, indicating strong to very strong internal reliability. Purchase intentions and product menu had the highest and lowest alpha coefficient, respectively.

Eigenvalues were calculated and the seven factors had values greater than one, indicating that the scale items were unidimensional (UCLA Academic Technology Services, 2012). These factors represented more than 64% of the total explained variance. Alternate test used for factor retention included the screen test which

examined the graph of the eigenvalues. The break point indicated that seven factors were appropriate.

We conducted the Kaiser-Meyer-Olkin (KMO) sampling adequacy test to evaluate the partial correlations among the factors. An examination of the KMO measure of sampling adequacy suggested that the sample was factorable (KMO = 0.845), which was above the commonly recommended value of 0.6 (Neill, 2008). In addition, the Bartlett's test of sphericity was significant (with  $\chi^2 = 2903.87$ ,  $p < .05$ ), indicating significant correlations among the identified factors.

The initial OLS regressions examined the six hypotheses, and the standardized beta coefficients are presented in Table 4. Analysis of the *t* statistics associated with each of the estimated coefficients provided support for all the hypotheses at the 5% significance level.

A second regression analysis was conducted whereby we estimated the impact of all the perceived factors/attributes simultaneously on each of the dependent variables: purchase intentions and brand loyalty. Table 5 shows that there were direct positive and significant relationships between service crew and brand loyalty, but not between service crew and purchase intentions. The empirical findings also revealed that location and food quality were



**Table 5.** Regressions of perceived factors on purchase intentions and brand loyalty

Factor	Purchase intentions		Brand loyalty	
	Beta	VIF	Beta	VIF
Location	0.223*	1.336	0.229*	1.336
Food quality	0.352*	1.613	0.338*	1.613
Product menu	-0.031	1.433	0.071	1.433
Service crew	-0.073	1.338	0.232*	1.338
Collectibles	0.043	1.192	0.084	1.192

**Table 6.** Purchase intentions as a mediator between perceived factors and brand loyalty: Bootstrap estimates

Independent Variable	Indirect effect	Direct effect	Indirect Effect 95% Confidence Intervals	
	<i>ab</i> -path	<i>c</i> -path	Lower	Upper
Location	0.14 (2.20)	0.42 (5.29)	0.04	0.29
Product Menu	0.09 (1.97)	0.06 (4.86)	0.01	0.19
Food Quality	0.16 (3.52)	0.50 (6.59)	0.08	0.27
Service Crew	0.07 (1.38)	0.48 (7.10)	-0.02	0.19
Collectibles	0.08 (1.75)	0.06 (2.73)	0.001	0.17

Note: t-ratios in parentheses

significantly associated with purchase intentions, as well as brand loyalty. However, product menu and collectibles were not significantly associated with purchase intentions and brand loyalty. The variance inflation factor (VIF) of the estimated beta coefficients showed multicollinearity effects were insignificant as the VIF values were all less than 10 (Hair et al, 2010).

Numerous methods for testing hypotheses about mediation have been proposed. We used the approach provided by Zhao et al (2010) and Hayes (2013) to investigate the mediating effects depicted in Figure 1. The purchase intention dimension captured consumers' implicit satisfaction (or dissatisfaction) with the McDonald's brand; hence their likelihood to purchase/repurchase the products. Table 6 shows that:

(i) The indirect effects of location, product menu, food quality (independent variables) on brand loyalty through purchase intention mediator were significant at the 5% level (given by *ab*-path).

- (ii) The indirect effect of collectibles on brand loyalty through purchase intention mediator was significant at the 10% level.
- (iii) The indirect effect of service crew on brand loyalty through purchase intention mediator was not significant at the 10% level.
- (iv) The direct paths from each of the independent variable to brand loyalty were positive and significant (path *c*) at the 5% level.

According to Zhao, et al (2010)'s decision tree, the findings for (i) and (ii) above support complimentary mediations because the 95% confidence intervals in Table 6 do not include 0. Mediation hypothesis is rejected for (iii) and we have direct-only non-mediation in this case. It seemed that food quality had the greatest effect on the mediator. Evidently, food quality had the largest indirect effect and direct effect. Based on the findings, we have established that purchase intentions performed a mediating role in the relationship between four QSR attribute perceptions by consumers and brand loyalty.

## Conclusion

Foodservice operators like McDonald's Restaurants would like to acknowledge that they strive to provide value, quality and service to enhance consumers' dining experience, in hopes that they would become loyal customers. We have empirically tested the associations between consumers' perceptions of various QSR's attributes, purchase intentions and brand loyalty. The findings provided support for all the hypotheses that positive significant relationships exist between these variables. Additionally, the results indicate that the purchase intention variable played a mediating role in the relationship between location, product menu, food quality and brand loyalty.

Managerial knowledge of these attributes is useful because of the correlation between their perceived importance and customers' purchase intentions. By knowing which aspects of QSR that contribute significantly to purchase intentions and brand loyalty, managers are better equipped to increase customer satisfaction; in future planning and marketing of product offerings to attract, and retain customers.

We are not aware of any hospitality-foodservice research on QSRs that examined collectibles, among other attribute factors, as a determinant of purchase intentions and brand loyalty. Our findings suggest that collectible toys have the potential to influence brand loyalty as this factor contributes significantly to purchase intentions. The influential role of collectibles has been debated in public policy research (Calvert, 2008; McAlister and Cornwell, 2011). For fast food operators and marketers to project their social responsibility image, it is crucial that they consider carefully the motivational influence of collectibles on young adult consumers' food choices.

Online sampling approach and social media sites such as Facebook are efficient, and potentially useful means for administering surveys and targeting specific populations like Gen Y consumers. However, this study has several shortcomings. Among the limitations is the makeup of the sample. The research had left out members of Gen Y (potential

respondents) who did not have a Facebook account. This might give rise to significant coverage gaps as the latter was not able to participate in the web surveys. Another shortcoming is related to the 'openness' of online surveys, making it difficult to control respondents (Illum et al, 2010; Paris, 2013). The study had very low response rate and this could be attributed to Gen Y consumers ignoring our online survey invitation. Apparently, this is a 'difficult-to-sample' population. Dillman et al (2009) remark that "the 18- to 30-year-old demographic segment is probably the most difficult group to get to respond to surveys by any mode" (p. 10). Non-response bias due mainly to self-selection by respondents are major limitations but these problems are not unique to the online-based survey as they are also present in other modes of conducting surveys (Paris, 2013). Hence, the results should be interpreted with caution and generalisation should not be made of Gen Y consumers' perceptions across all QSR brands, and McDonald's brand in particular. Future research should also investigate perceptions of other QSR brands, and use mixed-mode sampling approaches to compare the findings of online versus offline survey respondents.

## Acknowledgements

The authors are grateful to two anonymous reviewers and the Editor-in-chief for their helpful comments and suggestions. We wish to acknowledge the contributions of Sharon Goh and Mei Ping Poh to this research. The financial support from the Nanyang Business School, Nanyang Technological University, is also gratefully acknowledged by the first author.

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**Appendix A. Variables and scale items used**

<b>Variable</b>	<b>Item</b>
LOCATION	McDonald's™ outlets are accessible McDonald's™ outlets are clean McDonald's™ outlets are well maintained
PRODUCT MENU	McDonald's™ has a wide range of product variety I don't mind paying more at McDonald's™ for a larger portion of food I am satisfied with McDonald's™ current menu selections
FOOD QUALITY	McDonald's™ products are fresh The serving portion at McDonald's™ is big McDonald's™ food presentation is appealing McDonald's™ food quality is good The meals are of high nutritional value McDonald's™ products are tasty There is consistency in McDonald's™ food quality (e.g. appropriate food temperature, fries are not too salty or bland)
SERVICE CREW	McDonald's™ has a high service standard The service crew is knowledgeable The service crew is approachable The service crew is courteous
COLLECTIBLES	I like to collect collectibles from McDonald's™ The collectibles make the McDonald's™ meal more worthwhile Only certain collectibles entice me I like collectibles that are functionally unrelated with the meal (eg. cup, soft toy)
PURCHASE INTENTIONS	I am likely to make a purchase at McDonald's™ I see myself eating at McDonald's™ again
BRAND LOYALTY	I will rank McDonald's™ as my first choice over other fast food restaurants McDonald's™ is a brand that I will trust I will recommend McDonald's™ to my friend I prefer McDonald's™ over other fast food restaurants I will continue to patronise McDonald's™ despite any negative reviews I will say positive things about McDonald's™ to other people Overall, I am satisfied with McDonald's™