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# Understanding customer satisfaction in the UK quick service restaurant industry

## The influence of the tangible attributes of perceived service quality

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### Abstract

**Purpose** – The purpose of this paper is to examine the impact of the five dimensions of service quality on customer satisfaction in the UK fast food market and to indicate which factors among the five dimensions have a main role in driving overall customer satisfaction.

**Design/methodology/approach** – Primary data in the form of 147 questionnaire responses were been collected from a variety of quick service fast food restaurants in the UK. Likert seven-point rating scales were used to structure the questionnaire. Data were collected from the customers at two KFC restaurants, two McDonald's restaurants, and one Burger King Restaurant.

**Findings** – The results of the analysis indicate that tangibles, responsiveness and assurance play the most important role in driving customer satisfaction in the UK fast food industry, followed by reliability and empathy. Results of correlation and regression analysis show that physical attributes (tangible) of service quality are key to customer satisfaction. In a nutshell, the tangibles variable is the most important factor driving customer satisfaction in the context of the UK fast food market.

**Originality/value** – This research incorporates unique and original insights in relation to the British fast food restaurants market and the results constitute novel findings pertaining to the importance of physical facilities and attributes. This account of the relative importance of service quality dimensions in fast food restaurants in the UK adds value to the field. The findings of this research have contributed to a better understanding of the main factors that influence service quality and customer satisfaction and have implications from a managerial point of view in the highly competitive UK fast food and wider foodservice industry.

**Keywords** Service quality, UK, Restaurants, Customer satisfaction, Fast food

**Paper type** Research paper

## 1. Introduction

The global fast food restaurant industry has experienced strong growth in recent years in response to changes in consumer tastes and challenging global economic conditions. According to IBISWorld (2015), in the period since the global financial crisis and the worldwide decrease in individuals' income, there has been a decline in spending on luxuries such as eating out which has increased consumer preferences for lower priced and more convenient food options. Globally, the fast food market has shown modest growth since 2011 reaching a total value of $2, 849,950.5 in 2015 (Marketline, 2016). In terms of global

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segmentation of the foodservice industry, full service restaurants represent 40 per cent of the market value, quick service restaurants (QSRs) and fast food are the second largest segment of the market with 22 per cent of market value, while pubs, clubs and bars have 11 per cent of the market value and 9 per cent relates to the accommodation sector (Marketline, 2016).

The foodservice industry in the UK grew by an annual compounded rate of 2.3 per cent over the period 2012-2016 and by 2.6 per cent in 2016 to reach a total value of $95.5 billion (Marketline, 2017). The foodservice industry in the UK is structurally different in relation to the most important sectors with pubs, clubs and bars representing 35.7 per cent of total market value, followed by the QSR and fast food sector with 26.1 per cent and full service restaurants with only 15.5 per cent. This is a significant cultural difference in preferences for foodservice encounters and differs markedly in comparison to other European and Western contexts, and relates to the popularity of eating out in pubs as evidenced in the growth of chains such as Wetherspoons and the higher-quality gastro-pub market. When it comes specifically to the fast food industry in the UK, the sector overall has seen major developments over the years such as the introduction of the drive-through restaurant format in the 1980s (Duffill and Martin, 1993) and the current expansion of home delivery services. It is clear that the global fast food industry and the UK fast food market in particular have grown consistently in the recent past and generate significant annual revenue. This makes for a promising operational context for fast food chains to improve their performance and increase profits, especially in the UK. This study therefore investigates the impact of service quality on customer satisfaction in the UK fast food restaurant industry for the purposes of developing understanding that might help drive such continued growth.

For this study, three leading chains in the UK fast food restaurant industry are taken as subjects: Kentucky Fried Chicken (KFC), McDonald's and Burger King. The three chains selected for this study together constitute 50 per cent of the total value in the UK fast food market with McDonald's the leading brand with 28.8 per cent, KFC with 12.5 per cent and Burger King with 8.7 per cent (Euromonitor International, 2017). The three restaurants also represent the only significant players in the QSR sector nationally and currently operate in a diverse fast food market, where there are significant challenges from Greggs bakery (8.7 per cent of market value), Subway (6.6 per cent), and the casual dining sector which includes Nando's (7.7 per cent) (Euromonitor International, 2017). In a competitive environment such as this, it is important that QSRs are able to understand the determinants of service quality and customer satisfaction.

Service quality can be seen as one of the key factors affecting customer satisfaction. Due to time and length restrictions, the research addresses the impact of service quality on customer satisfaction results of KFC, McDonald's and Burger King restaurants through the five dimensions of the SERVPERF model, namely tangibles, reliability, responsiveness, assurance and empathy. The purpose of this study is to examine the relationships between the five dimensions of service quality and customer satisfaction in order to find out which factors drive customer satisfaction. More importantly, the results of the research will contribute to the development of service quality as well as of customer satisfaction in fast food companies in the UK. This study seeks to answer the following questions:

- To identify specific service quality dimensions that have an impact on customer satisfaction in the UK fast food restaurant market.
- To explore the effects of tangibles, reliability, responsiveness, assurance and empathy on customer satisfaction in UK fast food restaurants.

## 2. Literature review

### 2.1 Service quality

Parasuraman *et al.* (1988, p. 14) defined service quality as "the discrepancy between consumers' perceptions of services offered by a particular firm and their expectations about firms offering such services". Parasuraman *et al.* (1985) proved that if expectations are higher than performance then perceived quality is lower than satisfactory and hence customer dissatisfaction happens. Service quality is also considered to be a perceived attribute based on the experience of the customer regarding the service that the customer perceived during the delivery process of the service (Zeithaml *et al.*, 1990). Delivering quality service means conforming to customer expectations on a consistent basis (Angelova and Zekiri, 2011). In the specific terms of the fast food restaurant, whenever personal exchanges occur between a customer and service employees, this can be considered to be a service encounter (Bitner *et al.*, 1990). Similarly, Shostack (1985, p. 243) defined a service encounter as "a period of time during which a consumer directly interacts with a service". Wilson *et al.* (2012) proved that many positive experiences create a composite image of high-quality service in the customer's mind, while a single negative experience can obliterate a composite image of high-quality service.

*Measuring service quality*. Measuring service quality is difficult because the evaluation of service quality is not only based on the outcome of a service, but this assessment is also made during the process of service delivery. Angelova and Zekiri (2011, p. 246) indicated that "measuring goods quality is easier because it can be measured objectively with indicators like durability and number of defects, but service quality is an abstract item". During the purchase of services, there are some tangible indicators which are usually limited to the service provider's facilities, equipment and personnel. If tangible evidence for evaluating quality is absent, the customer has to base the assessment on other indicators. Overall, the abstract nature of service quality creates difficulties for organisations in terms of defining variables, making measurements and also in understanding how consumers ultimately perceive services and service quality. There are, however, a number of well-established frameworks for analysis of service quality such as the Nordic Model (Grönroos, 1984), and the SERVQUAL (Parasuraman *et al.*, 1985), SERVPERF (Cronin and Taylor, 1992) and DINESERV (Stevens *et al.*, 1995) models as detailed below.

Gronroos/Nordic model. According to Chaipoopirutana (2008), Grönroos (1984, 2007), the initiator of measuring service quality, used a traditional customer satisfaction/dissatisfaction model to measure and explain service quality. Based on the work of Grönroos (1984), there are two variables: expected service and perceived service, both of which play an important role in measuring quality of service. Grönroos (1984) claimed that the corporate image can be considered a quality dimension and the image is created by technical and functional quality along with the effects of other factors such as traditional marketing activities (advertising, pricing, PR), WOM, ideology and tradition (Angelova and Zekiri, 2011).

The SERVQUAL model. Also based on the work of Grönroos (1984), Parasuraman *et al.* (1985) developed a conceptual framework called the gap model, to show causes of service quality shortfalls because they found that service quality perceptions are the consequence of the comparison of consumer expectations to actual service performance. Palmer (2011, p. 328) suggested that "the GAPS model is an analysis of the causes of differences between what customers expect and what they get". There are ten dimensions of service quality: tangibles, reliability, responsiveness, competence, access, courtesy, communication, credibility, security and understanding/knowing the customer. However, later on the authors reduced the ten dimensions to five and outlined a scale named SERVQUAL to measure possible gaps (Parasuraman *et al.*, 1988), listed below:

- Tangibles: aspects of physical facilities, equipment and personnel.

- Reliability: the ability to perform the promised service dependably and accurately.
- Responsiveness: willingness of the firm to help customers and to perform the service promptly.
- Assurance: competence and politeness of the personnel, and the capability to inspire confidence.
- Empathy: personalised assistance that the firm conveys to its customers.

The SERVPERF model. Based upon various conceptual and operational grounds, many researchers have criticised the limited effectiveness of the SERVQUAL model as a means of understanding customer satisfaction and loyalty. Cronin and Taylor (1992) developed an account of how the conceptualization and application of SERVQUAL does not address the associations between service quality, customer satisfaction and purchase intentions. They also discovered that the conceptual basis of the SERVQUAL scale does not accurately define customer satisfaction in its totality and, as a result, suggested the SERVPERF scale. Based on the studies of Cronin and Taylor (1992) on dry cleaning, banking, pest control and fast food industries, the researchers sought to prove the advantages of their "performance – only" (SERVPERF) model in practice (Chaipoopirutana, 2008). SERVPERF operationalises only the performance-related criteria within the SERVQUAL model and effectively eliminates the measures relating to expectation (Carrillat *et al.*, 2007). In terms of the fast food restaurant industry, Jain and Gupta (2004) confirmed that the SERVPERF scale is more successful than the SERVQUAL scale in explaining the service quality concepts and the distinctions between service quality scores in relation to the model dimensions. In this paper, the SERVPERF model will be applied to measure the service quality of fast food restaurants in the UK.

The DINESERV model. Based on the LODGSERV model, Stevens *et al.* (1995) built the DINESERV model to evaluate the expectations of customer of service quality in quick service, casual and fine dining restaurants. In the original DINESERV model, there were 40 statements about what should occur in a restaurant and these were developed into 29 items that were measured on a seven-point scale ranging from "strongly agree" (7) to "strongly disagree" (1) (Hansen, 2014). As a result of the DINESERVE framework being more directly concerned with restaurant service quality, there is a different emphasis in the measurements in relation to the original SERVQUAL dimensions that better matches the nature of the service encounter in this specific sector (Hanks *et al.*, 2017; Wu and Mohi, 2015). In particular, DINESERV pays more attention to the tangible aspects of service quality such as visual attractiveness, comfort and cleanliness. Markovic *et al.* (2010) supported the DINESERV model as a reliable and relatively simple tool to determine how consumers view a restaurant's quality and operations and to assist in finding out where the problems are and how to solve them and a significant body of research has emerged confirming the validity of the approach (Hanks *et al.*, 2017; Kuo *et al.*, 2016; Wu and Mohi, 2015). For the stated reasons above, the items from the DINESERV model will be tested in this paper.

### *2.2 Customer satisfaction*

*The concept of customer satisfaction.* Customer satisfaction deals with known circumstances and known variables. Providing customer delight is a dynamic, forward-looking process. A satisfied and delighted customer is a potential loyal customer and a positive word of mouth (WOM) (Oliver *et al.*, 1997). On the other hand, once customers have been delighted, their expectation levels are raised (Andaleeb and Conway, 2006), which means that service providers have to make an extra effort to satisfy these customers. Andaleeb and Conway (2006) indicated

that dissatisfied customers are behind the spreading of negative WOM. Potential customers are easily impacted by negative WOM and they may draw potential customers away from the service provider (Wilson *et al.*, 2012). With respect to the fast food industry, Khan *et al.* (2013) pointed out that all the determinants of customer satisfaction fell into one of seven categories which were physical environment, service quality, brand, promotion, customer expectations, price and taste of food. Their results concluded that the main factors for customer satisfaction were service quality and brand.

*Measurement of customer satisfaction*. According to Murambi and Bwisa (2014), measuring customer satisfaction can be seen as an effort to measure human feelings, and it is therefore very difficult at times for many researchers to do so. It is important to note that "measuring customer satisfaction provides an indication on how an organisation is performing or providing products or services" (Manani *et al.*, 2013, p. 192). Specifically, the NBRI (2015) proposed possible dimensions that one can use in measuring customer such as: pricing, quality of service, speed of service, trust in employees, types of other services needed, complaints, positioning in clients' minds and the closeness of the relationship between the customers and the firm.

According to Boulding *et al.* (1993), there were two conceptualisations of customer satisfaction, transaction specific satisfaction and cumulative satisfaction. In the transaction specific approach considers customer satisfaction as a post-choice evaluation judgment of a specific service encounter (Oliver, 1993). Fornell (1992) pointed out that cumulative customer satisfaction is seen as an overall evaluation that depends on the total purchase and consumption experience with a product or service over time. According to Wilson *et al.* (2012), transaction specific satisfaction provides essential data for identifying service issues and making immediate changes to improve customer satisfaction. They also proposed that cumulative customer satisfaction is important in predicting, customer loyalty and motivating a company's investment in customer satisfaction.

### *2.3 Relationship between service quality and customer satisfaction*

The works of Cronin and Taylor (1992) and Oliver (1993) revealed that while the concepts of service quality and customer satisfaction are distinct, there is a close relationship between them. Parasuraman *et al.* (1988) differentiated that while customer satisfaction is related to a specific transaction, perceived service quality is a global judgment or attitude relating to the superiority of service. Sureshchandar *et al.* (2002, p. 372) attested that "there exists a great dependency between service quality and customer satisfaction, and an increase in one is likely lead to an increase in another". In the works of Brady and Robertson (2001) on fast food restaurants in America and Latin America, they found that service quality and customer satisfaction were very closely related. Grönroos (2007) indicated that a perception of service quality comes first, followed by a perception of satisfaction or dissatisfaction with this quality.

Based on the paradigm of Wilson *et al.* (2012), Figure 1 illustrates the relationship between service quality and customer satisfaction. In terms of the fast food industry, according to Heung *et al.* (2000), Jain and Gupta (2004), Qin and Prybutok (2009), and Khan *et al.* (2013), price, product quality and service quality relate directly to customer satisfaction; however, comparing product quality and price, the perceived service quality factor plays the most important role on overall satisfaction.

### *2.4 Conceptual framework and hypotheses*

In terms of the fast food restaurant industry, Jain and Gupta (2004) stated that the SERVPERF model is a very popular model to measure service quality globally. The efficiency of the SERVPERF model was also tested by many researchers such as

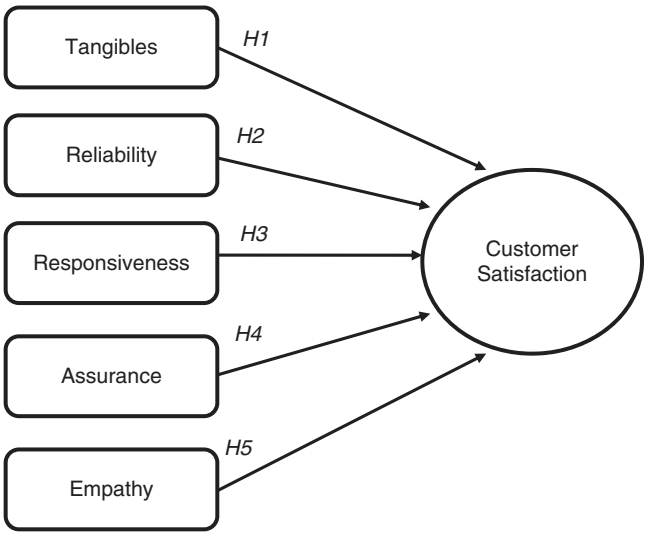



**Figure 1.**
Conceptual framework

Cronin and Taylor (1992), Jain and Gupta (2004), Qin *et al.* (2010), and Khan *et al.* (2013). Due to its popularity, the SERVPERF scale is applied to measure the perceived service quality of UK fast food restaurants in this study. There are five dimensions (tangibles, reliability, responsiveness, assurance and empathy) used to measure the service quality in the study. Based on the DINESERV model of Stevens *et al.* (1995), and the SERVPERF model of Cronin and Taylor (1992), 23 items were tested corresponding to the five above mentioned dimensions.

This conceptual framework illustrates the correlation between dependent and independent variables. In this framework, the five dimensions of service quality (tangibles, reliability, responsiveness, assurance and empathy) are the five independent variables and customer satisfaction is the dependent variable. The framework of the five dimensions is the foundation upon which the entire study is built to investigate the relationship between service quality and customer satisfaction. If customers are satisfied and provide the five dimensions of service quality as the reasons for satisfaction, it can be concluded that customer satisfaction has a significant relationship with the service quality dimensions. Based on the literature reviews, the hypotheses of this study were based on the fact that the five dimensions of service quality impact customer satisfaction. Based on the review of literature, the following hypotheses were formulated:

*H1.* The tangibles variable has a positive relationship with customer satisfaction in UK fast food restaurants.

*H2.* The reliability variable has a positive relationship with customer satisfaction in UK fast food restaurants.

*H3.* The responsiveness variable has a positive relationship with customer satisfaction in UK fast food restaurants.

*H4.* The assurance variable has a positive relationship with customer satisfaction in UK fast food restaurants.

*H5.* The empathy variable has a positive relationship with customer satisfaction in UK fast food restaurants.

## 3. Method

### *3.1 Data collection, research instrument*

We employ positivism and this paradigm uses the deductive approach which is the process of one step following the other in a clear and logical sequence. This paper applies survey methodology to support hypothesis testing of the relationship between service quality and customer satisfaction. We used the questionnaire method to maximise the response rate for this study (Creswell, 2014) as a survey strategy is the best way to collect large amounts of data from a significant population. It is also a cost-effective method where there are a large number of variables to be addressed. The survey strategy was useful for not only in collecting quantitative data for statistics and descriptive analysis but also in enabling the exploration of correlations between variables in order to achieve the research goals (Saunders *et al.*, 2012). When it comes to questionnaire structure, there are three parts of the survey. The first part contains three questions which ask general personal information for classification purposes. In the second part, there are 23 questions which explore the respondents' perception towards the service quality of the restaurants. Based on Likert seven-point rating scales, the questions sort the answer statements from "strongly agree" (7) to "strongly disagree" (1) for the respondents to rate (Kumar, 2005). The third part is divided into six questions which are designed to inquire about the overall level of satisfaction of respondents with service quality in the restaurants they visited.

Before releasing the final version, the questionnaire was tested by five random customers in the restaurants to remove redundant questions. The structure of the questionnaire survey was also checked by restaurant staff to ensure that it was easy to follow. Based on this feedback, some necessary improvements were made. We recognised that confusing questions could lead to ambiguous answers, so sought to improve questions by way of pilot testing which was also important given the potential for cultural difference between the UK and the North American context in which the SERVQUAL and DINESERV models originated. The pilot test was carried out to ensure the reliability and validity of the dimensions and the familiarity of customers with the items chosen for measurement. This pilot study was undertaken with a small sample of five customers in each restaurant in order to finalise a list of 23 items for the study before the questionnaire was distributed in the main phase of data collection.

In total, 147 questionnaire responses were collected from the customers at two KFC restaurants, two McDonald's restaurants, and one Burger King Restaurant in the city of Bristol, in the South-West of England, in the UK. An average of 30 questionnaires was used at each of the five restaurants using a random sampling technique whereby every fifth customer was approached for participation during periods of field working. Data collection was undertaken at predetermined times which were related to periods of peak and lower demand in order to maximise the number of responses at the same time as ensuring that any variation in the customers using the restaurants at different times of day was also captured. A total of four to five hours was spent in each restaurant. Respondents were invited to answer the questionnaire after they finished their meals, so that they had more "neutral" time for responding to prevent threats to reliability. For convenience, the respondents were invited to complete the questionnaire on tablets so that the data were immediately saved at the time of collection. Data collection was conducted based on the voluntary and anonymised submissions of the respondents, ensuring ethical practice.

Data were analysed using SPSS software. Chatterjee and Hadi (2006) defined regression analysis as an analytical method that examines the possible functional relationship which may exist among different variables at a given point in time. For these reasons, this research applies multiple regression analysis to examine the proposed hypotheses on the constructs

of the five service quality dimensions (tangibles, reliability, responsiveness, assurance and empathy) and customer satisfaction. It is important to note that the outcomes of regression analysis will indicate what factors impact customer satisfaction and which have the most influence on customer satisfaction.

The following 23 items were incorporated in relation to each of the five dimensions of service quality (adopted from Cronin and Taylor, 1992; Stevens *et al.*, 1995; Qin and Prybutok, 2009; Qin *et al.*, 2010) for the purposes of this study:

(1) Tangibles:

- parking availability;
- seating availability;
- clean and comfortable dining areas;
- well-dressed staff members;
- easily readable menu;
- clean restrooms; and
- adequate availability of sauces, salt, napkins, wet-naps and cutlery.

(2) Reliability:

- the speed of service is as fast as promised;
- dependability and consistency;
- quick corrections to anything that is wrong;
- accurate billing; and
- accuracy of customer's order.

(3) Responsiveness:

- during the rush hours extra employees are provided to help maintain speed and quality of service;
- prompt and quick service; and
- employees willing to help and handle customers' special requests.

(4) Assurance:

- customers feel comfortable and confident in dealing with establishment;
- feel safe for financial transactions;
- employees are consistently courteous; and
- employees have knowledge to answer customer questions.

(5) Empathy:

- employees are sensitive and anticipate individual customer needs and wants rather than always relying on policies and procedures;
- ability to make customers feel special;
- employees are sympathetic and reassuring if something is wrong; and
- customers' best interests are at heart.

## 4. Results

### 4.1 Description of research sample

The information shown in Table I contains the traditional demographic groups based on age, gender and the frequency of visits to UK fast food restaurants.

### 4.2 Measurement assessment

*Reliability*. According to Hair *et al.* (1995), if Cronbach's $\alpha$ is over 0.7 in general and over 0.5 for the item-total correlation; it means the survey questions in scale are reliable and connective. Cronbach's $\alpha$ coefficients of tangibles, reliability, responsiveness, assurance and empathy are 0.925, 0.828, 0.846, 0.932 and 0.836, respectively. The Cronbach's $\alpha$ coefficients of the five variables are over 0.8 and much higher than 0.7, so that they exceed the suggested criterion. Furthermore, all the variables' item-total correlations are over 0.5, with the lowest being 0.520 and the highest being 0.921. Thus, it is clear that the variables meet all requirements of reliability for analysis.

### 4.3 Factor analysis

*Kaiser-Meyer-Olkin (KMO) and Bartlett's test*. Factor analysis is generally employed to clarify the underlying structure among the variables in the analysis. Scale reliability for variables and group of variables has indicated the suitability of the data collected for structure detection. In other words, the KMO and Barlett's test measure the sampling adequacy which should be higher than 0.5 for a satisfactory factor analysis to progress. SPSS results indicate that the KMO is 0.859 which is much greater than 0.5. As a result, it indicates that factor analysis is relevant for this research. According to Malhotra and Birks (2007), a factor analysis is only significant when the variables concerned are suitably correlated to one another. According to Burns and Burns (2008), this result implies that the variables are related.

| Classification | Frequency | % |
|---|---|---|
| *Gender of respondents* | | |
| Female | 77 | 52.4 |
| Male | 69 | 46.9 |
| Prefer not to answer | 1 | 0.7 |
| Total | 147 | 100 |
| *Age of respondents* | | |
| Under 18 | 25 | 17.0 |
| 18-24 | 36 | 24.5 |
| 25-34 | 44 | 29.9 |
| 35-49 | 18 | 12.2 |
| 50-64 | 13 | 8.8 |
| 65 to over | 9 | 6.1 |
| Prefer not to answer | 2 | 1.4 |
| Total | 147 | 100.0 |
| *Visiting times per month* | | |
| 1-3 times | 17 | 11.6 |
| 4-6 times | 22 | 15.0 |
| 7-9 times | 55 | 37.4 |
| More than 9 times | 53 | 36.1 |
| Total | 147 | 100.0 |

**Table I.** Respondents' profile

Individual observed response is supported by underlying common factors. The loading factor is based on the weights and the correlation between each variable and the factor. According to Daniel and Berinyuy (2010), the higher the number, the more important the variable is in defining the factor's dimensionality. In contrast, if the value is negative, it means that there is an opposite influence between the variable and the factor. It is clear that all variables have practically significant loading on every certain factor, so that there are no eliminated variables on the table. The individual variables, which are greater than 0.5, are chosen for the specific factors. Finally, the five factors are generated from 23 individual variables and labelled as five major dimensions of service quality.

*4.4 Regression analysis*

As discussed in the literature review, it is assumed that there is a relationship between the five dimensions of service quality (tangibles, reliability, responsiveness, assurance and empathy) and customer satisfaction in UK fast food restaurants. In this part, the regression analysis will be conducted to examine the rate of significance in the relationship between the independent variables, tangibles, reliability, responsiveness, assurance and empathy, and the dependent variable (customer satisfaction).

The formula for regression analysis is as follows:

$$\text{Customer satisfaction} = \beta_0 + \beta_1 \times \text{tangibles} + \beta_2 \times \text{reliability} + \beta_3 \times \text{responsiveness} + \beta_4 \times \text{assurance} + \beta_5 \times \text{empathy}$$

Table II indicates the model summary of regression analysis. The $R$-value with 0.985 is known as the correlation coefficient between the dependent and independent variables. According to Hair (2010), the $R^2$-value which accounts for 0.971 illustrates that 97.1 per cent of the variance in customer satisfaction is explained by the five independent variables, tangibles, reliability, responsiveness, assurance and empathy.

Hair (2010) suggested that the function of the ANOVA table is to present the statistic test for the overall model fit in terms of the $F$-ratio. Table III shows that the independent variables influencing the dependent variable are significant with a $p$-value of 0.00. It implies that if $p$ is less than 0.001, there is 99 per cent certainty of a linear relationship between the variables. On the other hand, Table IV provides the coefficients of the variables with collinearity statistics.

**Table II.**
Model summary

| Model | $R$ | $R^2$ | Adjusted $R^2$ | SE of the estimate |
|---|---|---|---|---|
| 1 | 0.985[a] | 0.971 | 0.970 | 0.39061 |

**Note:** [a]Predictors: (constant), assurance, reliability, empathy, responsiveness, tangibles

**Table III.**
Significance of independent variables on dependent variable

| | ANOVA[a] | | | | |
|---|---|---|---|---|---|
| | Sum of squares | df | Mean square | $F$ | Sig. |
| *Model 1* | | | | | |
| Regression | 716.486 | 5 | 143.297 | 939.171 | 0.000[b] |
| Residual | 21.514 | 141 | 0.153 | | |
| Total | 738.000 | 146 | | | |

**Notes:** [a]Dependent variable: customer satisfaction; [b]predictors: (constant), assurance, reliability, empathy, responsiveness, tangibles

| | Unstandardised coefficients | | Standardized coefficients | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | *B* | SE | *β* | *t* | Sig. | Tolerance | VIF |
| *Model 1* | | | | | | | |
| (Constant) | 5.286 | 0.032 | | 164.065 | 0.000 | | |
| Tangibles | 2.009 | 0.032 | 0.894 | 62.152 | 0.000 | 1.000 | 1.000 |
| Responsiveness | 0.480 | 0.032 | 0.214 | 14.852 | 0.000 | 1.000 | 1.000 |
| Empathy | 0.403 | 0.032 | 0.179 | 12.458 | 0.000 | 1.000 | 1.000 |
| Reliability | 0.422 | 0.032 | 0.188 | 13.048 | 0.000 | 1.000 | 1.000 |
| Assurance | 0.548 | 0.032 | 0.244 | 16.939 | 0.000 | 1.000 | 1.000 |

**Note:** Dependent variable: customer satisfaction

**Table IV.** Coefficients

Based on the collinearity statistics, according to Janssens *et al.* (2008), the Varian inflation factor (VIF) is a test to indicate that the variables are not highly correlated with each other. Table IV shows that the VIF of the five independent variables is equal to 1.000. It implies that the value illustrates a complete lack of multicollinearity. It is evident that all tolerance values, which must be higher than 0.5 to prevent multicollinearity (Janssens *et al.*, 2008), are 1.000. As a result, it can be said that the five independent variables are unaffected by each other and verifying the appropriateness of conducting the regression analysis. Moreover, the results shown in Table IV also indicate that the significance of the independent variables is 0.000 which is less than 0.05. Therefore, it can be concluded that the five independent variables have an influence on the dependent variable (customer satisfaction).

According to Hair (2010), the regression coefficient (*B*) and the standardized coefficient ($\beta$ coefficient) present the change in the dependent measure for each unit change in the independent variable. With the coefficients provided in Table IV, the formula for regression analysis is:

$$\text{Customer satisfaction} = 0.894 \times \text{tangibles} + 0.188 \times \text{reliability} + 0.214 \times \text{responsiveness} + 0.244 \times \text{assurance} + 0.179 \times \text{empathy}$$

It is clear that the $\beta$-values of the independent variables are positive and greater than 0. Therefore, it is important to note that there is a positive correlation between the five independent variables and the dependent variable. Based on the $\beta$-values, if tangibles, reliability, responsiveness, assurance and empathy factor change one unit, customer satisfaction will change 0.894, 0.188, 0.214, 0.244 and 0.179 units, respectively.

*H1*: the results show that the $\beta$ coefficient of tangibles is highest and positive at 0.894 and with $p < 0.05$. Therefore, the variable tangibles and customer satisfaction have a significant and positive relationship. It is important to note that *H1* is supported.

*H2*: based on Table IV, it is obvious that the factor reliability has a positive influence on customer satisfaction with a $\beta$ coefficient of 0.188 and $p < 0.05$. Thus, it can be accepted that *H2* is supported.

*H3*: regarding the relationship between responsiveness and customer satisfaction, it can be seen from the results of Table IV that the $\beta$ coefficient and $p$-value of responsiveness are 0.214 and less than 0.05, respectively. As a result, responsiveness has a positive impact on customer satisfaction. Thus, *H3* is supported.

*H4*: the results from Table IV indicate that assurance is significant in predicting the customer satisfaction with second highest $\beta$ coefficient (0.244) and 0.00 in $p$-value (lower than 0.05). Consequently, it is evident that *H4* is supported.

*H5*: finally, with the $\beta$ coefficient 0.179 and $p < 0.05$, the research findings point out that empathy is positively related to customer satisfaction of fast food restaurants in the UK. As a result, it can be concluded that *H5* is supported.

## 5. Discussion, conclusion and implications of research

The aim of the first hypothesis was to establish a possible causal relationship between tangibles and customer satisfaction in the context of the UK fast food industry. Its essential elements earned the highest coefficient value of 0.894. Tangibles play a key role in driving customer satisfaction. Heung *et al.* (2000) and Khan *et al.* (2013) also proved that "tangibles" has a positive impact on customer satisfaction in restaurants in Hong Kong, and Pakistan's fast food industry. Similarly, Qin *et al.* (2010) maintained that the tangibles of a fast food restaurant directly impact a customers' experience and on its service.

The second hypothesis tests the correlation between "reliability" and customer satisfaction of fast food restaurants in the UK. The correlation of reliability is significant at the 0.05 level with a low coefficient value of 0.188. It is clear that this factor has a weak influence on customer satisfaction. Similarly, Bougoure and Neu (2010) claimed that the level of customer satisfaction and the reliability of service in Malaysia's fast food industries have a weak relationship. Additionally, the research results of Agbor (2011) indicated that the level of satisfaction depends lightly on the reliability of service sectors.

The result of the third hypothesis is supported by the high coefficient value of 0.214 at the significant correlation (0.000 of *p*-value) with customer satisfaction. In this research, "responsiveness" is comprised of only three items; however, it has a higher coefficient value (0.214) than the other two factors empathy (0.179) and reliability (0.188), which contain four and five items, respectively. The outcome of the third hypothesis is in line with previous studies conducted in fast food restaurants in China (Qin and Prybutok, 2009) and in Malaysia (Bougoure and Neu, 2010).

The purpose of *H4* was to examine the correlation between assurance and customer satisfaction. The result of the hypothesis provides a high coefficient value of 0.244 with a *p*-value less than 0.001. It can be said that the more "assurance" customers perceive, the more they are satisfied. This outcome is further confirmed by a previous study examining Malaysian fast food restaurants (Bougoure and Neu, 2010). Similarly, the result of the study done by Heung *et al.* (2000) in Hong Kong's airport restaurants also suggested that the higher a customer evaluates "assurance", the higher is the level of satisfaction.

Finally, based on the data analysis, the coefficient value (0.179) of "empathy" is lowest compared to other factors. It can be said that there is weak impact of empathy on customer satisfaction in the context of the UK fast food industry. The result is confirmed by previous studies that empathy lightly affects customer satisfaction (Agbor, 2011). According to Heung *et al.* (2000), the empathy factor is rarely associated with QSRs. Overall, based on the evidence, empathy is not a key driver in customer satisfaction. However, the research finding supports *H5*.

### *5.1 Theoretical implications*

This research contributes empirical support to the present theories which focus on the influence of the five service quality dimensions on the satisfaction of customer in fast food restaurants in the UK. It is worth noting that the variable "tangibles" plays an essential role in driving customer satisfaction. In addition, responsiveness and assurance are two further fundamental factors which significantly impact customer satisfaction in the UK fast food market. Similarly, this study suggests that reliability and empathy are also important for the overall customer satisfaction of QSRs. It is clear that there is a significant relationship

between service quality and customer satisfaction. Furthermore, based on the outcomes of the five hypotheses, the nomological validity of the SERVPERF model is valid as an efficient tool in this study.

*5.2 Managerial implications and limitations*

The findings of this research have contributed to a better understanding of the main factors that influence service quality and customer satisfaction in the UK fast food market and specifically in the QSR sector. There are clear implications from a managerial point of view in a highly competitive UK fast food industry in understanding how customers evaluate their experiences and how this relates to satisfaction. The "tangibles" variable is the most essential factor driving customer satisfaction in the context of the UK fast food market and this is an area in which restaurant settings potentially have an advantage over takeaway and convenience-based competitors. It is important for fast food restaurants to maintain attractive, clean and comfortable dining areas, with clear menu boards, well-maintained restrooms and good availability of sauces, cutlery, trays, napkins, and utensils. This is especially important in a British context where the largest foodservice market segment is the pubs, clubs and bars sector which traditionally offers more comfortable surroundings than QSRs. British consumer expectations when eating out are likely to be shaped by pubs to a greater extent than by full service restaurants, and this may be critical for fast food managers to understand given that pubs are much more price competitive with QSRs and thus may readily be chosen over McDonald's, KFC and Burger King.

This study uses only 147 questionnaire surveys, and this is a modest number and represents the largest single limitation of the study. The second limitation is that the framework of the study is restricted to its own objectives. This signifies that there are other possible factors that may influence customer satisfaction, such as product quality and price. Thus, the five service quality dimensions are not the only factors that have an effect on satisfaction. Consequently, based on the second limitation, future studies should examine other factors, such as cleanliness and specific behavioural traits of staff and customers that may impact customer satisfaction in UK fast food restaurants as well as developing a focus on understanding the determinants of customer satisfaction and service quality in the pubs, clubs and bars sector for comparative purposes. This is likely to prove important in a very diverse fast food marketplace such as that found in the UK which has seen significant recent growth in takeaway, casual dining and eating in pubs, clubs and bars. The distinctive competitive environment indicates that the QSR sector cannot afford to be complacent with regards to service quality and customer satisfaction.

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