

# The Effect of Service and Food Quality on Customer Satisfaction and Hence Customer Retention

Ahmad A. Al-Tit<sup>1</sup>

<sup>1</sup>Business Administration Department, College of Business & Economics (CBE), Qassim University, Kingdom of Saudi Arabia

Correspondence: Ahmad A. Al-Tit, Business Administration Department, College of Business & Economics (CBE), Qassim University, Kingdom of Saudi Arabia. E-mail: aa.altit@qu.edu.sa; ahmteet@yahoo.com

Received: August 5, 2015 Accepted: September 18, 2015 Online Published: September 23, 2015

doi:10.5539/ass.v11n23p129

URL: <http://dx.doi.org/10.5539/ass.v11n23p129>

## Abstract

The aim of this study was to investigate the relationships between service quality, food quality, customer satisfaction and customer retention in limited service restaurants in Jordan. A questionnaire-based survey was distributed to 400 students served at 10 limited service restaurants in the neighbourhood of universities in Amman, the capital city of Jordan. Service quality was measured in terms of SERVQUAL attributes. The key dimensions of food quality, customer satisfaction and customer retention were identified through literature. The data collected (283 valid questionnaires) were analysed using SPSS 20.0. The findings showed that service quality and food quality have a positive influence on customer satisfaction. In addition, service quality dimensions besides customer satisfaction have a positive influence on customer retention. Finally, the results confirmed that customer satisfaction mediates the relationship between service quality and customer retention. The small size of the sample is the main limitation of this study. The practical implications of this study are founded on the fact that limited service restaurants in the neighbourhood of universities should realize the critical role of service and food quality in satisfying their customers as an antecedent of their retention. This study is original as it examines the relationships between service and food quality and customer satisfaction and retention in a specific type of restaurants in Jordan.

**Keywords:** service quality, food quality, customer satisfaction, customer retention, limited service restaurants

## 1. Introduction

Service quality has been regarded an antecedent of customer satisfaction (Kim, Hertzman, & Hwang, 2010), which in turn results in customer retention (Boonlertvanich, 2011). Hence, investigating all these constructs can assist companies not only to meet or exceed their customers' expectations, but also to affect their intentional behaviour.

Many studies have been conducted examining service quality, food quality and customer satisfaction constructs in different settings in different countries, for example the healthcare industry (Yeşilada & Direktör, 2010), the automobile repair services sector (Izogo & Ogba, 2015), the hotel industry (Dedeoğlu & Demirer, 2015), retail settings (Anselmsson & Johansson, 2014; Omar, Shahrudin, Jusoff, & Ali, 2011), tourism industry (Debata, Patnaik, Mahapatra, & Sree, 2015; Al-Tit & Nakhleh, 2014), the gaming industry (Wu, 2014), the telecoms and cellular sector (Ahmed et al., 2010; Ali, Rehman, Yilmaz, Nazir, & Ali, 2010; Omotayo & Joachim, 2008), public transport (Kumar, 2012), the banking sector (Malik, 2012) and hair care services (Jeon, Dant, & Gleiberman, 2014), as well as the food industry (Marinelli, Simeone, & Scarpato, 2015; Wang, 2015; Kafetzopoulos, Gotzamani, & Psomas, 2014; Bujisic, Hutchinson, & Parsa, 2014; Jang & Ha, 2014; Wettstein, Hanf, & Burggraf, 2011). The results of these studies have confirmed the significance of relationships between these constructs. However, little attention has been paid to investigating how to improve customer satisfaction by enhancing service quality and food quality, thus increasing customer retention in the food industry, particularly in limited service restaurants in Jordan.

Consequently, the aim of this study is threefold. First, the study investigates the impact of service quality and food quality on customer satisfaction within limited service restaurants in Jordan. Second, the study explores the influence of service quality on customer retention. Third, the paper examines whether or not customer satisfaction mediates the relationship between service quality and customer retention. This study is expected to assist limited service restaurants in Jordan to enhance customer retention by meeting or exceeding customers'

expectations concerning the strength of service and food quality. It contributes to the literature on service and food quality, customer satisfaction and customer retention by surveying the restaurant-related attributes of service and food quality in a non-western setting.

The rest of the paper is structured as follows. Section 2 reviews the literature related to service quality, restaurant service quality, customer satisfaction and customer retention, to investigate the relationships between these constructs and formulate the hypotheses of the research. Section 3 then presents the research methodology. It covers the research model, research population, sample and data collection, as well as evaluating the validity and reliability of the instrument. This is followed by the analysis and the results in section 4. The fifth section discusses the results and presents the final conclusions. Finally, section 6 presents the limitations of the study and suggests directions for future research.

## **2. Literature Review and Hypothesis Development**

### *2.1 Service Quality*

One of the most important findings of Parasuraman, Zeithaml and Berry (1994) study is that service quality can be assessed by comparing the expectations of customers against their perceptions of the actual service experience. That is, service quality is an outcome of the difference between service expectations and customer perceptions of actual service performance (Naik, Gantasala, & Prabhakar, 2010; Yeşilada & Direktör, 2010). Izogo and Ogba (2015) argued that service quality leads to enhanced customer satisfaction and loyalty as a result of several factors. They added that SERVQUAL is one of the best measures of service quality.

SERVQUAL is an instrument for measuring the dimensions of service quality proposed by Parasuraman, Zeithaml and Berry (1988). As noted by Santouridis and Trivellas (2010), service quality is measured using this instrument as the gap between customer expectations and perceptions, characterized by five dimensions: tangibles, reliability, responsiveness, assurance and empathy. Not all studies adopting this instrument use the same dimensions (Dedeoğlu & Demirer, 2015). However, Hui and Zheng (2010) argued that SERVQUAL is one of the most effective and stable models for measuring service quality.

In terms of the dimensions, according to Parasuraman, Berry and Zeithaml (1991, p. 338), tangibles concern the appearance of physical facilities, equipment, personnel and communication materials. Reliability is the ability to perform the promised service dependably and accurately. Responsiveness represents willingness to help customers and prompt service. Assurance stands for the knowledge and courtesy of employees and the ability to inspire trust and confidence. Finally, empathy relates to the caring, individualized attention the firm provides its customers.

### *2.2 Restaurant Service Quality*

Studies conducted to investigate restaurant service quality have used three main dimensions of service quality: food quality, physical environment (ambience) and employee service (Dutta, Parsa, Parsa, & Bujisic, 2014; Ryu, Lee, Kim, & Woo, 2012). For this study, it was possible to measure the physical environment and employee service using the SERVQUAL instrument as it contains relevant dimensions covering these constructs. Ryu et al. (2012) highlighted the importance of food quality as a measure of customer satisfaction in the restaurant industry. As a result, five aspects of food quality were adopted from Ryu et al. (2012), namely: the food is fresh, the food is delicious, the food is nutritious, there is a variety of menu items and the smell of the food is enticing. Qin and Prybutok (2009) explored the potential dimensions of service quality and examined the relationships between service quality, food quality, perceived value, customer satisfaction and behavioural intentions in fast-food restaurants and pointed out that food quality has a positive and direct influence on customer satisfaction.

### *2.3 Customer Satisfaction and Customer Retention*

Customer satisfaction in services has been defined as the degree to which service performance meets or exceeds the customer's expectations (Kumar, 2012; Lombard, 2009; Santouridis & Trivellas, 2010). Hui and Zheng (2010) defined satisfaction as an evaluative judgment of a specific transaction resulting from perceived quality. On the other hand, Danesh, Nasab and Ling (2012, p. 142) defined customer retention as "the future propensity of a customer to stay with the service provider". According to them, customer satisfaction is not the only variable that influences the retention of customers. Ramakrishnan, (2006, cited in Molapo & Mukwada, 2011, p. 52) defined customer retention as the marketing goal of preventing a customer from switching to another competitor. Edward and Sahadev (2011, p. 33) stated that "customer retention indicates customer's intention to repurchase a service from the service provider". They used customer retention as a measure of the customer's intention to stay loyal to the service provider. For them, service quality and customer satisfaction are important antecedents of customer retention.

#### 2.4 Relationship between Service Quality and Customer Satisfaction

Malik (2012) measured the gap between the service expectation and service perception of customers in relation to the service delivered by four service industries (banking, transport, courier and telecommunications) and checked the impact on their satisfaction. His findings confirmed that service quality has a positive influence on customer satisfaction. Ahmed et al. (2010) found a significant and positive relationship between four dimensions of service quality (tangibles, reliability, responsiveness and assurance) and customer satisfaction. In their study, empathy showed a significant but negative relationship with customer satisfaction.

Naik, Gantasala and Prabhakar (2010) used SERVQUAL to analyse the gap between the expectations and perceptions of retailing customers to explore the factors that affect their satisfaction. Their results revealed that service quality has a positive and significant impact on customer satisfaction. Hence, we propose the following hypothesis:

*Hypothesis 1: Service quality dimensions have a positive influence on customer satisfaction.*

Furthermore, as food quality is one of the most important determinants of customer satisfaction in the restaurant industry, we draw the following hypothesis:

*Hypothesis 2: Food quality has a positive influence on customer satisfaction.*

#### 2.5 Relationship between Service Quality and Customer Retention

Ahmed et al.'s (2010) research revealed a significant and positive relationship between the service quality dimensions (tangibles, reliability, responsiveness and assurance) and customer repurchase intention. Ali et al. (2010) concurrently indicated that better service quality has a significant impact on consumer satisfaction. Omotayo and Joachim (2008) examined the construct of customer intention by investigating the chain of events in retention from the customer satisfaction and customer service perspectives. Their findings revealed that the higher the level of service quality, the higher the levels of customer retention. Ahmad et al.'s (2010) study investigated the impact of service quality delivered by cellular companies on customer retention and found that service quality has a positive and significant relationship with customer retention.

In the context of the restaurant industry, Bujisic et al. (2014) study revealed that food quality, besides service and ambience, is one of the most common attributes of restaurant quality. These variables were found to have a positive influence on aspects of customer behavioural intention, such as return intention and word-of-mouth recommendation. In view of the above results, this study hypothesizes that:

*Hypothesis 3: Service quality dimensions have a positive influence on customer retention.*

#### 2.6 Relationship between Customer Satisfaction and Customer Retention

Customer satisfaction has been regarded as a pivotal factor that affects customer retention (Ahmed et al., 2010; Danesh et al., 2012; Huppertz, 2008; Lombard, 2009; Omar et al., 2011). The link between customer satisfaction and customer retention has been examined by many researchers. Omotayo and Joachim (2008, p. 27) argued that although customer satisfaction is a key driver of customer retention, it is not always a means of assuring it. Therefore, companies have to learn how to retain customers not only considering their satisfaction. However, Alshurideh, Masa'deh and Alkurdi (2012) and Danesh et al. (2012) found that customer satisfaction has a direct effect on customer retention. Moreover, Rao, Goldsby, Griffis and Iyengar (2011) support the link between purchase satisfaction and customer retention. Based on the above literature, we propose the following hypothesis:

*Hypothesis 4: Customer satisfaction has a positive influence on customer retention.*

With regard to the significance of mediation, Ahmed et al. (2010) pointed out that customer satisfaction strongly mediates the relationship between service quality and customer retention. Hence, the fifth hypothesis is as follows:

*Hypothesis 5: Customer satisfaction mediates the relationship between service quality and customer retention.*

### 3. Methodology

#### 3.1 Research Model

The conceptual model of the study is developed based on customer satisfaction and retention in relation to service quality: it examines the influence of service quality on customer satisfaction and retention and the influence of customer satisfaction on customer retention. The conceptual framework presumes that there are relationships between the independent constructs, service quality (SQ) and food quality (FQ), the mediating construct, customer satisfaction (CS), and the dependent variable, customer retention (CR). Service quality is measured using Parasuraman et al. (1988) five attributes: tangibles, reliability, responsiveness, assurance and empathy. Food quality consists of five dimensions: the food is fresh, delicious and nutritious, there is a variety of menu items and the smell of the food is enticing (Qin & Prybutok, 2009; Ryu et al., 2012). Customer satisfaction is measured using self-reported satisfaction, customer mood

and length of wait for service (Qin & Prybutok, 2009; Ryu et al., 2012). Finally, revisit intention, likelihood of continuing to use the current restaurant for one more year and word-of-mouth were employed to measure customer retention (Edward & Sahadev, 2011; Li, Green, Farazmand, & Grodzki, 2012).

### 3.2 Data Collection

The target population of this study consists of all customers (students) served at 10 limited service restaurants in the neighbourhood of universities in Amman, the capital city of Jordan. According to Muller and Woods (1994, as cited in Bujisic et al., 2014), restaurants can be classified into five types: quick service, midscale, moderate upscale, upscale and business dining. For them, quick service restaurants can be distinguished by three features: narrow menus, a focus on price-sensitive customers and the development of "habit-forming" purchases. Limited service restaurants are equivalent to quick service restaurants.

A total of 400 questionnaires were distributed equally across these restaurants (40 questionnaires for each restaurant). In all, 387 of the questionnaires were completed and returned, representing a response rate of 70 per cent. Of these, 283 were valid for analysis. The questionnaire was developed to collect data on the study constructs and comprised 28 items covering tangibles (5 items), reliability (3 items), responsiveness (3 items), empathy (3 items), food quality (5 items), customer satisfaction (3 items) and customer retention (3 items).

### 3.3 Measures

The service quality dimensions identified by this study are: tangibles, reliability, responsiveness, assurance and empathy. These constructs are linked to customer satisfaction and customer retention. Service quality was assessed using the SERVQUAL model proposed by Parasuraman et al. (1988). As SERVQUAL does not measure the presumed attributes of restaurant quality, such as food quality (Bujisic et al., 2014), the food quality attributes were adopted, as mentioned above, from Ryu et al. (2012). Customer satisfaction was measured drawing on three main attributes identified in the literature, satisfaction with the dining experience, mood and waiting time (Kanning & Bergmann, 2009; Qin & Prybutok, 2009). Finally, customer retention was measured in relation to three main attributes, as identified in Edward and Sahadev (2011) and Li et al. (2012): intention to revisit, likelihood of using the restaurant over the coming year and word-of-mouth recommendation. Subjects (i.e. students) were asked to indicate their satisfaction level based on a five-point Likert measurement scale (1 = strongly disagree and 5 = strongly agree). Table 1 shows the sources of service quality, food quality, and customer satisfaction and customer retention items.

Table 1. Variables, indicators and sources of questionnaire items

Variables	Indicators	Sources
Tangibles	<ul style="list-style-type: none"> <li>• Appearance of physical facilities</li> <li>• Appearance of personnel</li> <li>• Using disposable gloves</li> <li>• Seating availability</li> <li>• Parking availability</li> </ul>	
Reliability	<ul style="list-style-type: none"> <li>• Performing the promised service</li> <li>• Accurate charge</li> <li>• Dependable and accurate</li> </ul>	
Responsiveness	<ul style="list-style-type: none"> <li>• Willingness to help customers</li> <li>• Exact time of service delivery</li> <li>• prompt service</li> </ul>	Parasuraman et al. (1988); Qin and Prybutok (2009)
Assurance	<ul style="list-style-type: none"> <li>• Knowledge of employees</li> <li>• Courtesy of employees</li> <li>• Employees abilities to inspire trust</li> </ul>	
Empathy	<ul style="list-style-type: none"> <li>• Convenient operating hours</li> <li>• Convenient location</li> <li>• Completely packaged food</li> </ul>	
Food quality	<ul style="list-style-type: none"> <li>• The food is fresh</li> <li>• The food is delicious</li> </ul>	Ryu et al. (2012); Qin and Prybutok (2009)

Variables	Indicators	Sources
Customer satisfaction	• The food is nutritious	Ryu et al. (2012); Qin and Prybutok (2009)
	• A variety of menu items	
	• The smell of the food is enticing	
Customer retention	• Satisfied with dining	
	• A good mood	
	• Waiting time	
	• Revisit intention	
Customer retention	• chance of continuing with current restaurant for next one year	Edward and Sahadev (2011); Li et al. (2012)
	• word-of-mouth	

### 3.4 Validity and Reliability of the Instrument

Construct validity and content validity were assured as the instrument was based on instruments previously developed and validated (Pantouvakis & Bouranta, 2013). Moreover, content validity was assessed by three academic experts. Convergent validity was tested by calculating the average variance extracted (AVE) by each factor. The results for convergent validity presented in Table 2 indicate that the variance for each factor is greater than the minimum recommended standard of 0.50 (Dedeoğlu & Demirer, 2015), which means that the convergent validity of the measurements is verified. The square root of AVE was used to examine discriminant validity. On the strength of the results demonstrated in Table 2, the square root of AVE was greater than the squared correlation coefficients for corresponding inter-constructs (Awwad, 2012; Pantouvakis & Bouranta, 2013; Ryu et al., 2012).

Table 2. Correlations, squared correlations and average variance extracted

Factors	Items	Factor loading	Squared correlations	AVE
Tangibles	TN5	0.88	0.7744	0.87
	TN2	0.82	0.6724	
	TN1	0.81	0.6561	
	TN3	0.72	0.5184	
	TN4	0.67	0.4489	
Reliability	RL3	0.81	0.6561	0.77
	RL1	0.76	0.5776	
	RL2	0.74	0.5476	
Responsiveness	RS1	0.74	0.5476	0.82
	RS2	0.73	0.5329	
	RS3	0.67	0.4489	
Assurance	AS3	0.81	0.6561	0.79
	AS1	0.75	0.5625	
	AS2	0.73	0.5329	
Empathy	EM1	0.73	0.5329	0.88
	EM3	0.69	0.4761	
	EM2	0.68	0.4624	
Food quality	FQ4	0.80	0.640	0.86
	FQ5	0.76	0.5776	
	FQ1	0.75	0.5625	
	FQ2	0.73	0.5329	
	FQ3	0.68	0.4624	
Customer satisfaction	CS1	0.71	0.5041	0.83
	CS3	0.68	0.4624	

Factors	Items	Factor loading	Squared correlations	AVE
Customer retention	CS2	0.65	0.4225	0.84
	CR2	0.79	0.6241	
	CR1	0.76	0.5776	
	CR3	0.75	0.5625	

Danesh et al. (2012) defined reliability testing as a measure that ensures the stability and consistency of results over time. Construct reliability can be assessed using Cronbach's alpha coefficient (Awwad, 2012). Danesh et al. (2012) added that a scale is reliable if alpha values above 0.7 are obtained. As shown in Table 3, the values for all items were above 0.7 as recommended (Manzoor & Naeem, 2011; Rao et al., 2011), indicated good reliability.

Table 3. Cronbach's alpha, means and standard deviations of the scale

Variable	No. of items	Cronbach's alpha	Means	SD
Tangibles	5	0.78	3.68	0.84
Reliability	3	0.81	4.10	0.92
Responsiveness	3	0.76	4.01	0.97
Assurance	3	0.86	3.96	0.83
Empathy	3	0.88	3.81	0.79
Food quality	5	0.92	3.88	0.74
Customer satisfaction	3	0.74	4.05	1.01
Customer retention	3	0.89	4.27	0.92

#### 4. Results

Hypothesis 1 proposed that service quality dimensions have a positive influence on customer satisfaction. A multiple regression analysis was conducted to verify this and explore how much variation in customer satisfaction could be explained by the variability in service quality dimensions. Such analysis is appropriate in the case that there a set of predictor variables (tangibles, reliability, responsiveness, assurance, empathy and food quality) and one response variable (customer satisfaction). The regression results shown in Table 4 indicate that the independent variables have a significant and positive effect on customer satisfaction. Therefore, hypothesis 1 is supported. According to these findings, the value of  $R^2$  (0.331) means that 33.1% of customer satisfaction can be explained by service quality dimensions.

Table 4. Regression results for service quality dimensions and customer satisfaction

Independent variables	Customer Satisfaction			Result
	B	t*	P**	
Tangibles	0.361	6.321	0.000	Supported
Reliability	0.134	8.312	0.000	Supported
Responsiveness	0.284	10.10	0.000	Supported
Assurance	0.167	8.544	0.000	Supported
Empathy	0.121	4.989	0.000	Supported

Note. \*The tabulated value of  $t = 1.96$ ; \*\*significant at  $P < 0.05$ .  $R^2 = 0.331$

Hypothesis 2 considered that food quality will have a positive influence on customer satisfaction. Consistent with this hypothesis, the results of the regression analysis shown in Table 5 indicate that 66.4% of customer satisfaction is explained by food quality.

Table 5. Regression results for food quality and customer satisfaction

<i>Independent variables</i>	Customer Satisfaction			<i>Result</i>
	<i>B</i>	<i>t</i> *	<i>P</i> **	
Food quality	0.384	10.31	0.000	Supported

Note. \*The tabulated value of  $t = 1.96$ ; \*\*significant at  $P < 0.05$ .  $R^2 = 0.664$

Hypothesis 3 proposed that service quality dimensions have a positive influence on customer retention. The simple regression analysis performed to test this relationship revealed that tangibles, responsiveness and empathy have significant and positive effects on customer retention. On the other hand, reliability and assurance have no effect on customer retention. Therefore, hypothesis 3 is partially supported. The results can be seen in Table 6.

Table 6. Regression results for service quality dimensions and customer retention

<i>Independent variables</i>	Customer Retention			<i>Result</i>
	<i>B</i>	<i>t</i> *	<i>P</i> **	
Tangibles	0.361	6.321	0.000	Supported
Reliability	0.134	8.312	0.101	Rejected
Responsiveness	0.284	10.40	0.000	Supported
Assurance	0.167	8.544	0.090	Rejected
Empathy	0.121	4.989	0.000	Supported

Note. \*The tabulated value of  $t = 1.96$ ; \*\*significant at  $P < 0.05$ .  $R^2 = 0.321$

Hypothesis 4 stated that customer satisfaction has a positive influence on customer retention. Again, a simple linear regression test was conducted to test this hypothesis. Results of the analysis revealed that customer satisfaction has a positive influence on customer retention. These results can be shown in Table 7.

Table 7. The regression results among customer satisfaction and customer retention

<i>Independent variable</i>	Customer Retention			<i>Result</i>
	<i>B</i>	<i>t</i> *	<i>P</i> **	
customer satisfaction	0.361	4.726	0.000	Supported

Note. \*The tabulated value of  $t = 1.96$ ; \*\*significant at  $P < 0.05$ .  $R^2 = 0.521$

Hypothesis 5 suggested that customer satisfaction mediates the relationship between service quality and customer retention. The Sobel test for mediation was employed to explore the mediation effects of customer satisfaction in the relationship between service quality and customer retention. The test statistic for the Sobel test was 5.87 with an associated p-value of (0.00), which falls below the established level of (0.05). This indicates that the correlation between service quality and customer retention is increased significantly by the effect of customer satisfaction (the mediator). Therefore, there is evidence of mediation.

## 5. Discussion and Conclusions

The aim of the study was to examine the relationship between service and food quality dimensions and customer satisfaction, as well as the relationship between service quality and customer retention. The study presumed that both service and food quality would have a positive influence on customer satisfaction, which in turn would positively affect customer retention. In addition, the study proposed that customer satisfaction would mediate the relationship between service quality and customer retention.

In line with the study hypotheses, the service quality dimensions (tangibles, reliability, responsiveness, assurance and empathy) were found to influence customer satisfaction. Izogo and Ogba (2015), Dedeoğlu and Demirer (2015) and Zamil, Areiqat and Tailakh (2012) all found the same results. In contrast, Qin, Prybutok and Zhao (2010) found that only three attributes, tangibles, reliability and responsiveness, were particularly salient dimensions in fast food restaurants in China. The tangibles dimension was also found by Zafar et al. (2012) to impact customer satisfaction

in Pakistan. In their 2010 study, Yeşilada and Direktör argued that the reliability dimension of service quality also plays a part in customer satisfaction.

With regard to food quality, the results of this study showed that food quality has a great influence on customer satisfaction. It is one of the most important factors resulting in higher levels of customer satisfaction. This result is in agreement with Lombard (2009) and Haghghi, Dorosti, Rahnama and Hoseinpour (2012).

In terms of the relationship between customer satisfaction and customer retention, the findings demonstrated that customer satisfaction has a positive influence on customer retention. The same result was found by Danesh et al. (2012). Moreover, Boonlertvanich (2011) regarded re-purchase intention and word-of-mouth as sub-dimensions of customer loyalty and indicated that customer satisfaction is a key driver to increase these aspects. Finally, consistent with Ahmed et al. (2010), this study found that customer satisfaction mediates the relationship between service quality and customer retention.

In conclusion, the study found a significant relationship between service quality and food quality and customer satisfaction. In addition, service quality has a positive influence on customer retention. Similarly, customer satisfaction has a positive influence on customer retention and mediates the relationship between service quality and customer retention. The results of this study suggest that service quality not only enhances customer satisfaction, but also leads to customer retention.

## 6. Limitations and Future Research

The sample chosen for this study is a student-based sample and therefore, caution must be taken in generalizing the findings to other populations. According to Sharma, Marshall, Reday and Na (2010), the results of studies employing student samples may not be generalized to non-student populations. Furthermore, the study sample was selected from 10 restaurants in the neighbourhood of universities in Amman. It is recommended that the same constructs be examined using a larger sample size spread through Amman as well as other governorates. It is also recommended that other constructs, such as temperature and the presentation of food, be studied as key dimensions of food quality. Future research might use the DINESERV instrument developed Stevens, Knutson and Patton (1995) and Kim, Ng and Kim (2009), which includes specific dimensions designed for the restaurant industry to augment the dimensions of SERVQUAL. Future research should consider these aspects.

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