

Customer Satisfaction Impact on Behavioral Intentions: The Case of Pizza Restaurants in Nablus City

Nidal Yousef Dwaikat, Saja Aziz Khalili, Samah Mohammad Hassis & Hala Sulaiman Mahmoud

To cite this article: Nidal Yousef Dwaikat, Saja Aziz Khalili, Samah Mohammad Hassis & Hala Sulaiman Mahmoud (2019): Customer Satisfaction Impact on Behavioral Intentions: The Case of Pizza Restaurants in Nablus City, Journal of Quality Assurance in Hospitality & Tourism, DOI: [10.1080/1528008X.2019.1616040](https://doi.org/10.1080/1528008X.2019.1616040)

To link to this article: <https://doi.org/10.1080/1528008X.2019.1616040>



Published online: 23 May 2019.



Submit your article to this journal [↗](#)



Article views: 69



View Crossmark data [↗](#)



Customer Satisfaction Impact on Behavioral Intentions: The Case of Pizza Restaurants in Nablus City

Nidal Yousef Dwaikat ^{a,b}, Saja Aziz Khalili^c, Samah Mohammad Hassis^c,
and Hala Sulaiman Mahmoud^c

^aDepartment of Industrial Engineering, An-Najah National University, Nablus, Palestine, Plaestine State;

^bIndustrial Marketing and Entrepreneurship unit, Department of Industrial Economics and Management, School of Industrial Engineering and Management, KTH Royal Institute of Technology, Stockholm, Sweden; ^cFaculty of Graduate Studies, Engineering Management Program, An-Najah National University, Nablus, Palestine, Plaestine State

ABSTRACT

Customer satisfaction has been extensively studied in marketing science and other business management disciplines. Yet, in quality management discipline, the question how customer satisfaction measured differs greatly from one business sector to another. The aim of this research is to explore the influencing factors on customer satisfaction, and explore the impact of customer satisfaction on behavioral intentions in pizza restaurants. A structural model was designed to predict the relationship between six constructs: food quality, service quality, quality of physical environment, customer perceived value, customer satisfaction, and behavioral intentions. The research model was assessed by using partial least squares structural equation modeling. Using SmartPLS software, a questionnaire of 386 responses collected from three local pizza restaurants customers in the west bank city of Nablus, Palestine was analyzed. The results demonstrate that customer perceived value has the strongest effect on customer satisfaction compared to the other three factors. The results also confirm that customer satisfaction positively affects behavioral intentions.

KEYWORDS

Food quality; service quality;
behavioral intentions;
customer satisfaction;
perceived value; physical
environment restaurant

Introduction

Customer satisfaction plays a central role in the success of any business. Business needs not only to retain its existing customers but also to extend its customer base by attracting new customers (Sabir, Irfan, Akhtar, Pervez, & Rahman, 2014). In food services industry, customer satisfaction is considered a key driver for the success of the business. Keeping customers satisfied is one of the vital roles to a restaurant's growth and to compete in business. In this regard, many researchers have emphasized that customer satisfaction has a strong impact on business improvement and customer behavior. For

CONTACT Nidal Yousef Dwaikat  nidal_n@najah.edu  Department of Industrial Engineering, An-Najah National University, P. O. Box 7, Nablus, Palestine

Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/wqah.

© 2019 Taylor & Francis Group, LLC

instance, most of studies have tested the relation between customer satisfaction and their behavior (Holjevac, Markovic, & Raspor, 2009; Qin & Prybutok, 2009; Ryu & Han, 2010; Ryu, Lee, & Kim, 2012). The main finding was that customer satisfaction affects the repurchase intentions; satisfied customers say favorable words, and recommend others, and therefore, increased restaurant revenue and profit (Barsky, 1992).

However, understanding the relationship between customer satisfaction and behavioral intentions in pizza restaurant business is still unexplored. Qin and Prybutok (2009) and Ryu and Han (2010) emphasized that food quality, services quality, quality of physical environment, and perceived value affect customer satisfaction in food services. This research will stand upon these studies to answer the following research question: *How do the quality of the food service, physical environment, and customer perceived value affect customer satisfaction and behavioral intentions?*

Food quality is one of the most important factors used to predict customer satisfaction. It can be measured by several characteristics, such as taste, flavor, appearance, and temperature (Namkung & Jang, 2007; Ryu et al., 2012). The next variable that has impact is service quality. It is important to provide the service that meet and exceed customer expectation. The main dimensions of service quality include quick employees' response, accurate order, and kind and friendly employees (Fu & Parks, 2001; Marković, Raspor, & Šegarić, 2010). Quality of physical environment is also a critical aspect that mainly affects the emotional side of customer. Decor and interior design, dining area cleanliness, and well-dressed employees are the main elements that reflect physical environment (Han & Ryu, 2009; Hooper, Coughlan, & Mullen, 2013). In addition to the above three predictors, customer perceived value plays an important role on customer satisfaction. It states the customer feeling and judgment that the restaurant experience was worth the money (Zeithaml, 1988). Despite the importance of perceived value, few studies have clarified it as direct impact factor, and most researchers consider it as mediator (Ryu & Han, 2010). Moreover, no studies have examined the direct effect of the all four predictors in pizza restaurants. Consequently, this research aims to fill this gap by constructing a research model that considers the influence of the four factors (food quality, services quality, physical environment quality, and perceived value) on customer satisfaction and behavioral intentions in pizza restaurants, especially in a developing country where fast food restaurant business is growing rapidly due to life style change of young people and increased trend toward eating outside.

This research contributes to the existing literature of customer satisfaction within context of quality assurance in food business by exploring the relationship among food quality, services quality, physical environment quality, and perceived value on customer satisfaction and behavioral intentions.

The rest of this research paper is organized in the following manner. A literature review is presented and then followed by the proposed model and hypotheses. Then, the methodology section presents the methods for data collection and analysis. Then, the results and findings are presented. Last, conclusions and implications are discussed.

Literature review

Food quality

Food quality is considered as a predictor of customer satisfaction in restaurants business. According to Peri (2006), food quality is considered as an essential to meet the needs and expectations of customers. In addition, Ryu et al. (2012) highlight that food quality is a key element to satisfy customers of restaurants and enhance their behavioral intentions. Furthermore, Sulek and Hensley (2004) clarify that food quality is one of the main and most leading factors to predict customer satisfaction in restaurants related to re-patronage intentions; although only 17% of re-patronage intentions were explained from food quality.

Food quality is measured by using several different attributes. Previous studies have identified several attributes such as food appearance, menu variety, healthy options, taste, food freshness, and temperature (Liu & Jang, 2009; Namkung & Jang, 2007; Qin & Prybutok, 2009; Rozekhi, Hussin, Siddique, Rashid, & Salmi, 2016; Ryu et al., 2012).

Service quality

Service quality is also another essential predictor of customer satisfaction. There have been several models and frameworks identified by the literature and practice to measure service quality. For instance, Metters, King-Metters, and Pullman (2003) explain that it is only the customer who determines the service quality, and the service quality occurs when it meets the customer's needs. In addition, Brady and Cronin (2001) define service quality as a focused evaluation that shows the customer's perception of various service elements. In this regard, Parasuraman, Zeithaml, and Berry (1988) indicate that customer perceived quality of service can be created by comparing their expectations relevant to their perceptions. SERVQUAL is another well-known model used to measure perceived service quality. The model is based on five dimensions of service quality which are tangibility, reliability, responsiveness, assurance, and empathy (Fu & Parks, 2001; Marković et al., 2010; Qin & Prybutok, 2009). However, since this research focuses on pizza restaurants, specific factors for service quality such as accuracy of food order, quick service, employees willingness to help, clear menu, and friendly employees need to be considered.

Al-Tit (2015) finds that there is a significant and positive relationship between service quality dimensions and customer satisfaction. In addition, his study confirms that service quality not only enhances customer satisfaction but also drives to customer retention.

Quality of physical environment

Physical environment is one of the predictors of customer satisfaction in restaurants business. Physical environment refers to the surroundings such as presence, atmosphere, services cape, and store environments. The physical environment including shapes, smell, music, and colors is considered as a necessary factor that affects customer satisfaction and behavioral intentions as it affects the emotional side of the customers (Hooper et al., 2013). The more comfortable and pleasant is the restaurant atmosphere, the more satisfied are the customers. . Therefore, customer satisfaction can affect customers' behavioral intentions positively.

The role of the physical environment in influencing customer behavior and in generating the image of the service provider is particularly relevant in the service industry such as the catering industry (Hooper et al., 2013). In this regard, Palit, Kristanti, and Wibowo (2019) highlight that the ergonomic aspects such as visual display, anthropometric, and environmental ergonomics have influence on customers' convenience at restaurants. Therefore, physical environment can affect the beliefs and perceptions of potential customer regarding the service of the restaurant whether it is reliable or not.

The physical environment (e.g. decoration, furniture, design, surroundings) can indicate to the customer that the nature and value of the service offered, including service prices, are feasible during the elementary visit. In the physical environment, customer finds many nonverbal cues that communicate with the nature of the service or the reputation of service providers. The physiological interaction is a result of surrounding conditions of the setting that effects on customer behaviors. Thus, it may have an impact on provider attitudes (Nguyen & Leblanc, 2002).

Customer perceived value

Along with food, services, and physical environment, previous studies have also considered perceived value as one of the important factors that affects customer satisfaction and behavioral intentions (Lee, Jin, & Kim, 2018). There is no single definition for value; every consumer has his or her own definition depending on his or her perspective of value. Zeithaml (1988) classifies the meaning of value into four main categories according to consumer point view: (1) value is the least price, (2) the benefit I obtain from the product, (3) it is the quality I gain over the price, and (4) what I earn compared to what I pay. Zeithaml (1988) defines

perceived value as consumer evaluation between perceptions of what they receive comparing to what they actually have.

According to the findings of several previous research works, customer perceived value had appositive impact and direct association with customer satisfaction and behavioral intentions (Qin & Prybutok, 2009; Ryu et al., 2012). Indeed, when customer perceived value rises, their satisfaction will increase, which reflects on their behavior to repurchase and recommend others to visit the restaurant (Ryu & Han, 2010).

Customer satisfaction

In food services market, customer satisfaction has become a primary topic that has a strong influence on business performance and customer retention (Holjevac et al., 2009).

Oliver (2010a, p. 8) defined customer satisfaction as “consumer’s fulfillment response. It is judgment that a product/service feature, or the product service itself, provided (or is providing) a pleasurable level of consumption – related fulfillment, including levels of under-or over fulfillment”. According to Oliver (2010a), satisfaction occurs when you exceed customer expectation, while poor performance will lead to dissatisfaction.

Many studies show that customer satisfaction has significant impact on firms’ profitability and behavioral intentions such as repeat purchase, say positive things, and recommend others (Barsky, 1992; Ryu & Han, 2010).

Several factors enhance customer satisfaction in food industry; the four basic variables include food quality, services quality, physical environment quality, and perceived value. Based on previous literature, all these variables have appositive influence on customer satisfaction (Liu & Jang, 2009; Qin & Prybutok, 2009). Andaleeb and Conway (2006) proposed that physical design and the appearance of the restaurant did not have much effect. These results cannot be generalized because the sample area may contain different requirements of restaurants. In addition, Namkung and Jang (2007) founded that food quality greatly influences customer satisfaction and behavioral intentions.

Customer satisfaction can be measured in several ways, such as observe customer attitude after dinning, take feedback, and ask them about their experience in restaurant.

Behavioral intentions

Behavioral intentions are an appropriate factor to measure customer satisfaction and anticipating future behavior for consumer. Warshaw and Davis (1985) defined behavioral intentions as how much a consumer will consider to proceed or not a future attitude toward specific service. Similarly, Oliver

(1999) mentioned that a strong relation exists between behavioral intentions and consumer intention to visit again and advise the service to others.

It is essential to determine and understand the attitude and actions of consumer after visiting the restaurant; these behaviors are represented in revisiting and repurchasing again, telling positive comments about the restaurant, encouraging and advising it to others (Han & Ryu, 2009; Liu & Jang, 2009).

In food services sector, many researchers emphasized that behavioral intentions are affected by customer satisfaction and they have a strong association (Lee et al., 2018; Ryu & Han, 2010; Ryu et al., 2012). As we mentioned before, customer satisfaction has a positive influence on behavioral intentions. Barsky (1992) found that as much as the customer is satisfied, it will lead to have positive behavior toward restaurant, as a result enhancing the profit. Whereas, dissatisfied customer will have negative influence such as complaining, transferring to other, and saying unfavorable word (Oliver, 2010b).

The proposed model and hypotheses

Figure 1 illustrates the proposed model of this research, which aims to examine the influencing factors on customer satisfaction and behavioral intentions in pizza restaurants, where it is composed of six constructs.

According to the proposed model that shows there are relationships between constructs, the following five hypotheses were formulated for this research:

H1: *Food quality has a positive influence on customer satisfaction.*

H2: *Service quality has a positive influence on customer satisfaction.*

H3: *Quality of physical environment has a positive influence on customer satisfaction.*

H4: *Customer perceived value has a positive influence on customer satisfaction.*

H5: *Customer satisfaction has a positive influence on behavioral intentions.*

All model constructs are measured by using reflective indicators. Table 1 shows these indicators that were developed based on reviewing the prior studies.

Methodology

Design the survey

A traditional paper-based survey was designed to evaluate customer satisfaction and behavioral intentions by testing the hypotheses of the research. The questionnaire is formed by two main sections. The first section covers four common questions about restaurant customer, such as gender (male or

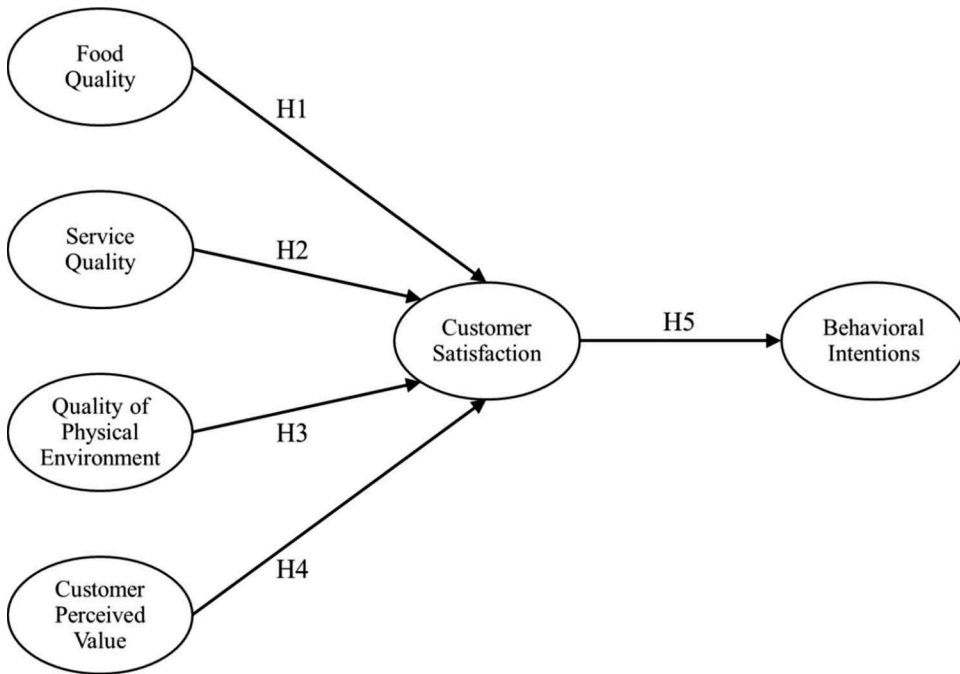


Figure 1. The proposed model and hypotheses.

female), age (five categories), place to eat pizza (inside restaurant or home delivery), and the restaurant visited by the customer (R#1, R#2, R#3).

The second section consists of 28 questions that reflect six constructs of the proposed research model by using 4-point Likert-type scale (where 1 = Strongly Disagree and 4 = Strongly Agree) except one question that asked about number of visits to the restaurant per month (three categories). We used this Likert-type scale because the 4-point Likert-type scale had higher reliability (Chang, 1994). According to (Lozano et al., 2008), the 4-point Likert scale is considered as a forced scale to make decision by responder since 'neutral' option not exist in overall options, and it is used to describe the consumer opinion for used services/products.

In addition to the traditional paper-based survey, a web-based survey version was designed and used in Arabic language. The reason for using web-based survey is due to wide spread of the Internet around the world, where many previous studies have provided research with evidence that web-based surveys have some potential advantages, such as reduced time and cost, decreased response bias, improved accuracy and reliability of data collection (Weber & Bradley, 2006; Wright, 2006).

Table 1. Indicators of constructs.

Construct	Item No.	Indicator
(FQ) Food quality	FQ1	Tasty and flavored food
	FQ2	Healthy food
	FQ3	Variety of food
	FQ4	Fresh and hot food
	FQ5	Aroma
	FQ6	Attractive food appearance
	FQ7	Consistency food texture
(SQ) Service quality	SQ1	Accuracy of food order
	SQ2	Quick service
	SQ3	Employees willing to help
	SQ4	Clear menu
	SQ5	Friendly employees
(QPE) Quality of physical environment	QPE1	Interior design and decor
	QPE2	Music
	QPE3	Cleanliness
	QPE4	Well-dressed employees
	QPE5	Food tools availability
(CPV) Customer Perceived Value	CPV1	Fair price
	CPV2	Value worthy of price
	CPV3	Competitive price
(CS) Customer satisfaction	CS1	Satisfied with restaurant
	CS2	Puts me in good mood
	CS3	Interesting experience
(BI) Behavioral intentions	BI1	Number of repeat purchase frequency
	BI2	Intention to repurchase
	BI3	Recommendation
	BI4	Say positive things
	BI5	Encouragement

Sampling and collecting data

The sample size is an important aspect for statistical-based research that includes determining the number of observations that must be included in the statistical sample. Essentially sample size is used to represent parts of a selected population in any questionnaire. The required minimum sample size of this research equals 385 that was calculated by using formula for large populations with 95% desired confidence level (Cochran, 1977). The population of Nablus Governorate equals 388,321 (Palestinian Central Bureau of Statistics, 2018). The sample size was also verified based on the recommendation and guidelines suggested (Hair, Risher, Sarstedt, & Ringle, 2018).

The data were collected from customers of three main local pizza restaurants in Nablus city. These restaurants are classified as mid-to-upscale restaurants. The surveys were conducted from 19 March 2018 to 15 April 2018; Of the 360 paper-based questionnaires distributed, 114 unusable responses were eliminated and the effective response rate is 68.3%. Of the 167 web-based questionnaires received, 27 unusable responses were eliminated and the effective response rate is 83.8%. As a result, a total of 386 questionnaires were used in the data analysis.

Analysis and results

The data were analyzed using two software packages. The first one is IBM SPSS Statistics 21 software package which was used to verify the dataset for errors, to check the normality, and to conduct data screening and cleaning test (Pallant, 2011). The other software is SmartPLS 3.2.7 which was used to test hypotheses and conduct model fit. SmartPLS is one of the most leading software tools for partial least squares structural equation modeling (PLS-SEM). Cho, Hong, and Hyun (2009) illustrate that SEM is a method of multivariate analysis established to study the cause and effect relationships in the social sciences, whereas Ali, Rasoolimanesh, and Cobanoglu (2018) emphasize that PLS-SEM is one of the most emerging and promising methods that is useful for path modeling and prediction. Furthermore, Ali, Rasoolimanesh, Sarstedt, Ringle, and Ryu (2018, p. 514) confirm that “hospitality researchers seem to be unaware of the recent extensions of the PLS-SEM method, which clearly extend the scope of the analyses and help gaining more insights from the model and the data”. Therefore, the authors believe that PLS-SEM method fits the purpose and scope of analysis of this research.

The analysis shows that the distribution of scores on all variables is not normal due to the p -value in Shapiro–Wilk’s test less than 0.05 (Pallant (2011). 2010 However, non-normality can be handled by SmartPLS according to guidelines suggested by Hair, Ringle, and Sarstedt (2011).

Furthermore, the results in this section were gained by using two procedures in SmartPLS. First, PLS algorithm with the default settings of 300 iterations and path analysis as the weighting scheme. Second, bootstrapping with the default settings of 500 subsamples

The analysis shows that the outer loading values of FQ2 and BI1 were equal to 0.33 and 0.26, respectively; these two indicators need to be eliminated because of the outer loading below 0.40 (Hair et al., 2011).

Sample characteristics

To study the characteristics of statistical sample, a descriptive statistical analysis of the respondents’ variables was performed in which the results are presented in Table 2. Due to culture issues, pizza and fast food is the growing business in Palestine, and the majority of customers are young female people such as university students, and this is why the sample may look biased toward female, which is more than double than the male samples or the samples may also look skewed toward 21–25 years age-groups as shown in Table 2. The mean and standard deviations are reported in Table 3.

The Mann–Whitney test was conducted for analyzing the place to eat pizza (inside restaurant or home delivery) with two constructs (service quality and quality of physical environment) by using SPSS software. The results, which are

Table 2. Respondents' statistical characteristics.

Characteristic	Frequency (<i>n</i> = 386)	Percent
Gender		
Male	106	27.5
Female	280	72.5
Age in years		
<20	79	20.5
21–25	165	42.7
26–30	86	22.3
31–35	31	8.0
>36	25	6.5
Place to eat pizza		
Inside the restaurant	299	77.5
Home delivery	87	22.5
The restaurant visited by the customer		
R#1	94	24.4
R#2	173	44.8
R#3	119	30.8

Table 3. Descriptive statistics results.

Construct and its indicators	Mean	Standard deviation
(FQ) Food quality		
FQ1: Tasty and flavored food	3.49	0.55
FQ2: Healthy food	2.59	0.80
FQ3: Variety of food	3.27	0.59
FQ4: Fresh and hot food	3.55	0.55
FQ5: Aroma	3.60	0.53
FQ6: Attractive food appearance	3.57	0.52
FQ7: Consistency food texture	3.42	0.58
(SQ) Service quality		
SQ1: Accuracy of food order	3.52	0.54
SQ2: Quick service	3.30	0.66
SQ3: Employees willing to help	3.51	0.55
SQ4: Clear menu	3.41	0.58
SQ5: Friendly employees	3.52	0.55
(QPE) Quality of physical environment		
QPE1: Interior design and decor	3.21	0.66
QPE2: Music	3.02	0.73
QPE3: Cleanliness	3.40	0.54
QPE4: Well-dressed employees	3.41	0.55
QPE5: Food tools availability	3.45	0.57
(CPV) Customer perceived value		
CPV1: Fair price	3.11	0.64
CPV2: Value worthy of price	3.26	0.60
CPV3: Competitive price	3.16	0.65
(CS) Customer satisfaction		
CS1: Satisfied with restaurant	3.44	0.55
CS2: Puts me in good mood	3.37	0.59
CS3: Interesting experience	3.41	0.57
(BI) Behavioral intentions		
BI1: Number of repeat purchase frequency	1.44	0.66
BI2: Intention to repurchase	3.39	0.55
BI3: Recommendation	3.34	0.56
BI4: Say positive things	3.34	0.56
BI5: Encouragement	3.38	0.57

Table 4. Mann–Whitney test (grouping variable: place to eat pizza).

Construct and its indicators	Mann–Whitney <i>U</i>	Sig. (2-tailed)
(SQ) Service quality		
SQ1: Accuracy of food order	12,765.50	0.76
SQ2: Quick service	12,331.50	0.41
SQ3: Employees willing to help	11,973.50	0.20
SQ4: Clear menu	11,742.50	0.12
SQ5: Friendly employees	11,013.50	0.01
(QPE) Quality of physical environment		
QPE1: Interior design and decor	12,565.00	0.59
QPE2: Music	11,049.00	0.02
QPE3: Cleanliness	11,858.50	0.15
QPE4: Well-dressed employees	11,431.50	0.05
QPE5: Food tools availability	11,267.50	0.03

shown in Table 4, display that each of SQ5, QPE2, QPE4, and QPE5 differs significantly for the two groups because of the asymptotic significance values are equal and less than 0.05 and the *z*-values are equal and less than -1.96 .

In addition, it is necessary to describe the direction of the difference (which group is higher); this issue was obtained from the mean rank and median values for each group by using SPSS software. As presented in Table 5, the inside restaurant group has a higher difference than the other group only for SQ5 and QPE5.

Reliability and validity analysis

Reliability is defined as the degree of the consistency over time. That is to obtain the same results from one occasion to other when repeating the analysis using the same methodology. Validity is defined as the degree to which the research really measures what it intends to measure or how truthful the research results are (Hair, Black, Babin, & Anderson, 2010).

Table 5. Mann–Whitney test extended (grouping variable: place to eat pizza).

Construct and its indicators	Place to eat pizza	Mean rank	Median
(SQ) Service quality			
SQ5: Friendly employees	Inside restaurant	200.17	4.00
	Home delivery	170.59	3.00
(QPE) Quality of physical environment			
QPE2: Music	Inside restaurant	200.05	3.00
	Home delivery	171.00	3.00
QPE4: Well-dressed employees	Inside restaurant	198.77	3.00
	Home delivery	175.40	3.00
QPE5: Food tools availability	Inside restaurant	199.32	4.00
	Home delivery	173.51	3.00

When assessing reflective measurement models, construct reliability is used to evaluate the internal consistency. The internal consistency is estimated using Cronbach’s alpha and composite reliability. The validity is estimated using convergent and discriminant validity (Dwaikat, Money, Behashti, & Salehi-Sangari, 2018).

As presented in Table 3, the Cronbach’s alpha values for all construct are greater than 0.70 as the lowest acceptable threshold (Hair et al., 2010). In addition, the composite reliability values are higher than 0.70 (Hair et al., 2011). Thus, the results indicate that internal consistency of all indicators is acceptable, and all constructs are reliable.

In addition to that, the average variance extracted (AVE) was considered as a popular measure to determine convergent validity on the constructs level (i.e. how an indicator is positively related with alternative indicators of the same construct) (Cheah, Sarstedt, Ringle, Ramayah, & Ting, 2018). The results displayed in Table 6 show that AVE values for all constructs are equal to 0.50 and higher which indicate that convergent validity is well established for all constructs (Hair, Hult, Ringle, & Sarstedt, 2014, p. 103).

Discriminant validity implies that the construct measure is empirically unique and represents phenomena of interest that other measures in model do not capture (Hair et al., 2014). Discriminant validity is measured by Heterotrait–Monotrait Ratio of correlations (HTMT). HTMT is a new approach that estimates the disattenuated correlation between the constructs (Henseler, Ringle, & Sarstedt, 2015). The results shown in Table 7 indicate that discriminant validity for all constructs is well established because the HTMT values did not exceed a threshold value 0.85 (Kline, 2011).

Table 6. Construct reliability and validity.

Construct	R^2	Cronbach’s alpha	Composite reliability	Average variance extracted
(FQ)		0.80	0.86	0.50
(SQ)		0.82	0.87	0.58
(QPE)		0.81	0.86	0.55
(CPV)		0.83	0.90	0.74
(CS)	0.52	0.85	0.91	0.77
(BI)	0.47	0.89	0.93	0.76

Table 7. Discriminant validity using HTMT.

Construct	(FQ)	(SQ)	(QPE)	(CPV)	(CS)	(BI)
(FQ)						
(SQ)	0.74					
(QPE)	0.70	0.83				
(CPV)	0.49	0.60	0.58			
(CS)	0.66	0.68	0.71	0.70		
(BI)	0.59	0.64	0.64	0.64	0.79	

Table 8. Indicator's outer loading.

Construct and its indicators	Outer loading	
	Point estimation	T-values
(FQ) Food Quality		
FQ1: Tasty and flavored food	0.73	22.18
FQ3: Variety of food	0.61	11.59
FQ4: Fresh and hot food	0.71	20.24
FQ5: Aroma	0.74	22.65
FQ6: Attractive food appearance	0.73	21.41
FQ7: Consistency food texture	0.70	19.03
(SQ) Service quality		
SQ1: Accuracy of food order	0.79	37.82
SQ2: Quick service	0.78	35.83
SQ3: Employees willing to help	0.78	32.71
SQ4: Clear menu	0.65	15.08
SQ5: Friendly employees	0.80	33.29
(QPE) Quality of physical environment		
QPE1: Interior design and decor	0.68	18.19
QPE2: Music	0.61	13.80
QPE3: Cleanliness	0.78	34.27
QPE4: Well-dressed employees	0.81	41.75
QPE5: Food tools availability	0.81	40.70
(CPV) Customer perceived value		
CPV1: Fair price	0.87	42.66
CPV2: Value worthy of price	0.86	56.40
CPV3: Competitive price	0.85	43.24
(CS) Customer satisfaction		
CS1: Satisfied with restaurant	0.87	47.46
CS2: Puts me in good mood	0.89	60.02
CS3: Interesting experience	0.87	48.42
(BI) Behavioral intentions		
BI2: Intention to repurchase	0.84	38.04
BI3: Recommendation	0.88	53.30
BI4: Say positive things	0.87	50.38
BI5: Encouragement	0.90	67.04

Table 8 displays the outer loading values that represent the correlations between the construct and the reflective indicators in its outer model. The acceptable outer loading values vary according to type of research. In general, 0.70 or higher is preferred (Wong, 2013), whereas 0.4 or higher is acceptable in exploratory research (Hulland, 1999). The results emphasize that the indicators outer loadings are acceptable and implying reasonable correlations given the fact that this research is an exploratory type.

In addition, it is essential to examine the outer model by testing the *T*-statistic. The outer model loadings are highly significant if *T*-values are larger than 1.96 (Wong, 2013). As presented in Table 8, all indicators in outer loading are highly significant.

Structural model

Coefficient of determination (R^2) is used in statistical analysis to measure the variance ratio of an inner construct that is explained by its predictor

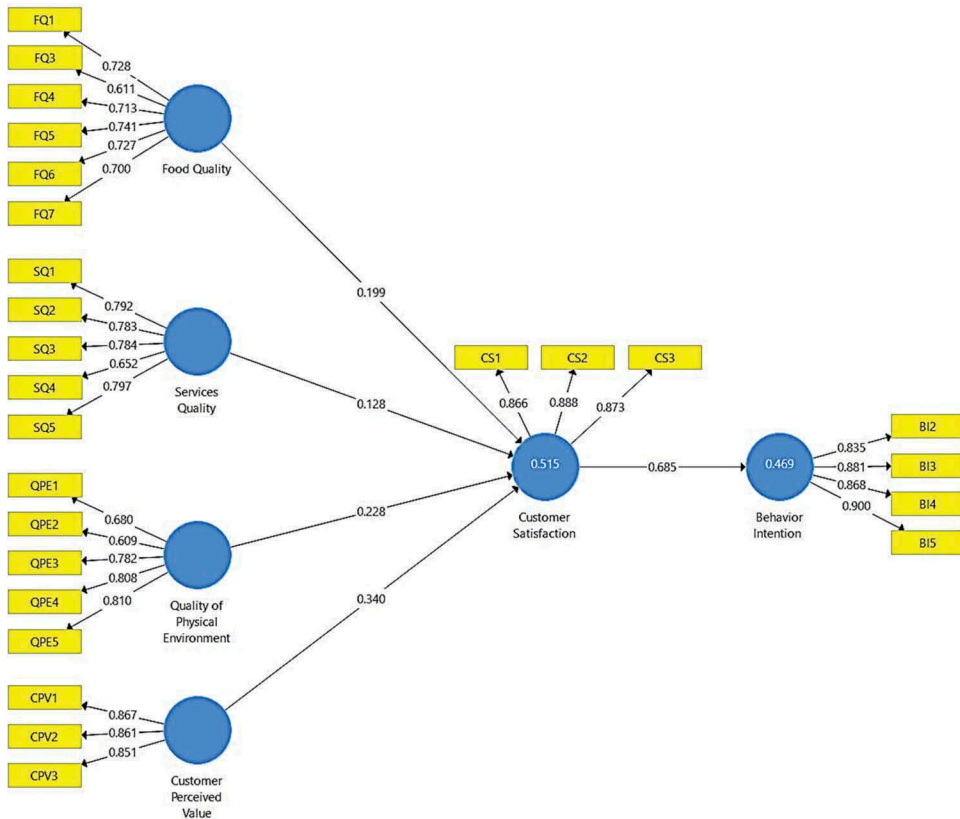


Figure 2. Outputs of PLS algorithm.

constructs. As presented in Figure 2, the R^2 for customer satisfaction is 0.52 which means 52% of the variance in the customer satisfaction is explained by the four constructs: customer perceived value, quality of physical environment, food quality, and service quality. In addition, the R^2 for behavioral intentions is equal to 0.47 which means 47% is explained by customer satisfaction. Thus, the structural model is described as moderate because of R^2 values close to 50% (Hair et al., 2011).

The inner (i.e. structural) model indicates that the customer perceived value has the strongest influence on customer satisfaction (0.34), followed by quality of physical environment (0.23), food quality (0.20), and service quality (0.13), respectively. However, customer satisfaction has a strong influence on behavioral intentions (0.69).

Since it is important to check the significance of the relationships between the constructs in the structural model, PLS bootstrapping was run to assess the path coefficient sizes and significance. According to Eggert and Serdaroglu (2011), the standardized path coefficient (β -values) should be equal or larger than 0.10 in order to demonstrate its significance. In addition, Garson (2016) clarifies that all T -values are significant at the 0.05 level when equal or greater

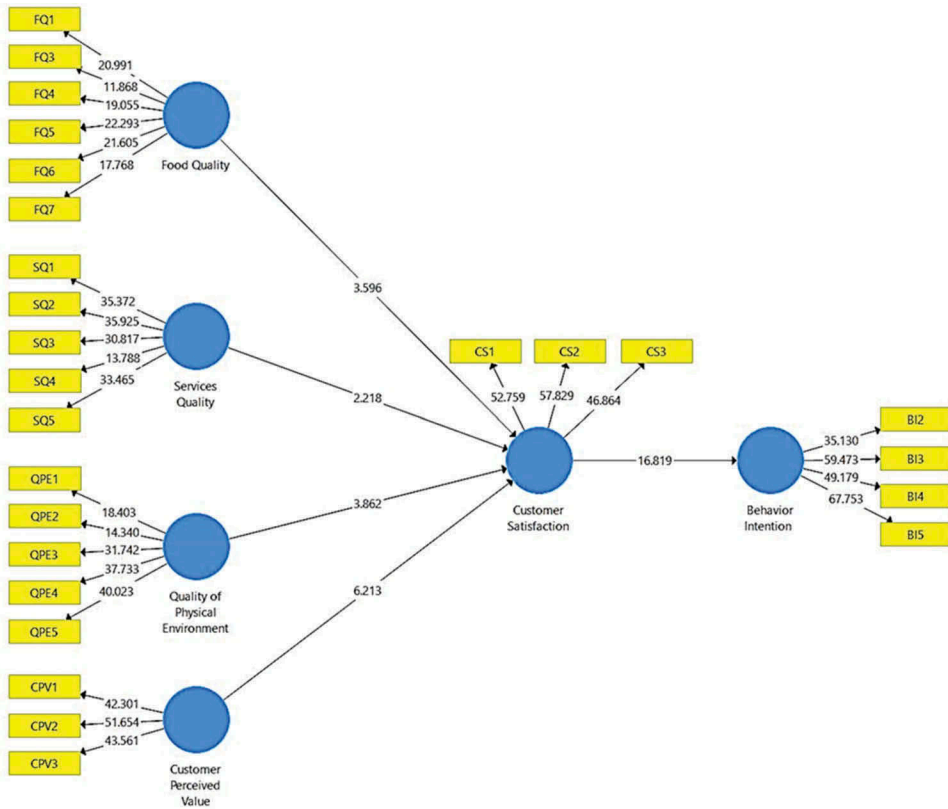


Figure 3. Outputs of PLS bootstrapping.

Table 9. The model fit results.

Relationship	Significance				
	Coefficient β -value	Standard deviation	T-value	P-value	Conclusion
FQ \rightarrow CS	0.20	0.06	3.60	0.00	H1 is supported
SQ \rightarrow CS	0.13	0.06	2.22	0.03	H2 is supported
QPE \rightarrow CS	0.23	0.06	3.86	0.00	H3 is supported
CPV \rightarrow CS	0.34	0.06	6.21	0.00	H4 is supported
CS \rightarrow BI	0.69	0.04	16.82	0.00	H5 is supported

than 1.96, and all paths are significant when all p -values less than 0.05. As shown in Figure 3 and Table 9, the results emphasize that customer perceived value ($\beta = 0.34$ and $T = 6.21$), quality of physical environment ($\beta = 0.23$ and $T = 3.86$), food quality ($\beta = 0.20$ and $T = 3.60$), and service quality ($\beta = 0.13$ and $T = 2.22$) have a significant positive impact on customer satisfaction, respectively, and customer satisfaction has a significant positive impact on behavioral intentions with ($\beta = 0.69$ and $T = 16.82$) as well.

Furthermore, the results of p -values presented in Table 9 demonstrate that all hypotheses (H1, H2, H3, H4, and H5) are supported and significant.

Therefore, it can be concluded that customer perceived value has the strongest factor effects on customer satisfaction compared to the other factors. Additionally, customer satisfaction has a strong effect on behavioral intentions.

To measure the goodness of the model fit for PLS-SEM (Henseler et al., 2014), the Standardized Root Mean Square Residual (SRMR) index has been used. Compared to the threshold value which was less than 0.1 (Hu & Bentler, 1998), the results show that SRMR is 0.05 which indicates that model has a good fit.

Discussion

This research has explored the impact of customer perceived value, quality of physical environment, food quality, and service quality on behavioral intentions through customer satisfaction. As these factors are found to have significant impact on behavioral intentions through customer satisfaction, the proposed model provides a deep understanding of the concept of customer satisfaction in the light of behavioral intentions in pizza restaurants. In this regard, FQ2 (i.e. healthy food) and BI1 (i.e. number of repeat purchase frequency) are found to be insignificant factors for their corresponding constructs Food Quality and behavioral intentions, respectively. This finding contradicts with findings in the literature. For example, healthy food has been always a strong indicator of food quality (Lee et al., 2018). However, the results show that healthy food is not a significant indicator of food quality in this study. Moreover, several studies find that the number of repeat purchase frequency is a relevant measure of behavioral intentions (Barsky, 1992; Ryu & Han, 2010). However, the results show that the number of repeat purchase frequency is not a significant indicator of behavioral intentions. This finding is justified by that fact that the majority of pizza restaurants are classified as fast food chain in Palestine, where healthy food is not customer's first priority when they order pizza. In addition, customers prefer trying different pizza restaurants every time rather eating every time in the same restaurant.

The estimates of T -values and β -values confirm that customer satisfaction strongly and positively affects customers' behavioral intention. The results also show that the customer perceived value has the strongest effect on customer satisfaction among other factors. This finding indicates that Fair price, Values worthy of the price, and competitive prices play important roles in customer satisfaction for this kind of business. Therefore, these factors among other ones are essential to be considered by pizza restaurant's owners as part of their competitive strategies. Yet, among all of these factors, customers' perceived value should be regarded as the most substantial tool of customer satisfaction. The results also confirm that quality of physical environment has the second highest impact on customer's satisfaction. Pizza restaurants' customers seem to pay more attention to this factor than food safety and service quality.

Perhaps, a poetical justification for this surprising result is that the restaurants included in this study may have the same levels of food quality and customer service but they differ in customer perceived value and quality of physical environment. Therefore, this model needs to be tested individually for each restaurant in future research.

The result of goodness of fit also confirms that suggested model for evaluating customer satisfaction and behavioral intentions in the pizza restaurant industry is valuable. This result indicates that Pizza restaurants' owners who want to maintain their competitive advantage should repeatedly seek to rise customer satisfaction levels by focusing on the four important factors identified in this research, especially for food safety and service quality.

Limitations

This research is without limitations. First, the analysis has included only one geographic area which is Nablus, Palestine, and focused on only one type of restaurants which is Pizza restaurants. Therefore, it is highly recommended to test the model on different geographic areas with different cultures and dining traditions. In addition, the study has mainly focused on age-gender group of customers which is young females; therefore, it would be interesting to include more groups and compare the results.

Second, moderating effect is not investigated in the analysis, given the aim and scope of this research. Therefore, it is recommended to conduct a competitive study to explore other factors that affecting the customer satisfaction and behavioral intentions within different business contexts, such as hotels and food carting services. It is also recommended to test the model with customer satisfaction as a mediating variable. and hence testing interrelationships between the variables covered.

Funding

This work was partially supported by the Bank of Palestine and Taawon Association [Zamala Program 2018/2019].

ORCID

Nidal Yousef Dwaikat  <http://orcid.org/0000-0002-2070-3075>

References

- Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality

- research. *International Journal of Contemporary Hospitality Management*, 30(1), 514–538. doi:[10.1108/IJCHM-10-2016-0568](https://doi.org/10.1108/IJCHM-10-2016-0568)
- Al-Tit, A. A. (2015). The effect of service and food quality on customer satisfaction and hence customer retention. *Asian Social Science*, 11(23), 129–139. doi:[10.5539/ass.v11n23p129](https://doi.org/10.5539/ass.v11n23p129)
- Andaleeb, S. S., & Conway, C. (2006). Customer satisfaction in the restaurant industry: An examination of the transaction-specific model. *Journal of Services Marketing*, 20(1), 3–11. doi:[10.1108/08876040610646536](https://doi.org/10.1108/08876040610646536)
- Barsky, J. D. (1992). Customer satisfaction in the hotel industry meaning and measurement. *Journal of Hospitality & Tourism Research*, 16(1), 51–73.
- Brady, M. K., & Cronin, J. J., Jr. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65(3), 34–49. doi:[10.1509/jmkg.65.3.34.18334](https://doi.org/10.1509/jmkg.65.3.34.18334)
- Chang, L. (1994). A psychometric evaluation of 4-point and 6-point likert-type scales in relation to reliability and validity. *Applied Psychological Measurement*, 18(3), 205–215. doi:[10.1177/014662169401800302](https://doi.org/10.1177/014662169401800302)
- Cheah, J.-H., Sarstedt, M., Ringle, C. M., Ramayah, T., & Ting, H. (2018). Convergent validity assessment of formatively measured constructs in PLS-SEM. *International Journal of Contemporary Hospitality Management*, 30(11), 3192–3210. doi:[10.1108/IJCHM-10-2017-0649](https://doi.org/10.1108/IJCHM-10-2017-0649)
- Cho, K., Hong, T., & Hyun, C. (2009). Effect of project characteristics on project performance in construction projects based on structural equation model. *Expert Systems with Applications*, 36(7), 10461–10470. doi:[10.1016/j.eswa.2009.01.032](https://doi.org/10.1016/j.eswa.2009.01.032)
- Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). New York, NY: John Wiley & Sons, Inc.
- Dwaikat, N. Y., Money, A. H., Behashti, H. M., & Salehi-Sangari, E. (2018). How does information sharing affect first-tier suppliers' flexibility? Evidence from the automotive industry in Sweden. *Production Planning and Control*, 29(4), 289–300. doi:[10.1080/09537287.2017.1420261](https://doi.org/10.1080/09537287.2017.1420261)
- Eggert, A., & Serdaroglu, M. (2011). Exploring the impact of sales technology on salesperson performance: A task-based approach. *Journal of Marketing Theory and Practice*, 19(2), 169–186. doi:[10.2753/MTP1069-6679190204](https://doi.org/10.2753/MTP1069-6679190204)
- Faizan Ali, S. Mostafa Rasoolimanesh, Cihan Cobanoglu (2018), Applying Partial Least Squares in Tourism and Hospitality Research, West Yorkshire, England
- Fu, -Y.-Y., & Parks, S. C. (2001). The relationship between restaurant service quality and consumer loyalty among the elderly. *Journal of Hospitality & Tourism Research*, 25(3), 320–336. doi:[10.1177/109634800102500306](https://doi.org/10.1177/109634800102500306)
- Garson, G. D. (2016). *Partial least squares: regression & structural equation models*. Asheboro, USA, Statistical associates publishing.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. (7th ed.) New Jersey, USA, Prentice-Hall.
- Hair, J. F., Hult, G. T., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling* (1st ed.). Newbury Park, CA: Sage Publications.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *The Journal of Marketing Theory and Practice*, 19(2), 139–151. doi:[10.2753/MTP1069-6679190202](https://doi.org/10.2753/MTP1069-6679190202)
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2018). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1):2-24.
- Han, H., & Ryu, K. (2009). The roles of the physical environment, price perception, and customer satisfaction in determining customer loyalty in the restaurant industry. *Journal of Hospitality and Tourism Research*, 33(4), 487–510. doi:[10.1177/1096348009344212](https://doi.org/10.1177/1096348009344212)
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., ... Calantone, R. J. (2014). Common beliefs and reality about PLS:

- Comments on Ronkko and Evermann (2013). *Organizational Research Methods*, 17(2), 182–209. doi:[10.1177/1094428114526928](https://doi.org/10.1177/1094428114526928)
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. doi:[10.1007/s11747-014-0403-8](https://doi.org/10.1007/s11747-014-0403-8)
- Holjevac, I. A., Markovic, S., & Raspor, S. (2009). Customer satisfaction measurement in hotel industry: Content analysis study. *4th International Scientific Conference "Planning for the future learning from the past: Contemporary Developments in Tourism, Travel & Hospitality*, Rhodes Islands.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2013). The servicescape as an antecedent to service quality and behavioral intentions. *Journal of Services Marketing*, 27(4), 271–280. doi:[10.1108/08876041311330753](https://doi.org/10.1108/08876041311330753)
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424–453. doi:[10.1037/1082-989X.3.4.424](https://doi.org/10.1037/1082-989X.3.4.424)
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195–204. doi:[10.1002/\(ISSN\)1097-0266](https://doi.org/10.1002/(ISSN)1097-0266)
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford Press.
- Lee, S. M., Jin, N., (Paul), & Kim, H. S. (2018). The effect of healthy food knowledge on perceived healthy foods' value, degree of satisfaction, and behavioral intention: The moderating effect of gender. *Journal of Quality Assurance in Hospitality and Tourism*, 19 (2), 151–171. doi:[10.1080/1528008X.2016.1230036](https://doi.org/10.1080/1528008X.2016.1230036)
- Liu, Y., & Jang, S. S. (2009). Perceptions of Chinese restaurants in the U. S.: What affects customer satisfaction and behavioral intentions? *International Journal of Hospitality Management*, 28, 338–348. doi:[10.1016/j.ijhm.2008.10.008](https://doi.org/10.1016/j.ijhm.2008.10.008)
- Lozano, Luis. (2008). Effect of the number of response categories on the reliability and validity of rating scales. In: *Methodology: European Journal Of Research Methods for The Behavioral and Social Sciences*, Vol 4(2), 73–79.
- Marković, S., Raspor, S., & Šegarić, K. (2010). Does restaurant performance meet customers' expectations? An assessment of restaurant service quality using a modified dineserv approach. *Tourism and Hospitality Management*, 16(2), 181–195.
- Metters, R., King-Metters, K., & Pullman, M. (2003). *Successful service operations management*. Mason, Ohio, USA: Thomson/South-Western.
- Namkung, Y., & Jang, S. (2007). Does food quality really matter in restaurants? Its impact on customer satisfaction and behavioral intentions. *Journal of Hospitality & Tourism Research*, 31(3), 387–410. doi:[10.1177/1096348007299924](https://doi.org/10.1177/1096348007299924)
- Nguyen, N., & Leblanc, G. (2002). Contact personnel, physical environment and the perceived corporate image of intangible services by new clients. *International Journal of Service Industry Management*, 13(3), 242–262. doi:[10.1108/09564230210431965](https://doi.org/10.1108/09564230210431965)
- Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63, 33–44. doi:[10.1177/00222429990634s105](https://doi.org/10.1177/00222429990634s105)
- Oliver, R. L. (2010a). *Satisfaction : A behavioral perspective on the consumer* (2nd ed.). New York, NY: M.E.Sharp.
- Oliver, R. L. (2010b). satisfaction's cosequences: Whathappenes next?. In *satisfaction : Abehavioral perspective on the consumer* (2nd ed., pp. 383–409). New York, NY: M.E. Sharp.

- Palestinian Central Bureau of Statistics. (2018). *Preliminary results of the population, housing and establishments census, 2017*. Palestinian Central Bureau of Statistics, Ramallah, Palestine.
- Palit, H. C., Kristanti, M., & Wibowo, Y. (2019). The effect of ergonomic aspects on customers' convenience at restaurant in Surabaya. *Journal of Quality Assurance in Hospitality & Tourism*, 1–19. doi:10.1080/1528008X.2018.1563017
- Pallant, J. (2011). *SPSS survival manual* (4th ed.). Crows Nest, Australia: Allen & Unwin.
- Pallant, J. (2011). *Spss survival manul* (4th ed. Crows Nest, Australia: Allen & Unwin.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing* 64(1):12-40.
- Peri, C. (2006). The universe of food quality. *Food Quality and Preference*, 27(1–2), 3–8. doi:10.1016/j.foodqual.2005.03.002
- Qin, H., & Prybutok, V. R. (2009). Service quality, customer satisfaction, and behavioral intentions in fast-food restaurants. *International Journal of Quality and Service Sciences*, 1 (1), 78–95. doi:10.1108/17566690910945886
- Rozekhi, N. A., Hussin, S., Siddiqe, A. S. K. A. R., Rashid, P. D. A., & Salmi, N. S. (2016). The influence of food quality on customer satisfaction in fine dining restaurant: Case in Penang. *International Academic Research Journal of Business and Technology*, 2(2), 45–50. Retrieved from http://www.iarjournal.com/wp-content/uploads/IARJBT2016_2_45-50.pdf
- Ryu, K., & Han, H. (2010). Influence of the quality of food, service, and physical environment on customer satisfaction and behavioral intention in quick-casual restaurants: moderating role of perceived price. *Journal of Hospitality & Tourism Research*, 34(3), 310–329. doi:10.1177/1096348009350624
- Ryu, K., Lee, H., & Kim, W. G. (2012). The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions. *International Journal of Contemporary Hospitality Management*, 24(2), 200–223. doi:10.1108/09596111211206141
- Sabir, R. I., Irfan, M., Akhtar, N., Pervez, M. A., & Rahman, A. (2014). Customer satisfaction in the restaurant industry; examining the model in local industry perspective. *Journal of Asian Business Strategy*, 4(1), 18–31.
- Sulek, J. M., & Hensley, R. L. (2004). The relative importance of food, atmosphere, and fairness of wait: The case of a full-service restaurant. *Cornell Hotel and Restaurant Administration Quarterly*, 45(3), 235–247. doi:10.1177/0010880404265345
- Surhone, L. M., Timpledon, M. T., & Marseken, S. F. (2010). *Shapiro-Wilk Test*. VDM Publishing.
- Warshaw, P. R., & Davis, F. D. (1985). Disentangling behavioral intention and behavioral expectation. *Journal of Experimental Social Psychology*, 21(3), 213–228. doi:10.1016/0022-1031(85)90017-4
- Weber, J. A., & Bradley, K. D. (2006). Strengths and weaknesses of conducting web-based surveys: A review of the literature. *University of Kentucky*, 1–15.
- Wong, -K.-K.-K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1–32.
- Wright, K. B. (2006). Researching internet-based populations: advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal Of Computer-Mediated Communication*, 10(3). doi:10.1111/j.1083-6101.2005.tb00259.x
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2–22. doi:10.1177/002224298805200302