Effect of Service Quality and Price Fairness on Customer Satisfaction and Loyalty: Moderating Role of Gender and Occupation

Group 2

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Abstract

Service quality and price fairness are deemed to be two important antecedents of customer satisfaction and customer loyalty which are two key strategic sources of sustainable performance for any company. The purpose of this study is twofold - to examine the effect of service quality and price fairness on customer loyalty through satisfaction and to understand the effect of two socio-demographic characteristics of customers on these relationships. Secondary data was collected from an open data repository that met the criteria to address the study objectives. Data consisted of responses from 384 customers from several coffee shops in Jakarta, Indonesia. After data screening and preparation, the validity and reliability of the constructs including five dimensions of service quality, price fairness, customer satisfaction, and customer loyalty were assessed with Chronbach's alpha and exploratory factor analysis. After that, confirmatory factor analysis was conducted to confirm the attributes of each factor by assessing the convergent and discriminant validity of the constructs with average variance extracted values and composite reliability. Three of the hypotheses were tested using structural equation modeling in AMOS and four were tested with Andrew Hayes process macro in SPSS. The results showed that service quality and price fairness significantly influence customer satisfaction and customer satisfaction significantly affects customer loyalty. Additionally, it was found that the gender and occupation of the customers moderates the relationship between price fairness and customer satisfaction. This study is expected to add to the current literature on customer satisfaction and loyalty as well as help hospitality managers to understand the factors significantly influencing customer loyalty and undertake appropriate strategies to retain customers.

Keywords: Service quality, Price fairness, Socio-demographic characteristics, Customer satisfaction, Customer loyalty

Introduction

Modern days businesses are competitive. To survive as an organization over the years one must face the competition, offer quality services and products, ensure fair pricing, focus on continuous improvements, ensure customer satisfaction, and build a loyal customer base. The interaction between these two core issues, service quality and customer satisfaction, has received its due importance as a strategic component (Bolton & Drew, 1991; Cronin & Taylor, 1992; Landrum, Prybutok, & Zhang, 2010; Taylor & Baker, 1994). It has been well recognized in the research community that service quality indeed influences customer satisfaction and triggers customer loyalty (Hodkinson & Kiel, 2003; Spreng & Mackoy, 1996; Wong & Sohal, 2003). Similarly, price fairness has been coined as an important antecedent of customer satisfaction and loyalty and researchers argued that price fairness has an effect on customers' reactions and it is strategically important for companies while making price-related decisions (Hassan, Hassan, Saqib Nawaz, & Aksel, 2013; Kahneman, Knetsch, & Thaler, 1986; Sinha & Batra, 1999).

For ensuring service quality, measuring service quality reliably is of paramount importance and on that front SERVQUAL has been reliably used by many researchers (Landrum et al., 2010) in the restaurant industry (Banwet & Datta, 1999), in the context of the service industry (Pitt, Watson, & Kavan, 1997), and even in the context of cultural studies (Donthu & Yoo, 1998). Hence, the multitude use of the SERVQUAL service quality measurement scale validates its use for further research in a similar direction.

In a similar research direction, this study aims to investigate how price fairness and service quality relates to customer satisfaction and customer loyalty. Additionally, this study will investigate the possible moderating effects of customer's gender and occupation on satisfaction and loyalty.

Theoretical Background

One of the most researched and interesting topics in the field of consumer research is customer satisfaction (Kim, 2011) and it verifies the fact that at the end of the day each business truly exists to make their customers satisfied. However, understanding customer satisfaction is not an easy endeavor. Ha & Park (2013) have highlighted the challenges to understand customer satisfaction in the new world of technology and mobile phones. Homburg & Stock (2004) defined the concept of customer satisfaction by the degree to which a company's product offering and service offering satisfy or surpass customer expectations. According to Kahn, Kalwani, & Morrison (1986), customer loyalty, as a behavioral approach, refers to the customer's purchasing frequency and purchasing a share from the same organization over time. Bharadwaj, Varadarajan, & Fahy (1993) argued that customer loyalty is key for ensuring sustainable competitive advantage which is one of the fundamental requirements for any company to survive over the years.

Service Quality and Customer Satisfaction

Several studies have examined the effect of service quality on customer satisfaction (Ha & Jang, 2010; Lassar, Manolis, & Winsor, 2000; Ma, QU, & Eliwa, 2014; Spreng & Mackoy, 1996). In the context of fine-dining restaurants, Ma et al. (2014) examined the relationship between "staff service quality, image, customer satisfaction, and loyalty" (p. 513) and found a positive correlation between service quality and customer satisfaction. In the context of ethnic restaurants, Ha & Jang (2010) also found a positive correlation between service quality and customer satisfaction.

Employees' attitudes and behavior affect a customer's perception of service quality (Ma et al., 2014). Parasuraman, Berry, & Zeithaml (1991) conceptualized service quality into five

dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Employees should exhibit traits such as "responsible attitudes and empathy", to improve customer satisfaction (Parasuraman, Zeithaml, & Berry, 1988, as stated in Ma et al., 2014, p. 517). This leads to the following hypothesis:

Hypothesis 1 (H1): Service quality positively affects customer satisfaction.

Price Fairness & Customer Satisfaction

According to Xia, Monroe, & Cox (2004), price fairness is driven by customers' perception, an overall perceptual assessment about the product or service price offering in terms of their comparative reasonability and acceptability. Bolton, Warlop, & Alba (2003) further argued that customers will compare current product and service prices with previous purchases, rival's offering, and other reference sources to judge and develop price fairness perception.

A number of studies have found a positive relationship between perceived value and customer satisfaction (Cha & Borchgrevink, 2019; Ryu, Lee, & Kim, 2012). Cha & Borchgrevink (2019) found that perceived value positively affects customer satisfaction, where perceived value is defined as the customer's perception of what they received compared with what it costs. Ryu et al. (2012) found the same relationship in the context of a Chinese fine-dining restaurant in the United States. Hanaysha (2016) also argued that price fairness positively relates to customer satisfaction in the fast-food restaurant industry of Malaysia. Herrmann, Xia, Monroe, & Huber (2007) argued the same for automobile purchases in the car dealership industry of Germany. Hence, the following hypothesis is proposed:

Hypothesis 2 (H2): Price fairness positively affects customer satisfaction.

Customer Satisfaction & Loyalty

Several studies have also examined the relationship between customer satisfaction and customer loyalty (Cha & Borchgrevink, 2019; Ha & Jang, 2010; Ma et al., 2014). Ma et al. (2014) found that there was a positive correlation between customer satisfaction and customer loyalty. Cha & Borchgrevink (2019) surveyed college students and confirmed that customer satisfaction positively affects customer loyalty in a restaurant context. These findings lead to the following hypothesis:

Hypothesis 3 (H3): Customer satisfaction positively affects customer loyalty.

Moderating Effect of Gender

A few studies have explored the moderating effect of gender on the relationship between service quality and customer satisfaction and between customer satisfaction and loyalty (e.g., Ma et al., 2014). Ma et al. (2014) found that gender has a moderating effect on staff service quality and customer satisfaction in a fine-dining context; females had greater satisfaction than males when perceptions of service quality increased. Hence, the following hypothesis is proposed:

Hypothesis 4 (H4): Gender moderates the relationship between service quality and customer satisfaction.

Sharma, Chen, & Luk (2012) explored the moderating effect of gender on perceived value and satisfaction in a broad retail setting. Males strengthen the positive correlation between perceived value and satisfaction (Sharma et al., 2012). The authors also argued that this finding shows that males are more "value-conscious" (p. 108). Hence, the following hypothesis is proposed:

Hypothesis 5 (H5): Gender moderates the relationship between price fairness and customer satisfaction.

Moderating Effect of Occupation

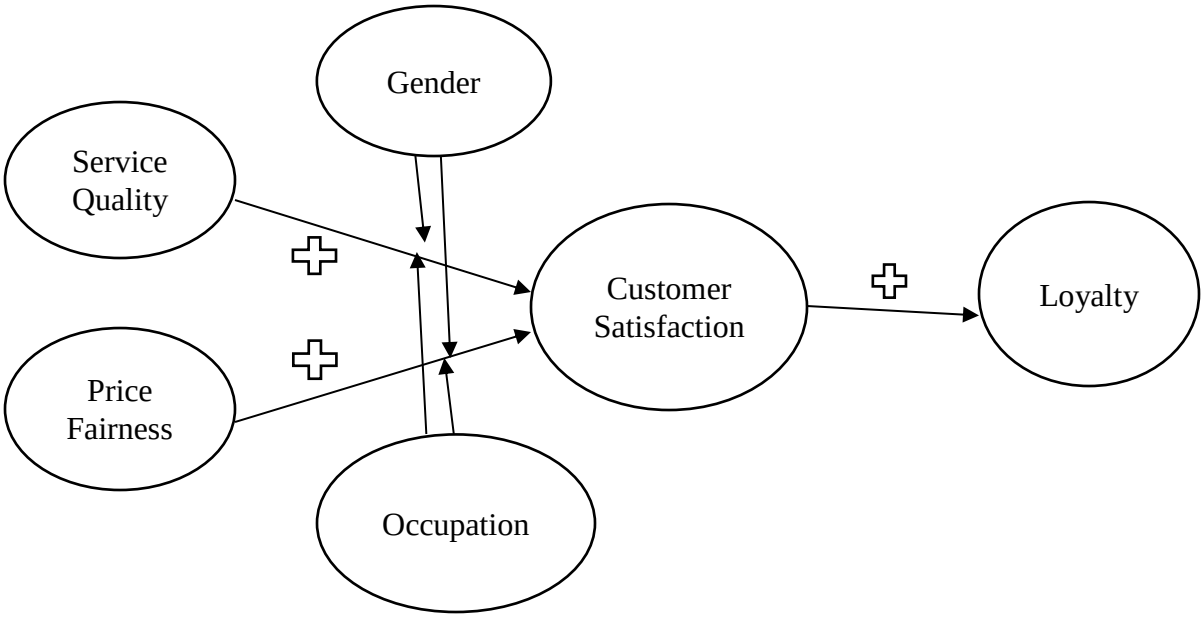
Customer's occupation is relatively an understudied variable in the context of service quality, price fairness, and customer satisfaction-related research undertakings. However, one of the very few such studies, Landrum, Prybutok, & Zhang (2010) argued and illustrated that service quality positively relates to customer satisfaction, and the relationship is significantly moderated by occupation. On a similar note, Giao (2020) concluded that service quality during online shopping positively relates to customer satisfaction, and the relationship is moderated by occupation. Considering the importance of the variable, the occupation will be tested as the moderating variable against service quality-customer satisfaction relationship, and price fairness-customer satisfaction relationship in this study. Hence, the following hypotheses are proposed:

Hypothesis 6 (H6): Customer's occupation moderates the relationship between service quality and customer satisfaction.

Hypothesis 7 (H7): Customer's occupation moderates the relationship between price fairness and customer satisfaction.

Figure 1

Conceptual Model



Methods

Data Source

A secondary dataset was collected for this project from Mendeley Data which is an open data repository. According to the data description, data was collected as part of a cross-sectional survey conducted in several coffee shops in Jakarta, Indonesia in 2018 (Dhisasmito & Kumar, 2020). The following sections describe measurement instrument development, data collection procedure, and participants' characteristics based on the data description found from the source.

Measurement Instrument

A review of related literature formulated the base for the design of the conceptual model of this study. The scale items for four constructs were adapted from prior studies to ensure content validity (see Appendix). These constructs include service quality, price fairness, customer satisfaction, and customer loyalty, where service quality consists of five dimensions. The construct 'service quality' was measured through items for five dimensions of the SERVQUAL model (Parasuraman et al., 1988): tangibility (5 items- SQT1, SQT2, SQT3, SQT4, SQT5), reliability (3 items- SQRL1, SQRL2, SQRL3), responsiveness (4 items- SQRS1, SQRS2, SQRS3, SQRS4), assurance (3 items- SQA1, SQA2, SQA3) and empathy (3 items- SQE1, SQE2, SQE3) adapted from Keshavarz et al. (2016) and Alhkami & Alarussi (2016). 'Price fairness' consisted of 4 items (PF1, PF2, PF3, PF4) adapted from Hanaysha (2016) and Jin et al. (2016). 'Customer satisfaction' was measured with 5 items (S1, S2, S3, S4, S5) from Lee et al. (2018) and Hanaysha (2016). Finally, 5 items for measuring 'customer loyalty' (L1, L2, L3, L4, L5) were adapted from Keshavarz et al. (2016) and Lee et al. (2018). A 7-point Likert scale (1= strongly disagree to 7= strongly agree) was used to measure the scale items representing the constructs (Wu, 2017). Only one item (SQRS3) was negatively worded which we reverse-coded

for analysis. Demographic information – gender and occupation – was collected on a nominal scale. Information on age, education, and monthly expenditure on food and beverages was collected on an ordinal scale.

Procedure for Data Collection

The data collection instrument (questionnaire) was assessed by five academic experts in the retail and culinary business. After that, it was pilot-tested with 10 undergraduate final-year students. Necessary adjustments were made based on the recommendation from the experts and pilot participants. The final questionnaire was distributed to 600 customers from different coffee shops selected by random sampling. Data was collected for three consecutive months. Out of 600 questionnaires, 400 were returned (66.7%) of which 384 met all criteria and the other 16 were incomplete and were hence discarded.

Participant Characteristics

The final sample (N = 384) consisted of 159 male and 225 female customers. More than two-thirds of the participants were below the age of twenty-four (70.3%) whereas a small fraction of them (only 1%) were more than fifty-five years old. 59.1% of the participants were students and 71.1% had a bachelor's degree. A majority of the participants indicated that they spend between Indonesian rupiah (IDR) 1,000,000 and 1,999,000 (25%), followed by between 2,000,000 and 2,999,000 (23.2%) monthly for food and beverages. Nearly two-thirds of the participants (64.8%) visited coffee shops 1-3 times a month. Table 1 shows the summary of sample descriptive statistics.

Table 1

Demographic Charecteristics of the Respondents.

Demographic characteristics	Categories	Percent (%)
Gender	Male	41.4
	Female	58.6
Age	Less than 18 years	4.7
	18–24	65.6
	25–34	13.0
	35–44	4.7
	45–54	10.9
	More than 55 years	1.0
Monthly expenditure for food and beverage	Less than IDR 500,000	4.4
	IDR 500,000–IDR 999,000	11.7
	IDR 1,000,000–IDR 1,999,000	25.0
	IDR 2,000,000–IDR 2,999,000	23.2
	IDR 3,000,000–IDR 3,999,000	9.6
	IDR 4,000,000–IDR 4,999,000	9.6
	More than IDR 5,000,000	16.4
Occupation	Employed for wage	24.2
	Self-employed	12.2
	Unemployed and currently looking for work	1.6
	Unemployed and not currently looking for work	0.8
	Student	59.1
	Retired	0.0
	Homemaker	2.1
Education level	Senior high school and less	12.0
	Associate degree (undergraduate)/D1-D3	5.7
	Bachelor’s degree (undergraduate)/S1	71.1
	Master’s degree/S2	11.2
	Doctoral degree/S3	0.0
Frequency of monthly visits to the coffee shop	1–3 times	64.8
	3–5 times	22.4
	5–7 times	6.8
	More than 7 times	6.0

Data Analysis

For data screening, preparation, and analysis IBM SPSS Statistics and AMOS version 26 were used.

Data Preparation

First, missing values were screened. There were no missing values found in any of the variables. Second, the normality of the variables was assessed by calculating the skewness and kurtosis statistics and plotting Q-Q plots for normality tests. The variables were also plotted with histograms to look for any skewness and outliers. For detecting outliers, Mahalanobis distance and its probability were also calculated. All the methods showed that there were no outliers in the main study variables and they were normally distributed. The assumptions of regression have been confirmed with residual plots. There was no multicollinearity among the main variables.

Validity and Reliability

In the next phase, the reliability and validity of each construct were measured separately. Scale items were assessed by measuring the internal consistency coefficient Cronbach's alpha. While testing reliability, an alpha of .38 was obtained for responsiveness, one of the dimensions of service quality, and hence one item (SQRS3) was removed in this stage which improved the alpha to .71. Table 2 shows that the reliability of all the scales was acceptable as the value of Cronbach’s alpha was found to be higher than the acceptable threshold value of 0.70 (Nunnally, 1978).

Then, the construct validity was tested through exploratory factor analysis (EFA). EFA can be used to explore any latent dimensions underlying a data set or examine which items have the strongest association with a given factor (DiStefano et al., 2009). Additionally, after identifying the number of factors or components through EFA, the information about the factors

can be further used in subsequent analyses such as latent variable modeling or confirmatory factor analyses (CFA) (Gorsuch, 1983; Schumaker & Lomax, 2004). The results of EFA are compiled in Table 2. Decisions have been made by considering factors with eigenvalues greater than one as significant (Olson et al, 2005; Albadvi et al., 2007). From the table, it can be seen that all the items of a particular construct are highly loaded on the corresponding construct with a factor loading of greater than 0.5. However, two items of loyalty (L3 and L5) were eliminated because of lower extraction values (< 0.5). Hence, out of 32 scales, three scales were eliminated after checking for reliability and validity and the final analysis was conducted with the 29 remaining scales.

Table 2
Instrument Validity and Reliability Index

Model Constructs	Measurement Criterions (Indicators)	Scales	Scale loadings	Alpha	Eigenvalue	% of Total Variance
Service Quality	Tangibility	SQT1	0.845	0.85	3.170	63.400
		SQT2	0.744			
		SQT3	0.834			
		SQT4	0.840			
		SQT5	0.708			
	Reliability	SQRL1	0.746	0.83	2.240	74.657
		SQRL2	0.770			
		SQRL3	0.724			
	Responsiveness	SQRS1	0.859	0.71	1.937	64.560
		SQRS2	0.842			
		SQRS4	0.700			
	Assurance	SQA1	0.878	0.87	2.373	79.099
		SQA2	0.925			
		SQA3	0.864			
	Empathy	SQE1	0.801	0.75	2.018	67.270
		SQE2	0.836			
		SQE3	0.823			
Price Fairness		PF1	0.920	0.88	2.995	74.871
		PF2	0.892			
		PF3	0.874			
		PF4	0.767			
Satisfaction		S1	0.828	0.85	3.126	62.517
		S2	0.794			
		S3	0.757			
		S4	0.792			
		S5	0.780			
Loyalty		L1	0.807	0.72	1.932	64.412
		L2	0.824			
		L4	0.775			

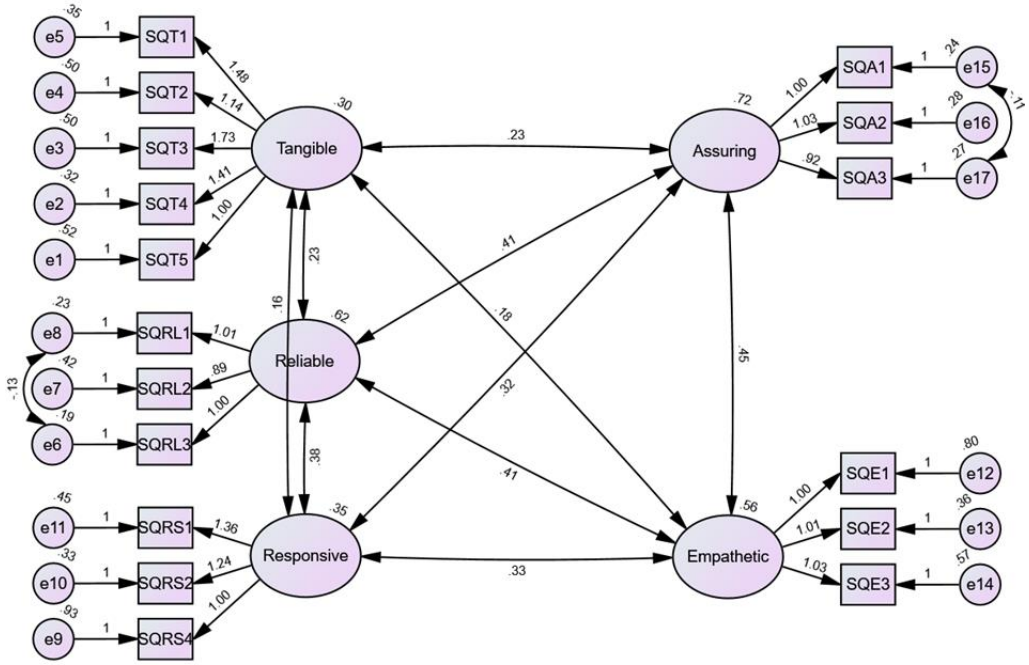
Measuring SERVQUAL Dimensions

Among the 29 scales, 17 scales represented five dimensions of service quality (5 scales for Tangibility, 3 scales for Reliability, 3 scales for Responsiveness, 3 scales for Assurance, and 3 for Empathy). A confirmatory factor analysis of these five dimensions was conducted in IBM AMOS 26. All the scales were highly and significantly loaded on respective dimensions (Figure

2). After confirming the validity, the average of the corresponding scales under each dimension was calculated and used as new observed variables of service quality in the subsequent analysis (Hair et al., 1995, p. 391 as cited in Keramati et al., 2010).

Figure 2

Measurement Model of SERVQUAL



Hypothesis Test

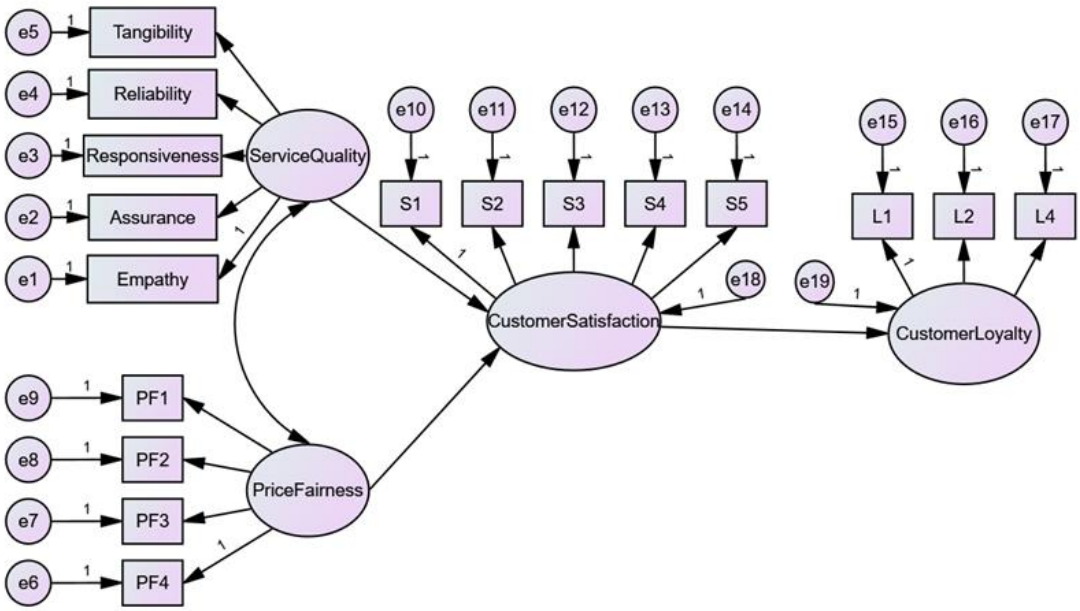
In the last phase, dependence techniques of multivariate analysis were carried out using AMOS 26 to test the goodness of fit of the measurement model as well as the structural equation model. Then, regression estimates were examined to test three of the hypotheses (H1, H2, H3) and to determine the relative significance of independent variables in influencing the dependent variable. Finally, the rest of the hypotheses (H4, H5, H6, H7) for examining moderating effects of gender and occupation were tested using the Andrew Hayes process in SPSS 26.

Results

An assessment of the measurement model followed by the structural model was conducted. The structural regression model included service quality (measured at Tangibility, Reliability, Responsiveness, Assurance, and Empathy), price fairness (measured at PF1, PF2, PF3, and PF4), customer satisfaction (measured at S1, S2, S3, S4, S5), and customer loyalty (measured at L1, L2, L4) as latent variables with their corresponding items as indicators. The schematic SEM model is shown in Figure 3.

Figure 3

Structural Equation Model



Overall Model Fit

In order to assess the overall model fit, four absolute fit measures (Chi-square, RMR,

RMSEA, and GFI), three incremental fit measures (TLI, CFI, NFI), and three parsimonious fit measures (AGFI, PNFI, Normed chi-square) were used (Hair et al., 2009). As shown in Table 3, all of the measures meet the recommended values. This indicates a good fit for the model.

Table 3
Overall Fit Indices

Fit Measure	Value		Recommended Cut-off Value (Hair et al., 1995; Roh et al., 2005)
	SERVQUAL Measurement Model	Main Measurement Model	
Chi-square	312.902	298.324	
Df	107	113	
p-value	<.001	<.001	sensitive to sample size
	Absolute Fit Measures		
GFI	0.916	0.918	≥ 0.9
RMSEA	0.071	0.065	< .08
RMR	0.042	0.039	≤ 0.08
	Incremental Fit Measures		
CFI	0.938	0.945	≥ 0.9
TLI	0.922	0.933	≥ 0.9
NFI	0.910	0.914	≥ 0.9
	Parsimonious Fit Measures		
AGFI	0.880	0.889	≥ 0.8
Parsimony Normed Fit Index (PNFI)	0.716	0.760	> 0.6
Normed chi-square (chi-square/DF)	2.924	2.640	≤ 2 or ≤ 3

Measurement Model

Before testing the hypotheses, a CFA was conducted to confirm the factor structure of the main measurement model, which included service quality (five dimensions were included as observed variables), price fairness, customer satisfaction, and customer loyalty. Results of the CFA yielded good fit, $\chi 2$ (115) = 298.32; RMSEA = .065; GFI = .918; CFI = .945. After assessing the overall model fit for the measurement model, we examined the factor loadings and their significance for each of the constructs. All the items loaded highly (b > .5) on their

respective factors with a significance level of $p < .001$. After that, the composite reliability (CR) and variance extracted (AVE) measure were calculated for each construct which is another key approach to assess the measurement model (Hair et al., 1995, p. 641). The reliability of the constructs remained consistent as Cronbach's alpha for all of the constructs exceeded the threshold value of 0.7. Figure 4 shows the loading of each indicator on the related construct. Additionally, the convergent validity of the constructs was proved with variance extracted values, which indicates the extent of agreement in the items of a construct (Fornell & Larcker, 1981). Table 4 shows the mean, the standard deviation for each indicator along with the factor loadings, significance, composite reliability, and average variance extracted (AVE) for each construct. From the table, it is seen that all constructs have acceptable convergent validity (>.5) except customer loyalty (.47), which is just below 0.5.

Figure 4
Results of Measurement Model

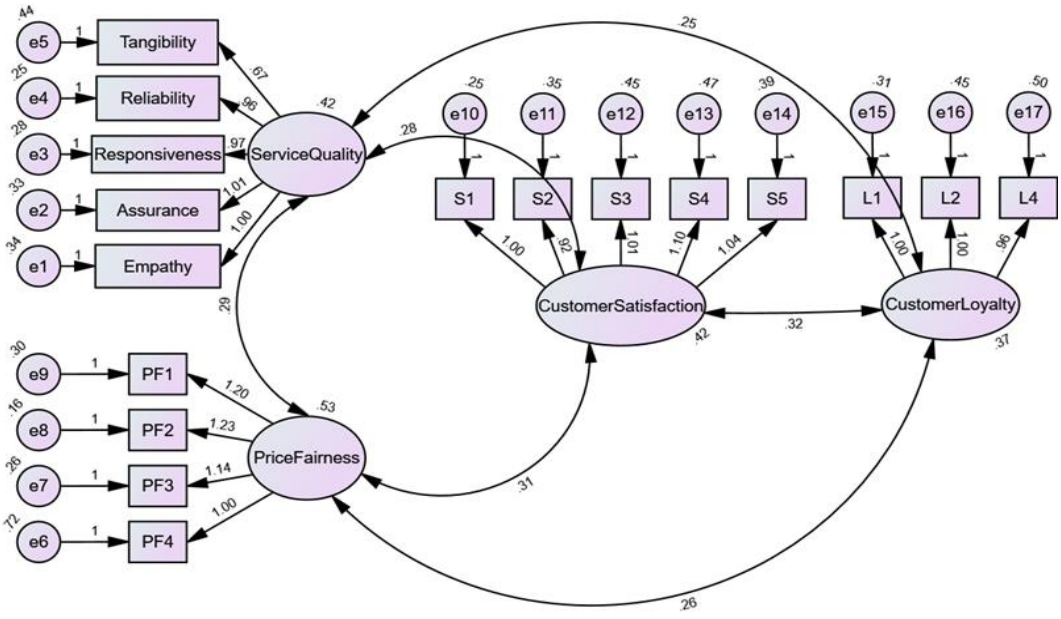


Table 4

Results of Mesaurement Model

Model Constructs	Measurement Indicators	Mean	SD	Indicators Loadings	Significance	Composite Reliability	Variance Extracted
Service Quality	Tangibility	3.40	0.79	0.554	***	0.84	0.52
	Reliability	2.67	0.81	0.779	***		
	Responsiveness	2.67	0.83	0.766	***		
	Assurance	2.33	0.87	0.750	***		
	Empathy	1.67	0.88	0.744	***		
Price Fairness	PF1	5.37	1.04	0.849	***	0.89	0.67
	PF2	5.37	0.99	0.911	***		
	PF3	5.34	0.98	0.850	***		
	PF4	5.23	1.12	0.653	***		
Customer Satisfaction	S1	5.70	0.82	0.787	***	0.85	0.53
	S2	5.80	0.84	0.707	***		
	S3	5.51	0.94	0.698	***		
	S4	5.52	0.99	0.718	***		
	S5	5.84	0.92	0.734	***		
Customer Loyalty	L1	5.67	0.82	0.738	***	0.72	0.47
	L2	5.53	0.90	0.671	***		
	L4	5.36	0.92	0.636	***		

Notes.***p-value < 0.001.

On the other hand, discriminant validity shows the degree of dissimilarities between the measures, in other words, if two measures that are not theoretically supposed to be related are actually unrelated. The discriminant validity was assessed by the Heterotrait-monotrait ratio of correlations (HTMT) with values below the threshold of 0.85 (Henseler et al., 2015). Table 5 shows that all the HTMT values are lower than the threshold. Hence, discriminant validity was established.

Table 5

Heterotrait-Monotrait Ratio of the Correlations (HTMT)

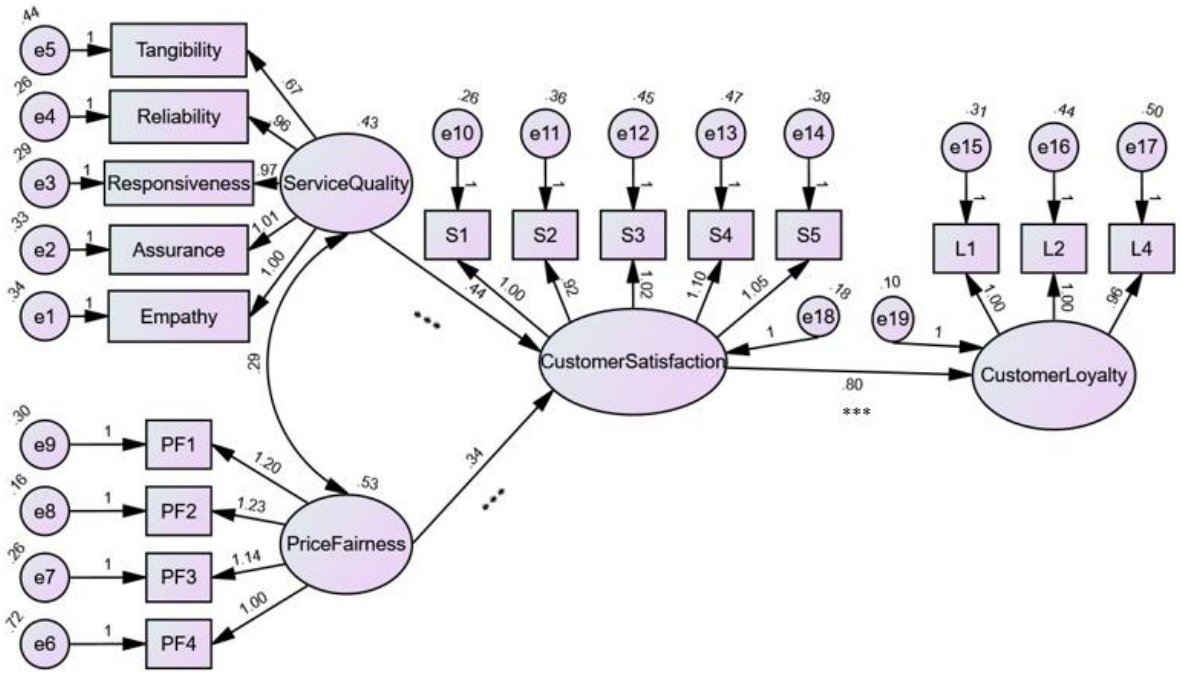
	Service Quality	Price Fairness	Customer Satisfaction
Service Quality			
Price Fairness	0.058		
Customer Satisfaction	0.064	0.660	
Customer Loyalty	0.060	0.587	0.832

Structural Model

To test the hypotheses, the full model with structural equation modeling was assessed next. After assessing the overall model, the estimated coefficients of the constructs were examined. All of the path estimates were significant at a level of p <.001 and in the expected direction. Service quality significantly influences customer satisfaction (H1), as b = .44, SE = .06, p < .001. Price fairness also showed significant impact on customer satisfaction (b = .34, SE = .06, p < .001) which supported H2. Finally, the significant path coefficient between customer satisfaction and customer loyalty supported H3 (b = .80, SE = .07, p < .001). Thus three of the seven hypotheses were supported by the SEM model. The path coefficients and their significance levels are shown in Figure 5 and hypotheses tests are shown in Table 6.

Figure 5:

Results of Structural Model



*Notes. Path coefficient ***p-value < 0.001.*

Moderating Effect

To test the hypothesis of whether gender and occupation moderate the relationship between service quality, price fairness, and customer satisfaction, four moderation analyses were conducted by using Andrew Hayes process macro of bootstrapping (Hayes, 2018). As the construct reliability and validity for each construct had already been established, for conducting this moderation analysis the average of the scales was calculated before entering them in the models.

Moderating Effect of Gender

First, the moderating effect of gender on the relationship between service quality and customer satisfaction was examined. Customer satisfaction was entered as a dependent variable,

service quality as an independent variable, and gender as a moderating variable. The overall model was significant, $F(3, 380) = 66.08$, $p < .001$, $R^2 = .34$. However, the effect of the interaction between gender (coded as: Male = 1; Female = 2) and service quality on customer satisfaction was insignificant, $b = -.05$, $SE = .09$, $p = .61$. So, it can be said that the relationship between service quality and customer satisfaction is not moderated by the gender of the customer. H4 is not supported.

To test H5, whether gender moderates the relationship between price fairness and customer satisfaction, customer satisfaction was again entered as a dependent variable, price fairness as an independent variable, and gender as a moderating variable. The overall model was significant, $F(3, 380) = 61.96$, $p < .001$, $R^2 = .33$. The interaction term between gender and price fairness accounted for a significant proportion of the variance in customer satisfaction, $\Delta R^2 = .01$, $\Delta F(1, 380) = 4.39$, $b = -.14$, $SE = .07$, $p = .04$. Moreover, from the interaction plot, we can see that while for lower perceived price fairness women were more satisfied than men, for higher perceived price fairness men were more satisfied than women. So, we can say that the relationship between price fairness and customer satisfaction is moderated by the gender of the customer. H5 is supported.

Moderating Effect of Occupation

To test H6, the moderating effect of occupation on the relationship between service quality and customer satisfaction was examined. The effect of the interaction between occupation and service quality on customer satisfaction was insignificant, $b = .01$, $SE = .03$, $p = .73$. As such, occupation does not moderate the relationship between service quality and customer satisfaction. Therefore, H6 was not supported.

On the other hand, the interaction effect between occupation and price fairness accounted

for a significant proportion of the variance in customer satisfaction, $\Delta R^2 = .01$, $\Delta F(1, 380) = 4.28$, $b = -.04$, $SE = .02$, $p = .04$. The interaction plot shows that for lower perceived price fairness those who were students showed more satisfaction than those who were employed. However, with a higher perception of price fairness students were less satisfied than the employed customers. So, we can say that the occupation moderates the relationship between price fairness and customer satisfaction. H7 is supported. Figure 6 shows the significant interaction plots.

Figure 6:

Interaction plots (left: price fairness and gender; right: price fairness and occupation)

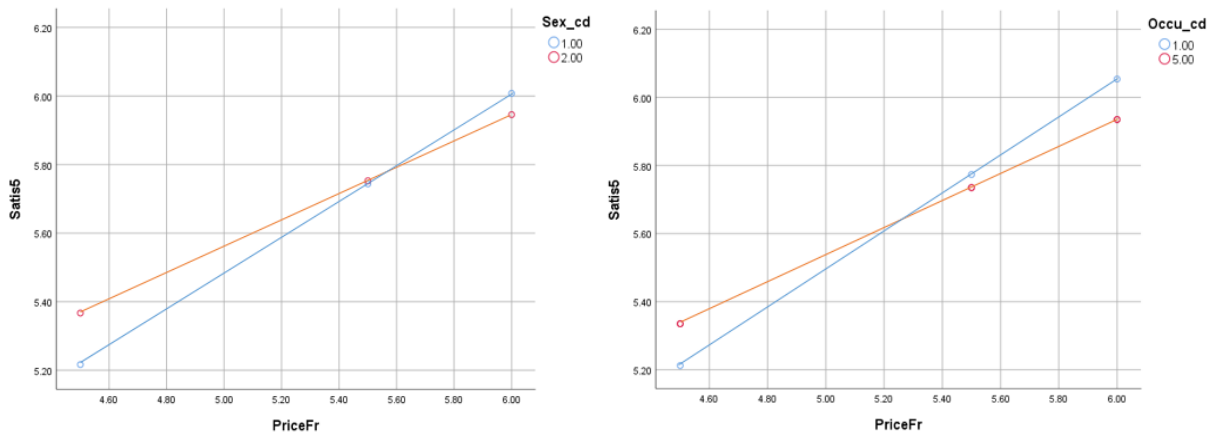


Table 6

Tests of Hypotheses

	Hypotheses		Estimates	S.E	t	Test Results
H1	Service quality	→ Satisfaction	0.44	0.06	6.94***	Supported
H2	Price fairness	→ Satisfaction	0.34	0.06	6.17***	Supported
H3	Satisfaction	→ Loyalty	0.80	0.07	12.33***	Supported
H4	Gender*ServiceQuality	→ Satisfaction	-0.05	0.09	-0.52	Not supported
H5	Gender*PriceFairness	→Satisfaction	-0.14	0.07	-2.10*	Supported
H6	Occupation*ServiceQuality	→Satisfaction	0.01	0.03	0.35	Not supported
H7	Occupation*PriceFairness	→Satisfaction	-0.04	0.02	-2.07*	Supported

Notes. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.

Managerial Discussion

This study investigates the impact of service quality and perceived price fairness on customer satisfaction, customer satisfaction on customer loyalty. Thus, this study contributes to the SERVQUAL, price fairness, customer satisfaction, and loyalty literature. Additionally, this study investigates the possible moderating effects of gender and occupation of customers on the relationship between service quality, price fairness, and customer satisfaction. The findings of this study will also have potential managerial implications for coffee industry operators in particular and dine-in restaurants in general.

Consistent with the findings of research undertakings like Spreng & Mackoy (1996), Lassar et al. (2000), Ha & Jang (2010), and Ma et al., (2014), this study establishes that service quality has a positive impact on customer satisfaction. Similarly, this study illustrates that customer satisfaction positively relates to customer loyalty which is consistent with the findings of Teeroovengadum (2020), Ha & Jang (2010), Ma et al. (2014), and Cha & Borchgrevink (2019).

Perceived price fairness was found to be a key antecedent and an immediate predictor of customer satisfaction, which is consistent with the findings of Hanaysha (2016), Ryu et al. (2012), Herrmann et al. (2007), and Hassan et al. (2013). Specifically, this study establishes that perceived price fairness has a positive effect on customer satisfaction. Ryu et al. (2012) and Cha & Borchgrevink (2019) additionally argued that perceived value is linked to its costs and this price or cost fairness relates positively to customer satisfaction.

Additionally, this study reports consistent and contrasting findings for the moderating variables compared with similar contemporary studies on service quality, customer satisfaction, and customer loyalty. Customer occupation and gender were found to be significant moderators of the price fairness and customer satisfaction relationship, which adds an extra dimension to the works of Herrmann et al. (2007), Hassan et al. (2013), Hanaysha (2016), Ryu et al. (2012), and Cha & Borchgrevink (2019). However, customer occupation and gender did not significantly moderate the service quality and customer satisfaction relationship which contrast with the findings of Landrum et al. (2010) and Ma et al. (2014). The possible reason behind the contrasting findings could be that we used SERVQUAL as a composite construct while other similar studies such as Teeroovengadum (2020) and Lassar et al. (2000) studied the SERVQUAL service dimensions separately and illustrated that not all service dimensions significantly relate to customer satisfaction. Teeroovengadum (2020) even concluded that one of the service quality dimensions positively relates to customer satisfaction and the relationship is significantly moderated by gender. As the focus of this study was on the factors affecting customer satisfaction and loyalty rather than SERVQUAL, the composite service quality was examined, rather than the five separate service quality dimensions. Thus, this approach can be considered as a limitation of the study which future studies might want to address.

Overall, the findings of this study lay reasonable grounds for managerial implications for the coffee industry and dine-in restaurant operators as the service quality and price fairness positively and significantly predicted customer satisfaction, and customer satisfaction positively predicted customer loyalty. The industry players who intend to build a loyal customer base can leverage these findings. They can aim to offer greater service quality and improve customers' perceived price fairness by enacting appropriate policies. Moreover, the coffee shop and dine-in restaurant players can take note of the fact that male customers and employed customers are more sensitive to price fairness. Male customers reported lower satisfaction scores compared to their female counterparts when they perceived lower price fairness and reported higher satisfaction scores compared to the female customer group when they perceived higher price fairness. Similarly, employed customers reported lower satisfaction scores compared to the student customer group when they perceived lower price fairness and reported higher satisfaction scores compared to the student customer group when they perceived higher price fairness. These findings can be useful for the industry operators when setting prices for their products and designing services to trigger perceived value creation in the psyche of the potential customers.

However, the study has some limitations as well. The survey was conducted at coffee shops in a particular location (Jakarta, Indonesia) and hence the result may not be generalizable to different geographic areas and industry sectors. Further research can be carried out in different settings with a mixture of urban and rural people in order to cover a broader consumer market. Another limitation of the study is that the data used for the main analysis consisted of self-reported responses to questionnaires on all measures which could lead to response bias. Future research using different research designs, such as an experimental study design might help overcome this issue and provide strong support for the model. Finally, as it was a secondary

dataset, we had a limited number of items and variables. The model might be further fortified and extended by considering a few additional demographic characteristics (e.g., income, social class, culture/ethnicity, etc.). Despite the limitations, our study has been able to provide strong support for the customer loyalty model as well as add some new perspectives to it.

References

Albadvi, A., Keramati, A., & Razmi, J. (2007). Assessing the impact of information technology on firm performance considering the role of intervening variables: Organizational infrastructures and business processes reengineering. *International Journal of Production Research, 45*(12), 2697–2734.

Alhkami, A. A., & Alarussi, A. S. (2016). Service quality dimensions and customer satisfaction in telecommunication companies. *Asian Journal of Business and Management, 4*(3).

Banwet, D. K., & Datta, B. (1999). Measuring service quality: Case study of a restaurant. Productivity, *40*(2), 296–301.

Bharadwaj, S. G., Varadarajan, P. R., & Fahy, J. (1993). Sustainable Competitive Advantage in Service Industries: A Conceptual Model and Research Propositions. *Journal of Marketing, 57*(4), 83–99.

Bolton, L. E., Warlop, L., & Alba, J. W. (2003). Consumer Perceptions of Price (Un)Fairness. *Journal of Consumer Research, 29*(4), 474–491.

Bolton, R. N., & Drew, J. H. (1991). A Multistage Model of Customers' Assessments of Service Quality and Value. *Journal of Consumer Research, 17*(4), 384.

Cha, J. M., & Borchgrevink, C. P. (2019). Customers' perceptions in value and food safety on customer satisfaction and loyalty in restaurant environments: moderating roles of gender and restaurant types. *Journal of Quality Assurance in Hospitality and Tourism, 20*(2), 143–161.

Cronin, J. J., & Taylor, S. A. (1992). Measuring Service Quality: A Reexamination and

Extension. *Journal of Marketing*, *56*(3), 55–68.

Distefano, C. ;, Zhu, M. ;, & Mîndrilã, D. (2009). Understanding and Using Factor Scores: Considerations for the Applied Researcher. *Practical Assessment, Research, and Evaluation*, *14*(1), 20.

Dhisasmito, P. P., & Kumar, S. (2020). Understanding customer loyalty in the coffee shop industry (A survey in Jakarta, Indonesia). *British Food Journal*, *122*(7), 2253–2271. https://doi.org/10.1108/BFJ-10-2019-0763

Donthu, N., & Yoo, B. (1998). Cultural Influences on Service Quality Expectations. *Journal of Service Research*, *1*(2), 178–186.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.

Giao, H. N. K. (2020). Customer Satisfaction at Tiki.vn E-Commerce Platform. *Journal of Asian Finance*, *7*(4), 173–183.

Gorsuch, R. (1983). Factor analysis. Hillsdale, NJ: L. Erlbaum Associates.

Ha, J., & Jang, S. C. (Shawn). (2010). Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment. *International Journal of Hospitality Management*, *29*(3), 520–529.

Ha, Y. W., & Park, M. C. (2013). Antecedents of Customer Satisfaction and Customer Loyalty for Emerging Devices in the Initial Market of Korea: An Equity Framework. *Psychology & Marketing*, *30*(8), 676–689.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). Multivariate Data Analysis 7th Edition Pearson Prentice Hall.

Hanaysha, J. (2016). Testing the Effects of Food Quality, Price Fairness, and Physical Environment on Customer Satisfaction in Fast Food Restaurant Industry Drivers of Purchase Decision and Customer Retention in Retail Industry View project TESTING THE EFFECTS OF FOOD QUALITY. *Journal of Asian Business Strategy, 6*(2), 31–40.

Hassan, M., Hassan, S., Nawaz, M. S., & Aksel, I. (2013). Measuring customer satisfaction and loyalty through service fairness, service quality and price fairness perception: an empirical study of Pakistan Mobile telecommunication sector. *Science International, 25*(4), 971-980.

Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (2nd editio). New York: Guilford Press.

Henseler, J., Ringle, C.M. & Sarstedt, M (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. of the Acad. Mark. Sci. 43,* 115–135. https://doi.org/10.1007/s11747-014-0403-8

Herrmann, A., Xia, L., Monroe, K. B., & Huber, F. (2007). The influence of price fairness on customer satisfaction: an empirical test in the context of automobile purchases. *Journal of Product & Brand Management, 16*(1), 49–58.

Hodkinson, C., & Kiel, G. (2003). Understanding Web Information Search Behavior. *Journal of Organizational and End User Computing, 15*(4), 27–48.

Homburg, C., & Stock, R. M. (2004). The Link Between Salespeople's Job Satisfaction and Customer Satisfaction in a Business-to-Business Context: A Dyadic Analysis. *Journal of the Academy of Marketing Science, 32*(2), 144–158.

Jin, N.(P)., Line, N.D. and Merkebu, J. (2016), "The effects of image and price fairness: A consideration of delight and loyalty in the waterpark industry", *International Journal of Contemporary Hospitality Management, 28*(9), pp. 1895-1914. https://doi.org/10.1108/IJCHM-03-2015-0094.

Kahn, B. E., Kalwani, M. U., & Morrison, D. G. (1986). Measuring Variety-Seeking and Reinforcement Behaviors Using Panel Data. *Journal of Marketing Research, 23*(2), 89–100.

Kahneman, D., Knetsch, J. L., & Thaler, R. (1986). Fairness as a Constraint on Profit Seeking: Entitlements in the Market. *The American Economic Review, 76*(4), 728–741.

Keramati, A., Mehrabi, H., & Mojir, N. (2010). A process-oriented perspective on customer relationship management and organizational performance: An empirical investigation. *Industrial Marketing Management, 39*(7), 1170–1185.

Keshavarz, Y., Jamshidi, D., & Bakhtazma, F. (2016). THE INFLUENCE OF SERVICE QUALITY ON RESTAURANTS' CUSTOMER LOYALTY. *Arabian Journal of Business and Management Review, 6*(4).

Kim, H. J. (2011). Service orientation, service quality, customer satisfaction, and customer loyalty: Testing a structural model. *Journal of Hospitality Marketing and Management, 20*(6), 619–637.

Landrum, H., Prybutok, V. R., & Zhang, X. (2010). The moderating effect of occupation on the perception of information services quality and success. *Computers and Industrial Engineering, 58*(1), 133–142.

Lassar, W. M., Manolis, C., & Winsor, R. D. (2000). Service quality perspectives and satisfaction in private banking. *Journal of Services Marketing, 14*(3), 244–271.

Lee, W. S., Moon, J., & Song, M. (2018). Attributes of the coffee shop business related to customer satisfaction. *Journal of Foodservice Business Research, 21*(6), 628–641.

Ma, E., QU, H., & Eliwa, R. A. (2014). Customer Loyalty With Fine Dining: The Moderating Role of Gender. *Journal of Hospitality Marketing and Management, 23*(5), 513–535.

Nunally, J. C. (1978). Psychometric Theory (2nd ed.). *New York: McGraw- Hill*.

Olson, E. M., Slater, S. F., & Hult, G. T. M. (2005). The Performance Implications of Fit among Business Strategy, Marketing Organization Structure, and Strategic Behavior. Journal of Marketing, 69(3), 49–65.

Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991). Refinement and Reassessment of the SERVQUAL Scale. *Journal of Retailing, 67*(4), 420-450., 67(4), 420–450.

Parasuraman, A., Zeithaml, V. A., & Berry, L. (1988). SERVQUAL: A multiple item scale for measuring customer perceptions of service quality. *Journal of Retailing, 64*, 12–40., 64, 12–40.

Pitt, L. F., Watson, R. T., & Kavan, C. B. (1997). Measuring information systems service quality: Concerns for a complete canvas. *MIS Quarterly: Management Information*

Systems, *21*(2), 209–220.

Roh, T. H., Ahn, C. K., & Han, I. (2005). The priority factor model for customer relationship management system success. *Expert Systems with Applications*, *28*, 641−654.

Ryu, K., Lee, H.-R., & 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 IJCHM 24,2 200. *International Journal of Contemporary Hospitality Management*, *24*(2), 200–223.

Schumaker, R., & Lomax, R. (2004). A beginner's guide to statistical equation modeling.

Sharma, P., Chen, I. S. N., & Luk, S. T. K. (2012). Gender and age as moderators in the service evaluation process. *Journal of Services Marketing*, *26*(2), 102–114.

Sinha, I., & Batra, R. (1999). The effect of consumer price consciousness on private label purchase. *International Journal of Research in Marketing*, *16*(3), 237–251.

Spreng, R. A., & Mackoy, R. D. (1996). An empirical examination of a model of perceived service quality and satisfaction. *Journal of Retailing*, *72*(2), 201–214.

Taylor, S. A., & Baker, T. L. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, *70*(2), 163–178.

Teeroovengadum, V. (2020). Service quality dimensions as predictors of customer satisfaction and loyalty in the banking industry: moderating effects of gender. *European Business Review*.

Wong, A., & Sohal, A. (2003). Service quality and customer loyalty perspectives on two levels of retail relationships. *Journal of Services Marketing*, *17*(5), 495–513.

Wu, H.-C. (2017), "What drives experiential loyalty? A case study of Starbucks coffee chain in Taiwan", *British Food Journal*, *119*(3), pp. 468-496, doi: 10.1108/BFJ-08-2016-0349.

Xia, L., Monroe, K. B., & Cox, J. L. (2004). The Price is Unfair! A Conceptual Framework of Price Fairness Perceptions. *Journal of Marketing*, *68*(4), 1–15.

Appendix

Item references

Model Constructs	Measurement Criterions (Indicators)		Scales	Sources
Service Quality	Tangibility	SQT1	The space of the coffee shop is comfortable	Alhkami & Alarussi (2016); Keshavarz et al. (2016)
		SQT2	The equipment of the coffee shop is modern and update	
		SQT3	The capacity of the coffee shop is big enough	
		SQT4	The service of the coffee shop is comfortable and suitable	
		SQT5	Appearances of the employees are suitable	
	Reliability	SQRL1	When these coffee shop promise to do something by a certain time, they do so	
		SQRL2	When customer have problems, this coffee shop is sympathetic	
		SQRL3	All parts of the coffee shop are reassuring	
	Responsiveness	SQRS1	The coffee shop tells customers exactly when services will be performed	
		SQRS2	You receive prompt service from the coffee's shop's employees	
		SQRS3	Employees of the coffee shop are not always willing to help customers	
		SQRS4	Employees of the coffee shop are not too busy to respond to the customers' requests promptly	
	Assurance	SQA1	You can trust employees of the coffee shop	
		SQA2	You feel safe in your transactions with the coffee shop's employees	
		SQA3	Employees of the coffee shop are polite	
	Empathy	SQE1	Employees of the coffee shop give customers personal attention	
		SQE2	Employees from different parts of the coffee shop serve the customer wholeheartedly	
		SQE3	Employees of the coffee shop know what the customers' needs are	

Price Fairness	PF1	This coffee shop offers the best possible price plan that meets my needs	Hanaysha (2016); Jin et al. (2016)
	PF2	The products price charged by this coffee shop is reasonable	
	PF3	The cost in this coffee shop seem appropriate for what I get	
	PF4	Overall this coffee shop provides superior pricing options compared to other service providers	
Satisfaction	S1	I am satisfied with this coffee shop	Hanaysha (2016); Lee et al. (2018)
	S2	I really enjoy myself at this coffee shop	
	S3	Considering all my experiences with this coffee shop, my decision to visit it was a wise one	
	S4	The food quality and services of this coffee shop fulfill my expectations	
	S5	Overall, I am satisfied about this coffee shop	
Loyalty	L1	I will say positive things about the coffee shop to other people	Keshavarz et al. (2016); Lee et al. (2018)
	L2	I will recommend the coffee shop to anyone who seeks my advice	
	L3	I will encourage friends and relatives to do business with the coffee shop	
	L4	I am more likely to patronize this coffee shop in the future	
	L5	I will purchase from this coffee shop even if it increases the price of the services	