

## **THE SATISFACTION OF CUSTOMER AND THE MODELING OF LOYALTY IN THE INDUSTRY OF FAST-FOOD**

**Sum Sochenda**

School of Graduate Studies, National University of Management, Kingdom of Cambodia  
E-mail: [sumsochenda8888@gmail.com](mailto:sumsochenda8888@gmail.com)

**Abstract:** This study's primary goals were to look at the antecedent factors influencing customer satisfaction (service quality, food quality, physical environment quality, price fairness, and brand image) and then evaluate the causality between customer satisfaction and loyalty in the fast-food restaurant segment. In this research, 480 questionnaires were delivered to six brand fast-food restaurant customers in Phnom Penh, Cambodia, using a self-administered questionnaire method and a convenience sampling methodology, leaving 403 (=83.95 percent) of the total sample size viable for this research. The acquired data were then analyzed utilizing the statistical software SPSS 22.0 and AMOS 26 Graphics in accordance with structural equation modeling (SEM) and qualitative approaches. Before conducting SEM, confirmatory factor analysis (CFA) was used to check the data's goodness-of-fit to the model, convergent and discriminant validity, and indicator and composite reliability. It was revealed that except for the service quality and the physical environment quality, brand image was shown to be the most significantly positive antecedent of consumer satisfaction, followed by food quality and pricing fairness. Customer satisfaction then affected the amount of customer loyalty. The study findings made significant advances to current theories and management implications, specifically when assessing success determinants in fast-food restaurants.

**Keywords:** *Customer Satisfaction, Customer Loyalty, SEM, Fast-food Restaurant*

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### **1. Introduction**

Firms of business generally try to set up strategies, operations, products or services, etc., to fulfill the needs and wants of customers. Meanwhile, customers also seek companies that understand their demands. Customers usually compare what they had expected to receive from the companies and what they actually had received. The gap between expectation and perception generates the judgment toward the service quality provided by companies. However, determining which elements have the most impact on consumer satisfaction is challenging.

The restaurant industry is today regarded as one of the most visible and far-reaching segments of each of them. It has now become a global phenomenon among marketers and consumers (Bhattacharya, Sengupta, & Mishra, 2011). Fast-fast businesses, consequently, become a fiercely competitive industry since there have been many restaurants opened across the country in the last decades. Firm owners in this industry have to determine the specific success factors for their businesses. Fitzsimmons & Fitzsimmons (2006) clarified that, in the

marketplace, winning the customers depended on personal needs and competition. In general, customers choose the service providers based on several necessary factors, including availability, dependability, convenience, price, personalization, reputation, quality, safety, speed, etc. Nevertheless, these success factors were determined for general businesses, not specifying the fast-food industry context. In addition, the fast-food businesses have been impacted terribly by the COVID-19 pandemic. The government restricted people from traveling and required them to stay at home, keep a social distance, wear a mask in public, etc. The restaurants frequently could not operate their businesses and consequently had to lay off their staff. Some suspended their operations temporarily to reduce the cost and losses. In such a circumstance, many restaurants seek new approaches to provide their services to their customers, for instance, using take-away or home-delivery services through a hotline, websites, or apps. Hence, investigating the explicit dimensions or parameters for such an industry during the COVID-19 pandemic was the main problem in this research.

Quality is often a situational, perceptive, and quite a subjective attribute, which is seen differently by different people. In this case, buyers might focus on the needed product and service quality, as well as how it compares to market competitors. Meanwhile, producers may assess compliance quality or the efficiency with which the goods and services were created (Bhakar et al., 2013). In addition, Parasuraman et al. (1985) ushered in a major shift in marketing research focused on service quality, which became a major concern in the 1980s. They addressed this issue by clearly defining and illustrating the differences between the perceived and anticipated services, and subsequently, instruments known as SERVQUAL were primarily used to gauge service quality and some main factors impacting the anticipated service. Nevertheless, as Buttle (1996) observed, these components were warped into five dimensions with their work in 1988, comprising dependability, response, reassurance, sympathy, and tangible things, which we shall address in more depth in the service quality section below. Except for the 'reliability' dimension, Tan et al. (2014) discovered that service quality factors positively impacted customer satisfaction. To improve the service quality in Chinese fast-food restaurants, a new measuring technique called Chinese Fast Food Restaurants Service Quality (CFFRSERV) was used.

This research followed the conjoined concepts/models coming from the revision of both SERVEQUAL and DINESERV based on the aforementioned evaluation and debate. As a result, and appropriately, we used the four key scales for correctly assessing service quality in the fast-food context: (1) dependability, (2) response, (3) reassurance, and lastly, (4) sympathy.

**Ha(1): Service quality positively impacts customer satisfaction.**

The notion of food quality varies depending on the type of food and an individual's culinary preferences. Freshness, texture, wholesomeness, color, flavor, nutritional content, and smell are important aspects of food quality (Huda, Muzaffar, & Ahmed, 2008). For their review, Ryu & Han (2010) used three criteria: food quality, physical environment, and service. They discovered that food quality is the most important factor among these characteristics, followed by the physical environment quality and service quality. In addition, presentation, healthy alternatives, variety, flavor, temperature, and freshness were among the six food quality factors used by Namkung & Jang (2007). Taste and presentation were the two most important factors in visitor satisfaction and behavior intentions, according to their research.

**H a(2): Food quality positively impacts customer satisfaction.**

The physical environment, process, and people are the only three key components of the service marketing mix employed to form the connection within the service quality dimensions (Yarimoglu, 2014). The categorization of service settings and the supply of concrete indications of service performances, such as interior design, furniture, vehicles/equipment, and personnel apparel, were all part of the physical environment. In addition, Ryu and Jang's (2008) DINESCAPE model uses five key scales to assess the restaurant surround quality, including (1) aesthetics of facility, (2) atmosphere, (3) lighting, (4) arrangements of table, (5) setting, and (6) staff of service. Meanwhile, in terms of appearance and physical design, Andaleeb & Conway (2006) used only four factors: (1) lighting, (2) decoration, (3) cleanliness of the restaurant and (4) parking. Moreover, Untaru & Ispas (2013) provided additional precise measures that should be employed in accurate physical evidence quality evaluation. (1) Cleanliness, (2) atmosphere, (3) spatial arrangement and functioning, and (4) ambient circumstances were the four key factors of restaurant atmospherics.

**Ha(3): Physical environment quality positively impacts customer satisfaction.**

Fairness of price alludes to a customer's total price assessment based on comparing the real price to a suitable price given by both self-interest (degree of adaption) and social norms (the price of reference). Moreover, fairness of price was theorized as a crucial component of customer abandonment, and consumer price perception was examined as a variable complementing other service fairness aspects (Namkung & Jang, 2010). For corporations, perceived pricing fairness is deeply engaged in marketing matters. It affected client satisfaction, willingness to pay, long-term profitability, and loyalty, according to some academics (Bieger et al., 2010). Although willingness to pay is not the same as reference price (what customers anticipate to pay), it is commonly used to represent the greatest amount a customer is willing to spend (Chung, Kyle, Petrick, & Absher, 2011). According to Dai (2009), a company can charge for service, but it must provide a nice experience that its customers consider a good value for the money.

**Ha(4): Price fairness positively impacts customer satisfaction.**

The brand image is a collection of brand associations formed in the buyers' personalities (Wijaya, 2013). Andreani, Taniaji, and Puspitasari (2012) used three variables to generate a brand image linked to the brand connection: originality, strength, and favorability of the brand association. Nonetheless, Keller (1993) described the brand image as a collection of sensitivity that customers acquire as reflected by brand association, and as the brand image for a food business is usually exceeds physical and apparent qualities, a compelling brand image that supports consumers' imagining and thus establishing optimistic attitudes regarding services prior buying is crucial to the success of the catering industry (as cited in Jin, Lee, & Huffman, 2012, p. 534).

**Ha(5): Brand image positively impacts customer satisfaction.**

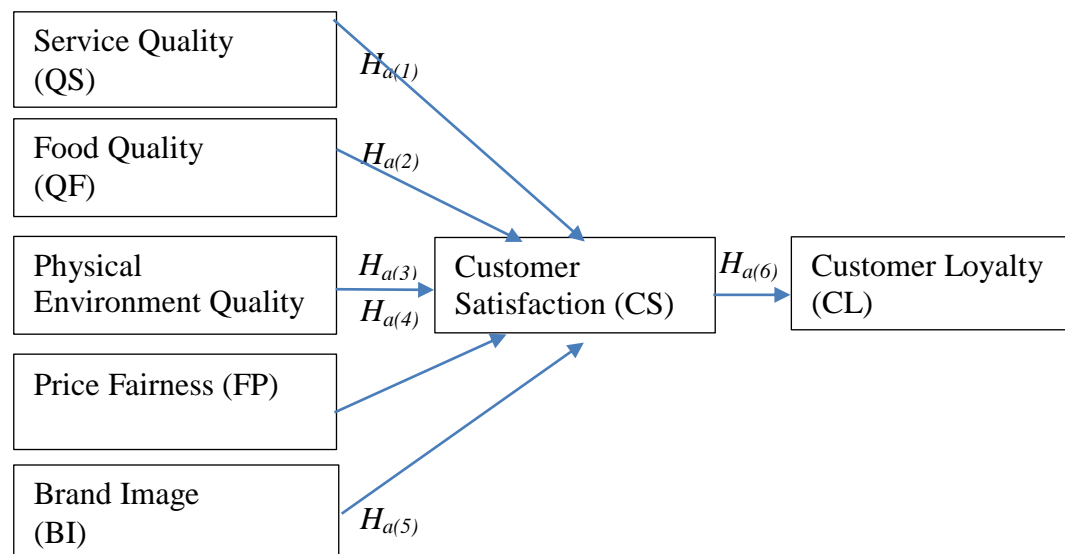
Customer satisfaction is the psychological condition used to assess the reasonableness of what a consumer really gets and offers (Howard & Sheth, 1969). Customer satisfaction is also defined as a commitment that is strong and deep to future repurchase or continual purchase of a favored product or service (Haghighi et al., 2012). Lahap et al. (2016) investigated the positive association between brand image and fulfillment of clients, concluding that brand image was a strong customer satisfaction predictor. This conclusion is also consistent with the findings of other researchers, such as Chien-Hsiung (2011), who stated that the most important part of brand image in the catering business was the consumer value supplied by the brand, which was the conveyance of the brand essence to clients.

**Ha(6): Customer satisfaction positively impacts customer loyalty.**

## 2. Research Method

Self-administered surveys were used in this research, which required participants or respondents to answer the surveys on their own. Prior to launching a large-scale survey, a pilot test of 40 people was conducted to assess scale reliability and choose the best design for the questionnaire. The 480 google-form questionnaires were then distributed to six international brand fast-food restaurants Cambodian customers in Phnom Penh in accordance with the sampling convenience method and a Likert scale ranging from 1 to 7 (1=Definitely Disagree; 2=Generally Disagree; 3=Slight Disagree; 4=Not Sure; 5=Agree; 6=Generally Agree; and 7=Definitely Agree). As a consequence, 403 of the total sample size was valid and useful for this investigation, and it fulfilled Hair, Risher, Sarstedt, and Ringle (2019)'s rule of thumb for the minimum necessary size of 200 for the structural equation modeling (SEM) approach.

**Figure 1: The Conceptual Framework Proposed**



The experimental research design was utilized to measure the causality between the dimensions using both quantitative and qualitative approaches (exogenous latent variables and endogenous latent variables). However, the qualitative approach was employed with a small number of sampling to affirm more and clarify the result derived from the quantitative approach. Consequently, in such a social and psychological setting, CB-SEM was the most successful instrument and notable strategy for obtaining trustworthy and correct results from the analysis. This research also used confirmatory factor analysis (CFA) to ensure that the gathered data matched the predicted models using goodness-of-fit indicators (absolute and incremental fit indicators, such as 2df3.00, RMSEA0.08, GFI>0.80, NFI>0.90, IFI>0.90, TLI>0.90, and CFI>0.90). Furthermore, with a generally significant level of 0.10, this investigation confirmed the strength of the inter-construct correlation across the whole model. This method, as suggested by Hair et al. (2019), requires the indicator reliability assessment (indicator loading>0.50), composite reliability (CR>0.70), convergent validity (average variance extracted>0.50), and discriminant validity (heterotrait-monotrait matrix0.90) to avert useless and misleading findings. Ultimately, this study was able to answer the questions of

research and, more importantly, draw the most accurate conclusions about results based on available literature and past research results.

### **3. Results and Discussion**

#### **3.1. Results**

The demographic profiles comprise data from respondents' profiles within the valid % of 403. Typically, 189 (=46.9 percent) of the total number went outdoors "sometimes" throughout the month, followed by 72 (=17.9 percent) who went twice monthly to eat at fast-food businesses. Furthermore, with a higher number of 195 (=48.4 percent), their major motivations for eating out were "fast meal and convenience." Then, 228 (=56.6 percent) of the fast-food restaurant's clients dined out in "evening" time, with 194 (=48.1 percent) spending "\$6-\$15" on a meal on a regular basis. In addition, the proportion of men in the "gender" variable was 229 (=56.8 percent). Meanwhile, the respondent's age was in the range of "24-35" years old, accounting for 179 (=44.4 percent). It is comparable to the characteristics of respondents in Sahagun & Vasquez-empirical Parraga's study, in which 62.4 percent of respondents were between the ages of 21 and 40. Moreover, most respondents (148 or 36.7 percent) worked as students, followed by 135 (or 33.5 percent) who worked as "company officials." Their average monthly income was lower than or equal to \$250, which constituted 160 (39.7%), followed by 146 (=44.2%) who made between "\$250 and \$750" each month.

Quality of service was compromised by 11 items, quality of food had 8 indicators, quality of physical environment existed 15 manifest variables, fairness of price was made up of 4 observed variables, and brand image was composed of 5 indicators. For other endogenous variables, customer satisfaction and customer loyalty consisted of 3 manifest endogenous indicators, respectively. Table 1 showed that the brand image had the highest mean of 5.7757, and the fairness of price had the lowest mean of 5.6830.

Cronbach's alpha generally provides a useful lower bound on reliability. When the correlations between the interested variables increase, Cronbach's alpha will usually go up Zaiontz (2015). Hence, the coefficient assesses the test's internal consistency. Moreover, its highest value is one, and its minimum is zero. An alpha of 0.70 is considered adequate reliability, whereas an alpha of 0.80 or above is considered exceptional or excellent reliability (George & Mallery, 2003). Consequently, all the values of Cronbach's alpha for initial indicators were over 0.70, confirming the evidence of internal consistency.

In this study, the composite reliability was assessed and then confirmed in case its value for CR was bigger than the acceptable threshold value of 0.70 (Dragan & Topolšek, 2014). As shown in Table 1, all CR values for exogenous latent factors of QS, QF, QPE, FP and BI were 0.909, 0.898, 0.946, 0.904 and 0.886, respectively. For the endogenous latent factors of CS and CS, the value of CR were 0.902 and 0.890, which were more than an acceptable cut-off value of 0.70. It means that the measurement model of all constructs had compulsory internal consistency reliability (initial construct reliability) between the manifest indicators and all of its latent constructs.

**Table 1: Mean, Standard Deviation and Construct Reliability**

N <sup>o</sup>	Constructs	Code	No. of Items	Mean (Std. Dev)	Cronbach's Alpha	CR
1	Quality of Service	QS	11	5.7496 (0.77935)	0.909	0.909



2	Quality of Food	QF	8	5.7587 (0.79121)	0.898	0.898
3	Quality of Physical Environment	QPE	14	5.7488 (0.84676)	0.944	0.946
4	Fairness of Price	FP	4	5.6830 (0.94014)	0.900	0.904
5	Brand Image	BI	5	5.7757 (0.84424)	0.884	0.886
6	Customer Satisfaction	CS	3	5.7353 (0.90419)	0.900	0.902
7	Customer Loyalty	CL	3	5.7610 (0.96794)	0.890	0.890

The basic goal of CFA, according to Dragan & Topolek (2014), is to see if the data fits the measurement model hypothesized, which is based on a certain theory. This method allows researchers to see how effectively manifest variables (also known as observable variables) represent a smaller number of constructs.

Hair et al. (2019) indicate that the reflective measurement model must be assessed before completing the covariance analysis-based SEM. The engagement of evaluating the indicator loadings is the initial phase. Furthermore, loadings should be greater than 0.708. The construct must then provide satisfactory item reliability if it explains more than 0.50 of the indicator's variation.

The data gathered were inspected utilizing CFA and AMOS 26 Graphics to ensure that the required manifest indicators or variables were present in order to meet the assumptions of model fit (Hanaysha & Pech, 2018). Figure 2 shows that at the 0.001 level of significance, all indicator loading values (also known as regression weights and referring to standardized loadings) were more than 0.50. To put it another way, such loadings met the criteria for indication reliability that is acceptable, which is statistically different from 0 at the 0.001 level.

**Figure 2: Measurement of Initial Items**

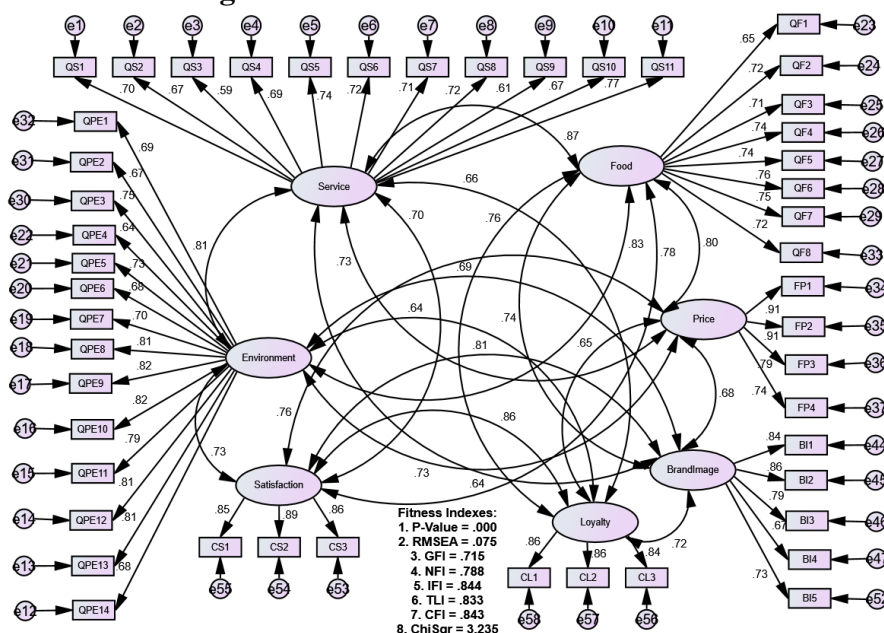
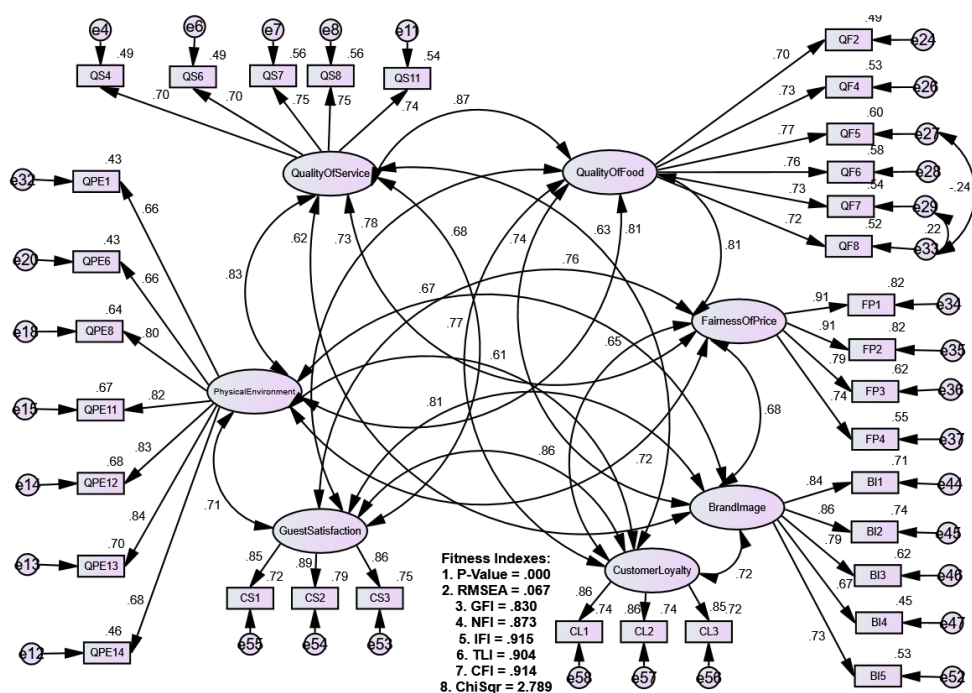


Table 4.1, on the other hand, indicates various model-fit indices, which were not suitable or acceptable because they were below or over the cut-off values or the acceptable threshold (2df = 3.235, RMSEA = 0.075, GFI = 0.715, IFI = 0.844, NFI = 0.788, TLI = 0.833, and CFI = 0.843). If the model fit of the inferred theories is not as robust as one would expect, as described by Schumacker & Lomax (2010), the next step is to alter the model and then analyze the new updated model. Conversely, several appealing approaches are available for detecting specification problems to examine more thoroughly described alternative models throughout the process of re-specification.

As a result of this outcome, the present model lacked model fit. Hence, with all of the original indicators, the model would be re-investigated to find any problematic indicators, which would then be deleted from the constructs to enhance model fit. Nevertheless, there are several techniques available for concealing specification errors so that more appropriately indicated alternative models can be assessed during the process of re-specification, such as specification search procedure or misspecification of correlated measurement residual (also known as disturbance, remainder, or error term) (Schumacker & Lomax, 2010). Then, this research used both approaches of assessing linked specification search and measurement disturbance, carefully evaluating various alternative models from the first to the second... until a suitable fit was found. Kenney (2012) pointed out that each component in the structural model must include at least two items (or manifest indicators) (as cited in Hanaysha & Pech, 2018).

**Figure 3: Final Items' Measurement**



Models with final manifest variables were developed during CFA using data that fits the models (2df = 2.789, RMSEA = 0.067, GFI = 0.830, NFI = 0.873, IFI = 0.915, TLI = 0.904, and CFI = 0.914), as shown in Figure 3.

All loadings on each latent component were between 0.70 and 0.90, except for QPE1, QPE6, QPE14, and BI4, which were close to 0.70 and significantly different from zero at the 0.001 level (two-tailed). These values are between 0.40 and 0.90 for the squared multiple correlations (also known as the coefficient of determination), which shows the proportion of variation in the regression model's outcome variable that can be described by the explanatory factors (Bowerman et al., 2009). R<sup>2</sup> values of 0.25, 0.50, and 0.75 represent weak, moderate, and considerable, respectively, according to Hair et al. (2019). In conclusion, there were 48 original indicators in the measurement models but only 33 in the final measurement models because exogenous manifest indications of 15 were removed from the original model, allowing the primary goal of achieving a sufficient model fit to be met.

**Table 2: Interconstruct Correlations**

	Service Quality	Physical Environment Quality	Food Quality	Price Fairness	Brand Image	Customer Satisfaction	Customer Loyalty
Service Quality							
Physical Environment Quality	0.831** *						
Food Quality	0.867** *	0.812***					
Price Fairness	0.727** *	0.717***	0.813** *				
Brand Image	0.619** *	0.672***	0.744** *	0.681***			
Customer Satisfaction	0.683** *	0.707***	0.777** *	0.755***	0.810** *		
Customer Loyalty	0.632** *	0.614***	0.769** *	0.652***	0.721** *	0.862***	

Note: Significance of Correlations: † p < 0.100; \* p < 0.050; \*\* p < 0.010 and \*\*\* p < 0.001

As described by Lind, Marchal, and Wathen (2008), the correlation coefficient (r) is a measure of the strength of the relationship between two variables. It also requires interval data or ratio-scaled with a value between -1.00 and 1.00. Weak correlation is defined as values near 0.00, whereas perfect and strong correlation is defined as values equal to or close to -1.00 or 1.00. Positive numbers indicate a direct association, whereas negative values indicate the opposite. The null hypothesis for the Pearson correlation, according to Hair et al. (2009), asserts that there is no association between two variables as well as the correlation coefficient is 0.00.



Table 2 shows the inter-construct correlation, which measures the strength of connections between the exogenous latent variable (i.e., service quality, food quality, physical environment quality, price fairness, and brand image) and other endogenous latent variables utilizing the AMOS 26 Graphics software (i.e., customer satisfaction and loyalty). Then, the correlation coefficient for service quality and customer satisfaction was 0.683 (p-value 0.001), demonstrating a substantial relationship between the two dimensions. In summary, all inter-construct correlations were more than 0.61, demonstrating a significant link between all of the model's features. Furthermore, the customer satisfaction and brand image's correlation coefficients were great ( $r=0.810$ ; p-value 0.001), indicating that both constructs had a significant relationship, followed by food quality ( $r=0.777$ , p-value 0.001) and pricing fairness ( $r=0.755$ , p-value 0.001). Moreover, there was a considerable connection between customer happiness and loyalty ( $r=0.862$ , p-value 0.001), showing a strong association between the two variables.

The composite reliability (also known as construct reliability) should be studied to evaluate and verify the internal consistency reliability once the fit of the predicted measurement model is achieved. Composite reliability, according to Glen (2019), is a measure of "internal consistency in scale components." Higher values indicate higher reliability levels. Despite the fact that the threshold for composite or construct reliability is up for dispute, Glen (2019) believes that a logical threshold should be somewhere between 0.60 and 0.80, with many writers providing varied threshold suggestions. In exploratory research, concept reliability is acceptable if calculated values are between 0.60 and 0.70 and "satisfying" to "excellent" if values are between 0.70 and 0.90.

As shown in Table 3, CR values of the first exogenous latent factor (quality of service) equal 0.848, which is more than an acceptable threshold value of 0.70, meaning that the measurement model of service quality has compulsory internal consistency reliability between the manifest exogenous indicators QS4, QS6, QS7, QS8, and QS11. In short, all the constructs have the required CR among their manifest indicators.

The convergent validity of each construct or latent component is reported in the third step of the measurement model evaluation. The amount to which a factor converges to explain the variance of its indicators (or items) is referred to as convergent validity (Hair et al., 2009). They went on to say that the "average variance extracted" (AVE) for all of the indicators on each component is the measure used to determine convergent validity concerning a construct. The AVE is calculated by squaring each item's standardized loading on a factor and the mean value. The calculated AVE value will next be compared to the cut-off value. An acceptable AVE must generally be 0.50 or above, indicating that the construct can account for at least 50% of the variation in its elements.

Table 3 shows that the AVE value of the first latent component connected to QS was 0.528, which was more than 0.50, indicating that QS had convergent validity. Similarly, a latent variable QF had convergent validity since its AVE value was 0.542, above the cut-off value of 0.50. In other words, the total measurement model's convergent validity was confirmed because all AVE values were more than 0.50.

**Table 3: Composite Reliability and Convergent Validity**

N <sup>o</sup>	Latent Variable	Manifest Variable	Standardized Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)	Convergent Validity
1	Quality of Service	QS4 QS6 QS7 QS8 QS11	0.698 0.703 0.747 0.746 0.737	0.848	0.528	Acceptable
2	Quality of Food	QF2 QF4 QF5 QF6 QF7 QF8	0.701 0.727 0.773 0.760 0.732 0.723	0.876	0.542	Acceptable
3	Quality of Physical Environment	QPE1 QPE6 QPE8 QPE11 QPE12 QPE13 QPE14	0.655 0.659 0.797 0.821 0.827 0.836 0.680	0.903	0.574	Acceptable
4	Fairness of Price	FP1 FP2 FP3 FP4	0.906 0.905 0.787 0.744	0.904	0.703	Acceptable
5	Brand Image	BI1 BI2 BI3 BI4 BI5	0.842 0.859 0.790 0.670 0.730	0.886	0.610	Acceptable
6	Customer Satisfaction	CS1 CS2 CS3	0.848 0.891 0.864	0.902	0.753	Acceptable
7	Customer Loyalty	CL1 CL2 CL3	0.858 0.860 0.846	0.89	0.73	Acceptable

Fornell and Larcker (1981) proposed using the standard metric of comparing each construct's AVE to the square of inter-construct correlation (also known as a shared variance measure) estimate of that same component and all other reflectively measured variables inside the structural model (as cited in Hair et al., 2019). When all AVE values are greater than the square of inter-construct correlation values, discriminant validity has been

adequately confirmed (Dragan & Topolek, 2014). Hair et al. (2019) confirmed that current research has shown that the standard measure provided by Fornell and Larcker (1981) is not adequate for evaluating discriminant validity.

Another technique for determining discriminant validity is the heterotrait-monotrait correlation ratio, devised by Campbell and Fiske (1959) and is known as the multitrait-multimethod matrix (also known as HTMT analysis). According to Henseler, Ringle, and Sarstedt (2015), the higher performance of this approach was proposed by Monte Carlo through a simulation study and investigated that HTMT can achieve greater sensitivity and specificity rates between 97 and 99 percent compared to the Fornell-Lacker criterion with only 20.82 percent and the cross-loadings criterion with 0.00 percent. Generally speaking, HTMT values near 1 indicate that discriminant validity is lacking. The generated results from HTMT analysis might be compared to a predetermined cut-off value. When the HTMT values were more than the 0.90 indicated by Hair et al. (2019), the concept was found to have violated discriminant validity.

**Table 4: Criterion of Discriminant Validity (HTMT analysis)**

	Service Quality	Physical Environment Quality	Food Quality	Price Fairness	Brand Image	Customer Satisfaction	Customer Loyalty
Service Quality							
Physical Environment Quality	0.841						
Food Quality	0.871	0.836					
Price Fairness	0.743	0.768	0.823				
Brand Image	0.615	0.682	0.746	0.705			
Customer Satisfaction	0.687	0.738	0.782	0.799	0.798		
Customer Loyalty	0.628	0.651	0.768	0.685	0.73	0.867	

Table 4 reveals the discriminant validity findings using the HMTM technique in CFA utilizing AMOS 26 Graphics program. The HTMT values of 0.841, 0.871, 0.743, 0.615, 0.687, and 0.628 for a QS construct were all less than 0.90, indicating that QS was statistically distinct. Then, with a factor of QPE, the HTMT values of 0.836, 0.768, 0.682, 0.738, and 0.651 were all less than the cut-off value of 0.90, indicating that QPE was statistically distinct. Furthermore, QF's HTMT values were 0.823, 0.746, 0.782, and 0.768, all of which were less than 0.90, showing that QF was statistically different. In brief, the discriminant validity was validated using the whole measurement methodology.

Furthermore, monitoring the normality assessment and some critical model diagnostics happened before conducting SEM. Lei and Lomax (2005) clarified that the skew values ranging from -2.0 and +3.5 were generally selected to specify the extreme skewness. Curran et al. (1996) confirmed that the absolute value of the kurtosis index above 7.0 was concerned with a severe abnormal distribution problem (as cited in Dragan & Topolšek, 2014).

**Table 5: Output of SEM Performance**

N0	Regression Paths			Estimate	P	Conclusion
Research question 1: What are the factors affecting customer satisfaction?						
$H_{a(1)}$	Service Quality	-->	Customer Satisfaction	0.001	0.995	Not Support
$H_{a(2)}$	Food Quality	-->	Customer Satisfaction	0.277	0.033*	Support
$H_{a(3)}$	Quality of Physical Environment	-->	Customer Satisfaction	0.064	0.469	Not Support
$H_{a(4)}$	Price Fairness	-->	Customer Satisfaction	0.226	0.001**	Support
$H_{a(5)}$	Brand Image	-->	Customer Satisfaction	0.523	***	Support
Research question 2: Does the customer satisfaction really affect the customer loyalty?						
$H_{a(6)}$	Customer Satisfaction	-->	Customer Loyalty	0.959	***	Support
Note: Significance of unstandardized coefficients: * $p < 0.050$ ; ** $p < 0.010$ and *** $p < 0.001$						

With the Amos-26-Graphics software, the outputs showed no extreme skewness and severe problem of abnormal distribution for individual scales since both the absolute values of skewness and kurtosis were in the range of 1.20. However, the multivariate assumption was violated that required using Bollen-Stine Bootstrapping of 1500 sampling. In addition, standardized residuals were less than |2.0|, confirming a nonproblem; and residuals were over |4.0|, raising a red flag and then suggesting a potentially improper degree of error. Standardized residuals ranged from |2.5| to |4.0|, raising some attention (Hair JR et al., 2009). The absolute values of most standardized residuals are less than |2.0| and confirm a nonproblem in this study.

Figure 4: Outputs of SEM Performance

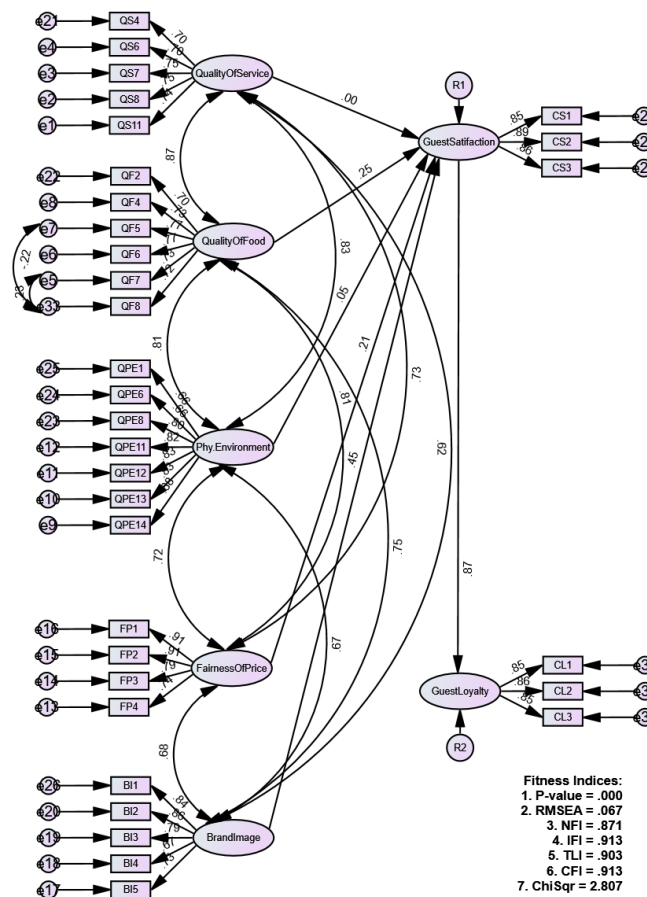


Table 5 and Figure 4 show the Amos-26-Graphics output after performing SEM. The R-square for the first model involves the causality relationship between exogenous latent variables, such as service quality (QS), food quality (QF), physical environment quality (QPE), price fairness (FP), and brand image (BI) and the endogenous variable of customer satisfaction (CS) was 0.763. It suggests that the five explanatory factors could explain 76.3 percent of the variation in CS (explained variable). The R-square for the second model, which examined the causal link between the endogenous latent variable of CS and the other endogenous latent variable of customer loyalty (CL), was 0.762. It revealed that a predictor variable of CS might explain 76.2 percent of the variation in CL (response variable). The goodness-of-fit criteria of SEM, which defined that the data matched the models (2df = 2.807, RMSEA = 0.067, NFI = 0.871, IFI = 0.913, TLI = 0.903, and CFI = 0.913), was still adequate, as was the result from the CFA.

The results of SEM showed that guests' perceived food quality, price fairness, and the brand image at the selected fast-food restaurants were predictors of overall fast-food restaurant enjoyment. Moreover, non-significant structural coefficients, such as service quality and physical environment (QS and QPE), will be ignored. Ultimately, the endogenous latent variable of visitor satisfaction revealed a similar positive association.

Since there were two insignificant factors (Quality of Service and Quality of Physical Environment) adversely to some findings in many previous studies, clarifying the above results were critical. The researcher had decided to conduct additional qualitative research by



interviewing the customers during their visiting the fast-food restaurants in a small sample size of 8 participants at three international brand restaurants, including Carl's Jr., Mike's Burger House and Pizza Company. The participants were selected randomly after meals, and then the researcher explained the reasons for the interviews. After permitted, the researcher interviewed them with some questions; such as "how many times do you eat at a fast-food restaurant"; "What are your main reasons to dine out at fast-food restaurants"; "Which meal time do you regularly prefer for your visiting fast-food restaurant?"; "How much do you usually spend for a meal in your chosen fast-food restaurant?"; "Please rank and explain the most import factors among these items which are important for you: Quality of Service, Quality of Food, Quality of Physical Environment, Fairness of Price, and Brand Image" and others.

Based on the results of the interviews, there still were symmetries between the outcomes from the quantitative and qualitative research. Consequently, the fast-food restaurants' success factors comprised brand image, quality of food, and fairness of the price. Despite some services and atmosphere in restaurants being a bit poor, customers generally could be careless about these issues and still fulfill to visit the restaurant relying on the other factors. Moreover, during the outbreak of the COVID-19 pandemic, those customers employed another way to purchase the products from their favorite brands, which was food delivery apps. In Cambodia and by 2022, the major food delivery apps include Meal Temple, Foodpanda, Nham24, Muuve, Your Phnom Penh, TukOut, BLOC, Phnom Penh Grocery Delivery Apps, Grocer Delivery Asia, Delishop Asia, Grocerdel, and GrabMart, etc. Websites and apps normally require the customers to register and generate a profile. This procedure provides safe storage of payment methods, personal information, and delivery addresses in case the food orders happen. Furthermore, online apps are usually available on iOS (Apple) and Android (Google Play). Every food delivery website and app also shows the fee based on the delivery distance. The customers also trace the deals and promotions (food discounts, free delivery, or grocery and drink items) on the websites and apps.

### **3.2. Discussion**

In contrast to the service quality, the food quality (QF) was the key factor having a positive impact on the guest's happiness due to the aforementioned output. Similarly, the findings of Nguyen, Nguyen, & Do (2019), Hanaysha & Pech (2018), and Rana et al. (2017) found that food quality had a substantial positive link with not the only good word of mouth but also guest joy, backed up this conclusion. Furthermore, Chun & Nyam-Ochir (2020), who studied the impacts of fast-food restaurant qualities on guest satisfaction, return intention, and recommendation discovered that food quality was the most important component and had a positive relationship with customer enjoyment. The food quality constructs incorporated significant variables, such as delicious, fresh, menu diversity, and good quantities in their study article. In line with Hanaysha J. (2016)'s results, the author discovered that in the restaurant sector, food quality is a critical factor that may boost client satisfaction. Guests are more likely to assess food quality based on necessary aspects, such as appropriate temperature, freshness, variety, appealing presentation, and flavor quality. Likewise, food quality was determined by combining measuring elements, such as food freshness, flavor, and presentation. As a result, fast-food restaurant owners or managers can incorporate these key factors into a food improvement strategy to boost customer satisfaction. Food quality may become one of the most important criteria that visitors consider when evaluating the value of the services supplied by the restaurants.

The results of this study demonstrated that, like service quality, the physical environment quality (QPE) had no beneficial impact on customer satisfaction. It might be due to pleasant ambiances that lacked the requisite dimensions or requirements for people to visit a restaurant. The literature did not support it. However, their findings were similar to those of Shin & Yu (2020), who looked at characteristics that influence restaurant client satisfaction. They discovered that the physical environment quality had little impact on the guests' enjoyment.

Shamsudin et al. (2020) observed that the majority of the restaurants had hired a quality expert to monitor and create the best preparations and standard operating methods for the company. Today, practically every fast-food business has its strategy and methods, even if diners may not see much difference between them. Because of this notion, customers in Cambodia were more likely to pick restaurants for dining out based on other aspects, such as food quality, pricing fairness, and brand image rather than service quality and physical atmosphere.

The conclusions of this study revealed that pricing fairness was actually recognized as one of the main indicators to promote consumer satisfaction, based on the results of statistical tests. It indicates that pricing fairness had a beneficial impact on guest satisfaction. The findings were supported by previous research that found a link between pricing fairness and guest satisfaction. Many prior investigations, such as Hanaysha J. (2016) and Majid, Rojiei, Shafii, Ghoni, & Hassan, verified these findings (2021). According to Gaji et al. (2013), pricing fairness was a major component influencing visitor happiness in their study of the critical factors of restaurant-quality determining client enjoyment. To avoid visitor complaints, unhappiness, and unfavorable word-of-mouth (WOM), it is vital to be beneath the quality. They agreed that pricing fairness referred to things with acceptable prices, good value for money, and a comprehensive worth of eating experience. As Hanaysha J. (2016) stated, consumers were more likely to compare different brands when repurchasing or after that to form accurate pricing fairness and establish their degree of satisfaction. As a result, the need for price justice for guests is obvious. Furthermore, according to the World Bank, Cambodia's GDP per capita was \$1512.73 in 2020, down from \$1643.12 in 2019 (as cited in Data Commons Place Explorer, 2021). Due to the consumer characteristics stated above, it was discovered that the majority of them are adolescents between the ages of 18 and 35, accounting for 86.8% of the total, with an average monthly income of less than \$750. As a result, dining out at fast-food restaurants that provide tasty meals at a reasonable price is crucial.

This study found that brand image (BI) had a considerable beneficial impact on customer satisfaction. It indicates that brand image has become one of the most important predictors of increased consumer satisfaction in the fast-food industry. This finding was also corroborated by Upamannyu & Sankpal's (2014) analysis of the literature, as well as prior studies by Absah, Rini, Azmi, & Arif (2020), Casta et al. (2021), Kultsum et al. (2022), and Malik, Ghafoor, & Iqbal (2012). Consumers with faith in a brand will display more positive attitudes and behaviors toward that brand, according to Tjahyadi (2006). Furthermore, customers satisfied with the brand's performance will continue to buy it, use it, and even promote good word-of-mouth about its benefits to others because of their familiarity with it (as cited in Absah et al., 2020). Moreover, in this study, the brand image was the most important element in predicting and producing increased customer satisfaction, followed by the food quality and price fairness. As a result, owners and managers of fast-food businesses should focus more on

developing a strong restaurant image and incorporating it into key initiatives to achieve more competitive advantages in the fast-food marketplaces.

At last, statistical tests revealed a substantial positive relationship between customer satisfaction (CS) and customer loyalty (CL). This result was also supported by literature suggested by Parasuraman et al. (1988) and confirmed by many previous studies, including Abdelhamied (2013); Hair, Jr., et al. (2009); Liu & Jang (2009); Haghighi et al. (2012); Rana et al. (2017); Sabir et al. (2014); Khan et al. (2013); Gajić et al. (2013), Fen & Lian (2007), Canny (2013), Dastane & Fazlin (2017), Hidayat, et al. (2019), Okpighe & Ogundare (2020), and Gill, et al. (2021).

Moreover, food service delivery apps and websites have played a vital role in business operations, especially between the fast-food service provider and their customers. Most brands also had their apps, websites or hotlines to facilitate home delivery service more effectively. Besides, other food delivery companies have collaborated with those fast-food brands to meet the increasing demand for home delivery services during the terrible circumstances of the COVID-19 pandemic. The fear of disease transmission has been restricting travel, and then people are required to embrace the rules imposed or recommended by WHO and the Ministry of Health. Therefore, the current usage of food delivery apps would become more popular and the new habits for Cambodian consumers from now on despite dramatically decreasing in the COVID-19 pandemic.

#### **4. Conclusion**

The major goal of this study was to look into and analyze the important factors that influence customer satisfaction. These characteristics were service quality, food quality, physical environment quality, pricing fairness, and brand image. The study's next goal was to look at the causal linkages between customer satisfaction and loyalty in the fast-food restaurant industry. The statistical test results and the CB-SEM technique revealed that brand image was the most significant positive predictor of consumer satisfaction, followed by food quality and pricing fairness. Surprisingly, there were no significant positive associations between both factors and customer satisfaction, or there were negligible positive relationships between both components and customer satisfaction. Furthermore, the findings revealed that the guest's enjoyment was the true reason for loyalty. Client satisfaction has a strong beneficial impact on customer loyalty. The more the satisfaction the customers had with the restaurant, the greater the loyalty they would return.

It stands to reason for customers to choose the brand image before eating at a fast-food business. Traditionally, brand image alludes to the whole perception created in customers' minds from all media. Customers form several connections with the brand. Because of this, customers in the fast-food restaurant setting looked for and then understood any brand that could match their requirements and desires. They did not hesitate to pick this brand for their dining-out while they had adequate knowledge about it and fully understood its culture, notably the reasonable quality that a brand restaurant would accept. Based on the respondents' demographics and social behaviors, this study concludes that today's fast-food customers did not spend their time looking for a qualified restaurant that they have never tried before or trying it by happenstance. Consumers can use peer group suggestions or internet information relevant to the brand restaurant before visiting and testing any restaurant's items in this high-tech era. Consumers would be more likely to purchase a product from a restaurant with a good brand image if the brand connection and awareness were high. To retain existing consumers and attract new ones, fast-food restaurateurs should

focus more on developing a positive brand image as luxury, fashionable, and well-known in terms of quality. In addition, the high risk of COVID-19 transmission also caused the consumers to select the reliable brands carefully for their dining-out. Brand chains have better applied the norm, standards, and guidelines recommended by WHO or the Ministry of Health to prevent coronavirus infection from one person to another.

In terms of food quality, it was the second statistically significant feature used to quantify and cause customer satisfaction. Under its understanding, food quality refers to the meal's flavor, freshness, temperature, and presentation. Nonetheless, in this research, the food quality variable highlighted food flavor, food freshness, and food presentation as markers of food quality in forecasting consumer satisfaction levels. As a result, customers regarded food quality as the primary reason for visiting a fast-food business. It was particularly logical because, in general, people were more concerned with food taste and other factors related to food quality than with service reliability, spatial layout, sympathy, responsiveness, good ambiance conditions, and others since these factors were already built into every brand restaurant's norm standard. As a result, consumers rely on food quality to decide whether to visit or return to a restaurant, and restaurateurs should pay more attention to this problem and continually check, reinforce, and reinvent their food quality. In summary, the fast-food restaurant should offer food to its customers fresh, and on time, the food should taste nice, fresh ingredients should be utilized in the preparation of the food, and the food should be served at the proper temperature. The restaurant should deliver a good size meal portion to its customers, which is also a part of the food quality. Restaurateurs should also ensure that the qualities of their cuisine become key expertise and a point of difference from competitors. As long as food quality is maintained, it will become one of the most important and successful tactics for increasing consumer satisfaction.

However, to boost the degree of joy for visitors, only the desired aspects of brand image and food quality were there. It was still insufficient. According to the findings of the study, pricing fairness was the third biggest antecedence of guest satisfaction. Price fairness refers to things with acceptable prices, good value for money, and the overall worth of the eating experience. Following this principle, restaurateurs should constantly evaluate the price of their reputable brand image, food quality, and, most importantly, the pricing of competitors. Even if they had been operating their business with a solid or well-known brand image and tasty or wonderful cuisine, restaurateurs could not completely disregard the reasonable-price approach. The average yearly income of Cambodians, as shown in the previous section, was in the lower-middle class level, affecting their expenditure. People's consumer expenditure is often dependent on their income from an economic standpoint. They would pay less for goods if they did not have much money. As a result, consumers would be sensitive to a product's price. The price elasticity of demand in this situation would be more than one due to the direct influence of their income, which caused them to be greatly disturbed by little price fluctuations. In a nutshell, fast-food restaurants' success components were their brand image, a mix of food quality and reasonable pricing, and then they were the antecedents of guest joys.

### ***Theoretical Contributions***

Taking into consideration that this study's model was constructed under a literature review and primarily relied on the previous theoretical and empirical models' integration, particularly the Parasuraman et al.'s (1985) SERQUAL modification, Haghighi et al.'s (2012)



model, Canny's (2013) conceptual framework, and the models done by Ryu & Han (2010), Jin, et al. (2012), and Malik, et al. (2012). Also, the above model was consistent with or similar to other crucially previous studies conducted by many researchers such as Kaewmahaphinyo et al. (2020), Hanaysha & Pech (2018), Rana et al. (2017), Dastane & Fazlin (2017), Petzer & Mackay (2014), Gajić, et al. (2013), Awi & Chaipoopirutana (2014), Liu & Jang (2009), Khan, et al. (2013), and Ryu & Han (2010). As a result, this research could help develop a model that is appropriate for the fast-food chain context in a developing country like Cambodia, which has a purchasing behavior, climate, culture, demographic profile, and socioeconomic status that differs from the regions or countries where previous research was conducted. As a result, the model here included (1) customer service, (2) food quality, (3) physical environment quality, (4) pricing fairness, and (5) brand image. All of these characteristics were antecedent determinants of customer satisfaction, with consumer pleasure influencing the extent of customer loyalty. The study discovered that three elements were considered predictors of guest joys, including brand image, food quality, and pricing fairness, with the exception of service quality and physical environment, based on statistical tests in structural equation modeling methods. Then, there was a strong link between visitor satisfaction and behavioral intention or re-patronage behavior, often known as customer loyalty. According to the findings, this research significantly contributed to the theoretical implications.

In contrast to literature and results from many previous studies, the findings revealed that customer service and a pleasant physical environment were not predictors of guest satisfaction, despite literature and results from many previous studies, indicating that both factors were critical success determinants for the catering industry. As shown in the previous sections, the insignificance of both factors might be due to the severe competition among brand restaurants, with each brand having previously established the highest standards of intangibility and tangibility. Nonetheless, those were not the most requested qualities among buyers. Consumers in this area considered brand image, food quality, and pricing fairness the most important factors in their decision to eat at a fast-food restaurant. If the results of their post-purchasing in any brand matched their expectations, they would return or share the good news with others.

### ***Managerial Implication***

The major goals of this study were to observe and determine the essential factors affecting visitor satisfaction, as well as to investigate the direct link between joy and loyalty. It was unique research on Cambodia's fast-food restaurant industry. As a result, restaurateurs, marketers, or owners may use these three primary dimensions (brand image, food quality, and pricing fairness) to develop priority plans and then establish them as essential company success criteria. Thus, restaurant managers or policymakers should focus on existing methods and their current performance based on this finding. According to the findings, even if fast-food chains are seen to be expensive, stylish, and well-known, managers and owners must constantly promote the brand image in accordance with correct food quality and reasonable pricing. Food quality, as mentioned above, incorporated multiple scales of the products, including food flavor, presentation, and freshness. In summary, managers should ensure that their items have a nice flavor and fragrance, that they are delivered in a timely and fresh way and that portions are of a reasonable quantity. Furthermore, existing culinary standards, particularly those relating to meal presentation, should be updated by restaurateurs because it affects how food is prepared and presented to visitors. The presentation is seen as a collection



of physical clues. Because good-looking and well-decorated food can increase a guest's sense of quality, restaurants should consider charging fair and competitive pricing to their customers. It implies that the price of ordered meals and the whole menu must be reasonable so that customers feel their money is well spent and in line with their budget. These tactics can also be used by entrepreneurs interested in starting a fast-food business.

### ***Limitation and Further Research***

Even though this research has made a significant contribution to a better understanding of the strongest factors and antecedents of customer satisfaction and loyalty through the model's significant ideologies inferred from a needed review of the literature and previous solid conceptual frameworks, there are still a few drawbacks that must be addressed in future studies. Firstly, the empirical evidences used in this study's statistical analysis were collected solely in Phnom Penh and were mostly based on the convenience sampling strategy due to time and money restrictions. Moreover, the study's findings represent a reliable conclusion based on similar demographic traits and geographic areas. As a result, because the results' generality is restricted, data should be collected from other demographic provinces around the country (i.e., Siem Reap, Preah Sihanouk, Kampot, Kompong Cham, and Poi Pet) to acquire generalized conclusions. Second, customer satisfaction was used as a mediator variable to describe the relationships among all mixed independent variables (i.e., service quality, food quality, physical environment quality, price fairness, and brand image) and the described variable (i.e., customer loyalty) due to the existing conceptual framework. This study solely used covariance-based structural equation modeling and did not use the complete mediation (also known as full mediator variable) or partial mediation methods to examine customer satisfaction. Only three exogenous latent variables, namely brand image, food quality, and price fairness, significantly influenced the endogenous latent variable of the customer satisfaction construct. In turn, customer satisfaction impacted another endogenous latent variable of customer loyalty, according to the findings of this study. It was a basic hypothesized model tested in the fast-food restaurant market to confirm antecedent determinants of client satisfaction. As a result, this issue should be resolved and presented in a future study using the mediation approach to assess the function of guest pleasures as partial or complete mediation in this model. The following methodologies are accessible and well-known in mediation analysis: Sobel (1982); Baron & Kenny (1986); and percentile bootstrapping. Third, more research should incorporate other variables (such as gender or income) that might moderate the influence of exogenous latent variables like brand image, service quality, and environment on guest joy.

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