

The Impact of Service Quality on Customer Satisfaction: A Study on Higher Education Students in Timor-Leste

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ABSTRACT

This research aims to test and assess the influence of service quality on customer satisfaction. Students from Hotel Management Department, Dili Institute of Technology (DIT), Timor-Leste were used as research respondents; while data collection and analysis used questionnaires and SMART-PLS 3.1 respectively. The result shows that service quality influence positively and significantly on customer satisfaction. This research can help industries to improve their service quality to raise customer satisfaction, leading to improve their performance.

Keywords: Service quality; customer satisfaction, Timor-Leste.

1. Introduction

Customer satisfaction is an important factor for profit and nonprofit organizations because satisfaction is an indicator for the successfulness of an organization (Tongshinen et al. 2018). Customer Satisfaction is an evaluation for the customers about a product or a service according to their perception or the difference between expectations and what they get (Parasuraman, Zeithaml and Berry, 1994; Mbama and Ezepue, 2018).

Customer satisfaction is influenced by service quality (Jiang and Zhang, 2016). Service quality is considered as the difference between the service that customers want to get and the service that they receive (Parasuraman, Zeithaml and Berry, 1988; Farooq et al., 2018). Gilbert and Cleopatra Veloutsou (2016) considered service quality as a factor that helps an organization to achieve its objectives. Thus, service quality has to be based on customer expectations in order to be satisfied through the product or the service that they use (Spyridou, 2017), as it can give a direct impact towards customer satisfaction. Satisfied customers will continue to buy the product as the company may get a long term profit (Wilkins et al, 2007; Lam and Burton, 2006).

Numerous studies had been done, the results showed that service quality has a positive and significant impact on customer satisfaction (Keshavarz and Jamshidi, 2018; Saldanha et al., 2018; Flores, Saldanha and Vong, 2020; Borishade et al., 2021) because if customers feel that an organization offers good service quality, then they will be happy and will return to buy the product/ service offered (Khoo, Ha and McGregor, 2017; Rua, Saldanha and Amaral, 2020; Annamdevula and Raja Shekhar Bellamkonda, 2016; Borishade et al., 2021). However, study from Famiyeh, Kwarteng and Asante-Darko, (2018) showed that service

quality had partial influenced on customer satisfaction due to the reliability dimension in the service quality is not related to customer satisfaction. In addition, most existing studies were carried out in developed countries, but still limited undertaken in emerging countries which its service industries were under developing stage.

Inconsistency results of the previous studies occurred due to types, resources, and environment of industries. Moreover, “only some resources may lead to sustained competitive advanced as they may have differential effects on actual performance” (DeSarvo, et al., 2015). In addition, “different industries face different competitive forces and thus they perform differently” (Rompho, N.,2015,59). Therefore, studies should be done continuously to discover appropriate indicators for every industry. This research aims to test and analyze the influence of service quality on student’s satisfaction.

2. Theoretical Framework

2.1. Service Quality

According to Javadin (2003; as in Mahmudi & Abdoli, 2016), Service is an activity which is presented from one party to another. Moreover, it is also defined as “an intangible activity or profit offered from one party to another which does not lead to ownership (Cotler, 2000,321; as in Mahmudi & Abdoli, 2016,791). On the other hand, “quality means the ability of given product to meet the target produced by the minimum possible cost”(Mahmudi and Abdoli, 2016, 790).

Elisabet et al. (2019,173) define service quality as the way in which clients are served in an organization which could be good or poor. Good service will give good benefits

to the company. When customers do not satisfy with a product or a service, they will not buy the product offered for the second time. Service quality has a significant impact on customer loyalty through customer satisfaction (Annamdevula and Raja Shekhar Bellamkonda, 2016; Borishade *et al.*, 2021).

2.2. Customer Satisfaction

Customer satisfaction is the perception of customers about products or services that are based on their expectations (Dominici and Guzzo, 2010; Sangpikul, 2018; Boonlertvanich, 2019). Customer satisfaction is the expectations of each person for the goods that he/she buys or the service that he/she gets (Carranza, Díaz and Martín-Consuegra, 2018).

According to Gunarathne (2014; as in Tongshinen, *et al.*, 2018), Customer satisfaction is expressed by the concordance level between the expected and experienced. Customer satisfaction makes the customers have a strong relationship with a company (Miranda, Tavares and Queiró, 2018), and so it can make customers own the loyalty concerning the products or services from a company (Chen, 2012). This statement is supported by Ranabhat (2018) who states that customer satisfaction becomes the first key indicator for business. Therefore, companies need to pay attention to customers' needs. Customer satisfaction can also look at the value of the products or services offered by an industry (Kaura, Prasad and Sharma, 2015; Babin *et al.*, 2019).

3. Conceptual Model and Hypothesis

Service quality is an antecedent variable for customer satisfaction. Service quality is considered as a factor that the company can achieve its objectives about customer satisfaction within the industry (Gilbert and Cleopatra Veloutsou, 2016). Customer satisfaction is related to the comparison between customers' expectations and the real experience of a product or a service (Boonlertvanich, 2019). Therefore, companies need to improve their service quality based on customer needs (Boonlertvanich, 2019). Numerous studies revealed that service quality has a direct impact on customer satisfaction (Annamdevula and Raja Shekhar Bellamkonda, 2016; Sriyalatha and Appuhamilage, 2019; Borishade *et al.*, 2021).

H: Service quality has a positive impact on customer satisfaction.

4. Research Methodology

4.1 Population, Sample, and Data Collection

This research was administered within one month at the Dili Institute of Technology (DIT). The total population of

the study were 71 people who studied in the Hotel Management Department at Dili Institute of Technology in the academic year 2017 to 2020. This number of students was taken as a sample because of the minimum number of students. Therefore, all students were considered as the sample for this research. The questionnaire was adopted from previous authors (Parasuraman *et al.*, 1988 & 1994; Stavkova *et al.*, 2008).

4.2 Technique of Data Analysis

This research used the quantitative inferential method to test the relationship between indicators (outer model measurement) and variables (inner model measurement). In this research, Smart-PLS 3.0 was used as an instrument to analyze both outer model and inner model data because this instrument can be used to test multiple variables, reflective/informative indicators, small sample with a minimum number of 30 (Hair *et al.*, 2014).

In the outer model measurement test, it will look at the validity and reliability of the relationship between indicators and variables. There are two types of validity tests such as convergent validity and discriminant validity. *Convergent validity* usually uses the parameter of loading indicator or outer loading (OL) with the value of larger than 0.7, and the value of *average variance extracted* (AVE) is larger than 0.5.

An indicator is valid when the OL value is above the threshold value of 0.7 and the AVE value is larger than 0.5 (Hair *et al.*, 2014). *Discriminant validity* usually uses *Fornell-Larcker* (FL) criterion parameter and *heterotrait-monotrait* (HTMT). FL criterion is the value of a root square item (e.g. SQ₁₁) for its item (SQ₁₁) larger than the value of other root square items (Hair *et al.*, 2014). On the other hand, an item or indicator can be valid if the HTMT value is smaller than 0.90 (Henseler *et al.*, 2015). The hypothesis test uses a path coefficient that more on the T and P-value. The relationship between variables can be significant if the T value is larger than 1.96 and P-value is smaller than 0.05 (Hair *et al.*, 2017).

5. Results and Discussion

5.1. Validity and Reliability Test

Two types of validity test namely convergent validity and discriminant validity. Convergent validity uses two parameters namely outer loading (OL) with the threshold value larger than 0.7 and average variance extracted (AVE) with the minimum allowable value of 0.5 (Hair *et al.*, 2014) ho Hair *et al.*, 2017).

The research results show that the item of OL value from tangible dimension (SQ₁), Reliability (SQ₂₁), customer satisfaction (CS₁) are well below the minimum threshold value of 0.7 which leads to influence the content validity

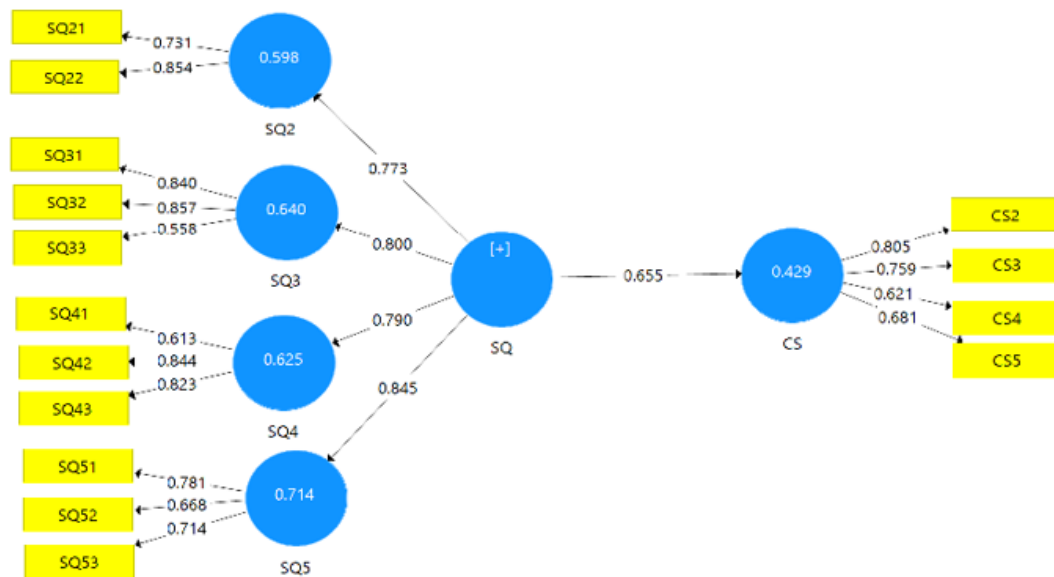


Figure 1. Outer Loading for Convergent Validity

(AVE value). According to Hair et al. (2014), if the OL value is smaller than 0.5 which influences content validity (AVE value), these items can be eliminated from the model. In general, the OL values of items are larger than 0.7 (Figure 1). Nonetheless, for exploratory research, the OL minimum allowable value of OL can be 0.6 (Hair et al., 2014). On the other hand, the value of average variance extracted (AVE) is larger than 0.5 (Table III), therefore all items are valid to test the relationship between variables (inner model).

The discriminant validity test uses two parameters namely Fornell-Larcker Criterion (FLC) and heterotrait-monotrait (HTMT). From the FLC side, the values for all items are valid for use to test the relationship between variables (inner model) in this research (Table I). This is based on the recommended principles by Hair et al. (2014) about discriminant validity test using Fornell-Larcker Criterion.

Table I. Fornell-Larcker Criterion for Discriminant Validity

Item	SQ2	SQ3	SQ4	SQ5	CS
SQ2	0.794				
SQ3	0.510	0.878			
SQ4	0.531	0.467	0.767		
SQ5	0.469	0.620	0.581	0.722	
CS	0.534	0.490	0.510	0.522	0.720

Table II also indicates about discriminant validity test using the HTMT parameter. Through this, all HTMT values are smaller than 0.90, and so all items are valid to be used to test the relationship between variables (Henseler, Ringle and Sarstedt, 2015).

Table II. Heterotrait-Monotrait Ratio (HTMT) for Discriminant Validity

Item	SQ2	SQ3	SQ4	SQ5
SQ3	0.829			
SQ4	0.862	0.697		
SQ5	0.853	0.888	0.885	
CS	0.859	0.672	0.776	0.887

Reliability items from all construct tests using Cronbach's alpha (CA) and composite reliability (CR). The results of this research as shown in Table III indicates that CA value from all items is larger than 0.6 and all CR values are larger than 0.7. Thus, according to Hair et al. (2014) and Hair et al. (2017), all items are reliable to test the relationship between variables (inner model).

Table III. Reliability and Validity

Item	CA	CR	AVE	Item
SQ2	0.625	0.772	0.631	SQ2
SQ3	0.705	0.871	0.772	SQ3
SQ4	0.745	0.809	0.589	SQ4
SQ5	0.644	0.764	0.521	SQ5
CS	0.693	0.811	0.519	CS

5.2. Hypothesis Test

The hypothesis of this research is to see the significant influence of service quality (SQ) on customer satisfaction (CS). The research result as shown in Table IV that SQ influences positively and significantly CS; the T value (7.824) is higher than 1.96 and the P-value (0.000) is lower than 0.05. Thus, service quality has a positive influence and

Table IV. Path Coefficient for the Hypothesis Test

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
SQ -> CS	0.649	0.674	0.083	7.824	0.000

is significant on students' satisfaction. Hence, the hypothesis (H) is supportable.

5.3. Discussion

The objective of this study is to test and explain the influence of service quality (SQ) on student satisfaction as a customer of Hotel Management Department at Dili Institute of Technology (DIT), Timor-Leste. The results of this research show that service quality has a positive and significant influence on student's satisfaction.

In this research, service quality focuses more on serving students on time, lecturers teach well according to their roles, the academic department consistently serves students well and students feel comfortable to study environment. That's why there is a positive impact on student satisfaction on facilities, tuition fees, service, and no discrimination policies. This indicates that students put more emphasis on intangible parts as the first option to increase their satisfaction compared to tangible parts such as facilities and equipment. This research confirmed previous studies which showed that service quality has a significant influence on customer satisfaction (Keshavarz and Jamshidi, 2018; Saldanha *et al.*, 2018; Flores, Saldanha and Vong, 2020; Borishade *et al.*, 2021).

6. Conclusion and Implication

Service quality and customer satisfaction are well-established variables in the marketing studies such as the hotel industry, and higher education institutions. However, there have not been many studies in Timor-Leste, especially in the area of higher education. This study is related to the hotel department because the number of students is declining, but lecturers' competence and facilities are improving.

The inferential results show that service quality has a positive and significant influence on customer satisfaction. This means that the level of customer satisfaction rises when the service quality is good. The factors that support the significant relationship between the two variables are lecturers' competence; discrimination study environment and good teaching facilities. This means that Hotel Management Department continues to improve their service quality to raise the level of students' satisfaction and loyalty.

7. Limitation and Future Research

The results of this research show that service quality positively and significantly influences customer satisfaction. Nevertheless, this research has some limitations such as: (1) This study was only applied for Hotel Management Department students at DIT with a total population of 71. The quantity of samples is relatively small in number. Therefore, future research needs to increase the number of samples in order to get better results. (2) This study only used a questionnaire as a data collection instrument which was difficult to confirm why students preferably choose the non-tangible dimension compared to tangible. Thus, the next research needs data collection instruments such as in-depth interviews, focus group discussion, and observation to know more about students' preferences and realities that they obtained. (3) The inferential data shows that the tangible dimension is not valid and reliable to measure the service quality. Hence, this dimension was deleted from the inferential analysis according to Hair *et al.* (2014). Therefore, the next research needs to develop indicators in proper tangible dimensions to measure the service quality.

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Appendix

Variable	Dimension	Indicator
SERVICE QUALITY (SQ)	SQ1. <i>Tangibility</i>	
	SQ 11	Facilities and equipment in the laboratory.
	SQ 12	Students can access to DIT IS SMART well.
	SQ 13	The classrooms for students are good.
	SQ 2. <i>Reliability</i>	
	SQ 21	Financial Department serves students on time.
	SQ 22	Lecturers at Hotel management department teach students according to their roles.
	SQ 23	Academic department serves students consistently.
	SQ 3. <i>Responsiveness</i>	
	SQ 31	Administration department staff serve students with their smiley faces.
	SQ 32	Finance department offers good service to the students.
	SQ 33	Academic department is willing to help students.
	SQ 4. <i>Assurance</i>	
	SQ 41	Students feel comfortable when studying at hotel management department.
	SQ 42	It is easy for students to access information at hotel management department.
	SQ 43	Hotel management department attends students professionally.
	SQ 5. <i>Empathy</i>	
	SQ 51	Finance department understands the needs of students.
	SQ 52	Academic department pays attention on the time for attending students.
	SQ 53	Hotel Management puts maximum attention for students.
CUSTOMER SATISFACTION (CS)	CS1	I am satisfied with the facilities at hotel management.
	CS2	I am satisfied with the school fees at hotel management.
	CS3	I am satisfied with the service in the academic affairs.
	CS4	There is no discrimination at Hotel Management Department, DIT.
	CS5	I am satisfied with the competence of hotel management lecturers.