



The effect of service quality and corporate image on customer satisfaction and loyalty in mobile telecommunication industry in Indonesia

Untung Setiyo Purwanto, Raihan

Faculty of Industrial Engineering, Jakarta Islamic University, Indonesia

Abstract

This study aims to investigate what impact service quality and corporate image have on customer satisfaction and loyalty in mobile telecommunication industry in Indonesia. This study was driven by the fact that research on the simultaneous relationship between these four variables is relatively sparse, especially in the context of mobile telecommunication industry in Indonesia. The sample involved in this study comprises of 147 mobile phone users in Jakarta. The sample was distributed on five mobile telecommunication operators: Telkomsel, Indosat Ooredoo, Tri, XL Axiata, and Smartfren. As hypothesized in this study, it was found that service quality, corporate image, and customer satisfaction are important antecedents of customer loyalty. The results provided a contribution to the literature by examining the simultaneous relationship involving service quality, corporate image, customer satisfaction, and customer loyalty. The results of this study imply that the mobile telecommunication operators should be aware that customer satisfaction and loyalty is a prerequisite condition for the success to compete. Therefore, the operator have to improve their quality of service. In addition, the operators should be aware that they need to enhance their corporate image. The premise is that customer satisfaction and loyalty is influenced by the extent to which their corporate image.

Keywords: service quality, corporate image, customer satisfaction and loyalty, in Indonesian mobile telecommunication industry

1. Introduction

Recent years, the mobile telecommunication industry has undergone changes characterized by changes in digital technology, increasing number of operators, and intense competition. A number of strategies and innovations have been undertaken by some mobile telecommunication operators to retain their customer loyalty. To that end, several mobile telecommunication operators have developed various innovative products and services. However, since such strategies are often followed and imitated by other mobile telecommunication operators, many scholars suggest that a more viable approach for mobile telecommunication operators is to focus on the improvement service quality and service satisfaction (Boohene *et al.*, 2011; Lai *et al.*, 2009) [4, 11].

The ultimate goal of a company's business activities is often viewed in terms of enhancement of customer loyalty to its products or services. Indeed, the literature extensively recognizes that customer loyalty is the ultimate goal of a company's business activities. It is also widely cited as an important basis for developing a sustainable competitive advantage (Dick and Basu, 1994) [7]. The results of previous studies support the argument presented in this study. This study aims to investigate the level of customer loyalty to organizations operating in mobile telecommunications industry in the Indonesian market. This study assumes that study of customer loyalty is essential for the development of business and management literature. The characteristic of consumer loyalty in the mobile telecommunication industry is unique and new to the theory and practice of business in Indonesia. The results of this study is very likely to be used to enhance business activities undertaken by service providers

operating in the Indonesian market. In particular, the results of this study can be used as a starting point for service providers [1] to understand loyal customer behavior and [2] to determine factors affecting customer loyalty in the mobile telecommunication industry.

A number of studies has been conducted to investigate service quality, customer satisfaction, and consumer loyalty issues. Nevertheless, studies focusing on the cellular telecommunications industry in Indonesia has remained limited. To cope with today's increasing competition, service organizations need to have a more insight concerning the complex relationship among service quality, customer satisfaction, and customer loyalty. In addition, some researchers provide evidence that consumer loyalty can also be influenced by corporate image, although some other researchers suggest that the relationship between corporate image and consumer loyalty is unclear (Bloemer *et al.*, 1998) [3]. This study proposes a model that describes the relationship among service quality, corporate image, customer satisfaction, and consumer loyalty.

2. Literature Review and Hypotheses Development

2.1 Service Quality

Service quality is widely cited as a multidimensional construct (Murti *et al.*, 2013) [13]. Parasuraman *et al.* (1985) [15] defined service quality as "a measure of how well the service level delivered matches customer expectations. Delivering quality service means conforming to customer expectations on a consistent basis". A number of models have been proposed to measure service quality. For example, Gronroos (1984) [8] distinguished dimensions of service quality into three: [1]

technical quality, [2] functional quality, and [3] image. Parasuraman *et al.* (1985) ^[15] developed SERVQUAL model to measure service quality and classified dimensions of service quality into five: [1] tangibles, [2] reliability, [3] responsiveness, [4] assurance, and [5] empathy. Cronin and Taylor (1992) ^[6] developed SERVPERF to measure service quality based on the customer perceptions about service performance. Meanwhile, Rust and Oliver (1994) ^[16] developed three-component model to measure service quality. The authors classified dimensions of service quality into three: [1] technical quality (service product), [2] functional quality (service delivery), and [3] service environment. Furthermore, literature suggest that delivering quality of service is an essential strategy for success and survival in today's competitive environment (Zeithaml *et al.*, 1996) ^[19]. A number of studies have attempted to link quality of service to the success of business measure. For example, quality of service is cited to be a determinant of customer satisfaction and retaining customer loyalty (Malhotra and Mukherjee, 2004) ^[12]. Therefore, this study proposes the following hypothesis:

- Hypothesis 1: Service quality is positively related to customer satisfaction
- Hypothesis 2: Service quality is positively related to customer loyalty

2.2 Corporate Image

Many researchers have recognized the importance of corporate image construct to support the success of company's business (e.g., Aydin and Ozer, 2005; Ishaq, 2012) ^[1, 9]. Corporate image has been defined in different ways. For example, corporate image can be understood as subjective knowledge or as an attitude towards company name, company reputation, price level, service quality variation, (Nguyen and LeBlanc, 1998) ^[14]. Other aspects contributing to the development of corporate image are corporate identity, advertising level and quality, and delivery system. In addition, corporate image is also could be referenced as the overall impression left in the customers minds about a company and its attributes (Nguyen and LeBlanc, 1998) ^[14]. Referring to Ball *et al.* (2006) ^[2], corporate image construct could be operationalized through several items: [1] customer perceptions of corporate stability, [2] social contribution to society, [3] care about customer, [4] reliability of what the company promises and does, and [4] innovation capability.

Research on corporate image concept has been undertaken in previous studies, yet, the research are undertaken mostly on companies producing goods and retail stores. There is still little research on corporate image in the context of service industry. In fact, many researchers argue that corporate image is very important for the development of service companies. The company's service is intangible in nature. Therefore, a better understanding of corporate image can help management to improve company's competitive performance (Nguyen and LeBlanc, 1998) ^[14]. In particular, corporate image is considered as an important factor in evaluating and building customer loyalty (Kim *et al.*, 2004) ^[10]. Corporate image is directly or indirectly related to customer loyalty (Ball *et al.* 2006; Nguyen and Leblanc, 2001) ^[2]. Several previous studies have found empirical evidence that corporate image directly

has a positive effect on customer loyalty (Nguyen and Leblanc, 2001). It was also found that corporate image indirectly had a positive effect on customer loyalty, that is, through customer satisfaction (Ball *et al.*, 2006) ^[2]. Therefore, this study proposes the following hypothesis:

- Hypothesis 3: Corporate image is positively related to customer satisfaction
- Hypothesis 4: Corporate image is positively related to customer loyalty

2.3 Customer Satisfaction

According to Murti *et al.* (2013) ^[13], customer could be referenced as "the customers' fulfillment response, which is an assessment and an emotion based reaction to a service provided. Satisfaction reflects the degree to which a customer believes that the use of a service evokes positive feelings". In addition, as described by Murti *et al.* (2013) ^[13], customer satisfaction is could be referenced as "overall feelings of satisfaction that immediately follows a service encounter. It is a function of the disconfirmation of performance from expectation". Referring to Singh (2006) ^[17], customer satisfaction is also could be referenced as "a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations", or, " a measure of how well a customer's expectations are met". Furthermore, literature agreed that customer satisfaction is essential for developing customer loyalty (Bowen and Chen, 2001; Singh, 2006; Sivadas and Baker-Prewitt, 2000) ^[5, 17, 18]. Researcher such as Sivadas and Baker-Prewitt (2000) ^[18] and Singh (2006) ^[17], recognized that "the ultimate objective of customer satisfaction measurement should be customer loyalty"; suggesting that "high customer satisfaction will result in increased loyalty for the firm and that customers will be less prone to overtures from competition". Therefore, this study proposes the following hypothesis:

- Hypothesis 5: Customer satisfaction is positively related to customer loyalty

2.4 Customer loyalty

According to Bowen and Chen (2001) ^[5], there is a positive relationship between customer loyalty and profitability. Therefore, many organizations are attempting to find ways to build customer loyalty. In this perspective, it is assumed that there are three benefits that can be achieved from customer loyalty: [1] reduction in marketing costs, [2] sales increase, and [3] decrease in operational costs. According to McIlroy and Barnett (2000) as cited in Singh (2006) ^[17], loyal customers have the following characteristics: [1] commit to do business with a particular organization, [2] purchase their goods and services repeatedly, and [3] recommending the products and services to friends and associates. Singh (2006) ^[17] further described that loyal customers tend to maintain or increase their purchases from the organization.

The purpose of this study is to investigate the relationship among service quality, corporate image, customer satisfaction, and customer loyalty. Figure 1 presents the conceptual framework of this research. Following Figure 1, two endogenous variables were being investigated: customer satisfaction and customer loyalty. Customer satisfaction

consists of two items while customer loyalty comprises of five items. Furthermore, this study takes into account two exogenous variables: service quality and corporate image. Service quality encompasses six items while corporate image contains five items. The framework postulated that mobile telecommunication operators need to enhance their customer

loyalty to survive and remain competitive. Toward this end, the operators need to improve their service quality and develop some degree of corporate image. Both service quality and corporate image could be directed to enhance customer satisfaction and customer loyalty.

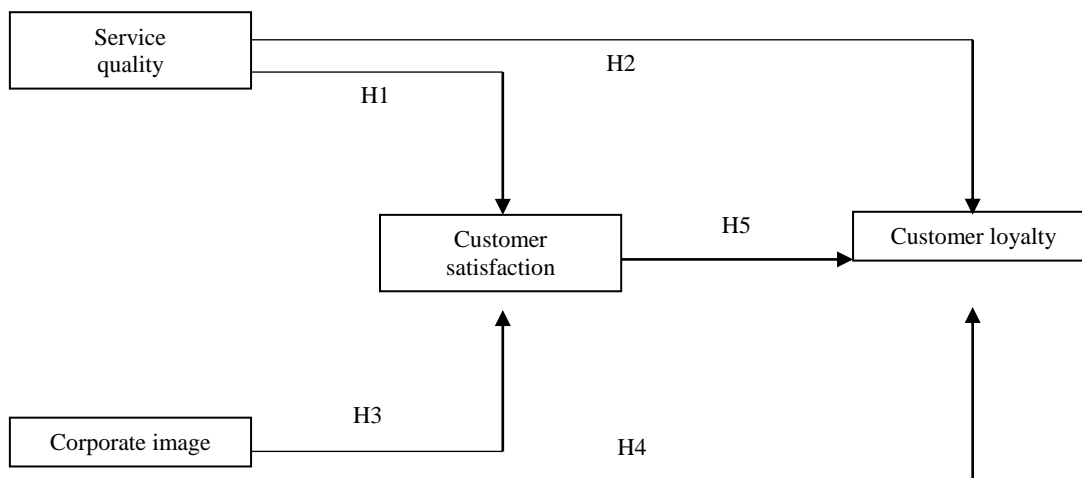


Fig 1: Conceptual framework proposed in this study

3. Research Methodology

3.1 Research Design

This study primarily aims to investigate service quality and corporate image effects on customer satisfaction and customer loyalty in the mobile telecommunication industry. Seven major research questions and objectives were pursued in this research, through the developed relationship model involving the four variables being investigated in this research. Aligned with the objectives of the research, a survey method is considered as an appropriate approach to collect data to explain the various phenomena in the manufacturing SMEs.

3.2 Sample

The sample involved in this study comprises of mobile phone users in Jakarta. Jakarta is the biggest city and the capital of Indonesia. A total of 1000 questionnaires were distributed to mobile phone users. In total, the return questionnaire comprises of 147 responses. The sample’s distribution on mobile telecommunication operators is as follows: Telkomsel (44.8 percent), Indosat Ooredoo (22.9 percent), Tri (15.7 percent), XL Axiata (13.2 percent), and Smartfren (3.4 percent).

3.3 Variable Measurement

Service quality

This study applied six items, adapted from Aydin and Ozer (2005) [1], to measure the service quality. Table 1 presents the items utilized to measure the service quality variable. In the survey, respondents were asked to indicate the extent of their agreement on the items using a five-point Likert-type scale; ranging from 1 (strongly disagree) to 5 (strongly disagree).

Table 1: Operationalization of service quality variable

No.	Coding	Description
1	X11	How would you rate the coverage area for your operator?
2	X12	How would you rate the customer services for your operator?
3	X13	How would you rate the adding service for your operator?
4	X14	How would you rate the vendor for your operator?
5	X15	How would you rate the campaign for your operator?
6	X16	How would you rate the services for your operator?

Corporate image

Referring to Aydin and Ozer (2005) [1], this study utilizes five items to measure the corporate image variable. Table 2 presents the items utilized to measure the corporate image variable. In the survey, respondents were asked to indicate the extent of their agreement on the items using a five-point Likert-type scale; ranging from 1 (strongly disagree) to 5 (strongly disagree).

Table 2: Operationalization of corporate image variable

No.	Coding	Description
1	X21	This company is stable and firmly established
2	X22	This company is innovative and forward-looking
3	X23	This company has a social contribution for society
4	X24	This company is a leading firm in the Turkish GSM sector
5	X25	This company has a positive image

Customer satisfaction

Following Lai et al. (2009) [11], this study uses two items to measure customer satisfaction. Table 3 presents the items applied to operationalize the customer satisfaction. In the survey, respondents were asked to indicate the extent of their agreement on the items using a five-point Likert-type scale; ranging from 1 (Very Dissatisfied) to 5 (Very Satisfied).

Table 3: Operationalization of customer satisfaction variable

No.	Coding	Description
1	Y11	How satisfied are you with the services you receive from your GSM operator
2	Y12	Overall, how satisfied are you with your GSM operator

Customer loyalty

A total of five items, adopted from Aydin and Ozer (2005) [1], were employed to capture the customer loyalty. Table 4 presents the items applied to operationalize the customer loyalty. In the survey, respondents were asked to indicate the extent of their agreement on the items using a five-point Likert-type scale; ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 4: Operationalization of customer loyalty variable

No.	Coding	Description
1	Y21	I will go on using this GSM line
2	Y22	I would prefer this GSM operator, if I bought a new GSM line
3	Y23	I recommend this operator to people
4	Y24	I encourage friends who plan to buy a GSM line
5	Y25	I would go on using this GSM line, even if the other operators' billing was cheaper

4. Results and Discussion

4.1 Pilot Study

This study conducts a pilot study prior to the actual research; aiming to assess whether or not the research instrument was applicable. In particular, the aim of the pilot study was to measure instrument reliability and validity degrees using Corrected Item-Total Correlation (CITC) and Cronbach's alpha coefficients. Table 5 presents the results of pilot study.

Table 5: The results of pilot study

Construct	Item codes	CITC	Cronbach alpha
Service quality	X11	0.67	0.87
	X12	0.73	
	X13	0.76	
	X14	0.72	
	X15	0.68	
	X16	0.71	
Corporate image	X21	0.64	0.81
	X22	0.75	
	X23	0.77	
	X24	0.63	
	X25	0.61	
Customer satisfaction	Y11	0.81	0.90
	Y12	0.76	
Customer loyalty	Y21	0.70	0.84
	Y22	0.78	
	Y23	0.66	
	Y24	0.72	
	Y25	0.81	

As seen in Table 5, the CITC of items utilized to measure service quality varied between 0.67 and 0.76. Meanwhile, the Cronbach's alpha coefficient for items utilized to measure service quality is 0.87. The results indicate that the items utilized to measure service quality were valid and reliable. It was also found that the CITC of items utilized to measure corporate image varied between 0.61 and 0.77 while its Cronbach's alpha is 0.81. The results indicate that the items

utilized to measure corporate image were valid and reliable. Furthermore, the analysis provided CITC of ≥ 0.50 for all items utilized to measure customer satisfaction. It ranged from 0.76 to 0.81. In this sense, the analysis provided Cronbach's alpha coefficients of 0.90. The result confirm the *validity* and reliability of the items utilized to measure customer satisfaction. As for the items utilized to measure to measure the customer loyalty; the results show that the CITC ranged from 0.66 to 0.81 with the Cronbach's alpha of 0.84. The results support the validity and reliability of items utilized to measure to measure the customer loyalty.

4.2 Measurement model

This study conducts a Confirmatory Factor Analysis (CFA) to test the measurement model. Table 6 presents the results of the measurement model test for construct being investigated in this study. As can be seen in Table 6, the results of measurement model test suggest that all the fit indices were within the acceptable range. In this perspective, it was found that RMSEA ranged from 0.05 to 0.07; GFI > 0.90; NNFI > 0.90; CFI > 0.90.

Table 6: The results of the measurement model test

Description	p-value	RMSEA	GFI	AGFI	NNFI	CFI
Model	< 0.01	0.06	0.95	0.91	0.96	0.96
Service quality	< 0.01	0.05	0.93	0.91	0.94	0.95
Corporate image	< 0.05	0.07	0.91	0.84	0.94	0.93
Customer satisfaction	< 0.05	0.06	0.96	0.86	0.97	0.97
Customer loyalty	< 0.01	0.07	0.94	0.92	0.96	0.97

4.3 Test of Hypotheses

This study developed a structural model representing the simultaneous relationship involving the four constructs: service quality, corporate image, customer satisfaction, and customer loyalty. Little effort has been put to investigating the simultaneous relationship involving the four constructs, particularly in the context mobile telecommunication industry in Indonesia. A Structural Equation Modeling (SEM) was applied to test the hypothesis proposed in this study. Table 7 depicts the results of structural model test. Individual goodness of fit measures (the GFI > 0.90; the TLI > 0.90; and the RMSEA = 0.05) confirm the structural model fit.

The first hypothesis of this study was dealing with the relationship between service quality and customer satisfaction. This study hypothesized that service quality would provide a significant and positive effect towards the customer satisfaction. The results presented in Table 7 indicated that service quality provides a significant and positive effect towards customer satisfaction ($\beta = 0.357$; $p < 0.01$). Therefore, Hypothesis 1 is supported. The second hypothesis was concerned with the relationship between service quality and customer loyalty. This research hypothesized that service quality would provide a positive and significant effect towards the customer loyalty. The results of the test, presented in Table 7, confirmed that service quality was positively and significantly associated with customer loyalty ($\beta = 0.572$; $p < 0.01$). Therefore, H2 was supported.

The third hypothesis of this study was concerned with the relationship between corporate image and customer satisfaction. This study hypothesized that corporate image

would provide a significant and positive effect towards the customer satisfaction. The results presented in Table 7 confirmed that corporate image was positively and significantly associated with customer satisfaction ($\beta = 0.218$; $p < 0.05$). Therefore, Hypothesis 3 is supported. The fourth hypothesis was concerned with the relationship between corporate image and customer loyalty. This research hypothesized that corporate image would provide a positive and significant effect towards the customer loyalty. The results of the test, presented in Table 7, confirmed that corporate image was positively and significantly associated with customer loyalty ($\beta = 0.186$; $p < 0.05$). Therefore, H4 was supported. The fifth hypothesis was concerned with the relationship between customer satisfaction and customer loyalty. This research hypothesized that customer satisfaction would provide a positive and significant effect towards the customer loyalty. The results of the test, presented in Table 7, confirmed that customer satisfaction was positively and significantly associated with customer loyalty ($\beta = 0.186$; $p < 0.05$). Therefore, H5 was supported.

Table 7: The results of structural model test

Relationship		SRW	CR	P
Service quality	→ Customer satisfaction	0.357	4.618	***
Service quality	→ Customer loyalty	0.572	7.774	***
Corporate image	→ Customer satisfaction	0.218	3.763	**
Corporate image	→ Customer loyalty	0.186	3.476	**
Customer satisfaction	→ Customer loyalty	0.467	6.315	***
Service quality	→ X11	0.76		
	→ X12	0.61		
	→ X13	0.58		
	→ X14	0.72		
	→ X15	0.74		
	→ X16	0.66		
Corporate image	→ X21	0.65		
	→ X22	0.63		
	→ X23	0.78		
	→ X24	0.59		
	→ X25	0.66		
Customer satisfaction	→ Y11	0.72		
	→ Y12	0.74		
Customer loyalty	→ Y21	0.57		
	→ Y22	0.60		
	→ Y23	0.77		
	→ Y24	0.74		
	→ Y25	0.64		
GFI	= 0.94			
TLI	= 0.97			
RMSEA	= 0.05			

Note: Significance at ** $p < 0.05$; *** $p < 0.01$

5. Conclusion

This study primarily aims to examine the proposed research model pertaining to the relationship among service quality, corporate image, customer satisfaction, and customer loyalty. In the model, service quality and corporate image serve as exogenous variables while customer satisfaction and customer loyalty act as endogenous variables. This study was driven by the fact that research on the simultaneous relationship between these four variables is relatively sparse, especially in the context of mobile telecommunication industry in Indonesia. For the purposes of this study, service quality comprises of six items, corporate image consists of five, customer

satisfaction contains two items, and customer loyalty composes five items. The sample of this study consists of 147 mobile phone users in Jakarta, Indonesia.

As hypothesized in this study, it was found that service quality, corporate image, and customer satisfaction are important antecedents of customer loyalty. The results provided a contribution to the literature by examining the simultaneous relationship involving service quality, corporate image, customer satisfaction, and customer loyalty. The results of this study give practical implication. In this perspective, the mobile telecommunication operators should be aware that customer satisfaction and loyalty is a prerequisite condition for the success to compete. For this reason, the operator have to improve their quality of service. In addition, the operators should be aware that they need to enhance their corporate image. The premise is that customer satisfaction and loyalty is influenced by the extent to which their corporate image.

6. References

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