

A Structural Look at Service Loyalty: Role of Service Quality, Corporate Image, and Trust

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Abstract This study investigates the relationships among service loyalty, perceived service quality, corporate image, and trust in the context of Malaysian mobile phone service market. Partial least squares approach was used to analyze the survey data. Results suggest adequate predictive ability of the model and provide support for all hypothesized relationships. It is found that both perceived service quality and corporate image jointly build trust which eventually affects service loyalty. It is also evident that, perceived service quality directly as well as indirectly affects consumer trust.

Keywords Service loyalty, Perceived service quality, Corporate image, Trust, Malaysian mobile phone service market

1. Introduction

Loyalty is often regarded as a Holy Grail for business firms due to its myriads of benefits[1],[2]. Past studies suggest that, loyalty contributes to increased amount of profit, enhances market share, generates positive word of mouth, and reduces customer switching tendency[3],[4]. However, creating customer loyalty is a daunting task, particularly in a highly competitive business environment[5].

Most of the prior studies have identified satisfaction and quality as two prime antecedents of consumer loyalty[6],[7]. However, there is a need to incorporate other variables in the loyalty framework. The present research is such an effort to integrate service quality, corporate image, and trust in the service loyalty model. Unfortunately, the linkages between service evaluation and service loyalty are often considered as a simple bivariate relationship which certainly covers the true relationships[8]. Moreover, research pertaining to trust and image are predominantly based on developed country context and little has been known related to the developing country perspective. It is argued that, models based on developed country settings may not be universally appropriate since cultural idiosyncratic characteristics may exhibit different relational strength and pattern across cultures and contexts[8],[9]. Taken together, the present study aims to investigate the relationships among service loyalty, service quality, corporate image and trust in the context of mobile phone service usage.

For the present study, mobile phone service sector is chosen as the research context. It is evident that mobile

phone service is the fastest growing industry in the world[10]. However, in this industry, inducing other service provider's customers to switch is a common practice[11]. This circumstance not only affects service providers' profit level, but also poses threat to service providers in making their customers loyal and to build a long term relationship. Another challenge to this industry is that, satisfied customers also switch due to the low (or absence of) switching barriers[12]. Therefore, indeed it is worthwhile to understand what drives service loyalty in the context of mobile phone service usage.

The present research develops and extends existing conceptualization of service dynamics by verifying the mediating role of corporate image between perceived service quality and service loyalty. The present study is structured as follows. First, a brief literature review is presented related to the study constructs and hypotheses are developed. Next, the methodology is discussed and results are presented. Lastly, conclusion and implications are stated and limitations are acknowledged.

2. Literature Review and Development of Hypotheses

It is often suggested that, retaining current customer is much more profitable than acquiring new customers since attracting new customers is five times more expensive than to retain the existing one[13]. Considering its benefits, most of the firms consider loyalty as a panacea to many problems. It is important to note that, loyalty is more important for services than goods[14]. Intangibility of services makes the evaluation of service quality difficult which creates uncertainty to its customers and thus, loyalty acts as a risk reduction strategy for its customers[15].

For the present study, in indicating the loyalty construct,

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the term *service loyalty* is used to differentiate it from goods loyalty. Due to the idiosyncratic nature of services and its unique features like perishability, intangibility, and inseparability, service loyalty greatly differs from goods based loyalty[14]. As such, the factors that contribute in explaining the service loyalty also varies from goods based loyalty.

Being a prime competitive weapon in the service industry, service quality is often regarded as the key antecedent of service loyalty[16],[17]. It is the measure of consumers' quality perception of service firms[18]. However, measuring service quality is far difficult than product's quality[18]. Evaluating service quality heavily depends on evaluation of quality delivery process as well as its outcome[14],[18]. Past studies suggest that consumer's favourable perception of service quality positively affect service loyalty[8],[19]. Moreover, it elevates consumer's repeat purchase intention and enhances inclination to buy additional services from the same service provider, makes consumers less price sensitive and creates positive word-of-mouth[7],[17].

Usually, trust occurs when one party firmly believes that the act of other party will result in positive outcome[20]. As such, service quality may positively affect trust. Thus, it can be assumed that, when consumers would have positive perception toward the delivered service quality, it may create trust toward their service provider. In addition to this, when consumers trust any service provider, it reduces their level of risk which eventually creates service loyalty[21],[22]. In other words, when consumers trust a service provider, they tend to form a favourable purchasing intention towards that service provider[14]. In support of this view, it is found that trust is a significant predictor of relational commitment[23]. For a service firm, it is the hardest part to create trust among its customers and absence of trust is considered as the hardest obstacle for that firm[24]. However, some study contended that, corporate image can help in this regard, i.e., favourable corporate image contributes in creating consumer trust about the firm[25]. They have suggested that, in the financial services sector corporate image significantly and positively influence consumer trust in both traditional channels and over the internet. Therefore, it is also expected that, this relationship will substantiate in the context of mobile phone service as well.

Corporate image is regarded as the overall impression that a person holds about a firm[26]. As such, it is understood that, corporate image results from an evaluation process[27]. This evaluation derives from ideas, feelings and/or consumption experience that a consumer retrieves from his or her memory which eventually transforms into mental images[28]. As such, the impression of quality that is communicated by the service provider to its clients may affect corporate image[29]. In turn, image not only affects trust but also affects loyalty. As[30] pointed that corporate image is positively related to behavioural intention. Similarly,[29] also found support for this notion. They have

demonstrated that corporate image relates positively with customer loyalty in retailing and education sectors. Furthermore, in Danish postal services and Danish food retailing sector[31] and[32] found support of this relationship.

In epitome, the present study simultaneously verifies the relationships among service loyalty (SL), perceived service quality (PSQ), corporate image (CI), and trust (TR). Based on the above discussions, following hypotheses are formed:

- H₁: SQ will be positively related to SL
- H₂: TR will be positively related to SL
- H₃: CI will be positively related to SL
- H₄: SQ will be positively related to TR
- H₅: CI will be positively related to TR
- H₆: SQ will be positively related to CI
- H₇: TR will mediate the relationship between SQ and SL
- H₈: TR will mediate the relationship between CI and SL
- H₉: CI will mediate the relationship between SQ and TR

3. Methodology

3.1. Measurement

Measures for this study were adapted from past studies. In measuring service loyalty, loyalty scale was borrowed from[33], which was consisted of five items. Perceived service quality scale was borrowed from[34] for reason of data collection efficiency. In this study, perceived service quality is considered as a uni-dimensional construct as an overall evaluation of quality which is in accordance with other researchers[11],[34]. This scale was comprised of five items. On the other hand, corporate image scale was adapted from[35]. This scale contained five items. Lastly, to measure trust, a five-item scale was adapted from[11]. All study constructs were measured using a five-point Likert scale which ranged from "1=strongly disagree" to "5=strongly agree". In this study, internal consistency reliability (measured by Cronbach's coefficient alpha) for all constructs exceeded the suggested cut off value of 0.7 by[36] and ranged from 0.762 to 0.783.

3.2. Data Collection

Data were collected by surveying a pool of students from a reputed private university in Malaysia. Using student as respondent is an old practice in marketing literature[19],[37]. Since the purpose of this study is to obtain theoretical generalizability over population generalizability, present study employed non-probability sampling as the sampling technique[38],[39]. All together 300 questionnaires were distributed and 215 questionnaires were collected. After removing the outliers and incomplete questionnaires, 207 usable questionnaires were obtained.

Among 207 respondents, 47% are male and the rest are female (53%) which represents somewhat equal distribution. Most of the respondents' age ranges from 18 – 27 years (86.6%) and the rest are ranged between 28 – 32 years (3.4%). In regard to ethnicity, 40.6% respondents are

Chinese, 29.5% respondents are Malay, 42% are Indian and the rest are foreigner (9.6%). With respect to marital status, 91.3% respondents reported that they are single and majority of the respondent's monthly income ranges from RM500 to RM1000.

4. Results

PLS approach was utilized to analyze the data since predicting the relationship was the main concern, rather than theory testing[40],[41]. Smart PLS M3 Version 2.0 software was employed in this regard with the application of a bootstrapping technique to determine the significance levels for loadings, weights, and path coefficients.

Following the general convention, a two step approach was considered to assess the conceptual model, i.e., the outer model (measurement model) and the inner model (structural model)[40],[41]. In the first stage, the outer model was assessed by evaluating psychometric properties of the measurement items. Next, the inner model was assessed to test the hypothesized relationships

4.1. Measurement Model

Confirmatory factor analysis (CFA) was carried out to test the measurement model. In this regard, reliability and validity were assessed. Convergent validity which is the degree to which observed variables are loaded on their underlying construct was assessed through factor loadings [40], composite reliability (CR) and average variance extracted (AVE)[42].

Convergent Validity

As seen in Table 1, all items are loaded adequately on their underlying construct and exceeded the recommended cut-off value by[43] of 0.6. Additionally, CR values which represent the extent to which the construct indicators indicate the latent construct exceeded the suggested value of 0.7[62]. On the other hand, AVE which demonstrates the overall amount of variance in the indicators accounted for by the latent construct was above the recommended cut-off value of 0.5[42].

Table 1. Test results of convergent validity

Construct	Measurement items	Loading	CR ^a	AVE ^b
SL	I will go on using this operator's network service.	0.687	0.856	0.546
	If I bought a new line, I would prefer this operator's network service.	0.817		
	I recommend this SP to people.	0.769		
	I encourage friends regarding this SP who plan to subscribe to a mobile network service.	0.793		
	Even if the other operators' billing is cheaper, I would go on using this operator's network service.	0.608 0.608		
TR	I trust this SP.	0.809	0.871	0.576
	I feel that I can rely on this SP to serve well.	0.783		
	I trust the billing system.	0.734		
	I believe that I can trust this SP that it will not try to cheat me.	0.818		
	This SP is reliable because it is mainly concerned with the customer's interests.	0.635 0.635		
CI	This SP is stable and firmly established.	0.714	0.842	0.518
	This SP is innovative and forward-looking.	0.721		
	This SP has a social contribution for society.	0.736		
	This SP is a leading firm in the Malaysian telecommunications sector.	0.611		
	This SP has a positive image in the mind of consumers.	0.803		
PSQ	The quality of the coverage area of my SP is satisfactory.	0.630	0.849	0.533
	This SP provides high quality customer support services.	0.785		
	I get adequate value added services (GPRS, WAP etc.) from this SP.	0.626		
	The pricing of the SP is reasonable.	0.766		
	This SP's offered services meet its advertisement promises.	0.822		

Note: SP refers to 'service provider'.

^a Composite Reliability (CR) = (square of the summation of the factor loadings) / {(square of the summation of the factor loadings) + (square of the summation of the error variances)}

^b Average Variance Extracted (AVE) = (summation of the square of the factor loadings) / {(summation of the square of the factor loadings) + (summation of the error variances)}

Discriminant Validity

For the present study, discriminant validity at the construct level was assessed using [44] criterion. Conversely, as suggested by [40], item level discriminant validity was assessed by observing the cross loadings. The findings suggest that each of the measuring items for a particular latent construct was greater than its loadings on any other constructs.

Next, criterion was assessed which recommends that the square-root of AVE for each construct is needed to be greater than other constructs' correlation coefficient. Results provided in Table 2 demonstrate that all inter-construct correlation value were less than the value of square-root of AVE.

Table 2. Assessment of discriminant validity at the construct level

	CL	TR	PSQ	CI
CL	0.739			
TR	0.448	0.759		
PSQ	0.295	0.392	0.720	
CI	0.308	0.215	0.243	0.730

Note: Diagonals represent the square root of the AVE while the off-diagonal values represent the correlations

In a nutshell, all these test results depict that the measurement model adequately met the criteria of convergent and discriminant validity. Therefore, analysis proceeded to evaluate the structural model.

4.2. Structural Model

Path coefficients were obtained using PLS algorithm. Additionally, bootstrapping technique was utilized to assess the level of significance of the structured paths. The results of bootstrapping indicated that all paths coefficients were significant at 0.01 and 0.05 levels. The R² value was 0.385 suggesting that 38.5% of the variance in service loyalty can be explained by perceived service quality, trust and corporate image.

Hypotheses testing

Table 3. The results of the structural model

Hypothesis	Relationship	Path coefficient	t value	Result
H1	PSQ → SL	0.141	2.631**	Supported
H2	TR → SL	0.481	9.964**	Supported
H3	CI → SL	0.210	3.290**	Supported
H4	PSQ → TR	0.238	3.051**	Supported
H5	CI → TR	0.122	2.003*	Supported
H6	PSQ → CI	0.258	3.494**	Supported
H7	PSQ → TR → SL		3.392**	Supported
H8	CI → TR → SL		2.142*	Supported
H9	PSQ → CI → TR		2.440*	Supported

Note: **p<0.01, *p<0.05

The results of the structural model from the PLS output indicated that perceived service quality ($\beta = 0.141, p < 0.01$), Trust ($\beta = 0.481, p < 0.01$), and corporate image ($\beta = 0.210, p < 0.01$) were directly, positively and significantly related to service loyalty. Therefore, H₁, H₂ and H₃ were supported.

Subsequently, perceived service quality ($\beta = 0.238, p < 0.01$) and Image ($\beta = 0.122, p < 0.05$) were positively and significantly related to trust. These results provide support for H₄ and H₅. Additionally, the effect of perceived service quality was found to be a significant predictor of corporate image ($\beta = 0.258, p < 0.01$). Thus, H₆ was supported. The results of the structural model are portrayed in Table 3.

Mediation Effect Assessment

In testing mediation effect, the Sobel test was performed to assess whether the indirect effect of the predictor variable on the outcome variable through the mediator variable is significant. The results suggest that trust mediates the relationship between perceived service quality and service loyalty as well as between corporate image and service loyalty. To check whether these mediation effects are partial or full, the method from [45] was utilized and found that partial mediation exists in both cases and thus H₇ and H₈ are supported. Additionally, corporate image partially and significantly mediates the relationship between perceived service quality and trust which provides support to accept H₉.

Effect Size (f^2) and Predictive Model Ability (Q^2) Calculation

The effect of adding additional predictors in the model was assessed by calculating the effect size. If the value of f^2 is 0.02, it is considered as weak effect [46]. Moreover, the values of 0.15 and 0.35 are considered as moderate and substantial consequently. For the present study, f^2 values for adding each additional predictor were 0.156, 0.339, and 0.153 which demonstrate the existence of moderate effect size.

The model capability to predict is another criterion that should be considered to assess the structural model (Hair et al., 2011). The model's predictive ability is decided based on Stone-Geisser's Q^2 [47]. The value of Q^2 was obtained by using a blindfolding procedure [42]. In this study, the predictive relevance values (Q^2) for service loyalty, trust and corporate image were greater than zero which implies that the model has predictive relevance.

5. Discussion and Conclusions

Using the PLS technique, findings of the present study support the conventional view of the influence of the predictor variables perceived service quality, trust, and corporate image on service loyalty among the mobile phone service users of Malaysian consumers. Moreover, indirect effects of perceived service quality and corporate image on service loyalty are also verified. The paper also assesses the goodness of measures by looking at the validity and reliability of the measures using PLS approach. The results reveal that the measures used in this study demonstrate both convergent and discriminant validity. Furthermore, effect size as well as predictive ability test results demonstrates the robustness of the structural model. The results exhibit that all hypothesized relationships are supported.

The finding of this paper confirms the view that perceived service quality positively affects service loyalty. It implies that, the higher the service quality, the higher the service loyalty. This finding is supported by other past studies in the different service context. For example, in the Nigerian banking sector[19], in the B2B context[48], and in the Turkish telecommunications industry[11] found support for this relationship.

Trust also found to be significant prediction of service loyalty. This fact implies that customers' trust toward their mobile service provider reduces uncertainty associated with the service delivery. Since, in regard to service experience customers heavily rely on the trusted brand[21], it enhances service loyalty. Past studies also echoed this notion with the[5],[12].

Corporate image too exerts a direct effect on service loyalty. In other words, being an attitudinal variable, corporate image positively influences behavioural intention, i.e., service loyalty. In examining this relationship in an Australian study,[49] found marginal support whereas, in Danish food retailing sector,[32] found substantial support for this relationship.

Perceived service quality and corporate image both found to be significant predictors of trust. These findings reflect the idea that service quality is a necessary but not sufficient condition to predict trust. It also depicts that, the more positive the corporate image and high service quality, the greater the trust of the firm. However, only a handful of studies found support for these two relationships[50].

Additionally, perceived service quality positively affects corporate image. In more detail, corporate image results from service quality evaluation process. As mentioned earlier, service quality is a function of the consumption experiences. If consumers are satisfied with the delivered services, they tend to hold positive image toward that service firm. In studying this relationship in the Chinese telecommunication industry,[8] also found positive relationship between service quality and corporate image.

Furthermore, trust partially mediates the relationship between perceived service quality and service loyalty as well as between corporate image and service loyalty. That is, both service quality and corporate image positively enhance customer trust which eventually leads service loyalty. It is also found that service quality has an indirect effect on trust through corporate image.

In epitome, perceived service quality, corporate image and trust all factors found to have significant influence on building service loyalty. Thus, mobile service providers need to put great emphasis on delivering quality services to its customers, and to build trust and good corporate image among their customers. The effect size calculation provided the idea that, trust poses greater influence on service loyalty largest effect size (0.339). Moreover, it acts as a predictor as well as a mediator which signifies its importance in creating service loyalty. In the Malaysian mobile phone sector, there are four major players namely Maxis, Celcome, DiGi, and U-mobile[51]. To increase market share, these giant telco

competitors fiercely competing among themselves. As such, creating customer trust might be a good competitive strategy to bid this competition.

This study has its limitations in that the sample is limited geographically. As such, the hypotheses should be tested further in other countries to get wider understanding of the proposed relationships. Moreover, future research can consider different segment of telecommunications sector, such as, fixed line and/or broad band users and can compare the findings among these different groups of customers to more interesting findings.

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