

# RELATIONSHIP COMMITMENT OF PREPAID AND POST-PAID SUBSCRIBERS OF A PRIVATE TELECOMMUNICATION COMPANY IN BANGLADESH

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## Abstract

This study intends to investigate the relationships of communication effectiveness, trust, technical quality, functional quality, and relationship commitment in the context of the prepaid and post-paid subscribers of a major private telecommunication company of Bangladesh. It presents a critical appraisal of some important antecedents of subscribers' relationship commitment to the respective mobile service provider. Data were collected from 103 prepaid subscribers and 107 post-paid by using self-administered questionnaires. For prepaid subscribers, stepwise regression has showed that technical quality, communication effectiveness, and functional quality have statistically significant relationship with relationship commitment. However, stepwise regression for post-paid subscribers has showed that trust and technical quality have statistically significant relationship with relationship commitment. A clear understanding of important precursors of subscribers' relationship commitment might induce the service provider(s) to germinate and strengthen subscribers' relationship commitment to create a loyal customer base.

## INTRODUCTION

In the past three decades, due to significant liberalization and privatization, the entire telecommunications industry has become a dynamic environment with huge growth potential subject to new opportunities as well as threats. (Graack, 1996). In recent years, in some Asian countries the number of mobile subscribers even passed the number of fixed-line subscribers (Fink, Matto, & Rathindran, 2001). Hence, lately the strategic behavior of telecommunications companies has attracted so much attention, both in the academic

literature and in the popular press. In Bangladesh the scenario is not much different. At present the socioeconomic profile of Bangladesh provides a great opportunity for the mobile industry to expand as the regulation in the mobile services is becoming more relaxed. Although the number of mobile operators is still limited to a few (four private mobile operators and one state-owned operator), aggressive competition has forced the incumbent telecommunications companies or mobile operators to reconfigure their strategy and business to sustain or improve their competitive advantage.

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Currently the mobile companies offer two types of service provider-customer relationships: prepaid and post-paid. Although in the early years the mobile services were primarily targeted to the post-paid subscribers, prepaid services have become more and more popular in recent years. By the end of 2003 the proportion of prepaid subscribers became more than 50% of the install base worldwide (Lonergan, Swain, Guy, Yunus, Jackson, Mallinson, Barrabee, Minoru, Hatton, Entner, Putcha, Hoffman, & Quigley, 2004). Prepaid subscribers pay in advance for a limited amount of services and if they want to consume more air-time, they just refill their scratch cards by paying service providers or their channel merchants. However, post-paid subscribers usually have long term contractual relationships with the service provider and pay on a monthly basis according to the usage of services in the previous billing period (Turel & Serenko, 2004). Understanding the behavior of both types of subscribers is strategically important to mobile service providers for long term success.

Increasing competition among the major private telecommunication companies in Bangladesh is pushing them to undertake various strategic and tactical measures to attract new customers while retaining the existing customers. In this emerging market both prepaid and post-paid subscribers are not exhibiting strong loyalty or commitment to any particular service provider as they have options of switching to other service provider(s) for more convenient and suitable service offerings. Hence, the major private telecommunication companies have a stake high enough to consider how to create a loyal customer base that will not be eroded even in the face of fierce competition. Therefore, the major private telecommunication companies must realize the emergence of studying and understanding various antecedents (viz. service quality, switching cost, trust, and customer satisfaction) of the subscribers' relationship commitment to figure out ways to create a loyal customer base.

Prepaid subscribers and post-paid subscribers tend to develop different type of relationships with their service provider because of dissimilar contractual obligation. According to Turel and Serenko (2004) prepaid subscribers have low commitment relationship, whereas post-paid subscribers have high commitment relationship with the service provider. Moreover, average switching likelihood of prepaid subscribers is usually higher than that of post-paid subscribers; which ultimately shapes the subscribers' relationship commitment (Turel & Serenko, 2004). Therefore, it is important to understand how various antecedents of relationship commitment vary between these two groups of subscribers.

For service oriented companies the essence of marketing is developing long-term, and value laden relationship with customers (Berry, 1983; Palmer & Bejou, 1998). In relationship marketing relationship commitment is considered essential for successful long-term relationship with customers (Anderson & Weitz, 1992; Kumar, Scheer, & Steenkamp, 1995). Sharma and Patterson (1999) reported that effectiveness of communication between customers and service providers can play a vital role to engender customer relationship commitment. Mukherjee and Nath (2003) have identified trust as a major precursor of customer relationship commitment. Two fundamental components of service quality-namely, technical quality and functional quality are considered to be the prerequisites of lasting customer relationship with the service provider (Grönroos, 1983).

## **REVIEW OF LITERATURE**

### **Communication Effectiveness**

According to Sharma and Patterson (1999), communications effectiveness refers to both formal and informal sharing of information in a meaningful and timely fashion between a subscriber/customer and a service provider with genuine

empathy. The purpose of the communication effectiveness is to educate the customers and keep them informed about the service offerings. To improve the perception of quality of service being received communication is an important ingredient (Headley & Choi 1992). Sharma and Patterson (1999) identified that strong communication skills of a service provider can corroborate customer understanding of services being received and thus the customers become more assured in their ability to assess the quality and outcomes of the service. In addition, through the timely communication of the service provider, a customer can assess whether he/she is receiving expected service, how much value he/she is getting against the money spent, and possible future opportunities and risks of the service. So it appears that offering good quality service is not enough unless that is not coupled with effective communication.

### **Trust**

In business studies, trust has been found to be very important for building and maintaining long-term relationships (Rousseau, Sitkin, Burt, & Camerer, 1998; Singh & Sirdeshmukh, 2000). Trust is viewed as one of the most relevant antecedents of stable and collaborative relationships as it is the credence to any organization and it has the power to determine the continuity of any relationship. According to Sharma and Patterson (1999) trust plays an important role in motivating the customers to continue the relationship with the service provider due to inherent credence properties and complex intangibles of service which make it difficult for many customers to assess whether service objectives were maximized or optimized. Moreover, trust is subject to a certain gestation period. Drucker (1986) provided a ballpark estimation on building up trust; which is at least three years with rewarding results at the end. Gambetta (1988) in his discussion about institutional trust mentioned that trust is subjective and should be measured with a certain level of

probability that someone will perform a certain action. Specifically, trust is positive expectations towards the behavior of others (Barber, 1983). According to Lau and Lee (1999), if one party trusts another party that eventually engenders positive behavioral intentions towards the second party.

### **Technical Quality**

Service quality is comprised of two components - technical quality (the core service or "what" is delivered) and functional quality ("how" the service is delivered) (Grönroos, 1983; Parasuraman et al., 1985). According to Lovelock (1996) technical quality refers to the actual outcomes or the core service as perceived by the customers. Technical quality refers to the competency of any service provider in achieving the best return on investment for their customers at acceptable levels of risk, thus assisting them to realize their expected services or values. Specifically, technical (outcome) quality involves what a customer actually receives from a service or a service encounter, and the "what" (or technical quality) might be difficult for the customer to evaluate at times. Generally speaking, the customers who are unable to confidently evaluate technical (service quality) outcomes will have higher perceptions of technical quality, when they find their expectations regarding the service have been fulfilled (Sharma & Patterson, 1999). For example, in health care, the customers lack the ability to assess technical quality, so they rely on other measures of quality - such as attributes associated with the process ("how" -viz. reliability and empathy). It can be safely deduced from Hauser and Clausing (1988); technical quality refers to the intended the set of technical/engineering attributes, characteristics, and activities which completely define a product/service from a technical/engineering point of view.

### **Functional Quality**

Functional quality means how the service provider delivers the services (Grönroos, 1983;

Parasuraman et al., 1985). Grönroos (1978) illustrated that functional quality is concerned with the interaction between the service provider and a customer and is evaluated in a subjective manner. Functional (process) quality focuses on the ways how a service is delivered to the consumer, which is subject to customer's perception of the interaction took place during service delivery/exchange. The process includes courteous attention, proper presentation and sufficient explanations regarding the service offerings, insightful suggestions and recommendations with customers' best interest in heart, and responding to customer queries and complaints promptly. According to Sharma and Patterson (1999) core service (technical quality dimensions) sooner or later becomes a commodity as competition increases and the industry becomes mature; then functional quality dimensions become more and more important to create a sustainable competitive advantage. However, according to Richard and Allaway (1993) utilizing only functional quality dimensions to explain and predict consumers' behavior is a poor articulation of service quality that has low predictive validity.

### **Relationship Commitment**

According to Anderson and Weitz (1992) and Kumar et al. (1995) relationship commitment has been considered to be a critical element for successful long-term relationships. According to Dwyer, Schurr and Oh (1987) relationship commitment is the pledge for relational continuity between exchange partners. In the contexts of buyer and seller commitment, relationship commitment is referred to the desire for continued relationship and an effort to ensure its continuance (Wilson, 1995). Sharma and Patterson (1999) had conceptualized relationship commitment as the function of communication effectiveness, perceived service quality (technical as well as functional) and trust.

### **Relationships between Communication Effectiveness and Relationship Commitment**

For a continuing buyer-seller relationship, communication effectiveness is instrumental. Communication effectiveness has direct impact on relationship commitment stated by Sharma and Patterson (1999). Relationship commitment has been highlighted by numerous researchers in relationship marketing literature which is inseparably linked to trust, satisfaction and communication (Cronin & Taylor, 1992; Dwyer et al., 1987; Moorman, Deshpande & Zaltman, 1993; Morgan & Hunt, 1994; Sheaves & Barnes, 1996). Sharma and Patterson (1999) specifically emphasized that if a sense of reliability and trust can be elicited in all possible forms of communication (written or spoken) between the service provider and the customer, the customer is eventually induced to become or remain more committed to the service provider.

Hypothesis 1: The higher the perceived communication effectiveness of the service provider, the stronger the relationship commitment.

### **Relationships between Trust and Relationship Commitment**

According to Crosby, Evans and Cowles (1990) trust is defined as the belief that the service provider can be relied on to serve the interests of the customer in the best possible way. Trust is one of the most important antecedents of long term relationships between service provider and customer (Fox, 1974; Morgan & Hunt, 1994). According to Morgan and Hunt (1994) trust precedes commitment in channel relationships also. Garbarino and Johnson (1999); and Doney and Cannon (1997) stated that business relationship between partners is inextricably influenced by trust and commitment. Mukherjee and Nath (2003) have stated that trust is a significant precursor of customer relationship commitment. Similar notion has also been supported by Sharma and Patterson (1999).

Hypothesis 2: The greater the trust in the service provider, the stronger the relationship commitment.

### **Relationships between Technical Quality and Relationship Commitment**

Sharma and Patterson (1999) stated that technical quality has a strong and significant direct impact on relationship commitment. If more attention is paid to service outcome(s) and technical quality is continually improved, customers will be not only be committed in the relationship with service provider, but also become more satisfied (Wetzels, Ruyter & Birgelen, 1998).

Hypothesis 3: The greater the perceived technical quality of the service provider, the stronger the relationship commitment.

### **Relationships between Functional Quality and Relationship Commitment**

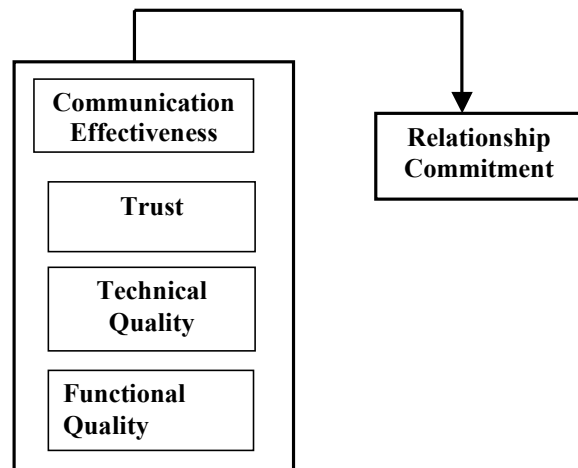
As mentioned by Grönroos (1978) functional quality is related to the interaction between the service provider and customers and it has a definite impact on customers' loyalty or relationship commitment to the service provider. Sharma and Patterson (1999) claimed that greater perceived functional quality of the service provider will result in higher trust in the relationship, eventually leading to higher relationship commitment.

Hypothesis 4: The greater the perceived functional quality of the service provider, the stronger the relationship commitment.

### **Conceptual Framework**

Based on the research hypotheses, the researcher has developed the following conceptual framework (Figure 1). In this study communication effectiveness, trust, technical quality, and functional quality are independent variables and relationship commitment is the dependent variable. The graphical model is suggestive that this study should be a correlational study to investigate the relationships among studied variables empirically.

**Figure1: Conceptual Framework of Research Variables and their Relationships.**



## **METHODOLOGY**

### **Research Setting and Sampling**

The researcher used the quota sampling and total 300 questionnaires were distributed among the prepaid (150 questionnaires) as well as post-paid (150 questionnaires) subscribers of a major private telecommunication company in Bangladesh who had been receiving its services for at least one year. The mode of participation was voluntarily. The response rate was 69% for prepaid subscribers and 71% for post-paid subscribers. The minimum age of the two groups of respondents was 17 and the maximum age was 58. The average age of the respondents was 31 years. Of 103 prepaid subscribers, 59% were male and 41% were female. Of 107 post-paid subscribers, 47% were male and 53% were female.

### **Measures**

A structured questionnaire comprised of five sections was used. To measure all of variables the researcher also used 5 points Likert scale like



previous researchers. Communication effectiveness was measured by using 6 items which were collected from Anderson and Weitz (1992); Sharma and Patterson (1999) and the researcher's qualitative interviews. Trust was measured by combining 5 items, which were developed by Moorman et al. (1992), Crosby et al. (1990), and Sharma and Patterson (1999). Technical quality scale pertinent to the prepaid subscribers was measured by using 7 items; which was a combination of items adopted from Sharma and Patterson (1999) and the researcher's qualitative interviews. Technical quality scale germane to the post-paid subscribers was measured by using 10 items; which was a combination of items adopted from Sharma and Patterson (1999) and the researcher's qualitative interviews. Similarly, the 5 items to measure functional quality were collected from Sharma and Patterson (1999) and the researcher's qualitative interviews. Relationship commitment had 4 items which were developed by modifying the commitment scales of Anderson and Weitz (1992), and Morgan and Hunt (1994). All the scales had high reliability coefficients with coefficient alphas ranging from 0.68 to 0.90. Other than technical quality, all the scales used for both prepaid and post-paid subscribers were same. Since technical quality dimensions are little different for two types of subscribers. So, technical quality for each type of subscribers was measured with slightly different and reasonably attuned scales.

### Data Analysis

The proposed study is a relational study. The researcher has done a correlation analysis for each type of subscribers to assess the nature of existing relationship between the independent and dependent variables. The researcher has also performed stepwise regression for each type of subscribers to test the strength of association between the independent and dependent variables. Thus, stepwise regression allows assorting the independent variable(s) or predictor(s) in relation to the

dependent variable. SPSS version 12 was used for statistical analysis.

## RESULTS

### Descriptive Statistics

Descriptive statistics and reliability coefficients of studied variables for both prepaid subscribers and post-paid subscribers are listed in Table 1 and Table 2 respectively. The reliabilities of all the constructs used in this study found to be above the standard set by Nunnally (1978), which is 0.50-0.60.

#### *Prepaid Subscribers*

The range of Cronbach alphas of all the scales used for prepaid subscribers was 0.62-0.83. Mean scores have been computed by equally weighting the mean scores of all items. For prepaid subscribers mean scores of all the variables measured on a five point-scale found to have a range of 3.51 to 3.74 and the corresponding standard deviations were ranging from 0.50 to 0.70. These mean scores indicate that the prepaid subscribers' appraisal of communication effectiveness, trust, technical quality, functional quality, and relationship commitment is above average.

**Table 1: Descriptive Statistics and Reliability Coefficients (Prepaid Subscribers)**

Scales	Number of items	Alpha	M	SD
Communication effectiveness	6	0.69	3.51	0.59
Trust	5	0.81	3.74	0.62
Technical quality	7	0.79	3.62	0.55
Functional quality	5	0.62	3.68	0.50
Relationship commitment	4	0.83	3.70	0.70

Note: n = 103

#### *Post-paid Subscribers*

The range of Cronbach alphas of all the scales

used for post-paid subscribers was 0.54-0.84. Mean score have been computed by equally weighting the mean scores of all items. In case of post-paid subscribers mean scores of all the variables were ranging from 3.55 to 3.75 and the corresponding standard deviations were ranging from 0.51 to 0.71.

**Table 2: Descriptive Statistics and Reliability Coefficients (Post-paid Subscribers)**

Scales	Number of items	Alpha	M	SD
Communication effectiveness	6	0.70	3.75	0.55
Trust	5	0.69	3.74	0.51
Technical quality	10	0.87	3.55	0.58
Functional quality	5	0.54	3.75	0.55
Relationship commitment	4	0.84	3.74	0.71

Note: n=107

These mean scores reveal that the post-paid subscribers' assessment of communication effectiveness, technical quality, functional quality, trust towards the company, and relationship commitment is also above average.

### Correlation Analysis

A correlation analysis was done on all variables in this study for two purposes. The first was to check the presence of multicollinearity, which is revealed when the inter-correlation between explanatory variables exceeds 0.8 (Berry & Feldmann, 1985). Secondly, correlation analysis helps to explore the relationships between independent and dependent variables. The bivariate correlation procedure was subject to two tailed tests of statistical significance at two different levels- highly significant ( $p < .01$ ) and significant ( $p < .05$ ).

### Prepaid Subscribers

Given the proposed framework and study of Sharma and Patterson (1999), it was expected

that communication effectiveness, trust, technical quality, and functional quality would correlate with relationship commitment for prepaid subscribers. Correlations for prepaid subscribers presented in Table 3 support the notion of hypothesized positive relationships among the independent variables and dependent variable with high statistical significance ( $p < .01$ ) except functional quality ( $r = 0.53$ ,  $p < .05$ ).

**Table 3: Correlation Matrix (Prepaid Subscribers, n = 103)**

Variables	COM_EFF	TRUST	TEC_QLTY	FNC_QLTY	REL_COM
COM_EFF	-	0.44**	0.21*	0.37**	0.39**
TRUST		-	0.20*	0.22*	0.33**
TEC_QLTY			-	0.61**	0.54**
FNC_QLTY				-	0.53*
REL_COM					-

Note: \* $p < .05$ , \*\* $p < .01$ .

### Post-paid Subscribers

Considering the proposed framework and study of Sharma and Patterson (1999), it was expected that communication effectiveness, trust, technical quality, and functional quality would correlate with relationship commitment for post-paid subscribers as well. Correlations for post-paid subscribers presented in Table 4 also support the notion of hypothesized positive relationships among the independent variables and dependent variable with high statistical significance ( $p < .01$ ).

**Table 4: Correlation Matrix (Post-paid Subscribers, n = 107)**

Variables	COM_EFF	TRUST	TEC_QLTY	FNC_QLTY	REL_COM
COM_EFF	-	0.22*	0.52*	0.10*	0.30**
TRUST		-	0.26**	0.22*	0.58**
TEC_QLTY			-	0.52**	0.35**
FNC_QLTY				-	0.30**
REL_COM					-

Note: \* $p < .05$ , \*\* $p < .01$ .

### Stepwise Regression Analysis

Stepwise regression analysis was done for each type of subscribers to assess how independent variables are associated with the dependent variables for both groups of subscribers. The results of stepwise regression analysis are presented in Table 5.

**Table 5: Stepwise Regression on Relationship Commitment**

Variable(s)	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Prepaid Subscribers (n = 103)					
Step 1					
Technical quality	.687	.107	.537**	.288	
Step 2					
Technical quality	.609	.104	.475**	.370	.082
Communication effectiveness	.348	.096	.293**		
Step 3					
Technical quality	.437	.125	.342**	.403	.033
Communication effectiveness	.277	.099	.233**		
Functional quality	.341	.146	.240*		
Post-paid Subscribers (n = 107)					
Step 1					
Trust	.813	.419	.581**	.338	
Step 2					
Trust	.736	.112	.526**	.381	.043
Technical quality	.266	.099	.216**		

Note: \*P < .05, \*\*P < .01

### Prepaid Subscribers

For prepaid subscribers the results indicate that technical quality ( $p < .01$ ), communication effectiveness ( $p < .01$ ), and functional quality ( $p < .05$ ) have statistically significant relationship with relationship commitment. The weighted  $R^2$  for regression of Model 1 comprised of technical quality (independent variable) and relationship commitment (dependent variable) was 0.288. The weighted  $R^2$  for regression of Model 2 comprised of technical quality (independent variable), communication effectiveness (independent variable), and relationship commitment (dependent variable) was 0.370. Communication effectiveness has only made 0.082 or 8.2% improvement in the model in terms of explaining the variation or change in relationship commitment of the prepaid subscribers. The weighted  $R^2$  for regression of Model 3 comprised of technical quality (independent variable), communication effectiveness (independent variable), functional quality (independent variable), and relationship commitment (dependent variable) was 0.403. Functional quality has only made 0.033 or 3.3% improvement in the model. The results also indicate that the Model 1, Model 2, and Model 3 are statistically significant (Model 1:  $F = 40.858$ ,  $p = 0.000$ ; Model 2:  $F = 29.398$ ,  $p = 0.000$ ; Model 3:  $F = 22.297$ ,  $p = 0.000$ ). Trust was found not to have statistically significant relationship with relationship commitment. These results provide support to hypothesis 3 and hypothesis 1, and partial support to hypothesis 4.

### Post-paid Subscribers

For post-paid subscribers the results indicate that trust ( $p < .01$ ), and technical quality ( $p < .01$ ) have statistically significant relationship with relationship commitment. The weighted  $R^2$  for regression of Model 1 comprised of trust (independent variable) and relationship commitment (dependent variable) was 0.338. The weighted  $R^2$  for regression of Model 2 comprised of trust (independent variable), technical quality (independent variable), and relationship commitment (de-



pendent variable) was 0.381. Technical quality has only made 0.043 or 4.3% improvement in the model in terms of explaining the variation or change in relationship commitment of the post-paid subscribers. The results also indicate that the Model 1, and Model 2 are statistically significant (Model 1:  $F = 53.508$ ,  $p = 0.000$ ; Model 2:  $F = 32.003$ ,  $p = 0.000$ ). Communication effectiveness and functional quality were found not to have statistically significant relationship with relationship commitment. These results provide support to hypothesis 2 and hypothesis 3.

## DISCUSSION

The present study is noteworthy for two special reasons. As to the knowledge of the researcher, no such study has been done previously on the subscribers of any telecommunication company in Bangladesh to examine the relationship between communication effectiveness, trust, technical quality, functional quality, and relational commitment. Sharma and Patterson (1999) used same variables in a study for personal financial planning services. Moreover, the researcher also tried to investigate whether the postulated relationship among studied variables vary in two different groups of subscribers. The study will definitely benefit the mobile service providers to understand what affect(s) most the relationship commitment of mobile subscribers.

Findings suggest that prepaid subscribers are more concerned about the technical quality or technical features of mobile services. Logically prepaid subscribers find technical failure or poor technical quality more offensive than post-paid subscribers, because the price of technical failure is more for prepaid subscribers. Moreover, the prepaid subscribers always want to remain updated about various special rates and discounts offered by their mobile operator on numerous occasions to reap the benefits fully. Therefore, in case of prepaid subscribers, communication ef-

fectiveness found to have a significant relationship with relationship commitment. Even though prepaid subscribers do not need to encounter the service provider or the customer-care personnel(s) of the service provider very frequently, functional quality dimension has also found to be significantly related to relationship commitment.

For post-paid subscribers trust found to be most significantly (statistically) related to relationship commitment. This finding is consistent with the fact that the post-paid subscribers need to rely on the service provider more heavily than the prepaid subscribers. So they expect the service provider to be trustworthy. Theoretically, technical features of mobile services are more germane and important to post-paid subscribers than prepaid subscribers. Technical failure or poor technical quality may hurt the post-paid subscribers remarkably as their contractual obligation does not allow them to stop receiving the services so easily or immediately. Therefore, technical quality to have significant relationship with relationship commitment is not unlikely. However, functional quality could or suppose to have a strong relationship with relationship commitment for post-paid subscribers, because they encounter the service provider frequently and for that matter quality of interaction is very important. More research is needed to probe these findings. To put it in a nutshell, the results have revealed that nothing hurts subscribers' relationship commitment more than poor technical quality related to mobile services. So a private telecommunication company should ensure better technical support with utmost care and diligence. Moreover, the company should focus on effective communication by employing properly articulated messages and by keeping the subscribers posted regularly about various promotions and service offerings. Furthermore, various measures should be taken to develop trust in the minds of the subscribers.

The findings of this study have to be interpreted considering the limitations of the study.

First, data collection was limited to the subscribers of that private telecommunication company who live in Dhaka metropolitan area; so the results might be challenged whether it is truly representative of the entire country. Second, a probability sampling would have been a better one to draw realistic inferences regarding the studied variables more safely and confidently. Third, analysis of variance could have been employed to draw a comparison between prepaid and post-paid subscribers regarding their relationship commitment. But the researcher's primary intention was to investigate the relationship between independent variables and dependent variable to test the conceptual framework for each group of subscribers to understand how independent variable(s) is/are shaping subscribers' relationship commitment. Finally, inclusion of other variables like-price perception, corporate image, switching cost, etc. could have made the model more robust. In future research additional variables could be incorporated.

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