AFTER SALES SERVICE, CUSTOMER SATISFACTION AND LOYALTY IN TELECOM SECTOR

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ABSTRACT

This study aims to examine the relationships between after-sales service, customer satisfaction, and loyalty. Moreover, this study also explains how after-sales services such as delivery, installation, product warranty, telephone/online supports, up gradation, and complaint influence customer loyalty with the mediating role of customer satisfaction. Online data were collected using a convenience sampling technique from 204 respondents who were currently using the Internet (i.e., 3G, 4G devices or fixed broadband) in Pakistan. The online-based questionnaire was implemented a five-point Likert scale with 38 items. Structural equation modeling (SEM) was performed to test the hypotheses. The results show (a) after-sales service has a significant influence on customer loyalty, (b) after-sales services effect customer satisfaction positively, (c) customer satisfaction has a direct and positive impact on loyalty, and (d) satisfaction partially mediates between after-sales service and loyalty. This study explains how service sector organizations maintain a profitable long-term relationship with customers, and how to get customer satisfaction and loyalty. In addition, this research may contribute to the literature that there exists a positive relationship between after-sales service, satisfaction, and loyalty which could apply to other service industries as well.

Keywords: *After-sales service, customer satisfaction, loyalty, Pakistan telecom industry, service sector organizations, profitable long-term relationship*

INTRODUCTION

Pakistan telecom industry is rapidly growing with the sales of the Internet (i.e., 3G, 4G devices, and fixed broadband). Internet users are increasing every year (PTA, 2018). Pakistan includes in top 30 countries regarding highest Internet users. According to statistical data available on the website (i.e., Internet World Stats), total Internet users in Pakistan are 44.6 million as of December 2017 (Stats, 2017). Pakistan total population has reached 207.7 million (Census, 2017). Therefore, Internet users in Pakistan are almost 21.4% of the total population. As Internet users are increasing every year, as a result of that companies also need to improve

after-sales service quality to advance customer service. After-sales service helps to produce remarkable revenue in almost every business field.

However, getting success in after-market services is a complex task for telecom business firms in Pakistan. It needs a strong follow up of customers complain, skilled technical staff, to fix the customers complaint, and to upgrade the Internet service consistently. There are many well-known companies in Pakistan such as Pakistan Telecommunication Company limited (PTCL), Zong, Mobilink, Warid, Ufone, and Telenor are providing the Internet service (i.e., 3G, 4G devices, and fixed broadband). PTCL is the first and most prominent company in Pakistan which provides the Internet service (i.e., 3G, 4G devices, and fixed broadband) for almost the entire country. Also, Zong, Mobilink, Warid, and Telenor are well-known companies concerning Internet service.

After sales service has become an essential factor for all organizations nowadays, organizations are merging several marketing mixes in different ways to enhance customer satisfaction and loyalty. Organizations are trying to provide excellent after-sales service to customers and using several techniques to retain them as loyal. Several studies on after-sales service investigate the relationship between after-sales, customer satisfaction, and loyalty in different contexts (Choudhary et al., 2011; Goffin, 1999; Murali, Pugazhendhi, & Muralidharan, 2016; Shaharudrn, Yusof, Elias, & Mansor, 2009). However, there is not enough literature available on after-sales service in service sector field (i.e., Pakistan telecom industry).

According to Goffin (1999), there are seven main elements such as installation, product warranty, online help, repair service, user training, documentation, and up gradation of after-sales support that must be offered to the customer. However, delivery, installation, and product warranty are the essential elements of after-sale service influence customer satisfaction in Malaysian electronic business market (Shaharudrn et al., 2009). Additionally, Choudhary et al. (2011) investigated the relationship between after-sales service and customer satisfaction in Pakistan home appliance industry. They reported a significant association between after-sales service and satisfaction. After-sales service elements are essential to satisfy and retain the customer (Choudhary et al., 2011). Moreover, Murali et al. (2016) also confirmed the positive relationship among after-sales service, satisfaction, and customer retention, and loyalty in the home appliances business.

Therefore, the researcher decided to take a study to investigate the relationship between after-sales service, customer satisfaction, and loyalty in service sector organizations (i.e., the telecom industry of Pakistan). The main aims of this study to investigate the impact of after-sales service on customer loyalty with the mediating role of customer satisfaction.

LITERATURE REVIEW

After-sales service, satisfaction, and loyalty

Every organization is trying to differentiate itself in the market by providing value-added services according to the customers' needs and wants. After-sales services are essential to satisfying and retaining the customers (Choudhary et al., 2011). The study of Rigopoulou, Chaniotakis, Lymperopoulos, and Siomkos (2008) reported that quality of after-sales service has a positive influence on perceived value, behavior intention, and customer satisfaction. After-sales service has discussed under two major perspectives in literature. When it is referred to the service providing organizations, it is taken as one of the supplementary services among some complementary services offered to the customer (Oliva & Kallenberg, 2003). On the other hand;

when it referred to the tangible goods, it is treated as operative activities by a few or all distribution channels (Gaiardelli, Saccani, & Songini, 2006). Such activities included; the product delivery, the installation, the product warranty, the quick response of customer complaint, the product related help or training, and the repairing service (Gaiardelli et al., 2006). After-Sales service is an essential tool for winning customer loyalty (Nasir, Mushtaq, & Rizwan, 2014). A company can create, maintain, and improve customer loyalty by providing excellent after-sales services such as the quick response of customer complaint, replace the faulty good or make a full refund in case of the customer is not happy with the products or service (Nasir et al., 2014).

Furthermore, Maintenance and repair are an essential element of after-sales support or service (Loomba, 1996). One way to get quick customer response is to offer loaner product, where possible, especially in the breakdown incident (Loomba, 1996). Maintenance issues should be fixed before any fault take place (Fites, 1996). However, the best approach for organizations is to have the facility of repair products (Lele & Karmarkar, 1983). Upgradation is another crucial element of after-sales service or customer support. It offers a chance for the customers to improve the performance of the current product (Cespedes, 1995). Online/telephone support is also the main characteristic of after-sales service in various businesses nowadays. Product or service specialists give telephone/online support or guideline to the customers (Armistead & Clark, 1992). Hence, whenever a problem resolves online, the cost is too minor than the visit of a product or service specialist (i.e., an engineer or lineman) to the buyer location (Armistead & Clark, 1992). Online/telephone help generally requires more in software-related-products (Armistead & Clark, 1992). For instance, many organizations have invested valuable assets in telephone/online centers (i.e., Microsoft) (Dubashi, 1992).

The primary objective of any firm is to satisfying its existing customers and attracting potential customers. In this regard, after-sales service activities are much contributed to customer satisfaction; it is given to the buyer by the seller after selling the product or service (Murali et al., 2016). The key to build a long-term relationship and enhance customer loyalty is to create superior value for customers. It helps to improve customer loyalty (Yuen & Chan, 2010). After-sales service, personal interaction, problem-solving, and promotion activities have a positive relationship with satisfaction and loyalty (Yuen & Chan, 2010). Also, Maghsoudlou, Mehrani, and Azma (2014) found a significant correlation between after-sales service and satisfaction. The quality of after-sales service is a crucial factor to influence customer purchasing decision (Nemati, Khan, & Iftikhar, 2010). After sales services are sometimes called "field service, "after-sales support," "technical support," or only "service" (Agnihothri, Sivasubramaniam, & Simmons, 2002; Goffin & New, 2001; Simmons, 2001). Hence, the author hypothesized that:

H$_1$: *After sales service will positively influence loyalty.*

H$_2$: *After sales service will positively influence satisfaction.*

The mediating role of customer satisfaction, and loyalty

Oliver (1997) proposed a customer satisfaction disconfirmation model, which is widely used in marketing nowadays. It explains the difference between customer expectation and real perception after consuming the product or service. Therefore, customer satisfaction is considered one of the fundamental to enhance customer repurchase intention and to establish a lifelong relationship with the customer in marketing. (Bai, Law, & Wen, 2008; Erevelles & Leavitt, 1992; Kim, Ma, & Kim, 2006; Lee, Lee, Lee, & Babin, 2008; McQuitty, Finn, & Wiley, 2000; Morgan, Attaway, & Griffin, 1996). In addition, after-sales service also helps to build long-term relationship, to satisfy the customer, and get loyalty (Yuen & Chan, 2010). Organizations can get many benefits from a satisfied customer such as positive word-of-mouth

(WOM) (Anderson, 1998). Zeithaml (2000) identified superior quality service dimensions to improve the buyer-seller relationship and their common objectives such as satisfaction, performance, and profit. Satisfaction is considered antecedent of customer loyalty (Forgas, Moliner, Sánchez, & Palau, 2010).

Oliver (1999) has explained loyalty as "an extremely assurance of a liked product, brand, or service to re-purchase, re-patronize, or continuously buy in the future." Customers perceived to be the most valuable asset of any organization and they play an important role in organization success (Shahrouzifard & Faraji, 2016). If an organization wants to enhance organization profit, customer retention, and loyalty, it should focus on to satisfy their customers. Satisfaction will help to increase organization profit, customer retention, and loyalty (Posselt & Gerstner, 2005). In order to maintain a steady growth and profit level when the competition is exceptionally high, subscription level is too close to the saturation point, and the market is mature, company should adopt a defensive strategy rather than an aggressive to retain the existing customers, which help to expand the market share (Ahmad & Buttle, 2002). Organizations that are struggling with loyalty should first focus on satisfaction and perceived value (Yang & Peterson, 2004). Hence, the author proposes a hypothesis as follow:

H_3: *Satisfaction will mediate the effect of after-sales service on loyalty.*

RESEARCH METHOD

Data collection

Table 1 shows the characteristics of the respondents such as gender, age, education, and income. First, the questionnaire was adapted from the previous studies. Online Data were collected using a convenience sampling technique from 204 respondents who were currently using the Internet (i.e., 3G, 4G devices, and fixed broadband service) in Pakistan from March 2018 to April 2018. In total, the researcher received 204 valid responses. Most respondents were males (178 responses; 87.3%). The ratio of females was (26 responses; 12.7%). The age of the respondents was (< 20 years; responses 5; 2.5%), (20-30; responses109; 53.4%), (31-40; responses 71; 34.8%), (41-50; responses16; 7.8%), and (> 50 responses 3; 1.5%). Their education level was Bachelor (68 responses; 33.3%), Master (84 responses; 41.2%), PhD (33 responses; 16.2%), professional certificate diploma (7 responses; 3.4%), and other (12 responses; 5.9%). Most respondents hold monthly income > 50000 rupees (73 responses; 35.8%).

Instruments selection

The questionnaire was comprised of demographic and research questions; 38 scale items were used in the questionnaire including eight demographic questions. A five-point Likert scale (1= strongly disagree to 5 = strongly agree) was used in the survey. In this study, the researcher selected after sales service as an independent variable, satisfaction as a mediating variable, and loyalty as a dependent variable. The five items of delivery, four items of installation, and warranty were adapted from the study of Shaharudrn et al. (2009). Both of the three items of telephone/online support and up gradation/maintenance were taken from the study of Essa (2011). Three items associated with the complaint were obtained by using McKee, Simmers, and Licata (2006) scale. The four items of satisfaction were adapted by using Bhattacherjee (2001) scale. Finally, four items of loyalty were obtained from the study of Raza and Rehman (2012).

Table 1. Respondents Characteristics (*n = 204*)

Characteristics	Distribution	Frequency	Percentage
Gender	Male	178	87.3%
	Female	26	12.7%
Age	< 20	5	2.5%
	20-30	109	53.4%
	31-40	71	34.8%
	41-50	16	7.8%
	> 50	3	1.5%
Education	Bachelor	68	33.3%
	Master	84	41.2%
	PhD	33	16.2%
	Professional certificate	7	3.4%
	Other	12	5.9%
Income/month (Rupees)	< 20000	28	13.7%
	20001–30000	30	14.7%
	30001–40000	31	15.2%
	40001–50000	42	20.6%
	> 50000	73	35.8%
Which company Internet do you use?	Mobilink or Warid	35	17.2%
	PTCL or Ufone	67	32.8%
	Zong	51	25%
	Telenor	20	9.8%
	Other	31	15.2%

RESULTS

Measurement model

Table 3 shows the reliability and validity of the constructs. The measurement model was performed to analyze the reliability and validity of the instruments (Ramayah et al., 2018). First, the α performed to measure the reliability of the constructs. The minimum α accepted value is 0.7 (Nunnally & Bernstein, 1978). Reliability is the consistency among constructs items. The values of reliability depend on the items consistency, the higher consistency among items, the higher the reliability of the constructs. The α of all variables were higher than 0.8 which indicates the higher reliability among the constructs. Every particular construct has multiple items. The reliability of the whole construct is composite reliability (CR) (Henseler, Ringle, & Sinkovics, 2009). The minimum CR acceptable value is 0.6 (Fornell & Larcker, 1981). In this study, CR was above the suggested criteria. The correlation among constructs with each other is convergent validity. There are three main techniques (i.e., composite reliability (CR), average variance extracted (AVE), and factor loading) to measure convergent validity. First, the factor loading of items should higher than 0.6; second, CR higher than 0.8, and AVE higher than 0.5 (Fornell & Larcker, 1981; Hair, Black, Babin, Anderson, & Tatham, 1998).

Table 2. Discriminant Validity

Variable	Mean	Standard deviation	ASS	SAT	LOY
After sales service (ASS)	3.28	0.738	**0.855**		
Customer satisfaction (SAT)	3.21	0.922	.788**	**0.796**	
Customer loyalty (LOY)	3.12	0.943	.783**	.812**	**0.830**

Note: AVE square root diagonal.

Additionally, discriminant validity (DV) was examined (see Table 2). DV indicates how constructs are different from each other. DV can measure through the square root of AVE. The AVE square root should higher than correlation values of the constructs (Chin, 1998; Fornell & Larcker, 1981). The DV can also be measured by factor loading (Chin, 2010). Table 2 shows the DV of the constructs, while the factor loading of the items is presented in Table 3. Results showed that AVE, and item loading above the suggested level.

Table 3. Reliability and Validity

Construct	Items	FL	α	CR	AVE
After sales services	Delivery service	0.833	0.927	0.942	0.732
	Installation service	0.859			
	Warranty service	0.849			
	Online/telephone support	0.874			
	Upgradation/maintenance	0.859			
	Complaint handling	0.858			
Satisfaction	SAT 1	0.819	0.807	0.873	0.634
	SAT 2	0.833			
	SAT 3	0.799			
	SAT 4	0.869			
Loyalty	LOY 1	0.834	0.849	0.899	0.689
	LOY 2	0.818			
	LOY 3	0.822			
	LOY 4	0.704			

Note: FL = factor loadings; α = Cronbach alpha; CR = composite reliability; AVE = average variance extracted

Structural model

In order to test the proposed hypotheses, a structural model was performed. It can measure through the path coefficient or significant path. Bootstrapping method (subsamples 5000) was used to analyze the path coefficient significance (Chin, 2010; Sanchez, 2013). First, the effect of after-sales service ($\beta = 0.376^{***}$; t = 5.533; p < 0.001) on loyalty was analyzed. The results supported hypothesis 1. Second, the effect of after-sales service ($\beta = 0.797^{***}$; t = 20.01; p < 0.001) on satisfaction was statistically significant. Hence, hypothesis 2 is accepted. Finally, satisfaction significantly influence loyalty ($\beta = 0.525^{***}$; t = 7.475; p < 0.001) and plays a mediating role between after-sales service and loyalty ($\beta = 0.418^{**}$; t = 7.145; p < 0.000).

Table 4. Hypotheses Testing

Relationships	Path coefficient	t-stat.	Confidence intervals		P value	Decisions
			2.5%	97.5%		
H₁: After sales service->loyalty	0.376***	5.533	0.243	0.512	0.000	Supported
H₂: After sales service->satisfaction	0.797***	20.01	0.716	0.868	0.000	Supported

| H₃: Satisfaction->loyalty | 0.525*** | 7.475 | 0.382 | 0.659 | 0.000 | Supported |

*Significant level ***p < 0.001*

Table 4 shows path coefficient results and mediation analysis is shown in Table 6. In addition, the author also investigated the effect size (*f*-square) of all constructs (i.e., after-sales service, satisfaction, loyalty). Table 5 presents the values of effect size (F-square) of each construct. All values are statistically significant.

Table 5. Effect Size (*f*-square).

Construct	After sales service	Loyalty	Satisfaction
After sales service	-----	0.191	1.743
Loyalty	-----	-----	-----
Satisfaction	-----	0.373	-----

Mediation analysis

The approach Hair Jr, Hult, Ringle, and Sarstedt (2016) was followed to investigate the mediating role of satisfaction between after-sales service, and loyalty. First, direct effect (excluding mediator) of after-sales service on loyalty was measured. Then the indirect effect (including meditator) was examined (Memon et al., 2018). As presented in Table 6, findings revealed that satisfaction partially mediates the effects of after-sales service on loyalty. Additionally, the mediation effect between after-sales service, and loyalty through satisfaction was also established using the bootstrapping method and significance values. As seen in Table 6, satisfaction established a mediation between after-sales service and loyalty.

Table 6. Mediation Analysis.

Relationship	Direct effects (without a mediator)	Indirect effects (with a mediator)	VAF	Mediation	Bootstrapping	
					t-stat.	p-value
ASS->LOY	0.794***	0.418***	52.62	Partial Mediation	-----	-----
ASS->SAT->LOY	-----	0.418***	-----	-----	7.145	0.000

Note: Significant level ***p < 0.001; ASS = after sales service; LOY = loyalty; SAT = satisfaction; VAF = variance accounted for.

DISCUSSION, CONCLUSION, AND IMPLICATIONS

In this global market, different companies are using different tactics to convert a potential customer into a regular customer for enhancing market share and profitability. This study aim was to examine the relationship among after-sales service, customer satisfaction, and customer loyalty. Furthermore, this study also explains how after-sales services such as delivery, installation, product warranty, telephone/online supports, up gradation, and complaint influence customer loyalty with the mediating role of customer satisfaction. Results showed that all after-sales service dimensions (i.e., delivery, installation, warranty, online supports, up gradation, and complaint) directly and indirectly affect loyalty through satisfaction. Satisfaction has a direct positive influence on loyalty, and it partially mediates the effect of after-sales service on loyalty as well.

Based on the study findings, after-sales service is very important to satisfy and get customers loyalty, especially in the service sector organizations. Hence, the manager should know how to satisfy the customers and how to get the loyalty. In order to satisfy customers, Shaharudrn et

al. (2009) suggested three main after-sales service factors (i.e., delivery, installation, warranty). Prior studies on after-sales service, satisfaction, and loyalty found a strong relationship between these constructs in different contexts (Choudhary et al., 2011; Nasir et al., 2014; Shaharudrn et al., 2009). The findings of the current study in line with the prior studies, as the author found the strong positive relationship among after-sales service elements (i.e., delivery, installation, product warranty, telephone support, complaint, and up gradation), satisfaction, loyalty in the service sector organization (i.e., Pakistan telecom industry). Therefore, this study contributes to the literature on after sales service, customer satisfaction, and loyalty respectively.

After sales service is very important to retaining and satisfying the customers (Choudhary et al., 2011). It may have three times more effect on company turnover as compared to product or service initial sales (Alexander, Dayal, Dempsey, & Vander Ark, 2002). Alexander et al. (2002) empirically found that after sales service has more influence on company turnover or profitability. Furthermore, when all the factors of after-sales service deliver efficiently, effectively, and professionally, the reputation of the organization will increase. The organizations should implement a good CRM system (customer relationship management) with extensive tools and latest software, which can support to organize all customers' data and information. Organizations should also indicate turn-around-time (TAT) in all after-sales service characteristics especially in product delivery, complaint handling, installation, and product warranty. They should take minimum time to deliver all these services to satisfy the customers. Companies also need a comprehensive distribution system to confirm that product or service is deliver to the right customer, right place at the right time. Companies should also look carefully there should not be any delay in the product warranty whenever customer claim for it. Finally, a quick response to customer complaint and continuous improvement is required to get customer loyalty.

Limitations and future recommendations

This study has some limitations which can be addressed in the future study. First, the limited sample size (i.e., 204 responses) was used in this study. Further study can be conducted by increasing the sample size. Also, new research may be focused on other well-known industries such as construction, automotive, auto manufacturers, and architectural services to examine the relationships between after-sales service, satisfaction, and loyalty.

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