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Aftersales Service Factors Affecting Customer Satisfaction of Mobile Phones

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ABSTRACT

Aftersales is one of the most critical dimensions for customer satisfaction. However, the elements of aftersales services influencing customer satisfaction are not well studied in the area of innovative and short life cycle products such as mobile phones. This study aims to identify the elements of aftersales services that influence customer satisfaction. Three hundred fifty mobile phone users of different brands, identified through the snowball sampling technique, were surveyed through a structured questionnaire. Multiple regression analyses of these data found four after-sales services: warranty, online support, service center's support/repair, and upgrades, statistically significant in influencing customer satisfaction for mobile phone brands.

Keywords: Aftersales Services, Mobile Phone, Customer Satisfaction

1.0 Introduction

The bottom-line of any organization mainly depends on the customers of the business. There has been a clear shift from a product-oriented business to a customer-oriented company. Even before two decades, the production of final goods and services was the main target of every business. But now, the notion has been changed. Customers are the ultimate ruler here.

Customer satisfaction is the accumulation of an overall impression of the supplier. It can be achieved only when customers are on good terms. Customer satisfaction is an essential determinant of overall success in the present age. It also refers to people's emotional response after making the purchase. The more positive the level of customer satisfaction, the more likely the buyer will come back and buy again. Pre, during and post-purchase services have a critical effect on customer satisfaction.

After-sales service refers to all the company's things to care for and feed the valued customers after buying the product. Merely saying "Thanks" after a sale will not bring that customer back to the business again. Instead, a long-term relationship is built when the company enhances customers' buying experiences after the sales. After-sale programs can entice consumers in the first place to purchase the product; they can be used to support a higher product price. It also influences the firm's long-term reputation and can affect future sales. However, it also imposes a cost on firms.

After-sales services involve a continuous interaction between the service provider and the customer throughout the post-purchase product life cycle. When a customer purchases a product, this interaction is

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formalized by a mutually agreed warranty or service contract. As a result, customer satisfaction, retention, and company image largely depend on after-sales services in IT and consumer electronics and household appliance industries (Saccani et al., 2006).

About 180 million Bangladeshi citizens use mobile phones, and around 128 million users use mobile internet-enabled smartphones (AMTOB, 2021). Many local and foreign brands compete to earn more market shares. As a result, the mobile industry in Bangladesh is getting bigger very rapidly. Previously, mobile phone features price was thought to be the primary determinant of customer satisfaction. But over a few years, this notion has been changed.

Many mobile users have disclosed that they no longer depend on features and price to evaluate a mobile brand. Improved after-sales service is also being used for customer satisfaction. Based on this situation, this study will determine the impact of after-sales service elements on customer satisfaction.

Moreover, a systematic literature search shows different researchers have done ample research in establishing the relationship between aftersales services and satisfaction (B. A. Othman et al., 2021), aftersales services and loyalty (B. A. Othman et al., 2021), aftersales service, and brand equity (Ahmad & Butt, 2012), aftersales service and word of mouth communication (Ullah et al., 2018), aftersales services as a part of the marketing mix (B. Othman et al., 2021).

These researches mostly covered the automobile industry (Ahmed & Sanatullah, 2011; Chawla & Singh, 2021; SR, 2021; Wang et al., 2021), clothing (B. Othman et al., 2021), and healthcare (Jiang et al., 2017). However, very few researches (Choudhary et al., 2011; Liu et al., 2019; Nordin et al., 2016; Xiangmin et al., 2010) have been found to identify the characteristics or dimensions of the aftersales services. In this context, there is a literature gap in determining the factors of aftersales services affecting customer satisfaction of evolving innovative products such as mobile phones.

Therefore, this study will identify the factors and their relative importance affecting customer satisfaction of aftersales services in the mobile phone industry. The outcome of this study will augment existing aftersales service literature and help the practitioners develop policies and strategies that will help build satisfied mobile phone customers. Consequently, the objective of our study is as follows.

1.1 Objectives of the study

To identify the impact of after-sales service elements on customer satisfaction in the mobile industry.

The remaining of the paper has been mapped out as follows. The following section 2 outlined the relevant literature and hypotheses. Section 3 represents the methodology of the study. The finding of the data analysis and discussion presented in section 4. The implications, limitations, future research direction, and conclusions are stated in the final segment.

2.0 Literature review

2.1 After-sales service and customer satisfaction

After-sales service is the customers' benefits after a sale. Customers justify the value of purchase with the after-sales services, which directly affect consumer satisfaction and indirectly affect customer loyalty (Hussein & Hartelina, 2021; Sugianto & Sitio, 2020; Wahjudi et al., 2018). Customer satisfaction for many products largely depends on the after-sales services (Knapp, 2021). Hence, after-sales services become a pivot point in customer relationship management (Rizaimy Shaharudin et al., 2009).

As a part of CRM, after-sales services are used as a non-price competition tool to gain competitive advantage, generating additional revenue and ultimately generating customer value (Gaiardelli et al., 2007; Majava & Isoherranen, 2019; Morschett et al., 2008; Sheth et al., 2020; Verstrepen et al., 1999). For example, comapancompanies4% of their revenue and 45% of gross profit from the aftermarket globally and in India, mobile phone after aftermarket expected to increase to $1.1 billion by 2024 (SME Channels, 2019). In addition, good after-sale service results in customer satisfaction and loyalty, resulting in customers' publicity (Verstrepen et al., 1999) through word of mouth (Fazlzadeh et al., 2011; Nasir et al., 2021).

Moreover, after-sales service can also differentiate brands (Habib & Sarwar, 2021). It creates and enhances brand equity (Ahmad & Butt, 2012). The customer tends to value brands that provide quality after-sales services tend to make more loyal customers. These loyal customers value their brands more than other brands. For example, Toyota differentiated its brand by superior after-sales services in the Philippines market (Balinado et al., 2021). Surprisingly, only two studies on Samsung and iPhone customers have been found to assess the effect of after-sales services on loyalty.

Bayu et al. (2019) studied the effect of after-sales service, brand image, and product quality on Samsung smartphone repurchase decisions in the Indonesian market. Despite Samsung being a solid brand, customers' repurchase decision has clung to product quality and after-sales services such as warranty, application assistance, and customer service. In another study, Hussein & Hartelina (2021) tried to find the relationship between after-sales service and customer loyalty through value co-creation for iPhone in Indonesia. After-sales service was found to have both direct and indirect influence through value co-creation on customer loyalty.

After-sales services for mobile phones, especially smartphones, are challenging because of their inherent nature of hi-tech innovations, short product life cycle, manufacturing defects, and the number of customers spreading worldwide (Rofman, 2017). Consequently, mobile phone vendors offer only a one-year service warranty for manufacturing defects, excluding accidental damage (SME Channels, 2019). For such reason, Indian customers spend on average Rs. 2400 for servicing their smartphones, mainly affected by charging, display, and software issues (J. Singh, 2020). Due to the challenging nature of the mobile phone industry, the elements of after-sales services are unique. In the following section, a list of after-sales services has been compiled from previous studies.

2.2 Elements of after sales service

Every time a sale occurs, it creates both opportunity and obligation. The role of after-sales service is to create a mutual relationship with the customers to ensure continued satisfaction. When a customer is dissatisfied with any product, he may switch to another product or provide information to the seller to improve the product (Barlow & Møller, 1996). An organization can engage with customers and collect feedback in different ways like comment cards, telephone calls, the Internet, etc. (Sampson, 1998). Organizations can provide after sales services through this feedback, opinion, and queries.

The after sales services may take different forms. Based on previous studies, the dimensions or elements of after-sales services have been summarized in Table 2-1, followed by their discussion and hypothesis development.

Table 2-1.

Elements of after-sales service.

No.	Elements	Definition	Source
1	Warranty	Any written document by which a business assures its customers that certain conditions would be fulfilled.	(Bayu et al., 2019; Cohen et al., 2006; Lele & Karmarkar, 1983; Rahman & Chattopadhyay, 2015; Udell & Anderson, 1968)
2	Online Support	They are providing answers to the queries of customers online.	(Çelik, 2021; Goffin, 1999; Majava & Isoherranen, 2019; Nurdiana Nurfarida et al., 2021; H. Singh, 2006; Wallman, 2014)
3	Delivery	Delivery of purchased products to customers at their specified location.	(Cohen et al., 2006; Kotler & Armstrong, 2010; Lele & Karmarkar, 1983; Majava & Isoherranen, 2019; Saccani et al., 2007; Wasing, 2013)
4	Upgrades	Updating hardware and software of products.	(Cohen et al., 2006; Goffin, 1999; Lele & Karmarkar, 1983; Majava & Isoherranen, 2019)
5	Service center's support / Repair	To fix the product after the initial sale.	(Bayu et al., 2019; Levitt, 1983; Nemati et al., 2010; J. Singh, 2020; Soltani et al., 2021; Wetmore, 2004)
6	User Training	We are providing information about the use of the products.	(Cohen et al., 2006; Goffin, 1999; Lele & Karmarkar, 1983; Tsegaye, 2017)
7	Feedback	Customer's reaction and opinion about the products after the sales.	(Barlow & Møller, 1996; Majava & Isoherranen, 2019; Sampson, 1998; Santos, 2018; Wallman, 2014)

Source: Authors

2.3 Hypothesis development

Warranty: Warranty service is provided after the sales to prove that the product will function properly. To be successful in these criteria, an organization must create a reliable and better product and offer long-term warranty service to its customers (Kelley, 1988).

As mobile phone manufacturers launch new innovative mobile phones every year, increased prototype testing ensures reliable products and may reduce warranty claims (Relich & Nielsen, 2021). Warranty service is an obligation for the seller. It is the responsibility of the seller-provided for the satisfaction of the buyer (Udell & Anderson, 1968). Combined Free-Replacement Warranty (FRW) policy Pro-Rata Warranty (PRW) policy can serve the customer with the lowest cost (almost 3% of the sales price)(Mutlu & Yildiz, 2021). Hence, it could be hypothesized that

H1: Warranty influences customer satisfaction.

User Training: User training is another element of after-sales service. The high-tech products must be made familiar to the users to feel comfortable for error-free uses (Tsegaye, 2017). Thus, it could be articulated that

H2: User guidelines/training influences customer satisfaction.

Online Support: Many e-commerce companies have started to provide online support to answer customers' queries regarding their products. Nowadays, almost all companies maintain social media platforms to support and communicate with customers. Engagement, communication, and after-sales support through social media can increase sales (Nurdiana Nurfarida et al., 2021; Tong et al., 2021; Wang et al., 2021). This support is crucial for hi-tech products such as smartphones, laptops, or electronic devices. Customers can share their screens and get a solution without going to the service center. For example, Xiaomi competes with Oppo in the Indian market by allowing the customer to interact in the online user community for software-related problem solving (J. Singh, 2020). Hence, it could be expressed that

H3: Online support influences customer satisfaction.

Upgrades: It is crucial for software and electronics products. Upgrading products at a regular interval of time is one of the essential elements used to ensure the product's effectiveness. Hardware may remain the same, but the software to support may need to be upgraded for proper and smooth running. For example, apple's mobile phone is differentiated with a value proposition of continuous software upgrades (Majava & Isoherranen, 2019). Thus, it could be articulated that

H4: Upgrades influence customer satisfaction.

Service center's support / Repair: Repair is the first element/component after the sales. It means fixing the products. Cost of repair, time to repair, time taken to deliver a repaired product, and accuracy of repair play a crucial role in customer satisfaction of the product (Soltani et al., 2021). Thus, it could be hypothesized that

H5: Service center's support / Repair influences customer satisfaction.

Delivery: Delivery is one of the most common elements of after-sales service. In the age of e-commerce, post-purchase delivery plays a significant role in customer satisfaction. Delivery in after-sales service refers to the time it takes to respond and deliver the repaired products to the customers. Oppo, which responds within 15 minutes at the counterpoint and delivers the repaired product on the same day, is in the top position among the mobile phone vendors in the Indian market (J. Singh, 2020). Thus, it could be hypothesized that

H6: Delivery influences customer satisfaction.

2.4 Research model

Based on the hypothesis, the linear regression model will be

$Y = c + b1x1 + b2x2 + b3x3 + b4x4 + b5x5 + b6x6$

Y (Customer satisfaction) = c(constant) + b1(warranty) + b2(user guidelines) + b3(online support) + b4(upgrades) + b5(service centre's support / Repair) + b6(Delivery)

Here,

X1= Warranty, X2= User guidelines, X3= Online support, X4= Upgrades

X5= Service centre's support / Repair, X6= Delivery

This model will be empirically tested through the following methodology.

2.5 Methodology

Sample and sampling technique

The target population of this study comprises people using both feature and smart mobile phones. There are around 178 million mobile phone users in Bangladesh as of August 2021 (BTRC, 2021). Taking a 90 % confidence level with an error margin of 5 %, this study needs a minimum of 271 samples.

A snowball sampling method is used from the target population to collect responses from 400 respondents using a structured questionnaire through an online survey. The first part of the questionnaire included questions regarding demography, and the second part of the questionnaire had questions about the factors of aftersales services.

To lessen the response bias, the respondents were well informed about the study and were given the option to withdraw anytime. A total of 350 responses were found useable (87.50 % response rate) and kept for data analysis.

Data analysis

This deductive study includes a multivariate regression technique to test the causal relationship among variables empirically. All the assumption (linearity, normality, multicollinearity, and homoscedastic) of multiple regression analysis has been assessed. The collected data is analyzed with the statistical package for social sciences (SPSS). The output is presented in the table, and overall implications are explained.

3.0 Findings

3.1 Descriptive analysis

The demographic analysis such as age, gender, education, and occupation of the respondents are shown in table 3-1. The respondents of this study were mostly young. Around 85% of the respondents lie below 30 years. The highest percentage was below 20 age groups, 42.9%. The participation was the least from the last two age groups: 40-50 years (2.6%), and above 50 years (0%).

Table 3.1.
Age of the Respondents.

Demography	Frequency	Percent	Cumulative Percent
Age Group			
Below 20 Years	150	42.9	42.9
20 - 30 Years	146	41.7	84.6
30 - 40 Years	45	12.9	97.4
40 - 50 Years	9	2.6	100.0
Above 50 Years	0	0	100.0
Gender			
Male	156	44.60	44.60
Female	194	55.40	100.00
Education			
Undergraduate	190	54.3	54.3
Graduate	129	36.9	91.1
Postgraduate	31	8.9	100.0
Occupation			
Business	16	4.6	4.6
Job Holder	44	12.6	17.1
Housemaker	28	8.0	25.1
Student	262	74.9	100.0

Gender-wise female respondents were more than male respondents. Among the 350 respondents, 194 were female, representing 55.40% of total respondents. One hundred fifty-six male respondents were found, constituting 44.60 %. Among 350 respondents, 190 people are under-graduate, which accounts for 54.3 % of the respondents, 129 people graduated, 31 people are postgraduate, which constitutes 8.9 %.

As previously stated, using mobile is more significant among the young generation. Of 350 respondents, 262 are students, constituting 74.9% of the sample, 44 respondents are job holders counting 12.6 %, 4.6% are businessmen, and 28% are homemakers.

3.1.1 Mobile phone types

A feature phone with features such as the ability to access the web and store and play music but not a touch screen is referred to as a feature phone. Here 14 % of respondents have been found using a feature phone.

Whereas a mobile phone that performs many of the functions of a computer, typically having a touch screen interface, internet access, and an operating system capable of running downloaded apps, is referred to as a smartphone. A significant number, 86 % of respondents, use smartphones (see Figure 3-1).

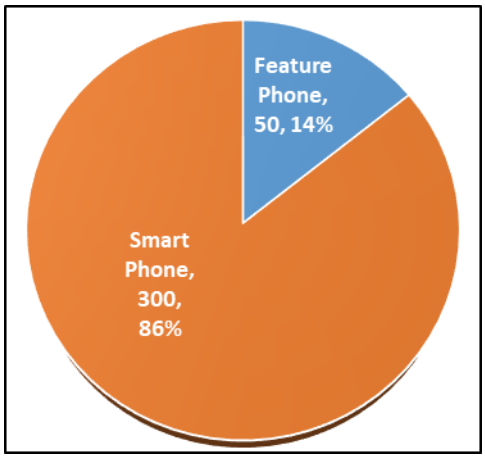

Figure 3- 1: Types of mobile phone

3.2 Regression analysis

Multiple regression was used to assess the ability of 6 control measures (Warranty, Online Support, Delivery, Upgrades, Service center's support / Repair and User Training) after-sales services to predict levels of customers' satisfaction. The first part of the assessment confirms the multiple regression assumption test, and the second part of the assessment states the model summary and hypothesis testing results.

3.2.1 Regression assumption test

Preliminary analyses were conducted to ensure no violation of normality, linearity, multicollinearity, and homoscedasticity assumptions.

An inspection of the normal probability plot of standardized residuals (Appendix-A), frequency of regression standardized residual

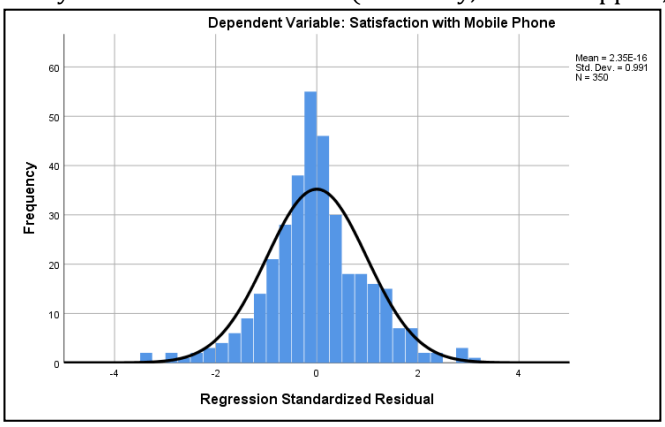

Figure 3- 2: Probability plot of standardized residuals

(Figure 3-2) as well as the scatterplot of standardized residuals against standardized predicted values (Appendix-B) indicated that the assumptions of normality, linearity, and homoscedasticity of residuals were met.

Multiple regression is sensitive to outliers. Mahalanobis (1936) distance (MD) did exceed the critical $\chi 2$ for df=6 (at α =.001) of 22.46 for six cases in the data file and three cases in the casewise diagnostic (Appendix-C). However, Cook's distance (Cook, 1979; Cook & Weisberg, 1982) residual value was 0.077, less than the critical value of 1.0, indicating that multivariate outliers were not of concern.

Moreover, relatively high tolerances for all six predictors (e.g., .877) and VIF less than 3(Kock, 2015) in the regression model indicated that multicollinearity would not interfere with our ability to interpret the outcome of the regression model (see table 3-2).

Table 3-2.

Coefficients.

Model	Understand. Coeff.		Stand. Coeff.	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	-.191	.233		-.819	.413	-.650	.268		
Warranty	.261	.052	.238	4.972	.000	.158	.364	.622	1.607
User guidelines/training	.014	.060	.012	.241	.810	-.104	.133	.543	1.842
Online Support	.250	.051	.197	4.887	.000	.150	.351	.877	1.141
Upgrades	.185	.050	.181	3.729	.000	.088	.283	.606	1.651
Service Centre's support / Repair	.300	.053	.278	5.635	.000	.196	.405	.585	1.710
Delivery	.118	.062	.093	1.908	.057	-.004	.241	.593	1.686

3.2.2 Model summary

In combination, six predictors (Delivery, Online Support, Upgrades, Warranty, Service Centre's support / Repair, User guidelines/training) accounted for 51.20 % of the variability in of after-sales services' satisfaction, R2= 0.512, adjusted R2= 0.503, F (6, 343) = 59.980, p <.0001 (See Table 3-3 and 3-4).

Table 3-3.

Model Summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.716[a]	.512	.503	.900	1.577

Table 3-4.

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	291.266	6	48.544	59.980	.000[b]
	Residual	277.603	343	.809		
	Total	568.869	349			

a. Dependent Variable: Satisfaction with After-sales service

b. Predictors: (Constant), Delivery, Online Support, Upgrades, Warranty, Service Centre's support / Repair, User guidelines/training

3.2.3 Hypothesis test

Table 3-5 shows warranty (b=0.2338, p=0.000), User guidelines (b=0.027, p=0.192) and online support (b=0.197, p=0.000), upgrade (b=0.181, p=0.000), Service Centre's Support / Repair (0.278, p=0.000) have statistically significant effect on the satisfaction of mobile phone after-sales service. Among them Service Centre's Support / Repair is the most important dimensions followed by warranty and online support.

However, User Guideline / Training (b=0.070, p=0.0000) and Delivery (b=0.070, p=0.0000) do not have any significant effect on mobile phone after-sales services satisfaction. The summary of the hypothesis test is shown in Table 3-2 & 3-4.

Table 3-4.

Hypothesis Test.

Hypothesis	Proved
H_1: Warranty influences customer satisfaction	YES
H_2: User guidelines/training influences customer satisfaction	NO
H_3: Online support influences customer satisfaction	YES
H_4: Upgrades influence customer satisfaction	YES

H_5: Service center's support / Repair influences customer satisfaction	YES
H_6: Delivery influences customer satisfaction	NO

Finally, the regression model ends with the following equation after considering the hypothesis testing result.

Y (Customer satisfaction) = 0.278 (Service Centre's support / Repair) + 0.238 (warranty) + 0.197 (Online Support) + 0.181(upgrades)

4. Discussion on findings

After-sales service is a vital operational and marketing issue for satisfying customers and making them loyal. Manufacturers of mobile phones provide aftersales services to their customers in different ways. Mobile phone manufacturers adopt different aftersales services dimensions depending on the capacity to serve their customers. For example, in India, VIVO is an excellent example of a service center repair job, and Xiaomi, on the other hand, does a better job with online support.

However, in this cross-brand study service center's support/repair service was found to be the most critical factor for aftersales service satisfaction. This finding supports the previous studies (Bayu et al., 2019; Levitt, 1983; Nemati et al., 2010; J. Singh, 2020; Soltani et al., 2021; Wetmore, 2004). Especially technological and innovative products for which the service and maintenance market is not equipped with new knowledge of innovative products such as mobile phones. For this reason, better product repair and maintenance in terms of hardware and software needs call for the special attention of the manufacturers.

Followed by repair service, warranty is the second most crucial thing in aftersales customer satisfaction. Repair or Service Centre Support costs money if the manufacturer offers no warranty. The technological product, especially the mobile phone life cycle, has shortened. Within this short life, the customer wants a hassle-free product's service. As manufacturers are in tuff competition in introducing new innovative products to market, there are always flaws and bugs in new innovative products. For example, Samsung's 7s had a battery explosion problem and all most all-new models of phones, regardless of price, had security and bug problems in their initial lunch. Warranty by the manufacturers proved peace in the customer's mind for purchase. This finding is also supported by previous studies (Bayu et al., 2019; Cohen et al., 2006; Lele & Karmarkar, 1983; Rahman & Chattopadhyay, 2015; Udell & Anderson, 1968).

However, mobile phone manufacturers are taking online and offline strategies to support and meet warranty claims. Most of the software upgrades and other issues are offered online. It helps the phone be updated for operating systems, security, and fixing bugs. For example, Samsung offers only three years of updates, whereas Chinese brands provide more. For customers, it has become a pivotal issue in choosing a particular brand because it helps customers maintain a mobile phone long without buying a new one. Thus, online support and upgrade are essential for customer satisfaction. In Bangladesh, most mobile phones are imported from China, which does not last long most of the time. So, users expect their mobile phones to give service for an extended period (Çelik, 2021; Majava & Isoherranen, 2019).

However, in contrast to previous studies ((Majava & Isoherranen, 2019; Tsegaye, 2017)) user training and delivery were found to be insignificant. Mobile phones have been launched around the world for more than three decades. By this time, consumers developed profound skills in operating a mobile phone. New features and innovations launched in the Android and Apple iOS platforms command minimal learning curve and effort. Moreover, the delivery time after purchase has become standardized around the world. Consumers are well informed about the lead-time and able to track the shipment. Thus, both training and delivery have become insignificant in influencing the satisfaction of mobile phone aftersales service.

5.0 Conclusion and implications

The primary goal of this research was to explore the relationship between after-sales service elements and customer satisfaction. Among the respondents, students were the maximum who belongs to the age group of below 20. Most of the respondents were educated and found using smartphones. This study identified six aftersales service elements (Delivery, Online Support, Upgrades, Warranty, Service Centre's support / Repair, User guidelines/training) through a systematic literature review. It used these factors to identify the estimated relationship with customer satisfaction.

Multiple regression analysis found warranty, online support, upgrades, and service center support/repair are the influential aftersales elements that can predict customer satisfaction. The most crucial dimension is the service center's support/repair, followed by warranty and online support. The findings of this study have numerous theoretical and managerial implications.

This study has augmented the aftersales literature by identifying the influential aftersales factors relevant to customer satisfaction. Moreover, it is a time-demand study that would meet the researcher's thrust of knowledge about innovative products' aftersales dimension, which has long not been studied.

Managers of different mobile phone brands must attach warranty with their new mobile phone as these are innovative products and repair markets are incapable of repairing new products due to knowledge diffusion. The warranty claim must be met with proper care through the support center's services because it is essential

for aftersales customer satisfaction. The mobile phone exporters, who currently don't have service center customer support, must provide the customer with online support that regularly gives operating system, security, and UI upgrades.

Like other research endeavors, this research is not free of limitations. Increasing sample size would have increased the study's strength. Moreover, the outcome of this study cannot be generalized without a cross-cultural study. Context, environment, users' tastes, and preferences constantly change as technology evolves. So do the variables that determine the uses of a specific technology. Researchers in their future study can validate the relevance of the findings of this study in cross-culture, cross-industry, and cross-country contexts by adding or removing new variables and more samples to the model.

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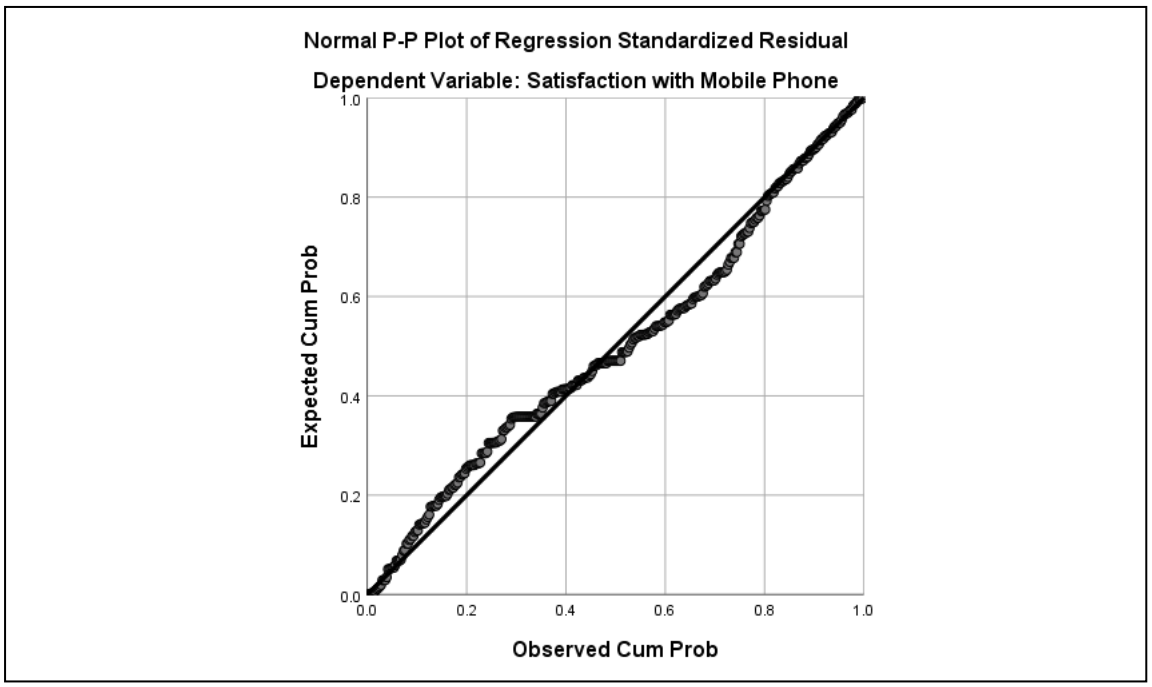
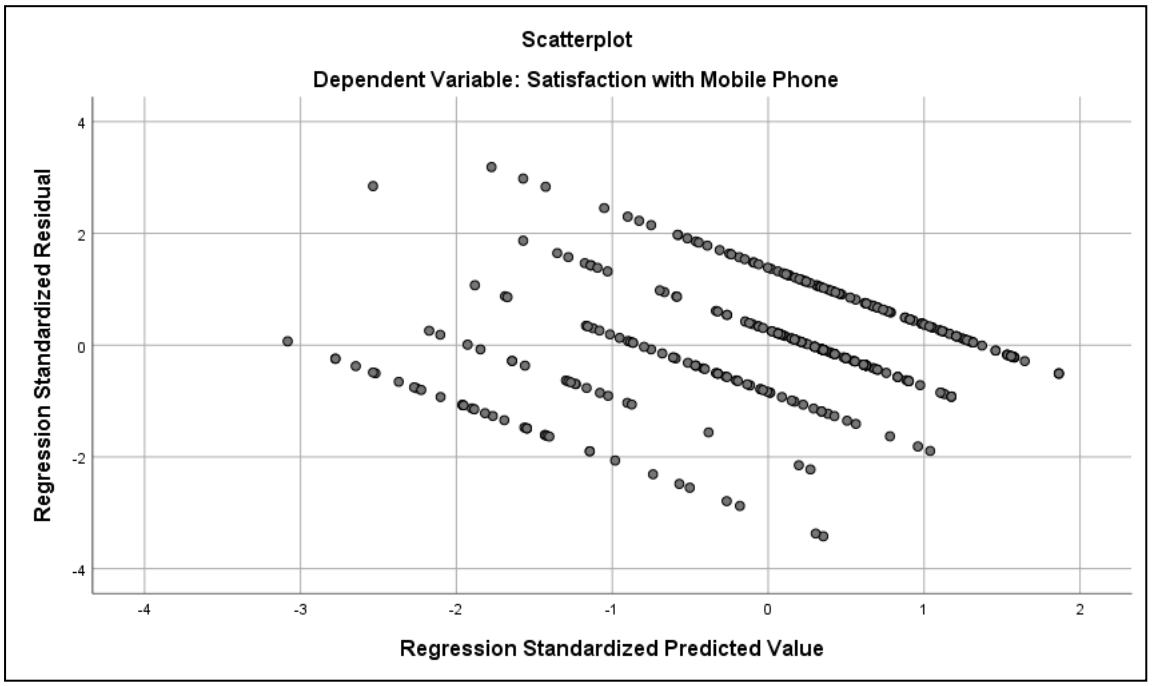
Appendix-A: Normal P-P Plot



Appendix-B: Scatter Plot



Appendix-C: Casewise Diagnostics [a]

Case Number	Std. Residual	Satisfaction with Mobile Phone	Predicted Value	Residual
114	3.187	5	2.13	2.867
138	-3.420	1	4.08	-3.077
286	-3.371	1	4.03	-3.033
a. Dependent Variable: Satisfaction with Mobile Phone				

Appendix-D: Residuals Statistics [a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.94	5.46	3.75	.914	350
Std. Predicted Value	-3.082	1.864	.000	1.000	350
Standard Error of Predicted Value	.058	.251	.121	.040	350
Adjusted Predicted Value	.94	5.46	3.75	.910	350
Residual	-3.077	2.867	.000	.892	350
Std. Residual	-3.420	3.187	.000	.991	350
Stud. Residual	-3.495	3.212	.000	1.005	350
Deleted Residual	-3.212	2.913	.000	.916	350
Stud. Deleted Residual	-3.554	3.257	.000	1.009	350
Mahal. Distance	.469	26.190	5.983	4.767	350
Cook's Distance	.000	.077	.004	.008	350
Centered Leverage Value	.001	.075	.017	.014	350

a. Dependent Variable: Satisfaction with Mobile Phone