# Impact of Service Quality of Cellular Companies on Customer Satisfaction in Context of Pakistan

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| Article Information | Abstract |
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| | The telecommunication industry in Pakistan has become highly competitive as each company introduces more customer-oriented policies to attain the loyalty and satisfaction of its customers. The study aims to check the impact of cellular companies' service quality on customer satisfaction in Pakistan. The study deploys SERVQUAL to investigate the dynamic of various dimensions of service quality and check the relationship of satisfaction of the customers of Pakistan. The study reports the positive and significant relationship of reliability, responsiveness, tangibility, empathy and assurance on customer satisfaction. |

## Introduction

The telecommunication sector holds immense importance in society and its development. The sector provides a well-balanced and technically advanced foundation for communication across societies or communities. The Telecom sector in Pakistan has also been growing on a similar global pattern. It was declared as a priority sector, in the year 2014, by the government of Pakistan and by the end of October 2020, almost 98% of the households own a mobile phone and reached a record mobile subscription of 172.3 million (Authority, Annual Report , 2020). There are four prominent critical players in the Pakistani telecom sector, providing wireless technology and mobile services, including; Jazz-Warid Ufone, Zong and Telenor. Customer satisfaction can be considered a significant construct and goal of marketing strategies as it plays a critical role in a company's financial strength and profitability. Customer satisfaction can be described as a customer's behaviour to make repeat purchases (Merkel, 2005). According to Fornell (1992), It can be better explained as "an overall positive evaluation after consuming a product or service". However, a deeper definition is provided by Oliver

(1996), which can be described as "the customer's fulfilment response". Customer satisfaction leads to their loyalty. It is generally observed as "a deep psychological commitment to re-patronise or repurchase a desired product or services from the same company, in the future. It results in the same brand- set or same- brand purchasing, ignoring the marketing efforts, by other companies to influence switching behaviour, and despite the situational influences" (Peppard, Customer relationship management (CRM) in financial services, 2000). Service quality is the prerequisite for attaining customer satisfaction and loyalty. It is an accurate measure of competitiveness for sustaining and developing good relationships with customers, indicating their post- consumption opinions and experiences. Attention to service quality has enabled several multinational companies to gain a competitive advantage over others over a long-term period. It does not only help in occupying a more extensive customer base and market share but also helps retain the customers for years, directly impacting their brand loyalty (Ryals, 2001).

SERVQUAL reliability dimensions have been developed by Parasuraman et al. (1990). They developed a scale of five dimensions which serves as an applicable and authentic measure of service quality. The companies can get all of the necessary information, which is a key to customer loyalty, if they connect customer responses over this SERVQUAL scale (Rygielski, 2002). It includes five essential dimensions, i.e. tangibility, empathy, responsiveness, reliability and assurance.

## Objectives of the Study:

The following are the study's key objectives:
- To determine and investigate the overall customer satisfaction level with service provision in four major companies in Pakistan's telecom sector, i.e. Jazz-Warid, Ufone, Zong and Telenor.
- To analyse and assess customer satisfaction concerning service quality of cellular networks, using the SERVQUAL Model of service quality.
- To make a critical assessment of involved aspects, i.e. customer loyalty to the customers' satisfaction.

## Research Questions

Research questions are as follows:
- Do users of Pakistan's major cellular operators (Jazz-Warid, Ufone, Telenor, and Zong) associate the dimensions of service quality and customer satisfaction?
- The sub-questions are:
- Is there a significant relationship between SERVQUAL reliability and customer satisfaction among the customers of four major cellular companies (Jazz-Warid, Ufone, Telenor and Zong) in Pakistan?
- How does customer satisfaction relate to customer loyalty for the services of cellular companies in Pakistan?

# Literature Review

It is a fact that service quality significantly impacts both customers' satisfaction and their loyalty. While researching the effects of service quality on customer satisfaction and loyalty in Vietnam's Telecommunications Industry (Hoang Vu et al., 2021). It is crucially essential for customer loyalty and satisfaction. The study also suggested that telecommunication providers should pay more attention to customer services as it strongly impacts both customer satisfaction and loyalty.

Ghana's telecommunications industry knows that customer happiness is solely determined by service quality. The industry needs to pay more attention to cellular businesses'

service quality to increase revenues while also increasing consumer happiness and loyalty. As cellular companies grow and deliver better service, a mediated relationship will develop between customer loyalty and service quality, resulting in consumer happiness in terms of satisfaction (M. Nayan et al., 2020).

While looking into the effect of service quality on customer satisfaction and loyalty in supermarkets, Singh et al. (2020) suggested that markets should focus on providing value and satisfying services to maintain consumer contentment, satisfaction and loyalty over time.

According to (Yousaf, 2017) service quality holds a significant impact on customer satisfaction. He looked at the relationship between these two variables in the banking industry. One of the most potent characteristics of service quality is responsiveness, one of the SERVQUAL dimensions that predicts customer satisfaction. A related study was also done in the Telecom sector in Yemen. According to Al- Hashedi and Akbar (2017), service quality and customer satisfaction share a positive relationship. The study used a SERVPERF model for the analysis and discovered that network quality had the most significant effect on customer satisfaction.

Customer satisfaction and loyalty are heavily influenced by service quality and its aspects. All service quality dimensions are equally crucial for increased revenues and customer satisfaction. However, the intensity varies from sector to sector and from region to region and, notably, on customer preferences. A comparative study of two countries i-e Yemen and Jordan, discovered that reliability, interaction quality, and tangibles are significant for customer satisfaction, while in Yemen, the significant dimensions are reliability, assurance-empathy, tangibles, and responsiveness. However, reliability has the most significant impact on consumer happiness (Akroush et al., 2019).

The association between service quality and customer satisfaction is not a new phenomenon. This perhaps can be traced out from the pioneer study of Churchill and Surprenant (1982), which searched for the potential predictors of customers' satisfaction and found that 'service quality' is one of the determining predictors of customers' satisfaction in the FMCG companies. Later on, this phenomenon became more prevalent, and numerous scholars worked on the topic under different environmental settings.

Oju (2010) examined the relationship between customer satisfaction and service in the telecommunication industry of Nigeria and established a direct relationship between these two variables. He also concluded that more focus should be made on the quality of the services because of their effect on customer satisfaction. To make this happen, the organisations should be well aware of the customers' expectations and design measures to meet those expectations.

The service quality also holds a positive relationship with the satisfaction of those customers who receive services from the Pharmacy Departments in the Public Hospitals. The findings are helpful because they indicated the direction for the Pharmacy Department to ensure service quality. After all, a better service intends to increase customer satisfaction (Yousapronpaiboon, 2014).

According to Selvakumar (2015), service quality is the most important assessment criteria for customers' satisfaction. He discovered a tangible link between bank service quality and customer satisfaction in public and private sectors. The banks can improve customer satisfaction by recognising the gap between the perceived and actual quality of services.

SERVQUAL is the abbreviation for service quality. SERVQUAL scale was developed in the mid-1980s by Parasuraman, Zeithaml and Berry (1990). The SERVQUAL scale was developed to assess both the good and bad quality service trends over the period. This scale is the subtractive component for the expectations and services received. Initially, this scale was devoted to the ten service quality dimensions; however, after certain stages, this scale reduced up to five service quality dimensions known as RATER. RATER is the abbreviation of five service quality indicators: ' reliability', 'assurance', 'tangibles', 'empathy' and 'responsiveness'.

After developing SERVQUAL reliability dimensions, several research scholars used this reliability dimension in different traits.

Moghaddam (2015) studied the relationship of customer satisfaction service quality by using the SERVIQUAL Model. Their research aimed to look at the impact of each aspect of service quality on customer satisfaction. They studied this relationship in the banking sector of Tehran and included the customers of around 501 branches of Melli Bank. According to the findings of their study, customer satisfaction was found to have a positive association with each component of service quality. (assurance, reliability, tangibles, responsiveness and empathy are among the dimensions).

Donnelly et al. (1995) adopted the SERVQUAL reliability dimensions for measuring the quality of services in the U.K. local government. The study has taken the customers' satisfaction questionnaires and checked them from the SERVQUAL reliability dimensions used for quality services offered by the local government to their residents. The results show that local government provides better quality services to their residents; however, many rooms of improvement are still required to delight their customers. Similarly, Asubonteng et al. (1996) revisited the SERVQUAL reliability dimensions and critically reviewed the service quality factors for marketing perspectives. The study concludes that SERVQUAL reliability measures should be used as a strategy tool to develop sound policy implications to prevent uncertain risks and measures.

The importance of customers' loyalty has evident in both the management and marketing perspectives. Several parallel studies are available on the topic that confined its importance in the customers' oriented era i.e., Gould (1995) described the clear distinction between happy customers and customer's loyalty, as these words are not interchangeable. It is not necessary that satisfied customers would be loyal customers in future; therefore, the study emphasises the importance of customer loyalty and argue that this is almost difficult to measure the customers' loyalty with only customers' satisfaction, it should require more customers' loyalty programme to retain their customers in the long-run.

Martensen et al. (2000) described the different drivers that affect customers' loyalty and satisfaction in Denmark's cross-industry. The study concluded that these drivers have a considerable impact on customers' satisfaction which ultimately transformed into the customers' loyalty. These drivers include return on investment, market value-added, and economic performance that would be crucial for the company's future performance.
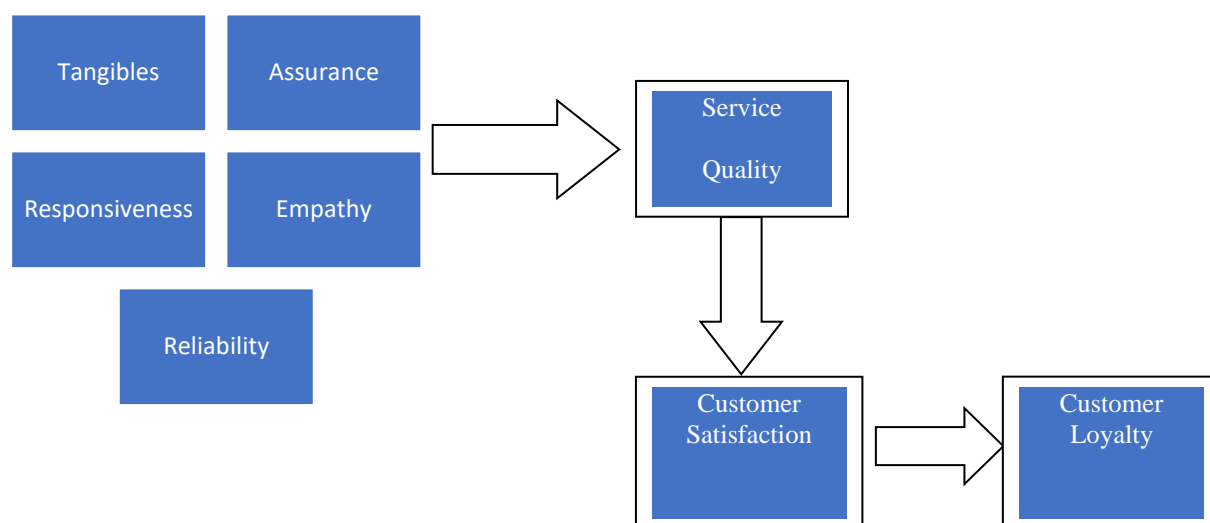
## Theoretical Framework

A model is devised to see the effects of service quality on customer satisfaction and customer loyalty.



*Figure 1: Short Model*

The model considers three interlinked variables, finally leading to customer loyalty.

*Figure 2: Comprehensive Model*

The above-presented model links the service quality dimensions, which are part of the SERVQUAL model, to customer satisfaction, which results in customer loyalty. . Parasuraman et al. (1990) have developed a SERVQUAL reliability dimension model which contains five aspects to measure the service quality. These five dimensions have a specific priority in investigating the service quality, and it is found that the higher the SERVQUAL score, the more is the service quality perceived in customers' minds. This model is a great help in measuring service quality on five attributes, i.e. responsiveness, empathy, tangibles, reliability and assurance (Kok Wei, 2006). These aspects define customer satisfaction, which is the core component of customer loyalty. Customer satisfaction is directly linked to customers' loyalty as it tends to make the customers more risk- adverse and rational (Verhoef, 2003). This behaviour would persuade them to make a repeat purchase to reduce risk. Hence, customer loyalty is a direct effect of customer satisfaction.

**Hypothesis:**

Based on the formulated framework or model mentioned above, the following statements have been hypothesised.

$H_1$: There is a significant relationship between customer satisfaction and service quality of Mobile Telecommunication Networks in Pakistan.

$H_2$: Tangibility and customer satisfaction are positively and significantly related

$H_3$: reliability is significantly associated with customer satisfaction

$H_4$: Responsiveness and significantly positively related to customer satisfaction

$H_5$: Customer satisfaction and assurance are significantly associated

$H_6$: Empathy is significantly related to customer satisfaction

$H_7$: There is a significant effect of customer satisfaction on customer loyalty

# Research Methodology

In the current research study, an explanatory or causal research approach is employed as a rationale behind the present study is to measure the effects of service quality on customer satisfaction. A quantitative analysis is done following a deductive approach to fulfil the research purpose and objectives.

**Data Collection**

A questionnaire survey is employed as data collection in the current research study. In this regard, a Likert-type questionnaire design has been used, comprising close-ended questions. The demographic information of the target respondents is acquired in the first segment by asking questions about their gender, age, and educational level. Respondents are questioned about their network choices, usage, and recommendations in the second section. The final portion of the survey asks respondents about cellular network service quality. In the fourth portion of the survey, respondents are asked how satisfied they are with the quality of service provided by their mobile networks. The respondents were also asked about the third significant variable in our study, loyalty, in the final part.

**Population and Sample**

The population comprises all the subscribers of the mobile telecommunication networks in Pakistan. The individual customers using the services of Jazz-Warid, Telenor Zong and Ufone are targeted.

In this research study, a convenience type of sampling method is used. The rationale behind selecting the convenience sampling method for the current research study is because of the flexibility in terms of geographical access to the target respondents

**Analysis of Data**

SPSS Ver. 20 is used to explore and analysis the data. To analyse the data, coding values from the questionnaire surveys are entered in the SPSS; various statistical tests are performed using SPSS to test the study hypotheses. The questionnaire internal consistency is checked by the reliability tests i.e. Cronbach's Alpha. Following table shows the cronbach's alpha which confirms the reliability of questionniar.

| Reliability Statistics | | |
|---|---|---|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .740 | .829 | 41 |

**Correlations**

A correlation analysis is performed to assess an association among variables in the present study. First, the analysis is performed to measure the association between the service of quality and customer satisfaction. Afterwards, as already discussed the study analysis the impact of various dimensions of service quality on customer satisfaction of telecom sector. And lastly, the correlation coefficient is also computed to analyse the association between customers' loyalty and customer satisfaction. The correlation between the said variables is as follows;

## Correlation between Service Quality and Customer Satisfaction

| | | Service Quality | Customer Satisfaction |
|---|---|---|---|
| Service Quality Correlation | ,Pearson | 1 | 0.647** |
| | Sig., | | |
| (Two=Tailed) | | | |
| | N | | |
| Customer Satisfaction Correlation | ,Pearson | 0.647** | 1 |
| | Sig.,( Two, | | |
| Tailed) | | | |
| | N | | |

**. Correlation is. significant at, level of 0.01, (2-tailed).

*Figure 3: Correlation between Service Quality and Customer Satisfaction*

As per the given table, a positive, considerable relationship exists between the two addressed variables. There are two variables, as shown in the table. The variables are Service quality and customer satisfaction. the service quality is the independent variable and customer satisfaction is the dependant variable. The calculated value of the correlation coefficient is 0.647, which confirms our results regarding the relationship of the addressed variables.

## Correlation between Customer Satisfaction and Tangible

| | | Customer Satisfaction | Tangible |
|---|---|---|---|
| Customer Satisfaction | ,Pearson Correlation | 1 | 0.618** |
| | Sig., (Two=Tailed) | | |
| | N | | |
| Tangible | Pearson,Correlation | 0.618** | 1 |
| | Sig.,( Two=Tailed) | | |
| | N | | |

**. Correlation is. significant at, level of 0.01, (2-tailed).

*Figure 4: Correlation between Customer Satisfaction and Tangible*

The table above calculates the correlation between tengiblilty and customer satisfaction using the pearson correlation. The results shows the positive and highly significant correlation between tengability and customer satisfaction. Which confirms the hypothesis of the study and support the effect of service quality dimensions on satisfaction.

*Correlation between Customer Satisfaction and Reliability*

| | | Customer Satisfaction | Reliability |
|---|---|---|---|
| Customer Satisfaction | Pearson, Correlation ,Sig. (Two= Tailed) N | 1 | 0.415** |
| Reliability | Pearson, Correlation Sig. (Two=Tailed) N | 0.415** | 1 |

**. Correlation is. significant at, level of 0.01, (2-tailed).

*Figure 5: Correlaiton between Customer Satisfaction and Reliability*

According to the given table, the calculated value of a correlation coefficient is 0.415. This coefficient determines the strength of an association between the quality dimension, i-e, reliability and customer satisfaction. The value seems to be positive, indicating a direct, positive relationship between the two addressed variables.

*Correlation between Customer Satisfaction and Responsiveness*

| | | Customer Satisfaction | Responsiveness |
|---|---|---|---|
| Customer Satisfaction | Pearson, Correlation Sig., (Two=Tailed) N | 1 | 0.260** |
| Responsivenss | ,Pearson Correlation Sig., (Two= Tailed) N | 0.260** | 1 |

Correlation is. significant at, level of 0.01, (2-tailed).

*Figure 6: Correlation between Customer Satisfaction and Responsiveness*

According to the given table, customer satisfaction holds a considerable relationship with responsiveness (dimension of service quality). The value of the coefficient is 0.260, which shows that even though there is a significant positive correlation between two variables, but this relationship is not too strong.

## Correlation between Customer Satisfaction and Assurance

| | | Customer Satisfaction | Assurance |
|---|---|---|---|
| Customer Satisfaction | ,Pearson Correlation Sig., (Two= Tailed) N | 1 | 0.270** |
| Assurance | ,Pearson Correlation Sig., (Two= Tailed) N | 0.270** | 1 |

**. Correlation is significant at level of 0.01 (2-tailed).

*Figure 7: Correlation between Customer Satisfaction and Assurance*

The calculated correlation coefficient in a table indicates a direct but very low association between assurance and customer satisfaction. The calculated value of the correlation coefficient is 0.270.

## Correlation between Customer Satisfaction and Empathy

| | | Customer Satisfaction | Empathy |
|---|---|---|---|
| Customer Satisfaction | ,Pearson Correlation Sig., (Two= Tailed) N | 1 | 0.5970** |
| Empathy | ,Pearson Correlation Sig., (Two= Tailed) N | 0.597** | 1 |

**. Correlation is significant at level of 0.01 (2-tailed).

*Figure 8: Correlation between Customer Satisfaction and Empathy*

As mentioned in the table above and in line with other variables there is positive correlation between empathy and customer satisfaction. The association and direction is strong with the value of 0.597. If one variable increase by one unit other variable will increase by 0.597 units.

## Correlation between Customer Satisfaction and Customers' Loyalty

| | | Customer Satisfaction | Customers' Loyalty |
|---|---|---|---|
| Customer Satisfaction | ,Pearson Correlation Sig., (Two= Tailed) N | 1 | 0.579** |
| Customers' Loyalty | ,Pearson Correlation Sig., (Two= Tailed) N | 0.579** | 1 |

**. Correlation is significant at level of 0.01 (2-tailed).

*Figure 9: Correlation between Customer Satisfaction and Loyalty*

An evaluation of an association between customers' satisfaction and their loyalty was one of the objectives of the current study. A happy and satisfied customer would be loyal to its cellular company because it provides him with the best out of all available services. The value of the correlation coefficient in the above table indicates that an associated exists between loyalty of customer and his satisfaction, which can be quickly evaluated with the value of the calculated Pearson Correlation Coefficient i-e 0.579

**Regression Analysis**

A simple linear regression analysis is performed in the current study as the data fulfils all the regression assumptions.

## Service Quality and Customer Satisfaction.

### ANOVA

| Model | Mean Square | F | Sig. |
|-------|-------------|---|------|
| Regression | 2.743 | 206.864 | .000ᵃ |
| Residual | 3.818 | | |

Service quality significantly affects the customers' satisfaction as verified by p-value 0.000 as shown in the above ANOVA table. F= 206.864, (p-value = 0.000 < 0.05) .Based on this ANOVA table, one may conclude that an independent variable factor is crucially helpful for determining the influence on customer satisfaction of the respondents living in Lahore, Pakistan. Therefore the model is not only useful but also a good fit.

*Model summary, (Service Quality and, Customer Satisfaction)*

| ,R | ,R Square | ,Adjusted R Square | Durbin-Watson |
|----|-----------|--------------------|--------------| 
| .647 | 0.418 | .416 | 2.114 |

*Coefficients (Service Quality and Customer Satisfaction)*

| | ,Unstandardized Coefficients | | ,Standardized Coefficients | | | Collinearity statistics |
|---|---|---|---|---|---|---|
| | ,B | ,Std. Error | ,Beta | ,t | ,Sig. | VIF |
| (Constant) | .825 | .223 | | 3.699 | .000 | |
| Service Quality | .776 | .054 | .647 | 14.383 | .000 | 1.000 |

above table the regression analysis indication the effect of service quality on customer satisfaction. The result indicate the one unit increase in service quality would change customer satisfaction with 0.825 unit. This effect with highly significant with reference to the reported p-value. The relationship is positive and significant. The calculated r= 0.647 lies within the targeted range of 0 to 1. The value of $R^2$ is 0.418, which shows that an independent variable brings 42 % variance in a dependent variable. In other words, the 42% variance independent customer satisfaction is due to an independent variable i-e service quality.

***Regression Equation:***

$$Y= 0.825+ 0.776X$$

A unit change in service quality will bring a change of 0.776 units in customer satisfaction. As per the above analysis, the formulated null hypothesis $H_{01}$ is rejected that there does not exist any relationship between the two variables. The calculated value of r=0.647.

## Tangible Quality Dimension and Service Quality

*Model summary (Tangible Quality Dimension and Service Quality)*

| ,R | .R Square | Adjusted R-Square | Durbin-Watson |
|---|---|---|---|
| .618 | .382 | .380 | 2.253 |

*Coefficients (Service Quality Dimension and Customer Satisfaction)*

| | ,Unstandardized Coefficients | | ,Standardized Coefficients | | |
|---|---|---|---|---|---|
| | ,B | ,Std. Error | ,Beta | ,t | ,Sig. |
| (Constant),, | 1.612 | .181 | | 8.887 | .000 |
| Tangible | .587 | .044 | .618 | 13.353 | .000 |

The tangible has the high impact on service quality. The regression analysis above indicate the positive and highly significant impact of tangible on service quality. The result indicate that one unit increase in service quality dimension i.e. tangible would increase the customer satisfaction with 0.587 units which is highly significant with the t-value of 13.353. the r=0.62, indicates that tangivle dimension explains the 62% of customer satisfaction variations.

The value of r =.687, which lies between 0 and 1, represents a strong relationship between Window display and consumers' impulse buying behaviour. According to the model as mentioned above summary, $R^2 = 0.472$, which means 47% of variance independent variable, i.e. Consumer's impulse buying behaviour is due to our independent variable, i.e. The value of Durbin Watson is 2.253, which shows no autocorrelation.

*Regression equation*

$$Y= 1.612+0.587 X$$

For every unit, change intangible will bring a change of 0.057 in customer satisfaction.

Based on the above analysis, the formulated hypothesis is accepted and there is a positive and significant relationship between tangible and customer satisfaction.

**Reliability dimension of Service Quality and Customer Satisfaction**

*Model summary (Reliability Dimension of Service Quality and Customer Satisfaction)*

| .R | .R Square | Adjusted R-Square | Durbin-Watson |
|---|---|---|---|
| .415 | .172 | .170 | 1.857 |

*Coefficients (Reliability Dimension of Service Quality and Customer Satisfaction)*

| | ,Unstandardized Coefficient | | .Standardized Coefficients | | |
|---|---|---|---|---|---|
| | .B | .Std. Error | .Beta | .t | .Sig. |
| (Constant). | 2.692 | .173 | | 15.555 | .000 |
| Reliability | .318 | .041 | .415 | 7.748 | .000 |

The reliability of the service quality significantly and positively impact the customer satisfaction with reported p-value and beta coefficient. The value of r= 0.415 lies between 0 to 1, and it holds the finding that 41.5% variation of customer satisfaction is explained by reliability. The value of R Square =0.172 means that 17% variance in customer satisfaction is due to an independent variable i-e reliability, dimension of service quality. The Durbin Watson value is also calculated, which is 1.857.

***Regression Equation:***

$$Y= 2.692+0.318X$$

A unit change in the reliability of service quality will bring about 0.318 changes in customer satisfaction. as per the above analysis the research accepts H3 and there is a significant and positive relationship between two variables. The calculated value of r=0.415 indicates a positive relationship between the two targeted variables.

**Responsiveness Dimension of Service Quality and Customer Satisfaction**

*Model summary (Responsiveness dimension of service quality and customer satisfaction)*

| .R | .R Square | Adjusted R-Square | Durbin-Watson |
|---|---|---|---|
| .260 | .068 | .0.064 | 1.850 |

*Coefficients (Responsiveness dimension of Service Quality and Customer satisfaction)*

| | .Unstandardized Coefficients | | .Standardized Coefficients | | |
|---|---|---|---|---|---|
| | .B | .Std. Error | .Beta | .t | .Sig. |
| (Constant), | 3.037 | 0.218 | | 13.937 | .000 |
| Responsiveness | .244 | 0.053 | .260 | 4.567 | .000 |

One unit increase in responsiveness increases the customer satisfaction with 0.244 units. Its is less than previous dimensions but p-value reports the significant and beta value shows the positive relation between two variables. The R-square value is 0.068, which indicates only a 6.8% variance in customer satisfaction is explained by the responsiveness dimension of service quality. The value of Durbin-Watson is 1.857, which lies between 1 to 4, indicating no autocorrelation.

***Regression Equation***:

$$Y= 3.037+0.244X$$

A unit change in the responsiveness dimension of service quality will bring about a 0.244 change in customer satisfaction. As per the above analysis, the formulated null hypothesis $H_{04}$ is rejected that there does not exist any relationship between variables i-e responsiveness (independent) and customer satisfaction (dependent variable). The calculated value of r=0.068 which is indicating a positive but weak relationship between the two targeted variables

Assurance Dimension of Service Quality and Customer Satisfaction

*Model summary (Assurance Dimension of Service Quality and Customer Satisfaction)*

| .R | .R Square | Adjusted R-Square | Durbin-Watson |
|---|---|---|---|
| 0.270 | 0.073 | 0.070 | 1.770 |

*Coefficients (Assurance Dimension of Service Quality and Customer Satisfaction)*

| | .,.Unstandardized Coefficients | | .,,Standardized Coefficients | | |
|---|---|---|---|---|---|
| | ,B | ,Std. Error | ,Beta | ,t | ,Sig. |
| (Constant),, | 2.880 | 0.242 | | 11.887 | .000 |
| Assurance | 0.285 | 0.060 | 0.270 | 4.755 | .000 |

The assurance dimension of service quality affects customer satisfaction, but this effect is not significant with r=0.270 and p=0.000 <0.05. The value of R Square is 0.073, which means that only 7% variation in customer satisfaction, is due to an independent variable i-e assurance, dimension of service quality. The value of Durbin Watson is also calculated at 1.770, indicating no autocorrelation.

***Regression equation***

*Y=2.880+0.285X*

Every unit change in the Assurance dimension of Service Quality will bring a change of 0.285 change in customer satisfaction.

As per the above analysis, the formulated null hypothesis $H_{05}$ is rejected that there does not exist any relationship between variables. The calculated value of r = 0.02 indicates a positive but weak relationship between the two targeted variables.

## Empathy Dimension of Service Quality and Customer Satisfaction

*Model summary (Empathy Dimension of Service Quality and Customer Satisfaction)*

| ,R | ,R Square | Adjusted R-Square | Durbin-Watson |
|---|---|---|---|
| .597 | .357 | .354 | 1.991 |

*Coefficients (Empathy Dimension of Service Quality and Customer Satisfaction)*

| | ,Unstandardized Coefficients | | ,Standardized Coefficients | | |
|---|---|---|---|---|---|
| | ,B | ,Std. Error | ,Beta | ,t | ,Sig. |
| (Constant), | 2.476 | .123 | | 20.079 | .000 |
| Empathy | .368 | .029 | .597 | 12.638 | .000 |

If empathy in telecom sector is increase by one unit the customer satisfaction increases by 0.368 units. This relationship is significant with t-value of 12.63 and p-value of 0.000. r-square of 0.354 inducate that the 35.4% variation in customer satisfaction in telecom sector is explained by empathy dimension of service quality. The value of Durbin-Watson also lies between 1 to 4, which is 1.991 indicating no autocorrelation.

***Regression equation:***

$$Y=2.476+0.368X$$

A unit change in the Empathy dimension of service quality will bring about a 0.368 change in customer satisfaction. As per the equation of empathy as independent variable and customer satisfaction as dependant variable, the study accepts the $H_6$, which states the significant and positive relationship between customer satisfaction and empathy.

## Customer Satisfaction and Customers' Loyalty

*Model summary (Customer Satisfaction and Customer's Loyalty)*

| ,R | ,R Square | Adjusted R-Square | Durbin-Watson |
|---|---|---|---|
| .579 | .335 | .332 | 2.002 |

*Coefficients (Customer Satisfaction and Customers Loyalty)*

| | ,Unstandardized Coefficients | | ,Standardized Coefficients | | |
|---|---|---|---|---|---|
| | ,B | ,Std. Error | ,Beta | ,t | ,Sig. |
| (Constant), | 1.869 | 1.86 | | 10.067 | .000 |
| Customers' Loyalty | 0.554 | .046 | .579 | 12.037 | .000 |

One of the study's objectives was to determine a relationship between customer satisfaction and loyalty. The calculated r=0.579 indicates that customer satisfaction significantly affects the customers' loyalty with p=0.000 < 0.05. The calculated R-Square is 0.335, which means that 33.5 % variance in dependent variable i-e. Customers' loyalty is due to our independent variable, i-e. Customer Satisfaction. It also explains that other factors contribute to the customer's loyalty as only 33% variance in customers' loyalty is explained by customer satisfaction. The value of Durbin Watson is 2.002, which lies within the targeted value, which ranges from 1 to 4.

*Regression Equation:*

$$Y=1.869+0.554X$$

The above regression line and significant values showed in table above approves the alternative hypothesis $H_7$, that highlights the potive and significant relationship between customer loyalty and customer satisfaction.

## Conclusion

The research article is very extensive and cover the importance and signficanct of dimensions of service quality of telecommunication sector. the study results indicates and discusses the significance and importance of service quality in telecom sector and contributes in satisfaction of the customers. The study discuss the dimensions of service quality i.e. responsiveness, dependability, empathy, assurance and tengability. Loyalty significantly explain the extent of customer satisfaction in telecom sector. There are a significant implications for telecom sector to see and improve the service quality for the enhancement of customer loyalty. Study also shows the strong and positive association between customer satisfaction and tangible. the high correlation indicate that one of the variable increases other moves in positive direction. The study report positively low but significant association between reliability, assurance and responsiveness with customer satisfaction. It is imparetive for overall increase in customer satisfaction and enhancement of market share in telecom sector.

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