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Determinants of customer satisfaction in telecom industry: evidence from Pakistan

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ABSTRACT

Telecom industry is rapidly growing in Pakistan; number of telecom users is increasing day by day. This study focused on exploring the factors which impact on satisfaction of telecom user. In order to meet the objective of the study, there were 550 individuals were selected by using simple random sampling techniques and structured questionnaire is used as data collection tool. Descriptive analysis, Correlation analysis and regression analysis were used for analysis purpose. Findings of the study revealed that customer expectation, perceived value and corporate image were the significant factors which impact on customers' satisfaction. This study is very informative and helpful for managers and policy makers of telecom sector.

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Introduction

In every business, customers are the most important component and are necessary to be treated and managed properly. According to Kotler (2008), "Customer satisfaction depends on the product's perceived performance relative to buyer's expectations". If product or services cannot fulfill the customer expectations, the customer is dissatisfied. If product or services fulfill the customer expectation, the customer is satisfied and if product or services exceed the customer expectation, the customer is highly satisfied.

The success of mobile telecommunications industry depends on generations. In first generation (1G) people enjoy mobile phone had only voice facility. 1G based on analogue system, and introduced late 1970s. In second generation (2G) introduced early 1990s in Europe. People enjoy digital phones with data, fax, and messaging service. Third generation (3G) introduced in 2001 in Europe and Japan. 3G provide multimedia facilities to peoples (L.S. Ashiho, 2003).

A great potential in telecom sector in Pakistan, because last seven years 12 billion US\$ invested in telecommunication industry for infrastructure and latest technologies. At the end of 2012 90% of our population use telecom services and telecom industry covering 92% land area of Pakistan.

The telecom annual revenue reached Rs 411.4 billion during financial year 2012. Telecom industry grows 3.1% and 5.4% in 2010 and 2011 respectively. It's a single digit growth, but the last year telecom industry growth double digit growth that is 12%. Because they promote their brand name, different types of calls and SMS packages, GPRS, mobile banking, payment of utility bills and many more things. If 3G services launch in Pakistan, telecommunication industry will attract more investment in next two to three years.

At the end of financial year 2012, the total mobile subscribers were 120.15 million. Out of 120.15 million mobile phone service subscribers, 115.89 million are prepaid that is, 98.40% and 1.88 million are post paid that is only 1.60%. According financial year 2011-12 the market share of Mobilink was 29.9%, Telenor 24.9%, Ufone 19.9%, CMPak

14% and Warid was 11.2%. Warid continuously losing their market share since 2009 (PTA annual report 2012).

Mobile phone service providers must realize the importance of customer satisfaction when they plan their strategies for users. In these days mobile phone service subscribers are more conscious about high quality in telecommunication service. Quality of service is the basic component in telecommunication (Nasser, Salleh & Gelaidan, 2012).

Telecommunications Industry in Pakistan:

Pakistan telecommunications ordinance 1994 created the PTA (Pakistan Telecommunication Authority) in 1994. PTA is the regulatory authority of telecommunication industry (PTA website).

Mobile phone service began in Pakistan in 90s, at that time only two mobile phone services are available, first one was Paktel and second was Pak com (Instaphone). Now at this time there are 5 mobile phone service providers operate in Pakistan. In Pakistan there has been an outstanding growth in telecommunications industry. With collaboration of foreign and domestic investments Pakistan telecommunications industry improving dramatically (Hafeez, Hasnu, 2010).

Between 2003-04 the total mobile service subscribers were 5,022,908. Now at May, 2013 the total subscribers were 125,012,860. At the end of May 2013 Mobilink maintained the top position and the total mobile phone service subscribers are 36.747 millions. From 2004 to 2007 the subscribers of the Mobilink increased by average 84%. But in 2008 the subscribers of Mobilink were decreased by 9%. Between 2009 to 2012 Mobilink increased by 5.6%.

The second largest mobile phone service provider is Telenor, and the total mobile phone service subscribers at May, 2013 were 31.693 millions. From 2005 to 2008 the Telenor service subscribers increased by average 153%, and 2009-2012 the Telenor service subscribers increased by average 10.1%. The 3rd largest mobile phone service provider is Ufone and the total subscribers were 23.869 millions at May, 2013. From 2004 to 2008 the Ufone subscribers increased by average 107.8%. But in 2009 Ufone subscribers decreased by 2.3% and in 2010 and

2011 subscribers increased by average 10.7%. But again the subscribers of Ufone decreased by 0.4% in 2012. The 4th largest mobile phone service provider is Zong and the total subscribers were 20.199 millions at May, 2013. Between 2004-05, subscribers were increased by average 54.6%. But in 2006 the subscribers were decreased by 1.5%. From 2007 to 2012. The subscribers were increased by average 80.1%. The last is Warid their subscribers were 12.503 millions at the end of May, 2013. From 2005 to 2008 the Warid subscribers were increased by average 258.9%. Its tremendous growth in telecom sector. But in 2009 Warid subscribers were decreased by 5.2% and the next year 2010 they increased by 2.7%. Between 2011-12 Warid subscribers decreased by average 14% (Source PTA website).

Objective of the Study:

The main purpose of this study is to investigate the customer satisfaction of telecom industry across different classification and explore how different factors affect it. Furthermore, this study is also aimed to determine the impact of customer expectation, perceived value, perceived quality and corporate image on customer satisfaction as well as find the relation between them in telecom sector of Pakistan.

Literature Review:

Customer Satisfaction:

Customers have many options available in competitive mobile phone service industry. The rise of technology has forced to mobile phone operators to provide new features in connection, if they maintained the existing customers. Customer satisfaction should be evaluated especially when customers use the mobile phone service from a long and continuous period of time. Several factors affect the different customers (Nasser, Salleh & Gelaidan, 2012). Mobile phone service providers must start looking for effective and innovative approaches to attract, retain and promote a closer relationship with the customers.

Customer satisfaction is the perception of the degree of fulfillment of the expectations and the actual services provided by mobile phone service providers and large investment are made to increase the level of customer satisfaction, but only increase in resources cannot create a high level of customer's satisfaction (Backlund G & Holmqvist M, 2006). The amount of high and low satisfaction depends upon the level of services from mobile phone service provider that meet the level of customer's expectation (Gerpott, Rams & Schindler, 2001).

According to Sendek L & Nysveen H (2004) Customer satisfaction is attained through best quantitative and qualitative services. These types of services must meet and fulfillment of customers desires in order to attain the maximum level of customer satisfaction that satisfaction lead to customer loyalty. There must be other factors leading to improve customer satisfaction as pointed by Henkel (2006) that additional value added services presented by mobile phone services provider may boost the level of satisfaction and overall usage, that can minimize customer migration, enhance loyalty, revenues and repurchase the services in next time. According to Ojo O, (2010) Customer satisfaction is described as the result of a perception and emotional assessment.

(Service expected – Service received = Satisfaction)

If service received is less than expected services, customer will be dissatisfied, and if service received is greater than expected services, customer will be satisfied. Higher customer satisfaction leads to,

- Enhance the retention of customer
- Enhance the repurchase behavior
- Enhance loyalty
- Enhance profitability of the firm

Perceived Quality:

The perceived quality depends on a combination of past experience, word of mouth and quality prediction of future mobile service. Each user requires best quality services. According to customer perception, businesses go to continuous quality improvement through the latest technology, installing the expensive equipment, improve the clarity of call and cover the maximum distance (Kouser, Qureshi, et al, 2012). Customer satisfaction is depend on the perceived quality and has encouraging role. During the formulation of a long-term policy of customer satisfaction with proper care. Customer satisfaction plays a very important role for maximum profits (Nasser, Salleh & Gelaidan, 2012). According to Fornell C, Johnson M, et al (1996) Perceived quality based on market evaluation of current consumption experience, and has a direct and positive effect on overall customer satisfaction. Customization is the process to in which firm offering goods or services according to the requirements of the customers and reliability is the processing which a company providing goods or services is reliable, Consistent and free from deficit.

American customer satisfaction index (2005) defined as "Perceived quality should have a direct, encouraging effect of customer satisfaction". Greater customer satisfaction comes from greater perceived quality. Following are three measures of Perceived quality,

1. Overall perceived quality
2. Customization
3. Reliability

Perceived Value:

Heinonen, K (2010) defined perceived value as "the consumer's overall assessment the worth of a goods depends on perceptions on what is expected and what is given". The question is how and what extent telecom sector provider delivered the value against their charging from the customers. Every customer expects benefit in term of value. The purpose to adopt or reject mobile phone service is based on perceived value. If companies provide higher level of value in term of charges, then the level of satisfaction will be higher, this level of satisfaction will leads to customer's loyalty (Nasser, Salleh & Gelaidan 2012). According to Hankel et al, (2006) Service provider of mobile phone companies have to increase switching costs to increase by implementing marketing strategies of customer lifetime value based on relationships and customer loyalty. According to Nasser, Salleh & Gelaidan (2012) Mobile phone companies increase the satisfaction of customers by generating worth from different methods. That's are

- Comparative value
- Usefulness
- Efficiency
- Differentiation in services

Perceived value and perceived level of service or product associated to volume paid by the customer's (American customer satisfaction index, 2005).

Customer Expectation:

In Pakistan new mobile phone services are coming into action in the market, but the companies who are already working in Pakistan they are trying to introducing different types of packages, because the expectations of the customer's are high (Kouser, Qureshi, et al, 2012). On the other hand Lin, (2002) If customer feel the expectations, provided by mobile phone service provider are low then customer may be switching more frequently. At this time all mobile phone service provider use latest technologies but these companies still need for improvement in order to meet high level of customer expectations, these expectations leads to high level of customer

satisfaction. Companies must provide excellent services, handle complaints, and give more value to customers (Gunnar & Malin, 2006). According to American customer Satisfaction Index, (2005). A positive relationship between customer expectations and perceived value. Customer expectations measured by Overall expectations, Expectations regarding customization and Expectation regarding reliability. Time to time customer's expectations are changing, because customer creating high level of benchmarks in their minds, that's why excellence is impossible (Hafeez, Hasnu, 2010).

Corporate Image:

Corporate image and Brand image also positively effects on customer loyalty and customer satisfaction. If mobile phone service provider give higher level of customer satisfaction, this satisfaction increase loyalty and this loyalty leads to positive corporate image. Developing customer loyalty in existing customers, corporate image plays a significant role (Kumar, et al, 2011). Corporate image identify the perceived quality. Image and reputation are two components that build the trust on mobile phone service provider. When you offer services on the web, corporate image become more important (Gunnar & Malin, 2006). Corporate image develop an excellent influence on the satisfaction of the customers. Those types of customer who develop emotional association with the brand, they are more satisfied (Nasser, Salleh & Gelaidan, 2012).

Methodology and Analysis

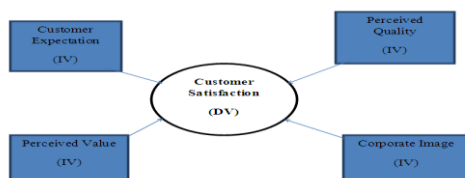
Research Methodology:

This section of study includes the information regarding research design, conceptual theme work, targeted and sampled population, sample size, sample technique, data collection tool, hypothesis and statistical methods which had been applied in order to analyze the data:

Research Design:

The present research is based on cross sectional data. Descriptive and hypothesis testing techniques were used to achieve the objective of the study. Following figure indicates the conceptual theme work of the study; customer satisfaction is dependent variable while customer expectation, perceived quality, perceived value and corporate image are independent variables. The model used in this study is borrowed from Naseer, M.A., Bt, Md.S et al (2012).

Figure.1 Conceptual Theme work



Data Collection:

This is cross sectional study; the population consists of all service users of Lahore city. In order to select sample, Simple Random Sampling technique is used, as it make possible that each unit in population has an equal probability of being included in the sample. In our study, the sampling unit is single user/customer of telecom industry. For data collection purpose the structured questionnaire was used. Before collecting the data a pilot study to check the validity of the questionnaire, the questionnaire was found to easy to understandable for the researchers. The questionnaire was divided into two sections: first section comprises questions about demographic and socio economic background of, whereas the second section contains the information related to customer satisfaction, customer expectation, perceived value and corporate image. These variables are measured on five point likert scale so that 1=

Strongly disagree to 5= Strongly agree. It is to be noted that the participants were clearly briefed about the objective and purpose of this study before distribution of the questionnaire and ensured them that information given by them will be confidential and will never disclose. There were total 600 questionnaires were distributed among different service users, of them 550 were returned back to researcher, so the response rate was 91.66 %. Of them 500 were found completely filled while rest of the questionnaire was partially filled or incomplete. Hence by using these 500 questionnaires analysis were done.

Hypothesis of Study:

Since the major aim of this study was to investigate that how the customer satisfaction in telecom sector was influenced by customer expectation, perceived value, perceived quality and corporate image as suggested in the conceptual theme work. In order to achieve the main objective following hypothesis were developed and tested by using correlation analysis and regression analysis:

H₀: 1 Customer satisfaction is same among male and female respondents.

H₁: 1 Customer satisfaction is not same among male and female respondents.

H₀: 2 Customers' satisfaction is same among respondents with respect to different service provider companies.

H₁: 2 Customers' satisfaction is not same among respondents with respect to different service provider companies.

H₀: 3 There is relationship between customer expectation and customer satisfaction.

H₁: 3 There is no relationship between customer expectation and customer satisfaction.

H₀: 4 There is relationship between perceived quality and customer satisfaction.

H₁: 4 There is no relationship between perceived quality and customer satisfaction.

H₀: 5 There is relationship between perceived value and customer satisfaction.

H₁: 5 There is no relationship between perceived value and customer satisfaction.

H₀: 6 There is relationship between corporate image and customer satisfaction.

H₁: 6 There is no relationship between corporate image and customer satisfaction.

Reliability of Data:

As suggested by statistical literature, in order to check the reliability we use Cronbach's Alpha, furthermore 0.70 as the acceptable level for reliability measure. For demographic section the Cronbach's Alpha was found 0.82. Table- 1 shows the detail of variables included in second section along with value of Cronbach's Alpha :

Research Findings and Discussions:

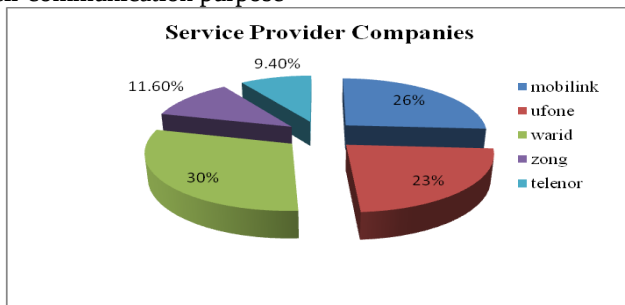
In this section, the results of study are discussed. In order to examine the finding of the research the collected data was coded using suitable scale and entered in computer using SPSS – 17. The demographic and socio-economic information of the respondents were presented using frequency table and pie chart. However the hypotheses were tested using t-test, ANOVA and Regression Analysis.

Demographic and Socio-Economic Background:-

Table-2 shows that there were total 500 telecom users were included in this study. Out of them 307(61.4%) were found male while 193(38.6%) were female. There were 96 (31.3%) male who were married whereas the unmarried male was 211 (68.7%). Married and unmarried females were respectively 73 (37.8%) and 120 (62.2%).

Selected service users were divided into two categories postpaid and prepaid service use. Table – 2 depicts that of 307 male respondents; postpaid service users of were only 63 (20.5%) and remaining 244 (79.5%) were prepaid service users. Among female participants the postpaid and prepaid service users were found 13 (6.7%) and 180 (93.3%) respectively.

With respect to qualification the respondent were divided into four groups i.e. Matric, Intermediate, Bachelor and Master. Among male respondent who passed who hold Matric, Intermediate, Bachelor and Master Degrees were recorded 24(7.8%), 10(3.3%), 89(29.0%) and 184(59.9%) respectively. The result revealed that our of 193 female telecom users, most of the females did master 103(53.4%) and there were only 16 (8.3%) females who had passed matric. In Figure-1 Pie chart depicts that there were five services providers i.e. Mobilink, Ufone, Warid, Zong and Telenor. Mostly customer used Warid 26%, followed by Mobilink whose users were 26%, whereas it was observed that there were 23% customers who use Ufone network. Zong and Telenor customers were 11.60% and 9.40% respectively. It may concluded maximum number of customers use Warid and small number of customer Telenor network for their communication purpose



Testing of Hypothesis:

In this section of the article, comparison has been made between male and female telecom users regarding their satisfaction level, also customers' satisfaction is compared with respect to service provider companies.

Two sample independent t-test has been used to test the following hypothesis:

H₀: 1 Customer satisfaction is same among male and female respondents is same.

H₁: 1 Customer satisfaction is not same among male and female respondents is same.

We use two sample independent t- test and results by performing in SPSS are given as:

This table indicates that the mean value of customer satisfaction for male and female is 30.54 and 30.89 with S.D. of 5.00 & 4.55 respectively. As P-Value 0.433 > 0.05 which is our level of significance. So we accept our H₀ and may conclude that satisfaction level is same among male and female respondents.

Whether the customers were equally satisfied by the service provider companies; Following hypothesis was developed and tested by performing Analysis of Variance (ANOVA) technique

H₀: 2 Customer satisfaction is same among respondents with respect to service provider.

H₁: 2 Customer satisfaction is not same among respondents with respect to service provider.

There are five service providers i.e. Mobilink, Ufone, Wrid, Zong and Telenor, in order to check the whether all the telecom customers were equally satisfied from the service provider we test the hypothesis by using Analysis of Variance (ANOVA). Since P-Value is less than 0.05 which is our level of significance, so we reject our null hypothesis and consequently accept alternative hypothesis, may conclude that the satisfaction

level of telecom sector is not same with respect to their service provide

Correlation Analysis:

In correlation analysis we measure the interdependence between two variables. Pearson correlation coefficient is used to measure the strength of relationship between the variables, it is denoted by “r” and ranges from -1 to +1. Theoretically speaking, the relationship is supposed to strong if $r > 0.70$, moderate if $0.50 < r < 0.70$ while weak $r < 0.50$. The sign of the coefficient represent the direction of relationship. Positive correlation coefficient indicates that both variables moves in same direction either increasing or decreasing, while negative sign represent that variables move in opposite direction i.e. if one is increasing and other is decreasing or vice versa.

Table-5 shows the finding of correlation analysis, it is obvious that there is positive and significant relationship between consumer expectation and consumer satisfaction. ($r = 0.62$ & P-Value = $0.00 < 0.05$). Similarly, relationship between perceived quality and customer satisfaction is positive and highly significant. ($r = 0.76$ & P-Value = $0.00 < 0.05$). It is also obvious from the table that perceived value is positively and significantly correlated with customer satisfaction ($r = 0.537$ & P-Value = $0.020 < 0.05$) and customer expectation ($r = 0.563$ & P-Value = $0.00 < 0.018$). The results presented in table revealed that there is positive and highly significant relationship between corporate image and customer satisfaction ($r = 0.81$ & P-Value = $0.00 < 0.05$), moreover this relationship is very positively strong as value of “r” is close to +1. Finally, the correlation between corporate image and customer expectation is found positive ad significant ($r = 0.63$ & P-Value = $0.00 < 0.05$).

**. Correlation is significant at the 0.05 level (2-tailed).

Regression Analysis:

Regression Analysis deals with the dependence of one variable called “dependent variable” on more than one variable called “independent variables”, it also aims to estimate / find the average value of dependent variable on the fixed value of independent variable. (Gujarati, 2004).

On the basis of value of independent variables, the value of dependent variable can be predicted. The estimated coefficient of a variable indicates how much change occurs in dependent variable by bringing unit in independent variable. The value of R² tells about the goodness of model i.e. how much variation in dependent variable is explained due to independent variables which are included in the model. (Gujarati, 2004).

In order to meet the objective of our study, we take Y= Customer Satisfaction as dependent variable while there were four variables; X₁= Customer expectation, X₂= Perceived Quality, X₃=Perceived Value and X₄= Corporate Image are supposed to be independent variables.

The results reported in table – shows that customer expectation has positive and significant impact on his/ her satisfaction as B = 0.432 and P-value is 0.026. Furthermore, the results reveals that perceived quality is negatively impact (B = - 0.025) on customer satisfaction but this impact is found to be insignificant as P = 0.845. In addition to this, it was also observed that the relationship between perceived value and customer satisfaction is positive and significant with B = 1.123 and P=0.000. Finally, the result of regression revealed that corporate image is positively related with the customer satisfaction and this relationship is highly significant as value of B and P- value are respectively 0.362 and 0.000. It is to be noted that significance of all the relationship is checked at 0.05.

The summary of the model is presented in Table, as value of $R^2 = 0.58$ which shows that 58% variation in customer satisfaction is due to customer expectation, perceived quality, perceived value and corporate image; there are many other factors which cause remaining 42% variation in customer satisfaction and these factors are not included in our purposed model. Theoretically speaking the model is moderately fit. This model is also significant as it is obvious from the table where it has shown that $F=61.882$ with $P\text{-Value} = 0.000 < 0.05$, hence as overall model is significant and can be used for prediction purpose.

Conclusion:

This study is very informative for mobile service provider companies in Pakistan. This study will helpful for companies to get to know the factors which made their customer satisfied. The managers and higher authority should consider these significant factors in order to attain higher customer satisfaction, as these are supposed to be key factors for the customer satisfaction and customer retention.

Table-1 Reliability Analysis

Name of Variable	Nature of Variable	Number of Items included	Cronbach's Alpha
Customer Satisfaction	Dependent Variable	8	0.85
Customer expectation	Independent Variable	4	0.83
Perceived Quality	Independent Variable	2	0.76
Perceived Value	Independent Variable	2	0.65
Corporate Image	Independent Variable	4	0.74

Table -2

Gender	Marital Status		Service Used		Qualification			
	Married	Unmarried	Post Paid	Pre-Paid	Matric	Intermediate	Bachelor	Master
Male	96 (31.3%)	211 (68.7%)	63 (20.5%)	244 (79.5%)	24 (7.8%)	10 (3.31%)	89 (29.3%)	184 (59.9%)
Female	73 (37.8%)	120 (62.2%)	13 (6.7%)	180 (93.3%)	16 (8.3%)	22 (11.4%)	52 (26.9%)	103 (53.4%)

Table-3 Two Sample Independent T-Test

	Gender	N	Mean	Standard Deviation	Standard Error Mean	T-test for Equality of Means		
Customer Satisfaction	Male	307	30.54	5.00	0.28	t-value	d.f.	Sig. (2-tailed)
						-0.785	498	0.433
	Female	193	30.89	4.55	0.32			

Table-4 Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	157.628	4	39.407	1.696	0.03
Within Groups	11502.580	495	23.238		
Total	11660.208	499			

Table- 5 Correlation among variables

		Customer Satisfaction	Customer Expectation	Perceived Quality	Perceived Value	Corporate Image
Customer Satisfaction	Pearson Correlation Sig. (2-tailed)	1	.624** (.000)	.760** (.000)	.537** (.000)	.810** (.000)
Customer Expectation	Pearson Correlation Sig. (2-tailed)	.624** (.000)	1	.053 (.234)	.563** (.000)	.630** (.000)
Perceived Quality	Pearson Correlation Sig. (2-tailed)	.760** (.000)	.053 (.234)	1	.054 (.229)	.108 (.056)
Perceived Value	Pearson Correlation Sig. (2-tailed)	.537** (.020)	.563** (.018)	.054 (.229)	1	.152 (.135)
Corporate Image	Pearson Correlation Sig. (2-tailed)	.810** (.000)	.630** (.000)	.108 (.056)	.152 (.135)	1

Table-6 Regression Analysis

Factors	Unstandardized Co-efficient		Standardized Co-efficient	t	Sig.
	B	Standard Error			
(Constant)	14.455	1.336918		10.812	0.000
Customer Expectation	0.432	0.08879	0.107867	2.237	0.026
Perceived Quality	-0.025	0.129322	-0.0073	-0.195	0.845
Perceived Value	1.123	0.145106	0.367229	7.742	0.000
Corporate Image	0.362	0.086585	0.197637	4.184	0.000

Table – 7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727 ^a	.581	.572	3.963

Table- 8

	Sum of Squares	df	Mean Square	F	Sig.
Regression	3887.044	4	971.761	61.88235	0.000
Residual	7773.164	495	15.70336		
Total	11660.21	499			

Hypothesis Accepted	Relationship found	Statistically Importance
H ₀ ; There is relationship between customer expectation and customer satisfaction.	Positive	Significant
H ₁ ; There is no relationship between perceived value and customer satisfaction	Negative	Insignificant
H ₀ ; There is relationship between perceived value and customer satisfaction.	Positive	Significant
H ₀ ; There is relationship between corporate image and customer satisfaction.	Positive	Significant

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