

**The mediation of customer satisfaction and moderation of Price: Evidence from the generation Y users of cell phones**

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**Abstract**

The purpose of conducting this study is to identify and explain the drivers of brand loyalty with customer satisfaction as mediator and the role of pricing because Pakistan's market is flooded with the presence of imported or refurbished cell phones. The research is focused on generation Y of Pakistani consumers. It is recommended that cell phone companies operating in urbanized developing societies must give due importance for activities that would ensure customer satisfaction and price, if they want to have committed customers in their targeted markets where there is a surge of refurbished/imported cell phones. The study will contribute to the literature of where customer satisfaction acts as mediator and price as moderator between customer satisfaction and brand loyalty. The importance of customer satisfaction and price in brand loyalty model increases the scope and hence it adds the value to the literature.

**Keywords:** brand loyalty, customer satisfaction, price, generation Y

**Introduction**

The technology has revolutionized almost everything and especially the cellular phones, cell phones or mobile phones. They have become immense popular among all generations of any society. The birth of a smart phone is reported in the year 2007 by

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Nokia corporation (Prlog, 2009) and since then it has become one of the main parts of human life because cell phones now also serve humans as status symbol, fashion accessory and a communication channel particularly for youth including both Generation Y and Generation X (Sultan & Rohm, 2005). Due to rapid change in technology, cell phones continue to reinvent with the modern technology and hence the life of cell phones get short. This becomes a matter of concern as cell phones are becoming part of our daily life. Cell phone industry in Pakistan also witnessed a great emergence in the economy in the recent years. Moreover, Pakistani mobile phone industry has always been affected by imported mobile phones; as a result a consumer may get the effects of getting a better price and quality by the branded/imported mobile phones, which is a challenge for companies that are fully active in this industry (Lin & Chang, 2013).

Cell phone industry has a brand switching at very high levels (Stremersch, Muller, & Peres, 2010), therefore, its marketers main concerned to manage the customer brand loyalty as the loyalty is not managed properly (Reinartz & Kumar, 2002). A very little literature of customer loyalty is available in cell phone brands as stated by (Petruzzellis, 2010), and prior literature focused on few aspects of brand loyalty in cell phones (brand trust or brand satisfaction) rather discussing a broad set of determinants in a comprehensive manner. In general, there are many studies which focuses brand loyalty but in particular not on cell phones i.e. (Mittal and Kumakura 2001; Chaudhuri and Holbroo 2001). Pakistan's cell phone industry is consists of various brands competing in the market. However, there are certain brands and models of existing brands that are not properly advertised to public but are available to be purchased in the market. Considering the scenario above, the study aims to identify what factors are relevant in effecting brand

loyalty of Generation Y? Moreover, if there is a surge of imported cell phones and they are competing on the basis of prices with brands present in the market then to what extent price is affecting the drivers of brand loyalty and whether price has any role to play or not in cell phone industry of Pakistan?

The main objective of the study was to explore the factors effecting brand loyalty when choosing a cell phone brand in Pakistan and which is the most influential factor on consumer brand loyalty of Generation Y in the presence of customer satisfaction mediation. Prior researches on brand loyalty are mostly focused on general segments of the economy, the uniqueness of this study can be gauged in two ways, first, it is mainly focused on assessing the brand loyalty on cell phone industry of Pakistan, secondly, the study has taken Generation Y consumers only which is considered to have more knowledge and skills than Generation X consumers. Moreover, the moderating effect of price has also been taken under consideration to identify whether in current market scenario where there is a influx of refurbished mobile phones and are coming from various means (legal & illegal) has any effect on the loyalty or not? The idea behind taking price as moderating variable is the success of imported/refurbished phones in the economy and if people are purchasing these phones then there must be some other phones which are not taken into consideration while the purchase process. This will help the industry understand the current position of buying behaviors of Pakistani consumers involved in cell phone brands. Moreover, the study will also benefit companies to identify what are the main factors that are impacting brand loyalty of Generation Y consumers in the market and whether the brand loyalty exist in the said industry or not?

## **Literature Review**

### **Generation Y**

Most researchers are agreed that Generation Y consumers were born between 1977 till 1995 (Hwa, Lee, & Cheng, 2011). Main characteristics of Generation Y includes social networking, cell phones, TV, video games as these activities are believed to effect the lifestyle of this generation, moreover this generation is very well connected and has good education (Vittal & Bobbie, 2012).

### **Brand Image**

Image of a brand is defined as symbols in the minds of consumers which are linked with the perceptions of the offerings forms by a customer about a brand (Cretu and Brodie, 2007). It could be defined as a picture in the mind of consumers about the offerings by the brands which also include the symbolic meaning of attributes of services and goods (Salinas & Pérez, 2009; Bibby, 2011).

### **Perceived Value**

Zeithaml, (1988) has defined perceived value as a complete evaluation of a products/services by customers that is based on the idea of what is received against what is being paid of the products/services. In another definition it is said that it is an overall assessment by the customers of what they receive e.g. quality against what they give up e.g. price for the brands which are in opposition (Grewal, Monroe, & Krishnan, 1998; Bolton & Drew, 1991). In cell phones, a customer receives benefits such as texting, video and internet and gives compare the net price that has been paid (Lam & Shankar, 2013).

## **Perceived Quality**

Consumers rely on two groups of products cues to form the judgement on quality. Firstly intrinsic cues representing the physical product attributes, secondly extrinsic cues, which is not part of the physical product and can experimentally be manipulated without changing the physical characteristics of the product (Szybillo & Jacoby, 1974). When there is an uncertainty in consumers' minds toward the quality of the brand, consumers rely on external cues such as brand name, product design, packaging and advertisement to form a perception of the brand quality (Kirmani & Rao, 2000). In that sense, perceived quality is not the real quality or actual performance of a product or service. Instead, it is the customer's overall subjective appraisal of the product (Zeithmal, 1988).

## **Customer Satisfaction**

Customer satisfaction may be defined as a pleasure of a consumer with respect to his/her purchases with a company (Christodoulides & Michaelidou, 2011; Anderson & Srinivasan, 2003). To make consumers satisfied or creation of customers who are satisfied becomes one of the top concerns in management for the companies (Veloutsou, Gilbert, Moutinho, & Goode, 2005). Basically, satisfaction is a judgment, response fulfillment, centered on a service or good, evaluation for onetime or ongoing consumption (Oliver, 1997).

## **Brand Loyalty**

Aaker (1991) termed brand loyalty as a key tool for a long run relationship between the company and its targeted audience. Kotler (2002) defined that loyalty of a brand is not ordered randomly and a long term reaction of a behavior of consumer which shows purchasing a brand among the multiple options available. Holt (2004) explained

that brand loyalty is a willingness of a customer to stick with a brand when competition come and offer the equally attractive product or service.

## **Pricing**

Zeithaml (1988) suggested that price can be conceptualized as a sacrificed or given up to obtain any product. Furthermore, it has a complex stimulus as explained by Lichtenstein, Ridgway, & Netemeyer, (1993) that price contains both roles, positive and negative. Positive role of higher prices send positive messages to market that product or services contains more quality and hence it increases the probability of purchase (Zeithaml., 1988; Lichtenstein, Bloch, & Black, 1988; Garretson, Fisher, & Burton, 2002) whereas the negative role of pricing may send the signals of sacrifice or cost that consumers incur to purchase a product or service and hence it may result in reduction of probability of purchase. Prior researches related to price perception and brand loyalty focus lesser on systematic relationships (Ferreira & Coelho, 2015). Price and value consciousness impact on the loyalty was identified by Garretson et al., (2002). Moreover, Manzur, Olavarrieta, Hidalgo, Farías, & Uribe, (2011) focused on value consciousness on loyalty of a brand and Lichtenstein, Burton, & Netemeyer, (1997) studied sales proneness on brand loyalty. But in marketing literature, the relationship between loyalty of a brand and price gets considerable attention as mentioned by Ferreira & Coelho, (2015), these studies focuses on additional appropriate questions on pricing such as price elasticity and loyalty of a brand (Krishnamurthi & Raj, 1991), brand loyalty and retail promotion (Gedenk & Neslin, 1999) and retail pricing strategies and brand loyalty (Allender & Richards, 2012).

## **Brand Image's Impact on Customer Satisfaction and Brand Loyalty**

In various sectors i.e. cell phones, landline, E-banking, supermarkets and banking, the brand image effect significantly to customer satisfaction (Gronholdt, Martensen, & Kristensen, 2000). Chang & Tu (2005) suggested that infrastructure of a store, store services, its convenience and sales activities are the four main components of store image and they ultimately leads to customer satisfaction directly. An empirically investigation by Chitty, Ward, & Chua (2007) proved that brand image has a dominant role in forecasting satisfaction of customers in hospitality industry. Furthermore, Jamal & Goode (2001) suggested that the similarity between customer's self image and brand image may increase customer satisfaction and preferences towards the brand.

Torres & Bijmolt, (2009) argued that brand image usually sends out signals to consumers to make them believe at a certain level in the products which later help in making a decision to purchase. Marketers take image of a brand as a fundamental by which a consumer evaluate the quality of a good or service, which can be considered as a hint of the products (Cretu & Brodie, 2007). Furthermore, it can also be seen as a set of matching quality promising, localization and function characteristics of a service and product which helps in reflecting self image of consumers and that is important in making purchase decisions (Aghekyan-Simonian, Forsythe, Kwon, & Chattaraman, 2012). Wood, (2004) is of the view that brand image is a result of branding which is used to reflect product and service and when it is presented to consumers it enables relationship building and allows consumers to judge the brand more easily and as per Morgan & Hunt, (1994) this judgement from consumers is an integral antecedent of loyalty and without constructive judgement the brand is difficult to be considered.

**H1:** Brand Image has a positive effect on customer satisfaction

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**H2:** Brand Image affects positively on Brand loyalty

### **The impact of Perceived Value on Customer Satisfaction and Brand Loyalty**

Oliver & DeSarbo (1988) revealed that customer satisfaction is the results of perceptions of a customer about the input and output costs against the benefits ratios which are to be fair. Another study conducted by McDougall & Levesque (2000) confirmed the role of a perceived value that it directly impacts on satisfaction of a customer which results in behavioral intentions. It was conceived by Jones & Sasser (1995) that the direct way to make customer satisfy and develop & sustain loyalty is when a customer perceived higher value.

Holbrook, (1999) in his book viewd customer perceived value as a basics of every marketing activity, as a strategic instrument that increases retention rates and reduces defections (Woodruff, 1997; Zeithaml, 1988), and a source that provides compitive advantage (Parasuraman & Grewal, 2000). Customers may stay devoted to a service firm if they believe that they are getting better value to that offered by the compition in the industry (Gruen, Osmonbekov, & Czaplewski, 2007; Sirdeshmukh *et al.*, 2002). Moreover, customer perceived value motivates customers to pay premiums, spend and buy more from a particular company (Palmatier, Dant, & Grewal, 2007). Floh, Zauner, Koller, & Rusch, (2014) supported that superior levels of consumer perceived value is connected with higher intentions in the. Considring the discussion above, it is therefore suggested in this study:

**H3:** Perceived value impacts customer satisfaction positively

**H4:** Perceived value has a significant positive affect on Brand loyalty

## **Perceived Quality's impact on Customer Satisfaction and Brand Loyalty**

The inter correlation between perceived quality and customer satisfaction is so high (Olsen, 2002). Most researchers in marketing and practitioners accept the fact that the quality construct leads to satisfaction of a customer (Oliver R. L., 1997; Dabholkar, Shepherd, & Thorpe, 2000). Olsen (2002) stated that if the quality is an evaluation performance and satisfaction is an impact of that performance on the feeling of people, then it may be used to calculate the future feelings (satisfaction) and the buying behavior.

Perceived quality helps companies improve their retention rates as it influences the customer loyalty. Aaker (1991) suggested that after assessment of quality of products offered in a competition, a customer makes perceptions of a brand, good perception results in better satisfaction rate that ultimately leads to the loyalty of a brand. Furthermore, a customer differentiate brands on the basis of their quality as perceived quality variable has a strength to affect the company profits and the positioning of brands in the market. An increasing number of studies on perceived quality have suggested its significant influence on perceived quality have suggested its significant influence on consumers' satisfaction, purchase intention and brand loyalty (Bang, Raymond, Taylor, & Moon, 2005).

**H5.** Perceived quality effects positively to customer satisfaction

**H6.** Perceived quality has a significant influence on brand loyalty

## **Customer Satisfaction and Brand Loyalty Relationship**

There is a vast literature available which suggests that brand loyalty is directly influenced by satisfaction or dissatisfaction of a customer with the brand and hence through evidence it can be said that satisfaction is one of strong driver of brand loyalty

(e.g., Lim, Widdows, & Park, 2006; Anderson & Sullivan, 1993; Zeithaml, Berry, & *The mediation of customer satisfaction and moderation of Price: Evidence from the generation Y users of cell phones*

Parasuraman, 1996). When consumers are satisfied, they are likely to repurchase the service or product and this not only helps increasing brand loyalty but also it helps decreasing the complaints from them (Johnson, Gustafsson, Andressen, Lervik, & Cha, 2001), and afterwards to positive word of mouth, this makes consumers brand ambassadors who helps company promoting their brand(s). Based on the evidence suggested above, the hypothesis for this study has been developed as:

**H7.** Customer Satisfaction has a significant positive effect on brand loyalty

### **Impact of Price on Customer Satisfaction and Brand Loyalty**

Price has been considered as an important factor of satisfaction of consumers as pricing of brands sends the signals of quality to consumers in the market. Singh and Sirdeshmukh (2000) have presented their finding about service industry that both of the variables have significant relationship as price has a strong effect on consumer satisfaction. Another research conducted by Han and Ryu (2009) which also found significant influence of price on satisfaction of consumers in the restaurant industry. Jiang and Rosenbloom (2005) have also presented their findings that price perceptions have positive impact on satisfaction as well as the behavioral intention of consumers. When consumers perceives price fairness from companies, it helps generating positive image of companies that leads to customer satisfaction and brand loyalty (Yieh, Chiao, & Chiu, 2007). Varki & Colgate (2001) suggested in their research that price has a significant positive impact on the loyalty of consumers and customer satisfaction is a main component of brand loyalty. Loyalty helps brands generate high profits from consumers by purchasing their products in result of a consistent behavior to purchase over time (Jacoby, 1975; Rauyruen & Miller, 2007). The situation mentioned effects the profits of companies and helps generating sale volumes (Bennett & Rundle-Thiele, 2005).

Reichheld & Sasser, (1990) added that retention of consumers is highly positive for generating profits than the economies of scale or even market share of companies. Contrary to this, consumers who are not loyal to brands use to swith because of various reasons i.e. for the purpose of having variety or may because of different promotional offers (Yoon & Tran, 2011). Many prior researches suggest that consumers are less price sensitive if loyalty exist (Yu & Dean, 2001; Krishnamurthi & Raj, 1991; Ibrahim & Najjar, 2008). Loyal consumers are important for companies for value creation programs, customer relationship and making marketing strategies (Reichheld & Teal, 1996). In the light of above literature, it is therefore hypothesized that:

**H8:** Price moderates the the relationship between customer satisfaction and brand loyalty

## **Research Methodology**

### **Method of Data Collection**

For the study, generation Y of Pakistani consumers have been taken as population in this research. Prior literature suggested that consumers of generation Y belong to the era between 1975 till 1995 and therefore, the age of the sample is between 21 to 41 years. Both, online and offline sources are used to collect the data. The respondents had to have cell phone shopping experience, the details of questionnaire and purpose of conducting the study was shared with them verbally and along with the cover letter contains the consent letter and the demography. Each respondent was asked to provide data on their preferred brands of cell phone available in Pakistan and hence, the study was not restricted to any particular brand. Both male and female who fall in the category mentioned were taken into the process of testing the hypotheses. Sample characteristics are diverse and belong to various sections of the society but the age group is restricted

from 21 to 45 as the study is based on Generation Y. Printed questionnaire distributed to students of KASBIT, Iqra University and Reflections School. Most of the students of KASBIT and Iqra University are professionals of various local and international organizations. The respondents of Reflections School were mostly teachers and administrative staff members. To increase the sample size, the data was also collected online using personal references; the link was shared with the respondents and has detailed description about the purpose of the study and questionnaire.

### **Sampling Technique**

The population as mentioned is the Generation Y consumers of Pakistan's cell phone market. It was mandatory for respondents to have a purchase experience of cell phone brands from their own amount. The sample selected for research is divided into two main groups, one belongs to executive students of different higher education institutions of Karachi city and other sample belongs to school teachers. Based on the above scenario, it was decided to have a non probability sampling method for the survey questionnaire, therefore, convenience sampling technique has been used to collect the data from the respondents due to various limitations of the authors i.e. time and resources limitations. This technique is adopted by the researchers for their convenience in getting the data from the respondents. The researchers distributed the questionnaire based on their own convenience but the purpose and the objectives were briefed in detail to the respected audience.

## **Sample size**

Fisher (2007) has mentioned in his book that an appropriate sample may result in reliable and perfect research. The sampling unit selected in this study was individual consumer involved in purchasing of cell phones from the Pakistani market. Different researches in the past used different sample size, a study conducted in South Africa to identify the drivers of brand loyalty has used a sample size of 151 (Chinomona, 2016). The instrument was shared with 1597 respondents on both, online and offline sources out of which 612 have filled the questionnaire with the success rate of 38%. 84 respondents were excluded because the age requirement was not met, whereas 119 questionnaires were rejected due incomplete and invalid responses. Therefore, the selected sample size of the study was 409.

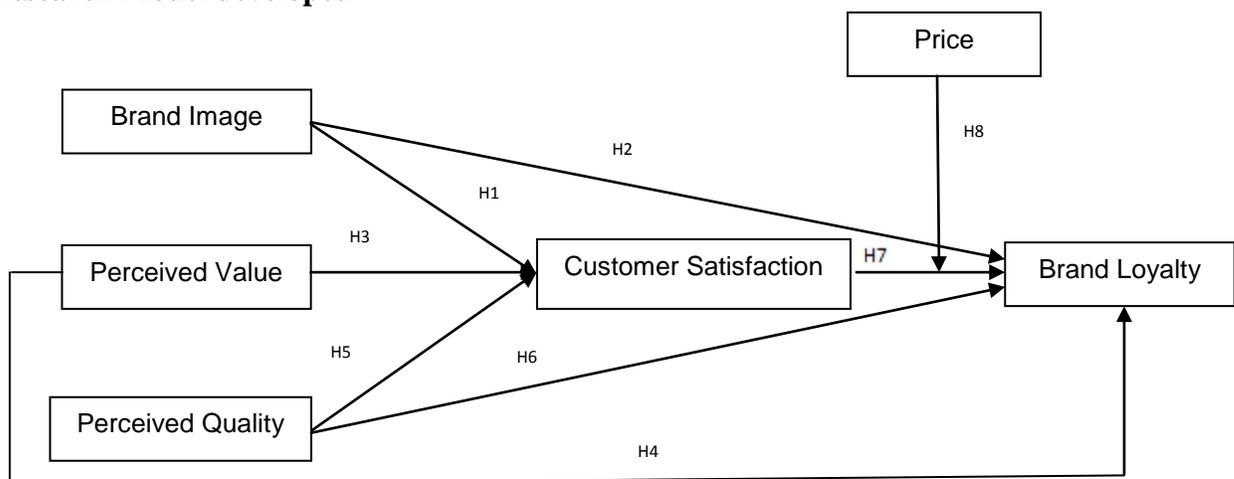
## **Instrument of Data Collection**

For the purpose of collecting data, survey method has used based on 5 points likert scale method on level of agreement (5 = strongly Agree, 4 = Agree, 3 = neutral, 4 = disagree, 5 = strongly disagree). The construct brand loyalty was taken from Chaudhuri & Holbrook (2001), brand image was from Salinas & Pérez (2009), perceived value was from (Grewal, Monroe, & Krishnan, 1998; Johnson, Herrmann, & Frank, 2006); Lasser et al., 1995), perceived quality was adopted from (Lu & Xu, 2015; Ahmed & Moosavi, 2013), customer satisfaction from (Lam, Venkatesh, Erramilli, & Murthy, 2004; Mano & Oliver, 1993; Sirdeshmukh et al., 2002) and questions of price were adopted from (Rubio, Oubiña, & Gómez-Suárez, 2015). Three questions were left out because of their low factor loadings in the pre-study conducted on 80 respondents from brand image, perceived quality and customer satisfaction.

## Statistical Technique

After finalizing, the data was coded to excel file and then uploaded to the SPSS data sheet. For the purpose of data analysis, a two phase approach for structural equation modeling (SEM) was adopted, first Confirmatory Factor Analysis (CFA) to analyze the validity and reliability of overall model and secondly to test the hypotheses using SEM. If Cronbach's alpha value is 0.70, then it is acceptable (Hinkin, 1995). Before testing the hypotheses, the frequency distribution and descriptive statistics were applied to check the missing data then validity and reliability of the instrument was checked. Cronbach's Alpha values taken using SPSS and CFA applied using AMOS to find the values of CR, AVE, MSV and ASV. For hypotheses testing, structural equation modeling has been applied AMOS, for moderation analysis, help from SPSS taken to find out the effect of the interaction.

## Research Model developed



## Results

### Descriptive analysis

The demographics results clearly show that the males are in a slight majority with 54.53% whereas female respondents were also shown their interest and contribute 45.48% to this research. Since the study is conducted on Generation Y, therefore the starting age was 21 and the maximum limit was 41. Most of the respondents were between 31 to 35 years with 37.41%. Since the most of the respondents were associated with universities mentioned therefore, maximum of them were graduates and masters with 46.21% and 40.34% respectively. The last demographic variable was experience, and results shows that most respondents were with the experience from 4 to more than 10 years with the percentage of 78.48.

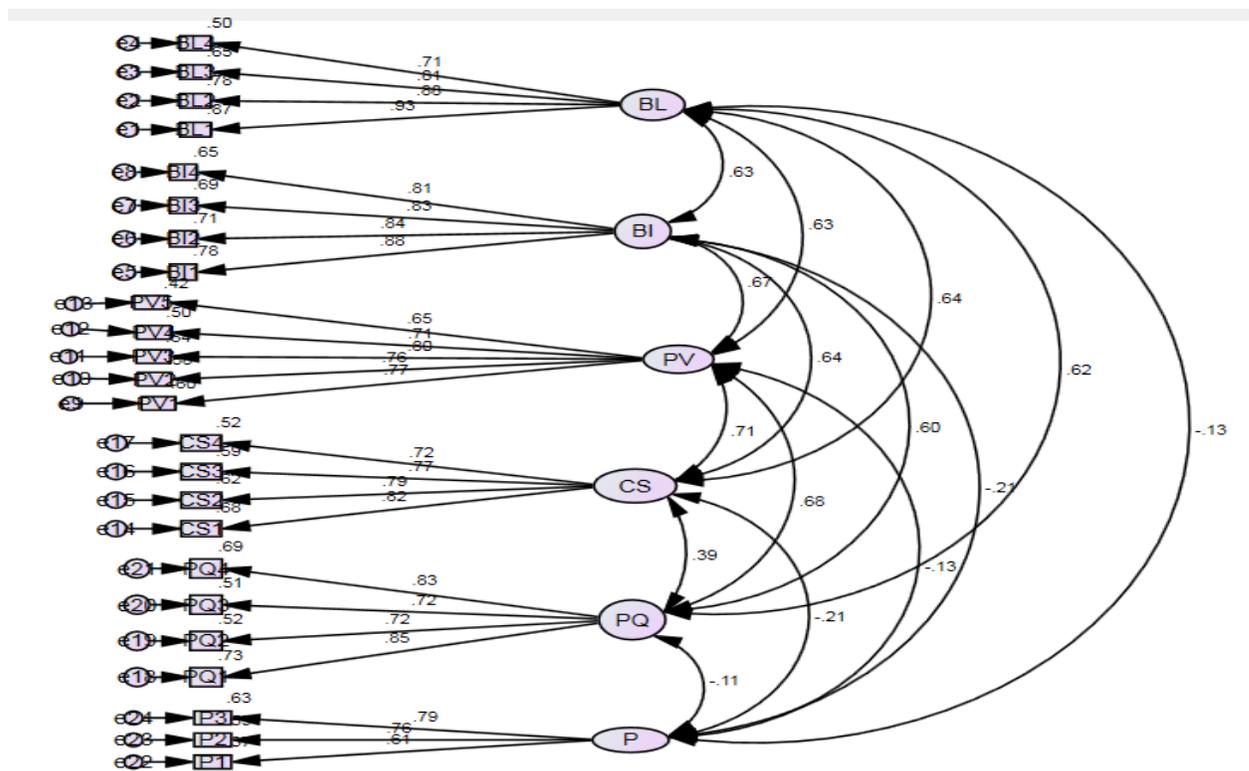
**Table 01: Descriptive Analysis**

Variable	Category	Sample Size	%
Gender	Male	223	54.52
	Female	186	45.48
Age	21 to 25 years	63	15.40
	26 to 30 years	116	28.36
	31 to 35 years	153	37.41
	36 to 40 years	75	18.34
	41 years	2	0.49
Qualification	Matric/O level	6	1.47
	Intermediate/A level	48	11.74
	Bachelors	189	46.21
	Masters	165	40.34
Experience	Doctor	1	0.24
	Less than 1 year	25	6.11
	1-3 years	63	15.40
	4-6 years	109	26.65
	7-10 years	116	28.36
	Above 10 years	96	23.47

## Confirmatory Factor Analysis

The results shows that Cronbach's Alpha values of all the constructs are above 0.7 as stated by Nunnally (1967) that means the instrument's internal consistency is fine to predict the results. Moreover, the AVE values of all constructs are above 0.5 which shows that the variance explained by these construct is good and the error is explaining less to the latent variable. The discriminant validity is also as per the standard which shows that all the questions are explaining what they were supposed to explain, means they are not explaining other variables and only explaining their own variables in which they were placed.

Figure 01: Confirmatory Factor Analysis



**Table 02: Reliability and Validity**

Construct/Indicators	Standardized Factor Loading (CFA- AMOS)	Construct Reliability		Construct Validity		
		Cronbach's alpha	Composite Reliability (CR)	Convergent Validity Average Variance Extracted (AVE)	Discriminant Validity Maximum Shared Variance (MSV)	Average Shared Variance (ASV)
<b>Brand Loyalty:</b>		.896	.904	.705		
BL 1	.94				0.4096	0.32098
BL 2	.88					
BL 3	.81					
BL 4	.71					
<b>Brand Image:</b>		.905	.915	.729		
BI 1	.92				0.4225	0.31436
BI 2	.83					
BI 3	.87					
BI4	.79					
<b>Perceived Value:</b>		.854	.852	.538		
PV 1	.78				0.49	0.36026
PV 2	.77					
PV 3	.80					
PV 4	.68					
PV 5	.62					
<b>Customer Satisfaction:</b>		.854	.866	.620	0.49	0.29764
CS 1	.86					
CS 2	.78					
CS 3	.81					
CS 4	.69					
<b>Perceived Quality:</b>		.865	.845	.581		
PQ 1	.89				0.49	0.2818
PQ 2	.68					
PQ 3	.63					
PQ 4	.82					
<b>Price:</b>		.765	.769	.530	0.0441	0.02328
P 1	.61					
P2	.77					
P3	.79					
<b>Reliability and Construct Validity Thresholds: [Suggested by Fornell &amp; Larcker (1981)]</b>		$\alpha > 0.70$ (Nunnally, 1975)	CR > 0.70	i) AVE > 0.50 ii) CR > AVE	MSV < AVE	AS < AVE

The model tested was over identified mode. For a measurement model, there are various indices to measure a goodness of fit model. This study has taken seven fit indices which indicate a fit model (Hair, Black, Babin, Anderson, & Tatham, 2006) as follows:

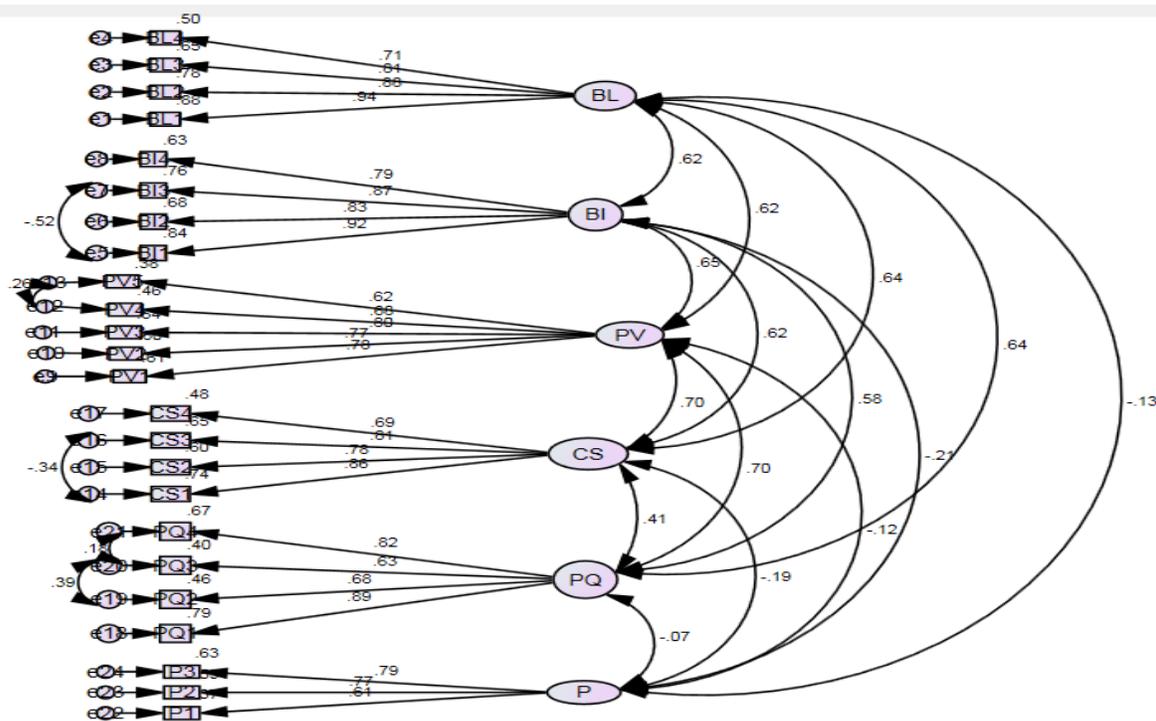
Chi-square/df , P. Value, Goodness-of-Fit Index (GFI), Adjusted Goodness of Fit Index

(AGFI), Comparative Fit Index, Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA). Most of the values of goodness of fit found as per the thresholds of Hair et al., (2006) however, CMIN/DF, GFI were slightly not up to the mark as mentioned in the table 03.

**Table 03: Model Fitness Values**

CMIN/DF	P	GFI	AGFI	TLI	CFI	RMSEA
3.064	.000	.875	.842	.907	.920	.071

**Figure 02: Confirmatory Factor Analysis after Modification**



Values after modification of the model fitness were improved a bit and GFI is matched the standards required by Bagozzi & Yi, (1988). Moreover the AGFI indicator is 0.86 which is as per the requirements mentioned by Gefen, Straub, & Boudreau (2000). Furthermore, the rest values like CMIN/DF, P, TLI, CFI and RMSEA are as per the

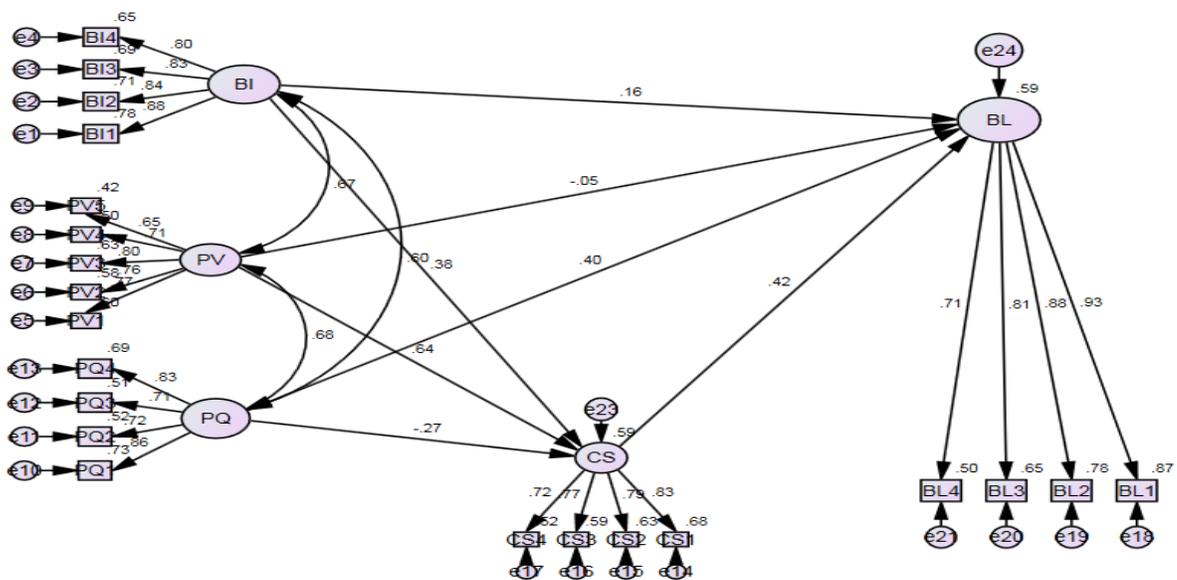
standards of Hair et al., (2006). Therefore, in the light of model which passed the threshold values (Hair et al., 2006; Bagozzi & Yi 1988; Gefen, 2000) it was finalized that the model is a good fit as mentioned in the table 04.

**Table 04: Model Fitness Values after Modification**

CMIN/DF	P	GFI	AGFI	TLI	CFI	RMSEA
2.64	.000	.894	.863	.926	.938	0.063

**Hypotheses testing using Mediation Analysis**

**Figure 03: Mediation Analysis**



To test the mediation analysis brand image, perceived value and perceived quality have been taken as exogenous variables and brand loyalty as endogenous variable, whereas, the customer satisfaction was a mediator in this proposed model for Generation Y consumer of cell phones. The indirect effects of all three variables are showing

significant relationship at 0.05 confidence interval, which means that mediation in the proposed model exists as mentioned in Table 05.

**Table 05: Indirect Effects**

	PQ	PV	BI	CS	BL
CS	...	...	...	...	...
BL	.045	.016	.020	...	...

The direct effect of PV and BI shows insignificant relationship but the PQ shows that it has a significant relationship with the dependent variable. Which means customer satisfaction is a true mediator in case of PV and BI but partial mediation found in case of PQ as it has a direct significance as well as mentioned in Table 06.

**Table 06: Direct Effects**

	PQ	PV	BI	CS	BL
CS	.038	.002	.018	...	...
BL	.004	.908	.652	.029	...

Table 05 explains that the H1, H5 are fully accepted but H3 is accepted partially because it has both, direct and indirect connections. It is therefore being said that brand image and perceived value has full and perceived quality has a partial mediation.

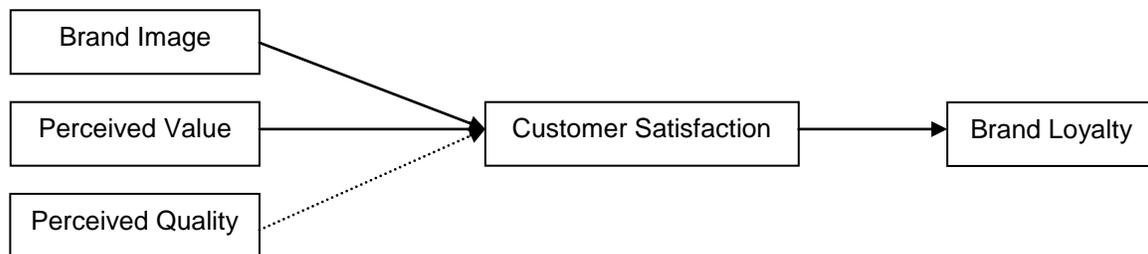
**Table 06: Hypotheses using Mediation**

	Estimate	S.E.	C.R.	P
CS <--- BI	.250	.043	5.798	***
CS <--- PV	.570	.073	7.759	***
CS <--- PQ	-.240	.061	-3.924	***
BL <--- BI	.153	.062	2.445	.014
BL <--- PV	-.062	.117	-.530	.596
BL <--- PQ	.525	.090	5.827	***
BL <--- CS	.623	.110	5.648	***

The hypotheses estimate table confirms that in the presence of mediation factor customer satisfaction, brand image and perceived value found insignificant to the brand loyalty, whereas, perceived quality has both, direct and indirect connections and that means it has a partial mediation in this case.

It is therefore concluded in Figure 05 that for mediation analysis, following model has been identified for this study where perceived value and brand image are affecting indirectly and perceived quality is affecting both ways. The dotted lines in the figures are suggesting that this variable has a partial mediation.

**Figure 04: Finalized Model**



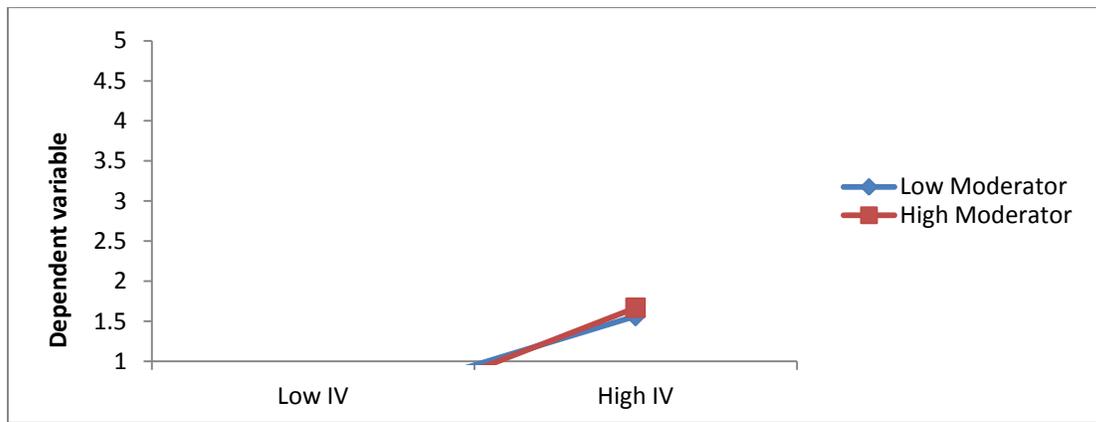
**Hypotheses testing using Moderation Analysis**

Moderation of price between brand loyalty and customer satisfaction has been conducted in two phases through regression analysis. In first phase, the moderator (price) has been taken as Predictor along with customer satisfaction whose values are mentioned in Table 07.

**Table 07: Regression without Moderator**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>ANOVA</b>	<b>Unst B</b>	<b>Sig Values</b>
<b>CS</b>	0.572	0.327	0.000	0.714	0.000
<b>P</b>				-0.047	0.437

**Figure 06: 2 Way Interactions**



The interaction of moderation although is not very strong but the effect is there. The high priced cell phones have chances that customers purchase them if they are imported due to major decrease in prices.

**Table 08: Regression with P Moderator**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>ANOVA</b>	<b>Unst B</b>	<b>Sig Values</b>
<b>BI</b>	0.583	0.340	0.000	0.698	0.000
<b>P</b>				-0.033	.000
<b>MOD</b>				.085	.005

After incorporation of interaction, the results showing slight improvement in the model and the moderator found significant with the customer satisfaction and brand loyalty relationship as mentioned in Table 08. Therefore, H8 is accepted, as price has found significant in the model.

### **Conclusion, Limitations & Recommendations**

The study has proposed a mediation of customer satisfaction in measuring the effect of brand image, perceived value and perceived quality on the brand loyalty in cell phone industry taken generation Y as the sample and moderation of price on customer satisfaction and brand loyalty. The research was conducted in two phases in first phase

the mediation was performed using AMOS and in second phase the price effect has been checked on customer satisfaction and brand loyalty using SPSS.

In first phase, four models were identified, the first model observed the effect of brand image on customer satisfaction and brand loyalty. The results indicated that image of a brand is significant for the loyalty of a customer and to improve brand loyalty, companies should invest in improving customer satisfaction. The second model suggested perceived value and its impact on customer satisfaction and brand loyalty. This model too was found significant where true mediation was found and it was established that perceived value is a true construct of brand loyalty and companies must deliver the value promised to their customers. The third model investigated the effect of perceived quality on customer satisfaction and brand loyalty. The model partially mediates and it is proved that perceived quality has a significant relationship with customer satisfaction and brand loyalty. Therefore, cell-phone companies must also develop perceptions of good quality in the minds of customers along with maintaining the actual quality. The fourth model was based on customer satisfaction and brand loyalty relationship which confirms the theory that customer satisfaction has a strong positive effect on brand loyalty. A study conducted by Hussain (2016) taken service quality, corporate image and perceived value on airline industry, the research concluded that all the variables taken were found significant and customer satisfaction comes out as a true mediator. Hence, in cell phone industry, companies must commit their resources and allocate adequate budgets for developing brand image, perceived value and perceived quality for gaining higher customer satisfaction to achieve more loyal customers in the targetd markets.

In second phase, the moderation was tested between customer satisfaction and brand loyalty relationship. The results revealed that in cell phone industry's context, the price has shown adequate relationship between customer satisfaction and brand loyalty. Thus it is recommended that cell phone companies operating in urbanized developing societies i.e. Pakistan, must give due importance for activities that would ensure customer satisfaction, if they want to have a long term committed customers in their targeted markets where there is a surge of refurbished/imported cell phones.

As the study setting is confined to urban markets that are targeted by cell phone industry. The sample investigated is not diverse as in such studies is more appropriate. Therefore, the scholars involved in the research of exploring customer satisfaction and brand loyalty may embark on research that may include other clusters of diverse markets been targeted by industries who need long term commitment from customers for maximizing their return on investment. Furthermore, scholars may explore products which are less tangible in nature and where the population is more diverse and prices may be a more valuable variable of satisfaction with reference to the delivered value.

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