Exploring the Impact of Customer Knowledge Management in Creating Brand Value with the Moderating Role of Gender and Residential Area of the Respondents

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Abstract

This research explores the ongoing process by which customer knowledge influences the brand awareness, brand image and brand value perception of consumers in telecommunication sector. This study applied quantitative research methodology. Survey was conducted using administered questionnaire as research instrument. For this purpose a sample of 600 respondents was chosen on the basis of mobile sim usage, gender and geoghraphical location from District Gujrat, Pakistan to test the conceptual model developed by reviewing literature from multidisciplinary fields. The results reveal that customer knowledge management positively and significantly contribute in strengthening the brand value through mediating role of brand image. However, brand awareness is not found a mediator between customers knowledge management and brand value relationship. Results postulates that marketing strategies on the basis of gender and geogrphical location play a significant role in brand value.

Keywords: Customer Knowledge Management, Brand Awareness, Brand Image, Brand Value

1. Introduction

Fierce market competition, globalization, innovation and advancement of information technology are key antecedents which make circumstances exceptionally tough for the businesses to survive. To cope up with this situation for businesses success, it is realized the need to shift their focus more on customer value through ongoing value-creation processes.(Sedighi, Mokfi, & Golrizgashti , 2012). Interestingly, all businesses know that they need to provide value to their customers. These businesses are now keen to adapt effective customer-oriented approaches to augment value creation processes in spite of knowing how challenging it is (Chan et al., 2010). Customer knowledge management (CKM) is known as a significant and most effective resource that can help (Giebert et al., 2002) e.g., improving innovation, to help analyzing emerging opportunities in the market and to make organizations able enough to manage long-term profitable customer relationships (Jenny & Rod, 2003). Therefore, businesses who have plan to stay, survive and compete in the marketplace should be investing in CKM which basically aims at acquiring, developing, communicating and sustaining the knowledge of the customers in the bid to enhance the value for them (Hualin & Zhongdong, 2010; Lin, Su, & Chien, 2006; Oin & Mu, 2009) by helping organizations in getting to know the customers more closely and clearly so that they can be served accordingly.

Customer Knowledge Management (CKM) and Knowledge Management (KM) have caught the attention of researchers, academia and most importantly business community. These both phenomena are used to support business activities so that competitive advantage can be gained and point of differentiation can be made (Gebert et al, 2003). As the competition has increased a lot in this era of globalization, therefore maintaining one's position, companies need to focus on customers' needs and their wants. This concept can be quite helpful for companies to follow a more customer-oriented or customer-centric approach to create brand value. It has become quite important for the businesses to adopt customer-oriented approach so that they have a better understanding of their customers which would build brand knowledge and create strong brand value and ultimately benefiting the companies as well as customers.

2. Research Framework and Hypotheses

Conceptual model (Fig-1) highlights that CKM has impact on creating brand value through brand knowledge. In this model it is hypothesized that CKM affects brand awareness of the customers of cellular companies in Pakistan. Similarly, brand image is also positively affected by CKM. It is also posited that brand image and awareness about brand positively contributed in strengthening the brand value and later brand image is also positively affected by the brand awareness of the customers. In addition, the relationships

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between structural paths are moderated by the gender and geographical location of the respondents. The key constructs of the conceptual model are reviewed based on the collected data to support the conceptual relationships based on theoretical grounds.
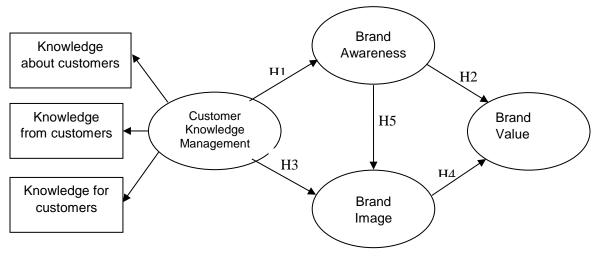

Figure 1: Conceptual Model

2.1.　Customer Knowledge Management (CKM)

CKM is an ongoing procedure through which knowledge about customers can be generated, disseminated and used inside an organization (Tanika et al., 2009). CKM has been known as a significant resource that supports the research and development in marketing (Giebert et al., 2001), to modify inventions and to facilitate opportunities to create long term profitable customer relationships in emerging markets (Jenny & Rod, 2003). CKM is tool to create an infrastructure to share knowledge and processes between sellers and customers. Furthermore, it is process which is strategic and continuous in nature; through which the companies equip its customers to shift from their information sources which are passive and also turn customers into empowered knowledge partners from customers of mere products and services (Chen & Huang, 2011).

2.2.　Customer Knowledge Management, Brand Awareness and Brand Value

Literature has revealed the customer knowledge as an asset. It is of great value for all types of businesses. It is amongst the significant factors that makes improvements in customers' value (Novo, 2001). KM increases awareness of the knowledge implanted in customer relationships and arrangements, whereas CKM is apprehensive in the management and utilization of customer knowledge which create value (Rowley, 2002). All businesses want to create value for customers that may shape their image in the market. Deploying a marketing strategy which is customer-oriented is essential to enhance the processes of value creation and capturing. Furthermore, it is also considered as one of the most important competitive strategies that can help create value for the customers. This endowment makes businesses proficient of achieving sustainable competitive advantage (Sedighi, Mokfi, & Golrizgashti, 2012). Therefore, it is imperative for all the businesses to invest considerably in CKM to survive in the marketplace because it increases the value for customers by gaining, developing, sharing and maintaining the knowledge of customers (Hualin & Zhongdong, 2010; Lin, Su & Chien, 2006; Oin & Mu, 2009). According to Cepeda et al (2016), Knowledge Management plays a significant role in creating value for customers. It adds that if companies are intending to stay and survive in the market, they need to focus on the customers more than ever before and knowledge management is the tactic by which companies can not only gain knowledge regarding the needs and wants but also manage it and offer value to customers. This value can help them gain competitive advantage and success.

2.2.1.　Customer Knowledge Management and Brand Awareness

Ross (2006) defined the 'Brand awareness' as strength of a brand present in customers' mind. Furthermore, it depends on the customer brand knowledge and ability to recall the brand among the alternatives (Aaker, 1991). Customers' decision making is influenced by this mental attachment. Additionally,

it helps brand identification. The sequence of brand name in customers' mind has strong differential affect to build customers' attitude toward brand (Schwarz and Bless, 1992). Additionally, awareness of brand influences brand image and association (Cwalina et al., 2008). Level of brand awareness increases product selection chance. It also decreases vulnerability of competitors.

H1: Customer Knowledge Management positively affects brand awareness.

2.3.   Brand Awareness and Brand Value

Differential effect on the response of a consumer to the marketing actives of a brand due to brand awareness and association is called brand equity. According to Hanzaee and Yazd (2010) customer value processes are significantly affected by brand awareness and price fairness concepts. Dimensions of the brand knowledge are categorized in a pyramid in which low level elements form the basis of high level elements of the dimensions. To put it simply, rational and emotional brand evaluations originate affiliation and attachment to a brand, which emanates out of emotional and functional associations with a brand and which depends upon brand awareness. If we look at the pyramid, we will clearly see that brand awareness is the initial point of creating brand value (Keller, 2001). Conceptual model based on branding and price of the product affects quality, value, perceptions, and behavioral intentions of customers (Haemoon, 2000).

H2: Brand Awareness has a significant impact on creating brand value

2.4.   CKM, Brand Image and Brand Value

According to Aaker, (1991), company having a good repute and brand name will attain a higher premium because of the goodwill, if and when it is sold. Furthermore, he elaborated that brand values also influence the choice of the target market in selecting a brand for a particular product or service. Core brand values not only reveal key problems but they may become the reasons which document a brand to be effectively differentiated. Different attributes of brand make the basis of the brand perception in a market place. Among them the perception is regarded as fundamental element to enhance the brand's image and influence decisions regarding purchase. This is why attention to a brand's image is considered as fundamental element for long term success and ultimately endurance (Aaker, 1991). With the increased competition in current era; companies are putting much focus on customer-oriented approach to gain competitive advantage. It also creates value for the customers (Sedighi, Mokfi, & Golrizgashti, 2012).

2.4.1.   CKM and Brand Image

Brand image in simple words is the view and perception which consumers have relating any brand and can be positive or negative. The positivity or negativity of brand image is grounded on external stimuli or fancies. Brand image is closely tied to brand value (Assael, 2004). Brands exist because of the values which are being perceived by the customers. These perceived values can be positive or negative as per the priorities and assumptions of the potential customers. These evaluations help build the image of the brand. One thing to keep in mind regarding the image is that it is purely a perception which cannot be a fact necessarily. Buyers do not always know every possible thing about a company and yet they hold opinions. But these perceptions and opinions work as the real thing for the buyers as they take their purchasing decisions based on the information they have (Aaker, 1991). According to Zhang (2015) the more the customers have knowledge about the product and service, the stronger and favorable brand image is created. Overall speaking if customers are being guided properly to process the information, knowing the difference between the brands, know motives to buy, give positive affiliations, and if or not extension is needed then value can be created by brand image (Aaker, 1991). Producing and upholding of the brand's image is the most crucial and toughest job to perform in the whole marketing program (Roth, 1995). However, the success of companies in managing and utilizing the customers' knowledge helps them in strengthening the brand image by developing effective brand strategies on the basis of knowledge produced during company-customer interactions and market trends. From these arguments it is concluded that managing customer knowledge facilitates firms in creating a brand image therefore it is hypothesized that:

H3: Customer Knowledge Management has a positive effect on brand image.

2.5   Brand Image and Brand Value

Brand image highly influence brand value. Furthermore, brand image affects the feelings and the perception of the customers of any brand. Ultimately, the impact of brand image is in customers' behavior (Zhang, 2015). Farquar (1990) elaborates the importance of brand equity as a supplementary value for customers and firms. Keller (2003) posits that additional value of goods and services is marked as brand equity. Additionally, brand equity is affects the brand value (Bivainiene & Sliburyte, 2008). Brand equity

model by (Aaker, 1991); Keller, (1993); customer based brand equity model, Ice-berg model of brand equity; Semion brand equity model; BEES model of brand equity, and Bekmeier-Feuerhahn brand evaluation (Zimmerman et al, 2001) clearly state and approve that brand image is strongly related to brand value for the customers. Customers have certain perception regarding the product and service and that helps them in their purchase intention which ultimately creates brand value. Based on the aforementioned discussion following is the hypothesis:

H4: Brand Image plays a significant role in creating brand Value for its customers.

2.6 Brand Awareness and Brand Image

Brand awareness is defined as "initial level of attitude-processing" (Brewer & Zhao, 2010). Aaker (1996) marked the brand awareness a significant element of brand equity. It has huge effect on the perceptions of customers, their attitudes and also sometimes reflects the salience of brand. However, many scholars agreed on the power of brand awareness in categorizing the brand clearly (Mourad, Ennew, & Kortam, 2010). Furthermore, brand awareness may also affect the loyalty of customers (Aaker, 1996). According to Keller (2001), Brand image is based on multiple beliefs, judgments and behaviors that the customers usually relate to the brand they use, no matter whether this perception is created purposefully or not. For the recent times, it is widely accepted that that brand image includes knowledge from customers and their brand belief about numerous products and allied attributes. The higher the brand image is; the better the quality perceptions of the customers (Iversen & Hem, 2007; Lee, Lee, & Wu, 2009). Brand awareness impacts the customer's choices by associating the brand in shape of brand image. The essential requirement for building brand image is basically dependent on the formation of brand association in consumer's memory and the strength of association in order to recall the brand.

H5: Brand Awareness has a significant relationship with Brand Image

2.6 Moderating effects of Gender and Geographical Location of the Respondents

The key aspects in evaluating the recognition and recall of the brand elements are gender, education and age. Although gender doesn't have major influence on recall aspect but it highly impacts the recognition of brand symbols (Subhani, Hassan, & Osama, 2012). Gender has been regarded as strategically important criterion to differentiate brands and to achieve brand equity on the basis of gender differences. There are new trends in consumer behavior due to increased influence of women in purchase decisions. Women are now responsible for about 80% of remarkable customer spending and this is why it is impossible for the brands to ignore this market (Cohan, 2001). Women are more inclined to advertising than men that make advertising tremendous instrument when trying to change brand value. Meyers-Levy and Maheswaran (1991) claimed that the women process information different from the way men process the information than men. Similarly, women react otherwise to advertisements as compared to men, for example women are deeply interested in the details. Myers-Levy and Sternthal (1991) and Catterall et al (2000) discovered that women tend to have lesser threshold for rich processing of a message and they are more likely to make good use of the signs in decision making. Similarly, Sapienza et al (2009) argued that women were normally at more risk adverse as compared to men and tends to evaluate information for longer time before making final purchase decisions. In consideration of these arguments this is hypothesized as follows:

H6a: Strength of all hypothesized relationships of the conceptual model varies according to the gender of the respondents.

The previous studies disclosed that the consumers from the urban areas are more conscious of the brand and style in contrast to the consumers from the rural areas which ranks functionality and rate more. Similarly, urban population gains information more from the internet whereas rural population relies on the television advertisements and cell phone retailers (Singh et al, 2014). Furthermore, (Rajan 2002) argued that rural customers are more careful customers and their decision process is more complex than the urban customers. This is due to the reason that during purchase decisions the rural customers try to avoid risks by giving priorities to the costs and gains unlike the urban consumers who may not focus much on the cost/sacrifice and seek functional/expressive value alone (Velayundhan, 2013). Rural consumers are more apprehensive about product's quality, brand name and brand benefits of the personal care products bought by them. Further, it was also revealed that rural customers are more brand loyal and brand suitability conscious than urban customers and once they found certain brands suitable according to their demands then they have very low chance to change it easily even persuade by friends or other social groups. Companies need to effectively communicate with the customers from rural and urban areas separately and

should use customized promotional strategies to deliver value and augment brand quality and opinions (Kumar and Joseph, 2014). Because, both markets have specific and individual requirements and need to consider demographic differences while finalizing the promotional strategies. Therefore, it is hypothesized that

H6b: Strength of all hypothesized relationships of the conceptual model varies according to the geographical location of the respondents.

3.   Research Methodology
3.1.   Data Collection

Survey based methodology is used to collect data. Survey is carried in the Telecommunication sector of District Gujrat, Pakistan. The sample was chosen by using Purposive or non-random technique. Five students (three male and two female) out of registered students in business research method course were trained and hired to collect the data. The respondents should be the current user of the cellular networks operating in the Pakistan. The respondents were approached personally and were described the nature of the study. Those who fulfilled the above-mentioned criteria were handed over the self-administered questionnaire. Respondents were requested to complete the questionnaires on site and returned them directly to the researcher or data collectors. Respondents completed the survey without and incentive. Researcher received 635 questionnaires out of 800 distributed. 600 questionnaires were complete in all sense and 35 were incomplete so we dropped them from the analysis. Valid and completely filled 600 questionnaires were used for the analysis (75% response rate). Table-1 highlights the respondents' demographic characteristics. With respected to gender; there are 58.3% males and 41.7% females. More than three quarter (79%) of respondents were between the age range of 20 and 40. Majority of the respondents were from urban area (63.7%). About half 49.8% respondents were having 16 years and above qualification. Most of the respondents were using the services of cellular companies for more than 10 years maximum and 2 to 4 years minimum (24.0%).

Table 1: Demographic Profile

Characteristics	Category	N	%	Characteristics	Category	N	%
Gender	Male	350	58.3	**Qualification**	Below Middle (8 yrs.)	30	5
	Female	250	41.7		Matriculation (10 yrs.)	62	10.3
					Intermediate (12 yrs.)	88	14.7
Age	19 and Below	38	6.3		Bachelors (14 yrs.)	121	20.7
	20-40	474	79.0		Masters and Above (16 and Above)	299	49.8
	41-60	84	14.0				
	61 and Above	4	0.7	**Geographical Location**	Rural	179	29.8
					Urban	379	63.7
Usage Years	Below 2 Years	61	10.2		Suburb	42	7
	2 - 4 Years	147	24.5				
	5 - 7 Years	140	23.3				
	8 - 10 Years	108	18.0				
	Above 10 Years	144	24.0				

3.2   Measurement

The constructs presented in conceptual model (figure-1) are measured by employing already established scales. These scales were carefully adopted to collect the most relevant information about constructs. Thirty-one measures were incorporated in the questionnaire and were used to gather data to define the latent constructs. The literature about these constructs was carefully and critically reviewed and five measures were selected to capture information regarding Knowledge fort customers, Knowledge about customers, and knowledge from customers, brand awareness and brand value. Six measures were selected for Brand Image. Five point Likert scale 1 (strongly agree) to 5 (strongly disagree is used to measure the constructs. There are two parts of the questionnaire. Part-1 consists of demographic and background variables including age, gender, residential area, length of using mobile services, and qualification of the respondents. The second part comprising the questions about six constructs presented in the conceptual model.

4. Results of the Study

4.1 Unidimensional Assessment

To measure the unidimensionality exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are conducted. The scales are purified by conduction the reliability test at first stage. The items having Cronbach Alpha less than reliability cut value 0.70 (Nunnally, 1978) and low item-to-total correlation (<.40) were dropped for next stage analysis. The item number 2 and 5 from knowledge about customers, item number 5 from knowledge from customers, item number 1 and 5 from knowledge for customers, item number 5 from brand awareness, item number 1 and 2 from brand image and item number 5 were dropped from the brand value. The remaining measurement items are retained. The further analysis is carried on retained items. In CFA, the CKM construct is captured from knowledge about customers, knowledge from customers and knowledge for customer as a second order correlation. The CFA is performed by using the AMOS Version-16. The model fit indices were chi-square X^2 (212) = 630.1, Goodness-of-Fit Index (GFI) = .917; Adjusted Goodness-of-Fit Index (AGFI) = .892; Comparative Fit Index (CFI) = .900; Root Mean Square Error of Approximation (RMSEA) = .057; and Standardized Root Mean Square Residuals (SRMR) = .0519. The model fit indices indicate that model is acceptable and may be used for Structural Equation Modeling in the next stages. The Pearson correlations presented in table-2 illustrates the strength of relationship among the variables customer knowledge management and brand awareness. The results indicate that knowledge for customer has the highest correlation with (r = .45, p< .01), followed by knowledge about customers with correlation (r = .35, p< .01), knowledge from customers (r = .31, p< .01). The correlation with customer knowledge management variables and brand image was also examined. Knowledge for customers has highest correlation with (r = .50, p< .01), followed by knowledge about customers (r = .45, p< .01), and knowledge from customers (r = .43, p< .01).

4.2 Hypotheses Testing

AMOS version 16 is used to evaluate the hypotheses proposed in conceptual model- Fig-1. Three structural equation path models were tested. In the first path model the hypothesis-1 to hypothesis-5 were tested by using complete sample (n=600). In the second path model the moderation effects of Gender were tested by dividing the sample into male and female gender (male n=350 and female n=250). The moderation effects of gender were tested for hypothesis-1 to hypothesis-5 to evaluate the paths that are moderated by the gender. In the third path model the moderation effects of geographical location of the respondents were tested by dividing the sample according to respondents residing in the rural and urban area (Rural n= 179 and Urban n= 379). The respondents residing in the suburban area were dropped from the moderation test due to low number of responses (n=42). The moderation effects of geographical area were tested for hypothesis-1 to hypothesis-5 to evaluate the paths that are moderated by the geographical area where the respondents were residing.

4.3 Overall Model Results

Hypotheses from H1 to H5 are analyzed by using SEM. The structural equation model analysis results show that the proposed model provided good fit to the data, X^2 (196) = 583.4614, GFI = .918; AGFI = .896; CFI = .9013; RMSEA = .0574; SRMR = .0504. All in all, the model explained 28% variance in brand awareness- SMC (Squared Multiple Correlation) =.28), 65% variance in brand image (SMC=.65), and 56% of variance in Brand Value (SMC=.56).

Table 2: Correlation Estimates and Constructs Mean

	Constructs	1	2	3	4	5	6	Mean	S. D.
1	Knowledge About Customers	1						2.3896	.69894
2	Knowledge From Customers	.437**	1					2.7142	.78459
3	Knowledge for Customers	.471**	.480**	1				2.3583	.74346
4	Brand Awareness	.349**	.310**	.453**	1			2.0630	.67690
5	Brand Image	.451**	.432**	.499**	.454**	1	.	2.2911	.75308
6	Brand Value	.396**	.355**	.439**	.343**	.561**	1	2.5223	.88559
	** Significance at the 0.01 level with 2-tailed, N=600								

The estimates of the structural coefficient presented in table-3 provided the goodness-of-fit tests of the proposed relationships in the conceptual model. The effects of customer knowledge management on brand awareness and effects of brand awareness on brand value are evaluated; where objective is to test

H1 and H2. The relationship between customer knowledge management and brand awareness (hypothesis-1) is found significant. The result shows positive coefficient with standardized $\acute{Y}_{1 =}$ .53), the value is statistically significant with $p<.001$ level. However, the relationship between brand value and brand awareness is found negatively significant. The path coefficient with standardized $\acute{Y}_{1 = -}$.15), shows $p<.05$ level. It means that increase in the strength of brand awareness decrease the brand value. The proposed relationship between customer knowledge management and brand image (Hypothesis-3) found significant with coefficient standardized $\acute{Y}_{2 =}$ .62), and significant with $p<.001$ value. Hypothesis 4 suggested that brand image increases the brand value was supported by the significant and positive path coefficient (standardized $\acute{Y}_{1 =}$ .85), statistically significant at the $p<.001$ level. Finally, the hypothesized relationship between brand awareness and brand image (hypothesis 5) is supported with significant and positive coefficient standardized value $\acute{Y}_{1 =}$ .28), the value is significant with $p<.001$. The empirical results supported all hypothesized structural relationships except the relationship between brand awareness and brand value.

Table 3: Results of Structural Model

Hypothesized Relationship		Proposed Model		
		Standardized Path Coefficient	t-value	Results
Overall Model				
H1	Customers Knowledge Management → Brand Awareness ($\acute{Y}_1$)	.5276	8.7160***	Supported
H2	Brand Awareness →Brand Value (β_1)	-.1495	-2.1293*	Not Supported
H3	Customers Knowledge Management →Brand Image ($\acute{Y}2$)	.6223	8.1735***	Supported
H4	Brand Image → Brand Value ($\beta2$)	.8479	6.0946***	Supported
H5	Brand Awareness→ Brand Image ($\beta3$)	.2813	4.7560***	Supported
*** $p<.001$, **$p<.01$, *$p<.05$, X^2(196) = 583.4614, GFI = .918; AGFI = .896; CFI = .9013; RMSEA = .0574; SRMR = .0504				

4.3.1. Mediation Model Test

In the conceptual model, presented in figure-1, it was proposed that brand awareness and brand image mediate the relationships between customer knowledge management and brand value. These hypothesized mediating relationships were analyzed by using Process Model approach (Hayes, 2013). The mediating results shows that the relationship amongst customer knowledge management and brand value are significantly mediating by the brand image (β = .26, SE = .054 [.172 ~ .380]). The results also exhibit that brand awareness is not mediating the relationship between customer knowledge management and brand value (β = .04, SE = .026 [-.078 ~ .095]). However, brand awareness mediates the effects of customer knowledge management on brand value and brand image (Customer knowledge Management → Brand Awareness → Brand image → Brand value), (β = .07, SE = .017 [.041 ~ .108]). It is notable that the brand image is strongly and significantly mediating the effects of customer knowledge management on brand value.

4.3.2 Moderation Model Tests

The moderating effects of gender and geographical location of the respondents were estimated by using a multigroup approach. The moderating effects of gender on entire hypothesized relationships in the conceptual model were estimated at first stage. To check the moderating affects the data is divided into two parts with respect to gender of respondents. The data set was divided into Male = 350 and Female = 250 respectively. This multigoup analysis was conducted to check whether gender positively and significantly mediates the proposed relationships from H1a to H5a. All the structural paths of the conceptual model are estimated with both groups (male and female) and paths are freely estimated to tap the differences. The differences between moderating effects of male and female were evaluated by using X^2difference test by running model with AMOS, version 16. The moderation results of gender are presented in the table-4. X^2difference comparison test results exhibit that gender does not moderate the relationship between customer knowledge management and brand awareness as the X^2difference comparison test is insignificant ($\triangle X^2/\triangle$d.f. =1.95, $p<.165$). Similarly, gender does not reasonable the relationship amongst customer knowledge management and brand awareness as the X^2difference comparison test is also insignificant ($\triangle X^2/\triangle$d.f. =1.79, $p<.180$). Therefore, hypothesis 1 and hypothesis 2 were not supported.

The results of X^2 difference comparison indicate that there is a significant difference between male (β = .665, p<.001) and female (β = .525, p<.001) in the relationship between customer knowledge management and brand image ($\triangle X^2/\triangle$d.f. =5.23, p<.05). These results support that gender significantly moderate the relationship between customer knowledge management and brand image. Therefore, the hypothesis 3a was supported. On the basis of these results it is concluded that the male have more positive brand image of the cellular companies when their knowledge is increased than female. The results of X^2 difference comparison document that there is a substantial relationship among brand image and brand value ($\triangle X^2/\triangle$d.f. =4.23, p<.05). Thus, the gender significantly moderates the relationship between brand image and brand value. Therefore, the hypothesis 4a was also supported. These results prove that female have strong brand value in their mind when the brand image is improved than male. Similarly, the results of X^2 difference reveal that there is a significant difference between male (β = .814, p<.001) and female (β = .475, p<.001) in the relationship between brand awareness and brand image ($\triangle X^2/\triangle$d.f. =10.3, p<.01). These results show that gender is significantly moderating the relationship between brand awareness and brand image. It is concluded that increase in brand awareness develops stronger and more positive brand image of cellular network provider in the mind of male than female. Therefore, the hypothesis 5a was also supported.

Table 4: Multigroup Comparison Test (Moderation test based on Gender)

Hypothesized Relationship		Standardized Path Coefficient (t-value)		X^2 Difference
		Male	Female	
H1a	Customers Knowledge Management → Brand Awareness (γ_1)	.534*** (8.58)	.503*** (8.58)	1.95 NS
H2a	Brand Awareness →Brand Value (β_1)	-.210** (-3.20)	-.275* (-3.20)	1.79 NS
H3a	Customers Knowledge Management →Brand Image (γ_2)	.665*** (8.23)	.525*** (8.23)	5.23 *
H4a	Brand Image → Brand Value (β_2)	.534*** (8.58)	.936*** (8.58)	4.23 *
H5a	Brand Awareness→ Brand Image (β_3)	.814*** (8.93)	.475*** (8.93)	10.30 **
Model Fit Indices: *GFI* = .851; *AGFI* = .810; *CFI* = .827; *RMSEA* = .0579				

Table 5: Multigroup Comparison Test (Moderation test based on Geographical Location of the respondents)

Proposed Hypothesized Relationships		Standardized Path Coefficient (t-value)		X^2 Difference
		Urban	Rural	
H1b	Customers Knowledge Management → Brand Awareness (γ_1)	.542*** (8.62)	.664*** (8.62)	16.81***
H2b	Brand Awareness →Brand Value (β_1)	-.120* (-2.44)	-.157* (-2.44)	10.47***
H3b	Customers Knowledge Management →Brand Image (γ_2)	.578*** (7.45)	.587*** (7.45)	12.70***
H4b	Brand Image → Brand Value (β_2)	.923*** (8.25)	.632*** (8.25)	2.61 NS
H5b	Brand Awareness→ Brand Image (β_3)	.358*** (5.27)	.298*** (5.27)	11.73***
Model Fit Indices: *GFI* = .851; *AGFI* = .810; *CFI* = .827; *RMSEA* = .0579				

The moderating effects of geographical location of the respondents on entire hypothesized relationships in the conceptual model were estimated at second stage. To check the moderating affects, this is divided into two parts with respect to geographical location. The data set was divided into Urban = 379 and Rural = 179 respectively. The respondents residing in the suburban area were dropped from the moderation test due to low number of responses (n=42). This multigoup analysis was conducted to check whether geographical location of respondents positively and significantly mediates the proposed relationships from H1b to H5b. Table-5 highlights the moderation results. X^2 difference comparison test results exhibit that there is a significant difference between urban (β = .542, p<.001) and rural (β = .664, p<.001) in the relationship between customer knowledge management and brand awareness ($\triangle X^2/\triangle$d.f. =16.81, p<.001). These results support that geographical location significantly moderate the relationship between customer knowledge management and brand awareness. Therefore, the hypothesis HIb was supported. On the basis of these results it is concluded that the brand awareness of the respondents locating in the rural area increases by managing the customer knowledge by the cellular companies more than the respondents locating in the urban area. The results of X^2 difference comparison indicate that there is a

significant difference between urban (β = -.120, *p*<.05) and rural (β = -.157, *p*<.05) in the relationship between brand awareness and brand value ($\Delta X^2/\Delta$d.f. =10.47, *p*<.001). Thus, the geographical location significantly moderates the relationship between brand awareness and brand value. Therefore, the hypothesis H2b was also supported. However, the results show that with increase in brand awareness the brand value decreases more in rural areas than urban. Similarly, the results of X^2difference comparison show that there is a significant difference between urban (β = .578, *p*<.001) and rural (β = .587, *p*<.001) in the relationship between customer knowledge management and brand image ($\Delta X^2/\Delta$d.f. =12.70, *p*<.001). It is concluded that brand image improves in rural areas by managing the customer's knowledge. Thus, the hypothesis H3b was also supported. The results of X^2difference comparison specify that there is no substantial difference between urban and rural location of respondents in the relationship between brand image and brand value ($\Delta X^2/\Delta$d.f. =2.61, *p*<.107). Therefore, H4b was not supported. There are also significant differences between urban (β = .358, *p*<.001) and rural (β = .298, *p*<.001) in the relationship between customer brand awareness and brand image ($\Delta X^2/\Delta$d.f. =11.73, *p*<.001). Results indicate that by increasing the brand awareness the brand image is improved in the respondents residing in the urban area more the respondents belonging to the rural area. Therefore, the hypothesis H5b was also supported.

5.   Conclusion

This research is conducted with aim to determine the role Customer Knowledge Management in the development of brand value in the minds of the customers with mediation effects of brand awareness and brand image. The analysis results of the conceptual model indicate that brand awareness is improved by managing the customers' knowledge through creating knowledge for customers and capturing knowledge about customers as well as from customers. The knowledge about customers helps cellular network providers to create the particular set of knowledge for them and to tap the knowledge from them in order to analyze the role of provided knowledge in increasing the brand awareness, brand image and ultimately the brand value. The results indicate that customer knowledge management significantly and positively improves the brand awareness about the network provider. This improvement in brand awareness strengthens the brand image in the mind of customers. The strength of knowledge in the memory of the customers helps them to recognize a particular cellular network provider among the competing brands in variety of situations (Ahmed et al, 2015). However, it has been noted that the brand awareness tends to decrease the brand value. This is may be due to the psychological effect of brand uniqueness. The promotional strategies increase the awareness of a particular network package or additional offer that definitely improves utility of services. The high utility of services decreases the brand uniqueness and tends to lower the brand value in customer's mind as suggested by Chu and Keh (2006).

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