ANALYTICAL STUDY OF REDUCING BRAND SWITCHING (NUMBER PORTABLITY) IN GSM SECTOR.

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ABSTRACT

This study aims towards identification of the factors responsible for the Brand Switching (MNP) in GSM sector of Pakistan. This study was based on primary data and was designed in a manner that it inferred the current purpose of customer defection and their intention to switch from one service provider to other. Overall 184 responses were collected and data was analyzed by using multiple responses set and Logistics Regression. After analysis, it was found out that the service Quality and Value-Added services are the prime factors that are responsible for the customer defection from one service provider to the other. It was also found out that most of the respondents have either changed their number or have switched from their first network service provider. This result clearly states that there is a vast quantity of customer mix in the Pakistan's GSM sector.

Keywords: MNP, GSM, Brand switching, Number Portability, Churn rate, Customer defection

INTRODUCTION

The phenomenal advancement in the technology and communication has led people communicate far more quickly than ever before. With the increasing research and development, men have transformed the traditional ways of communication into more quicker and reliable medium. The telecommunication technology stands pioneer as it has become the most attractive industry due to its acceptance and growth. It includes satellite communications, fiber optics networks, IP networks, Mobile-Cellular telephony and etc. The most promising among all telecom industries in terms of growth, subscription and teledensity is mobile-cellular telecommunication industry. According to ITU statistics, the teledensity of mobile-cellular telecommunication globally has reached to 86.7 per 100 inhabitants in 2011 which was 15.5 per 100 inhabitants in 2001(ITU). Kim, Park and Jeong (2004) has indicated high demand from customers of the brisk improvement of information and communication technologies is now shifting the standard of mobile telecommunication services from basic functionality to a combination of high-speed data communiqué.

Globalization has made survival and growth for all firms very challenging. Satisfying the customer is every firm's core focus because it is the customer who eventually defines quality and standards. Companies, who fail to meet those standards, go out of business. Service sector is the fastest growing sector of the modern era and in this sector, telecommunication has a huge contribution toward the economy of any country. Every single interaction across the globe is taking place through telecommunication. Each decision and activity is incomplete without involving any telecommunication technology.. Deutsch (1953) says that this is "a web of

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nations". Communication has turned this world into a "global village" (McLuhan, 1964). Communication technology has gone beyond the borders of voice telecom (Melody, 2003). Competition is increasing rapidly because of endless possibilities and growth opportunities among all companies. Nevertheless, comprehending needs and prior experiences of consumers is of utmost significance. Their perception on all attributes will lead companies into the right direction.

The network providers started to focus on attributes like pricing and quality. They came up with packages that led to discounts, unlimited talking or messaging which increased overall usage and income from tariffs. Due to this situation, two core priorities for MNP were to protect rights of consumers and also stimulate competition. The government introduced mobile number portability option so that further cost cutting could take place. In America, over 30 million consumers were estimated to switch their operators after introduction of this facility while only 7.8 million consumers actually did (Shin, 2006).

European countries were slightly reluctant in introducing MNP facility. Some were concerned about affect on large mobile operators while others were faced with technical issues (Shakouri, Tehrani &, Taheri, 2004). Nera (National Economic Research Associates) continued to monitor utility of MNP in England and surprisingly, only 12% of the total users switched their networks in the first two years of implementation. A major reason for this slow shift was because people had difficulty understanding it (Shin, 2006). However, once consumers became familiar with the concept, usage of MNP was way easy and made their lives simpler in many contexts. This realization made MNP more popular in its later years of being operative. On the other hand, network providers had a fair chance of competing on the basis of quality of service and fair pricing for the consumers.

The Telecom sector of Pakistan has seen growth since its introduction. The Telecom sector of Pakistan is a significant exchequer to the economy as it is contributing around Rs 100 Billion on an average per year to the economy. The telecom sector has attracted many national and international firms. Telecom sector has shown stability whereas the whole economy was being faced by adverse shocks due to floods, oil and commodity price fluctuations in 2011. The telecom sector showed an expansion of overall 6.7% teledensity recorded to be 68.39% during the FY 2011 (PTA). Based on six cellular companies the market share of GSM sector is distributed as Mobilink 30.7%, Telenor (24.5%), Ufone (18.9), Warid (16%) and Zong (10%), Mobile-Cellular sector contributes around 95% of the total Telecom sector teledensity. Mobile-Cellular penetration improved by 4.3% during the FY 2011 and reached to 64.9% (PTA).

Mobile-Cellular subscription has witnessed tremendous growth of 170% since the deregulation in 2004 (PTA). With the addition of 9.7 Million new subscribers, the total number of subscription has reached to 108.99 million at the ending of 2011. Out of total subscription, 98% subscriber are prepaid mainly due to zero line rent, lower prices, credit control, and small top up (balance recharge) (PTA).

LITERATURE REVIEW

All these cellular network companies are adding to effectiveness and competition in this sector. Knowing that new entrants are now present in the market, those monopolistic interests

of firms are long gone now. Telecommunication sector in most countries is operating as an Oligopoly which consists of few major players who control the pricing and quality of the product as well (Durukan &Hamurcu, 2009). There is massive growth for mobile operators in Asian market. The number of mobile applications being used is increasing and even expanding to the education and training sectors (Petrova, 2007).

Jahanzeb and Jabeen (2007) indicated that competition is increasing among network providers; churn rate is becoming an important factor for each of them. Initially, companies were concerned only about attracting new customers but now it is becoming an issue for them to retain their existing customers. Churn rate is actually the number of customers leaving a telecommunication company in every given period. As telecommunication sector is reaching its saturation point, companies find it crucial to keep a track of their churn rate and effectively manage it so that they are able to stay ahead of their competition.

Yankee (2001) inferential survey concluded as cost of obtaining a new buyer is 7 times higher than the cost of upholding an on hand buyer on annual level. Churn rate may vary from region to region as well. There are two possibilities behind churn rate. It can be either external churn rate which is because customer finds quality of service and pricing of a competing company better than the one he/she is using. Another possibility is that he or she is faced with unavoidable reasons or is migrating to another state so internal churn rate comes into place. External churn rate can also be called customer initiated churn rate while customer initiated churn rate encompasses unsatisfactory service of current network provider. Mobile number portability has brought a very convenient option to all customers that they can switch network as they please (Jahanzeb and Jabeen, 2007).

Mobile number portability has made things simpler for consumers and reduced cost for changing network. This study is based on evaluating relationship between various variables including customer satisfaction with MNP, switching costs, customer loyalty with existing network and satisfaction (Durukan, Bozacı &, Dogan, 2011). Ürper (2009); Buehler and Haucap (2003); Buehler, Dewenter and Haucap (2005), all of these researchers have tried to analyze relationship between consumer satisfaction, switching inclination, and mobile number portability and worked on other related mathematical models. Many other researchers have also worked on the impact of and reactions to mobile number portability in various countries of the world trying to understand relationship among various variables (Durukan et al., 2011).

Presently, mobile network providing companies are focusing on ways to satisfy their customers because new entrants are increasing the saturation level of this sector (Fatima Ali, Ali, Rehman, Yilmaz, Safwan &, Afzal, 2010). Their main agenda is not only to attract new customers to increase their overall customer base, they are also putting equal efforts in retaining existing customers so that they do not have to incur additional cost for attracting every new customer. Customer retention on its own turns out to be a factor that contributes to increment of overall market share (Steenkamp, 1989).

At present, annual churn rate for telecommunication companies is ranging from 20% to 40%. This has become a serious concern for all companies over time (Ahn, Han &, Lee, 2006). Another reason for this to become a serious concern for companies apart from reducing their profit levels is that acquiring new customers is multiple times costly than retaining an existing

customer (Siber, 1997).

With the telecommunication industries competing in battlefield, it is important that each service provider meets customer expectations in terms of price as well as service quality. It is not enough to just provide good pricing and service quality (Melody, 2001). The companies must also keep in consideration what customers' expectations are in that regard. This is why now companies are coming up with strategic mix of pricing and service quality so that they are able to attract as well as retain substantial number of customers.

Pricing structure takes a shift when companies change their focus from earning revenues to providing value to their customers. Two part pricing concept is the one which is relevant here. Two part of pricing policy entails that a part of the price is fixed while other is usage dependent (Xie & Shugan 2001; Essegaier, Gupta &, Zhang 2002). Danaher (2002) surveys indicate that mobile networks are now incorporating the concept of maximum possible future usage of service in a given time period instead of using the price per unit concept. The studies further imply that pricing does have an impact on customers' loyalty to a particular service provider.

Leisen and Vance (2001) suggest that service quality makes all the difference when all other factors are close to constant. No other competitive edge can be maintained in the long run except service quality. In addition to that, a product or service on its own is never enough to satisfy a customer. Therefore, service quality becomes the differentiating factor here. Nevertheless, it is a challenge for telecommunication service providers to consistently maintain service quality standards due to never ending changes in the market structure on both micro and macro level.

Prior studies indicate that quality of connectivity and the network itself has major contribution to a customer's being satisfied or dissatisfied with a service provider (Ahn, et al., 2006). Therefore, if a company focuses on its connectivity quality and makes sure that they provide best services, they can eventually reduce their churn rate. A study showed that 44% of customers, who switched their networks, did solely because of poor services of their previous service provider (Keaveney, 1995). Along with that, dissatisfaction with service centers adds to their overall dissatisfaction with the network and they eventually switch network. It is crucial to define quality itself before measuring any product against it. There is no universal definition for this term but some studies indicate that there are two perspectives on this term. Marketer's perspective revolves around product or its manufacturing while consumer's perspective revolves around expectation from and experience with the product (Archibald, Haulman & Moody,1983).

It is core function and features of the product that customers worry about. They want these features to be better than that of competitors'. It becomes an essential measure for telecommunication sector to therefore, focus on quality of their service and try to meet customers' expectations (Lambert, 1980; Nowlis & Simonson, 1996). This is why the sector's progress is also dependent upon their quality as well as availability. While talking about quality, it is important to understand both costumers' and mobile operators' perspective. Mobile operators need to keep various aspects of quality into their consideration so that they can sustain in this ever changing macro environment. GSM (Global System for Mobile Communication) has listed some significant factors that will help improve quality of service.

These factors mainly revolved around service integrity and retain ability; network and service access (Sutherland, 2007).

Accenture (2008) started study in various countries including countries from America Continent and European Continent. Their sample for this study was around 4189 customers of network providers. Out of these 4189 customers surveyed, as much as 67% customers identified poor service quality and poor customer service as their core reason for switching service provider.

Souki and Filho (2008) initiated a study on 434 respondents in Brazil. This study indicated that the reasons that contribute to a customer's high level of satisfaction with mobile service provider. The results implied that these factors included good ambience of service centre, great quality of connectivity, and overall coverage.

Directorate for Science, Technology, and Industry (DSTI) Committee on Consumer Policy conducted a study in the year 2007 regarding customer satisfaction for telecommunication segment in OECD (Organization of Economic Cooperation and development). This study brought another perspective into view. If mobile operators are not communicating clear roaming and other tariff charges to their consumers, unidentified binding limitations for consumers by mobile networks and value for money have a very high impact on consumers' behavior toward a mobile network provider. Imperfect information is a significant indicator which was highlighted with the help of this study. However, the reason for switching network remained the same that consumers mostly switched network due to unsatisfactory quality of service and highly charged prices. The study further emphasized on the element of imperfect information by entailing that billing was inappropriate in US and consumers in UK were faced with almost equal pricing by every network provider (DSTI, 2007).

Now coming to the core of pricing, consumers, who are aware of actual pricing, respond stronger than others toward any changes in it. Studies show that a customer who is satisfied with his or her service provider will have a higher tolerance limit for any increase in actual prices over time (Anderson, 1996). However, it is important that companies do pay close attention to value added services or additional bonus packages that they provide to their subscribers. Call quality and geographical coverage of the network among all variables have the biggest share in satisfying a customer (Woo & Fock, 1999). According to Trebing (2001), there are three types of pricing strategies. First is to limit entry for new companies and thus maintain company position. Second is to increase prices for new entrants which will discourage them from entering respective sector.

Third is to charge prices based on contribution margin. Along with that, he also concludes that continuous use and strategic pricing are the only tools for telecommunication sector's prosperity. Nevertheless, despite all these studies, not all the facts and variables have surfaced as yet. There is more scope for further studies and refinement of causal relationships. At times, even exploration studies can play a major role. Researchers are now inclined toward finding the relationship between profitability and customer retention with respect to loyalty. Otherwise, most studies were focused to find out variables that helped a mobile network in keeping its customers satisfied or rather increasing their satisfaction level with current service provider.

Theories as well as studies suggest that switching cost has an impact on quality and price of the product. It also reduces competition in the market (Maicas, Polo & Sese 2009).

Factors that affect customer loyalty include switching cost and customer satisfaction mainly. Nevertheless, there are no universally defined factors for loyalty (Bloemer & Lemmink, 1992).Surprisingly, some reviews reveal that 80% of customers, who switched their networks, actually responded in surveys before switching as being very satisfied with the service of current provider. According to Arasil (2005), switching cost has an impact on customer satisfaction and trust as well. Some mention it as a quasi moderator. Switching cost when combined with customer relationships increases customers' loyalty. In addition to that, switching cost also intervenes in the number of portability taking place among consumers. Studies show that if the price of portability is brought near to zero, the overall portability as well as usage of networks will increase by 44.7%. Consumers will use more service because they will be enjoying lower rates after portability. It shows that price of service is not the only deciding factor.

Prior studies show that customer satisfaction does help in retaining existing customers in the long run. However, some other studies indicate that customer satisfaction is not the only factor which contributes to retention (Kim et al., 2004). In some cases, it even fires back and is not sufficient to retain customers in the long run. Customer satisfaction does help in gaining customer loyalty in most cases, but companies still need to identify solutions for those rare cases (Dick & Basu, 1994; Lee & Cunningham, 2001). This need introduces the switching barrier. Jones, Mothersbaugh, and Betty, (2002) suggests that customers remain loyal to only those companies that win the battle of survival of the fittest. Defensive strategy works better in these cases where company has to maintain its reputation and retain its current customers instead of being aggressive and increasing its overall customer base (Fornell, 1992; Ahmad & Buttle, 2002).

Three factors combined formulate the switching barrier which includes switching cost itself, availability and attractiveness of alternatives, and interpersonal relationships. It is favorable for a company to have a high switching barrier because the higher the barrier, the more difficult it becomes for a customer to switch to another company (Murray, 1991). Another way to overcome dissatisfaction or gain satisfaction is called "Complaint Management". Studies show that many customers become satisfied after they have made a complaint and their complaint was dealt with in an excellent manner. However, if the number of complaints increases, satisfaction will go down (Andreasen, 1988). Therefore, complaint management is another element that mobile companies cannot afford to overlook. Customer retention has become the ultimate goal of mobile networks in Pakistan considering the increasing competitiveness of this sector over time.

Promotion is a tool that companies use to persuade its potential customers and masses about their products and also remind them of their presence. Promotion helps all companies in meeting their targets and goals (Alvarez & Casielles, 2005). From marketing perspective, purpose of promotional strategies is to retain or increase market share and increase sales for the product as well. This is what ultimate goal of almost every company is i.e. to increase sales and market share. In addition to that, promotional strategies also focus on creating awareness among employees, communicating differentiation factors of products, and also present a

competitive perspective (Kotler & Armstrong, 2003). Promotion acts as a stimulus among customers to make purchase. Promotions directly affect perception and buying pattern of customers (Freo, 2005). Studies suggest that companies achieve their goals of promotion when they do it at times when the customer is least expecting it. A crucial factor here is that these promotional strategies must be in harmony with the strategic objectives of the entire organization.

RESEARCH METHODOLOGY

Methods of Data Collection

This study is based on exploring the factors that are responsible for reducing Brand Switching (MNP) in GSM sector. This research is supported by primary data. The respondents are selected from various universities and professions.

Sampling Technique and Sample Size

The students and professionals were the primary segments of focus and subscription for the cellular service providers, therefore these two segments were primarily targeted in this study. Unrestricted non-probability sampling technique was used in data collection. The main concern of students with cellular companies is they are more interested in advertisements and are more conscious of the charge plan whereas the main concerns of professional are innovative product offerings, connectivity and call quality of these companies. 225 students and professionals were selected and survey questionnaires were administered personally and online through Google docs. 184 were found useful for the analysis. The demographics characteristics of respondents are as follows. The 74.5% respondents were found to be between 19 and 25 of age with the majority of male respondents with 74.5%. 53.8% respondents were found to be master's level student with the average spending on monthly mobile communications between 251-500 and 501-100 (58.7%). The characteristics (sample) of GSM service provider in terms of usage are as follows: Mobilink (12%), Telenor (23%), Ufone (43%), Warid (15%) and Zong (7%). The average duration of network service usage is found to be 4.85 years. 87% respondents were found to be prepaid service users.

Instrument of Data Collection

To study and measure the determinants of brand switching (MNP), the instrument that has been used for data collection is a questionnaire comprised of several close ended questions and multiple responses set with Likert scale ratings covering monthly mobile expenses, independent & dependent variables & a profile section which included name, age, profession, education & gender. Several items of the instrument were adopted from Kim et al (2004); Ali et al (2010) & Jahanzeb and Jabeen (2007).

Table 1.1

Construct	Measurement of Variables	References
Pricing structure	1) high prices of call, sms and data package offered by network/service provider 2) Variety of price packages offered by network/service provider 3) Possibility of freely choosing price schedules	Jahanzeb and Jabeen, 2007; Kim et al 2004; Ali et al 2010.
Valve- added services	1)Variety of value-added services offered by network/service provider 2) Convenience of use of value-added services 3)outdated value-added services offered by network/service provider	Ali et al2010; Kim et al 2004.
Call quality	Satisfaction with call quality, call recharge, network coverage and value for money	Ali et al 2010;Jahanzeb and Jabeen, 2007; Kim et al 2004;
Connectivity	Satisfactory and non satisfactory connectivity services	Jahanzeb and Jabeen, 2007;
Complaint management	1) Prompt dealing with complaints, 2)Poor attitudes of the customer service personnel, 3) Slow complaint processing, 4) Difficult complaint reporting 5) Friendliness, 6) Service provider's care for customer, 7) Lower Level of communication	Ali et al2010.
Product differentiation	Product Differentiation, Service Differentiation and Corporation	Self constructed
Convenience in procedures	The overall services of changing a package, getting new sim card and recharge (top ups).	Kim et al 2004.
Switching barriers	Switching Cost, Attractiveness of Other Alternatives and Customer Loyalty and Satisfaction	Kim et al 2004.

Research Model Developed

The following research model has been developed to study and measure the determinants of reducing brand switching (number portability) in GSM sector.

Figure 1.1
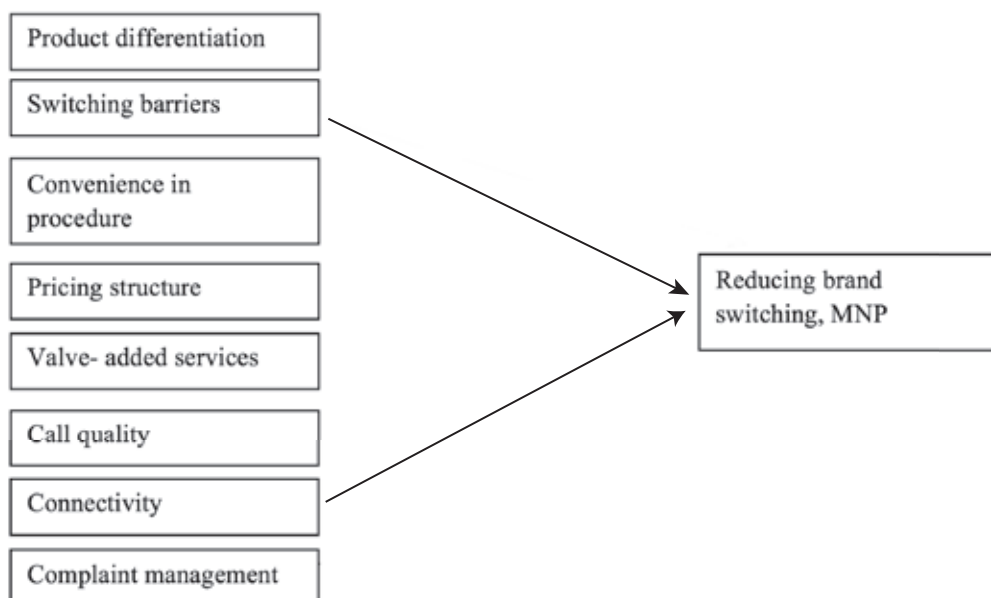
Source: Self constructed

This research has been categorized into eight main categories termed as Product differentiation, switching barriers, Convenience in procedures, pricing structure, Valve- added services, Call quality, Connectivity and Compliant management.

Validity and Reliability

The reliability of data was checked through Reliability Analysis using SPSS. The data was found to be reliable with the value of cronbach's Alpha 0.764.

Table 1.2

Reliability Statistics	
Cronbach's Alpha	N of Items
.764	10

Statistical Technique

The techniques used for the analysis are Binary logit (also known as Logistics Regression) and multiple responses set. The Logistics Regression was used because of dichotomous nature of dependent variable. Another reason of using Logistics Regression is the independent variables are categorical in nature. Multiple responses set were used to analyze the respondent's reasons and intention to switch while multiple choices were given to be chosen for a question.

Findings and Interpretation of Results

To access and understand the cellular service users' switching reasons and intentions, multiple responses set was used. There were two sets defined all together. In the first set respondents were asked to identify the reasons that why they use more than one service of cellular companies, it was found out that 22 respondents used multiple services due to feasible pricing structure, 17 for value-added services and 11 for better call quality. (See full chart in appendix)In the second set, respondents were asked that will they switch to other service providers due to these reasons, 26 respondents used multiple services due to feasible pricing structure, 27 for value-added services and 24 for better call quality. (See full chart in appendix) For further analysis, Logistics Regression was used. After applying Logistics regression (Binary), the dependent variable was predicted 70.1% accurately in classification table without using any Independent variable. The prediction was found accurate with the help of p value which is smaller than 5%.

Table 1.3

			Predicted		
	Observed		18. Will you switch to other service provider due to any of the above stated reasons?		
			Yes	No	Percentage
Step 0	18. Will you switch to other service provider	Yes	0	55	.0
	due to any of the above stated reasons?	No	0	129	100.0
	Overall Percentage				70.1

a. Constant is included in the model.

b. The cut value is .500

Hosmer and lemshaw test shows the overall compatibility and fitness of analysis on data as the sig greater is greater than 5%.Omnibus test successfully predicts the significance of logistic regression.

Table 1.4

Hosmer and Lemshaw Test			
Step	Chi-square	df	Sig.
1	5.433	8	.710

Model summary suggest an overall 4% of expected increase in the model if Negelkerk R2 is considered.

Table 1.5

Step	-2 Log likelihood	Cox & Snell R Square	Negelkerk R Square
1	205.850a	.096	.136

The overall prediction was improved by 1% after including variables in the classification table of the model.

Table 1.6

			Classification Table		
			Predicted 18. Will you switch to other service provider due to any of the above stated reasons?		
	Observed		Yes	No	Percentage
Step 1	18. Will you switch to other service provider due to any of the above stated reasons?	Yes	8	47	14.5
		No	6	123	95.3
	Overall Percentage				**71.2**

Value added services and call quality were found to be significant variable in determining the reduction of brand switching (Number Portability) in GSM sector.

Table 1.7

		Variables in the Equation					
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1a	price	-.119	.301	.157	1	.692	.888
	valueadd	-.707	.344	4.215	1	.040	.493
	callqual	.778	.259	9.025	1	.003	2.178
	connectivity	-.314	.253	1.550	1	.213	.730
	complaint	.101	.291	.120	1	.729	1.106
	differentiation	.253	.242	1.093	1	.296	1.288
	convenience	.086	.200	.184	1	.668	1.089
	sbsc	.096	.214	.200	1	.655	1.101
	sbaa	-.284	.279	1.038	1	.308	.753
	sbcl	.111	.259	.184	1	.668	1.117
	Constant	.721	1.442	.250	1	.617	2.057

a. Variable(s) entered on step 1: price, valueadd, callqual, connectivity, complaint, differentiation, convenience, sbsc, sbaa, sbcl.

As per the table 1.8 independent variable like price , connectivity , complaint management, product differentiation, convenience in procedures and switching barriers have been rejected as they all have P value greater than .05 (i-e 0.692, 0.213, 0.729, 0.296, 0.668, 0.655 respectively) Some of the above mentioned variables also have negative beta values . Hence only Value added and call quality have been accepted as they have significant impact on the MNP.

4.2 Hypothesis Assessment Summary

Table 1.8

	Hypotheses	B	Sig.	EMPERICAL CONCLUSION
H1	There is a significant impact of price on MNP!	-0.119	.692	Rejected
H2	There is a significant impact of value added services on MNP!	-0.707	.040	Accepted
H3	There is a significant impact of call quality on MNP!	0.778	.003	Accepted
H4	There is a significant impact of connectivity on MNP!	-0.314	.213	Rejected
H5	There is a significant impact of complaint management on MNP!	0.101	.729	Rejected
H6	There is a significant impact of product differentiation on MNP!	0.253	.296	Rejected
H7	There is a significant impact of convenience in procedure on MNP!	0.086	.668	Rejected
H8	There is a significant impact of switching barriers on MNP!	-0.284	.655	Rejected

CONCLUSION

After analyzing the data through multiple responses set, it was concluded that the cellular service users are most responsive to pricing structure, value-added services and call quality out of eight different features. A clear difference can be seen in the responses of value-added services and call quality in the two sets. Respondents clearly showed their intention of switching if their network service providers are unable to deliver competitive value-added services and adequate call quality. And this analysis is validated by the outcome of logistic

regression, where value-added service and call quality were found significant. Therefore, these two are the important factors that are drawn out of various factors in deterring the customer churn rate, Mobile Number Portability and Brand Switching in GSM sector of Pakistan.

With the cut throat competition and never ending urge of companies to acquire customers, the paradigm of firms have shifted from acquiring new customers to retaining and satisfaction of current customer for a long term relation. The unambiguous space in the knowledge of past history of customer loyalty has changed. The call quality and value-added services are the prime factors responsible for keeping the customer to the firms.

After thorough analysis and review of literature, it can be recommended that the firms can achieve and maintain a sound financial relationship with their customer if call quality and value-added services become their primary objective. The firms can expand their scope of research from customer acquisition to service innovation and after sales service. Furthermore, in order to maintain customers, firms are required to do a thorough analysis of their customer so that they can provide the best value proposition in the market.

The study was limited to the couple of segments of GSM sector of Pakistan mainly students and professionals. The same study can be conducted on various other segments like foreign residents, house wife's and etc. The scope of study was limited to mainly identifying factors that can help in reducing brand switching however this scope can be expanded to pre and post purchase expectations, customer retention modeling for long term, partial and total defection of customers in GSM sector and etc.

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