

Understanding the Demographic Variations in Service Quality Perception: An exploratory study on cellular industry of Pakistan

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Abstract

There always subsists a gap between quality perceived by the customers and the quality delivered to them. There have been many attempts to fill out this gap. This study aims to spot out the result of demographic factors on quality perception. This paper is an attempt to understand the service perception as Johnston (1995) suggests that identification of service quality determinants is one of the important issue to the marketers, and to get an insight that how these perceptions may vary among different ages, genders and education levels. All these demographic variables tend to depict variations in personality and the mindsets of people. This paper will facilitate the marketing practitioners to get an insight about what customers think about quality and how marketers should plan their marketing efforts to attract their favorable market group. An exploratory research was conducted to obtain the view point of the cellular users. Well-known service market mix of 7 Ps' (People, Procedures and physical evidence, additional to conventional 4 Ps) is used to design the questionnaire using AHP. Analytical hierarchy process (AHP) categorizes thoughts,

intuitions & reasons in a logical way to make decisions. Though the marketing theorists and practitioners lay a great prominence on the further 3 P's (People, Process and Physical Evidence) for the service marketing but outcome of this research suggest that customers take the conventional 4 P's as crucial for service quality and additional 3P's can be taken as supportive elements.

Keywords: Perception, Service Quality, Demographics, Analytical Hierarchy Process (AHP)

Introduction:

In this fast moving era, providing right quality dimension to the right customer is the crucial for the service providers. Providing the right quality can move the organizations towards success (Reichheld and Dawkins, 1990; Reichheld and Sasser, 1990; Parasuraman et al, 1985). Researchers had been showing deep interests in finding out the quality dimensions. They have explored a lot in this regard but some issues, some questions are still there to be answered like are the quality dimensions for all type of services are same? Does brand name affects the service perception? And the most important, does demographic changes have any effect on perception?

Marketing Practitioners always require suggestions from the researchers to know about the quality perceptions and on which area they should focus to get maximum customer satisfaction. This paper is an attempt to understand the service perception as Johnston (1995) suggests that identification of service quality determinants is one of the important issue to the marketers, and to get an insight that how these perceptions may vary among different ages, genders and education levels. All these demographic variables tend to depict variations in personality and the mindsets of people. This paper will facilitate the marketing practitioners to get an insight about what customers think about quality and how marketers should plan their marketing efforts to attract their favorable market group.

We chose cellular phone industry for our study due to the fact that it is growing at a rapid pace in Pakistan. There are 95,918,729 subscribed users of cellular phones in Pakistan who contribute 2% in the GDP of the country. Collection from cellular companies touched the figure of 44.5 billion rupees in year 2007-08.

For our study we begin with building a theoretical background of the elements being discussed in this research. We started with the marketing of services and how service quality perception is built. Services market mix, its background and evidence is explained then there is an introduction of Analytic Hierarchy Process (AHP).

Service Marketing

Following four dimensions distinguish between products and services. (Zeithaml 1985; Wolak 1998; Mackay 2001)

- **Heterogeneity** – Services are not static or a constant. Quality and type of service may vary in various situations. Whereas products are always same for everyone.
- **Inseparability** – point of production and consumption of services is same. Services are produced and consumed simultaneously. On contrary, products have a proper channel from production to consumption.
- **Intangibility** – Experiences of customers are the essence of services. They do not have any physical form to be felt or touched like products.
- **Perishability** – Unlike products, services can not be stored for future use.

Researchers all over have agreed on point that services and products are two different categories. (Shostack, 1977; Zeithaml, 1985). Marketers accept the importance of services, yet the focus of researchers had been on branding of products, rather on services. (Turly and Moore, 1995).

As competition is becoming fierce by every passing day in service sector, practitioners are now more concerned about the success factors of services. They are putting their focus on knowing the customer preferences and choices. How to improve the customer experience with our services? This question resides in every marketer's mind these days, after all services are all about customer experiences. Due to deep competition in services like telecom, takeovers and joint ventures are taking place repeatedly. In this scenario those service providers will survive who know the customer preferences and manage them in such a way that customers feel pleasure and satisfaction utilizing their service.

Service Quality Perception

Identifying and determining the service quality dimensions is the prime objective of market practitioners, researchers and managers. This is due to the fact that these dimensions help them to improve the perception of service quality in the mind of their customer. One of the important point to be focused is the identification of determinants of service quality (Johnston, 1995). In 1980s, the researches were focused on knowing what does a customer means by service quality, to satisfy the customer's perceptual framework (Parasuraman *et al.* 1985). Normally the service quality level is compared to some standard services (Zeithaml, 1993). Researchers have shown that there are three types of expectations (Parasuraman, 1985, 1988; Zeithaml, 1993)

- i. Normative
- ii. Predictive &
- iii. Minimal

- i. *Normative Expectations* are the extra-ordinary services expected by a well known service provider. (Zeithaml, 1990).

- ii. *Predictive Expectations* are normally seen as the services which are provided by the service provider; just in some given conditions hence the service level expected by the consumers in this case is lower than the normative level. There might be only one situation in which normative and predictive expectation may stand at the same level, and that is when the customer believes the service provider who is providing the services is an excellent service provider.

- iii. *Minimal expectations* show consumer's lowest possible expectations. Adequate expectations are recognized as the lowest level of services a customer expects to get (Zeithaml, 1993) and least reasonable expectations (Miller, 1977).

Perceived performance show the consumer's subjective views of the level of service they receive when they get service (Parasuraman, 1985; Brown and Swartz, 1989; Cronin and Taylor, 1994).

Service Marketing Mix (7Ps)

McCarthy's (1964) 4 Ps has got a lot of criticism and which resulted in so many other market mix evolution (Rafiq and Ahmed, 1995). So many authors proposed modification in this 4P marketing mix concept (Nickels and Jolson, 1976; Mindak and Fine, 1981; Kotler, 1986). Among all these criticism, Booms and Bitner's (1981) extension for service marketing, to include Physical evidence, People/Participants and Procedures got the highest attention and acceptance by the theorists and practitioners (Rafiq and Ahmed, 1995). Perreault and McCarthy (1987) termed marketing mix as the controllable variables which can be used by the practitioners to satisfy the target market (Rafiq and Ahmed, 1995).

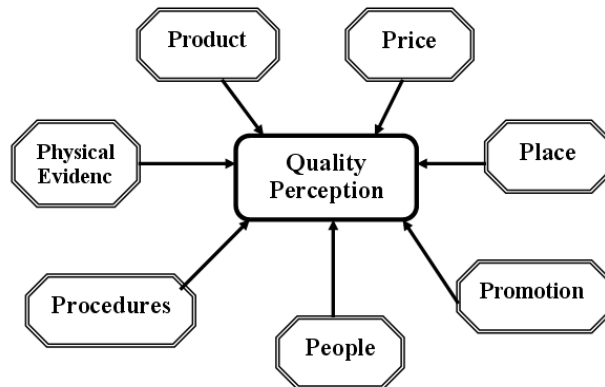


Figure : Theoretical model for the study

Analytic Hierarchy Process (AHP)

AHP was presented by Thomas L. Saaty in 1982 (Crowe and Noble, 1997). AHP incorporates a pair wise comparison of the elements and eventually the relative score of each element is determined which shows the importance of that very element. We can say that AHP attempts to find out the impact of elements from the lower level to the hierarchy or the objective (Rafiq and Ahmed, 1995).

These attributes of this model make this methodology appropriate for decision making where so many elements are involved and provide ease to the practitioners in making the decisions.

AHP is best suited for the analysis of intangible attributes, especially if the comparison is too made between numbers of factors.

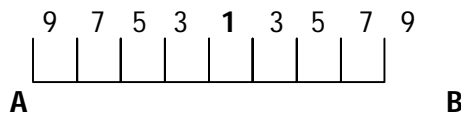
Objective of the study is to:

- ◆ Check the validation of extended marketing mix in cellular industry.
- ◆ Identify the important factors involved in building quality perception
- ◆ See the effect of demographics on quality perceptions.

Methodology:

Through this study, we are trying to find out the determinants of service quality residing in the perceptual framework of the customers. We chose the most growing and highly competitive sector, the cellular service providers normally known as mobile phone companies. To get the opinion of the customers a detailed questionnaire was designed. Extended marketing mix of services, constituting on seven P's (Product, Price, Place Promotion, People, Procedures and Physical Evidence) was used to design the tool. In this seven P's, Product depicts the services being offered by the cellular companies to their customers like SMS, GPRS, Better Call Connectivity etc.

This study is based on well known analytical model, Analytic Hierarchy Process (AHP) developed in 1982 by Thomas L. Saaty. Analytic Hierarchy process consists of six major steps. And these steps are comprehensively explained by Partovi (1991) & Wabalickis (1987).



1. First of all it is mandatory to define the problem and focus of the research for which the AHP is being applied.
2. After defining the problem there comes the need of developing the hierarchy from general viewpoint (Level 1 in our study) to sub attributes on which subsequent levels depend (Level 2 in our study. There can be a third and bottom level of hierarchy which may consist of list of alternatives.

3. Now comes the need to make pair wise comparison matrices for each level. Pair wise comparison is done in terms of which element is important as compared to other. The scale used was as it is shown below.

If a respondent marks on 1, this shows that both factor A and B are equally important to him and he is neutral in his opinion. If his opinion goes towards left of neutral point it means he is giving more priority to factor A. converting these ratings into the matrices is an important step. If the respondent is in the favor of factor A (on the left side of the scale) the whole integer is written and if the response is in the right side, the reciprocal is entered.

4. After the responses are entered and the matrix is developed, next step is of calculating the Vector of Priorities. In terms of algebra of matrices, the priority vector consists of calculating the "Principal Vector" of the matrix and normalizing it to sum 1 or we say cent percent. This is obtained by dividing the elements of each column by its own sum and adding those elements in each resulting row to get the row sum. Dividing this row sum by the number of elements in the row gives the priority weight.
5. After getting the priority vector, now comes the turn to calculate the consistency ratio of the estimated vector. As researchers are human beings and humans are not often not consistent in their judgments, this Analytic Hierarchy Process technique incorporates those inconsistencies into a logical model. That logical model provides decision makers with a measure of these inconsistencies. The consistency ratio is obtained through the consistency of results being tested to the consistency of the same problem. This is normally evaluated with random numbers. Saaty (1982) suggested 10 percent as the upper limit. If consistency ratio is within the limit of 10 percent, the comparison is acceptable.
6. If the ratio exceeds the limit of 10 percent, the judgment of pair wise comparison is doubtful and should be improved. Exceeding the consistency ratio to 10 percent shows the excessive intransitivity of preferences. Sometimes this ratio can be reduced by re-estimating the preferences. If re-estimating the preferences does not work then the problem should be structured in a more accurate way and the procedure should start from second step of making the matrices.

Questionnaire consisted on three parts. First was of classification questions including gender, education level, age and usage period. Second part was of Level 1 of AHP, pairs were made of seven P's. In third part of questionnaire level 2 analyses of decomposed factors was done. An integrated 9 point scale was used to get the response of the customers. Scale was the combination of pair and importance

measurement scales. Respondents were to choose one element among the pair and also had to rank the importance of that one as compared to other one.

At first level we put the service market mix element

- | | |
|--------------|----------------------|
| 1. Product | 5. People |
| 2. Price | 6. Procedures |
| 3. Place | 7. Physical Evidence |
| 4. Promotion | |

To get the second level of elements we had to decompose these market mix elements. For that, short interviews were conducted to the employees of cellular phone companies and as a result all each of these seven elements were decomposed into further four. That decomposition is as:

Product/Service

- | | |
|-------------|--------------------------------------|
| i. GPRS | iii. Call Connectivity/Voice Quality |
| ii. SMS/MMS | iv. Value Added Services |

Price

- | | |
|------------------|--------------------------|
| i. SMS/MMS Rates | iii. GPRS Rates |
| ii. Call Rates | iv. Int. Roaming Charges |

Place

- | | |
|----------------------------|--|
| i. Network Coverage | iv. Prepaid Cards/Easy load Availability |
| ii. Franchise network | |
| iii. Location of franchise | |

Promotion

- | | |
|------------------------|----------------------------------|
| i. Advertisement | iii. "Active Your Number" offers |
| ii. Event Sponsorships | iv. Personal Selling |

People

- | | |
|---|--|
| i. Competence | |
| ii. Appearance | |
| iii. Conduct | |
| iv. No. of People available to serve customer | |

Procedure

- i. Reception & Guidance
- ii. Quick Response
- iii. Customer Friendly Attitude
- iv. Complaint Handling & Problem Solving

Physical Evidence

- I. Colors Associated
- II. Franchise Atmospherics (Music, Lighting, Scent)
- III. Franchise Layout & Design

Customer response from five cities was gathered. Respondents were of different age groups, education level and social class. This thing helped us to get an insight of the demographic variations.

Results and Findings

Over All Analysis

After the analysis of level 1, it was found that the respondents ranked Price as the crucial factor for making a quality perception. This depicts the mindset of the consumers that higher quality services come with higher costs.

Second rank is occupied by Services offered by the cellular companies. It means that the respondents take services as the second most important factor for making the quality perception. Mobile users are now more informed and smart for utilizing the services offered by companies. Services like GPRS and MMS are gaining more attention of the young users. Mobile phones are now more than just a "Making a Call Device". These are used for emails, Smart Media Messages, Multimedia Messages and much more. Ranking service as second most important factor saliently demands from the service provider companies for better and innovative services to offer their customer. This will not only help to retain the old customers but also to attract the new ones.

Factor	Priority Vector%
Price	26.837
Services	21.066
Place	19.316

Consistency Ratio = 6.5%

Third important factor was Place. The factor place refers here to the place where the customer is encountered with the services provided. In cellular phone industry the network coverage, location of franchise and availability of reload facilities are categorized under place. This now calls for wider network coverage,

better franchise network and more convenient location of service franchises. (See annexure for source data Table)

Analysis Level 2

Pricing Factors

Analysis of the pricing attributes for second level places charges of smart media messages at the top following with Call rates. Charges of GPRS reside as third most important factor. Table summarizes the results.

Consistency Ratio = 8.8%

Factor	Priority Vector %
SMS/MMS Rates	45.92
Call Rates	28.97
GPRS Charges	16.67

Services

Variety and quality of services offered by the companies' plays a vital role in making a good quality perception. Variety of services is being offered by the companies to the customers. Our research depicts that customers take SMS and MMS service as the important one. Second important service offered to the customer is GPRS. Customers take call connectivity as the third important element.

Factor	Priority Vector %
SMS/MMS	30.86
GPRS	28.67
Call Connectivity/Voice Quality	28.21

Consistency Ratio = 9.5%

Place

Factor	Priority Vector %
Network Coverage	40.17158727
Franchise Network	24.80425775
Availability of Prepaid Cards	19.7974068

Analyzing the place factors has given the following results. People think that better network coverage is the sign of better quality. Better network coverage means the cellular network must be available in more areas. Second most important factor identified was franchise network followed by availability of prepaid cards and easy load, or we say the RECHARGE EASE to the customer provided by the company.

Consistency Ratio = 9.7%

Analysis According to Demographic Classification

Analyzing the results of different age groups showed interesting patterns. Price stands as the most important factor for both age groups. Respondents of first age group ranked Product as second most important factor but for second group the place is ranked at second position. And for second most important factor, age 1 ranked Place and second group respondents favored products. (Figure 1)

Our respondents were of three different education levels. First category was of the respondents who had the secondary level education. Second group was of those respondents whose level of education lie between intermediate and graduation and the third group was of those respondents who had done post graduation or above level of education. Though the priority vectors are not same but Price is the crucial factor for all the respondents. Respondents of first education level i.e. Secondary level education, ranked PLACE as the second most important factor for making the quality perception. For other two groups, the products offered to them make and the break the perception of quality in their minds. (Figure 2)

Figure 1

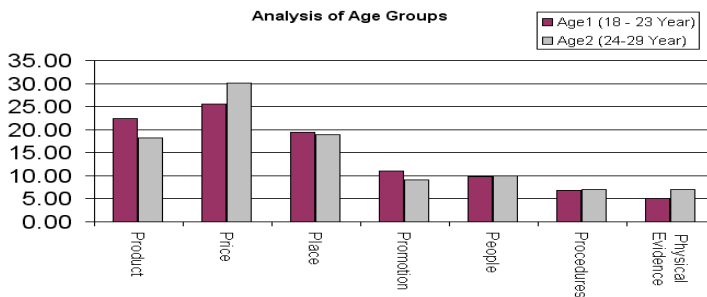
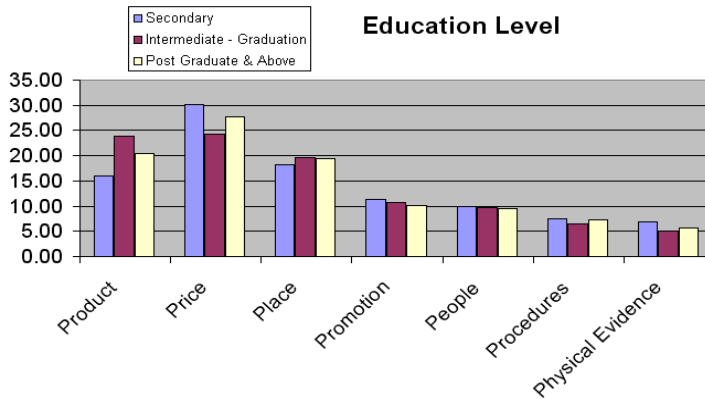
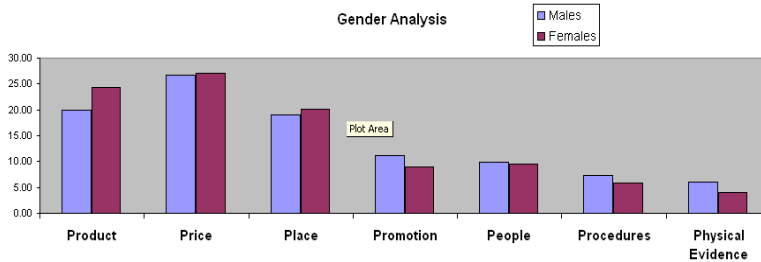


Figure 2



After categorizing the data into genders showed some interesting results. Though the priority vectors are not same but Price is the crucial factor for both males and females. Here the products and Place factors are at second and third rank respectively. Here is an interesting point to be noticed that promotion factor does not lie in the priority bracket for women. Priority vector for promotion is less than 10 for women, which means that women do not give any consideration to Promotional factors for making a quality perception. (Figure 3)

Figure 3



2.1. Making the suitable Demographic Clusters for particular Component Services

During previous years, technological improvements have changed the lifestyle of people. It has not only added ease and convenience to the society but also has ignited the competition amongst the companies who are offering technologies to a common man. Internet, no doubt, has become the need for every one. Tracking this need of the age, mobile companies started offering internet services to their mobile users in their handsets. According to our study, highly educated males take this service as important one. Seeing the age range and the education of GPRS users, it is not difficult to assess that this age group include working class and businessmen. If

they are taking this service as a critical element for quality perception, it means they are using this service frequently. This also gives a positive motivation to the cellular companies to offer more innovative services to their customers.

Second service under our study is Smart Media Messages and Multimedia Messages (SMS/MMS). This service has also got a rapid growth in usage during last few years. Now a day everyone is having a chit chat with their friends through text messages. It is also an idea that this service has somehow replaced the internet messenger services. Our results show that young females are the ones who prefer this service over making calls. This might be due to the social restrictions over girls in Pakistani culture.

Call connectivity and Value added services are liked by male users. In a society like Pakistan, males have to make a frequent contact with the outer world. So they need to make calls and that is why they seem more concerned to the call connectivity. As far as value added services are concerned, this service is used by less educated people. No one can argue why? But might be due to the urge of being a part of moving world makes them to use innovative services like ring tones and caller tones etc.

Services Offered	Demographic groups who are most inclined toward the service		
	GPRS / Internet	Males	Post Graduation or Above
SMS & MMS	Females	Intermediate to Graduation	18-24 years
Call Connectivity	Males	Intermediate to Graduation	18-24 years
Value Added Services	Males	Secondary Level Education	25-31 years

Pricing Attributes

As explained earlier that females are more inclined towards the usage of smart media messages, our study show same results in the analysis of pricing attributes. Young females are more cautious about the sms charges of the cellular services. This is the group of students who normally get pocket money from their elders and have to adjust their expenses in that short amount. This might be the reason of more sms usage and cautiousness of sms charges.

Next comes the call rates. Mature people are normally less inclined towards the excessive usage of smart media messages hence they make calls to stay connected to the outer world. It is a natural phenomenon that if someone is using some service, he must stay cautious about its charges to make an analysis that if he is getting the quality of services for which he is paying.

Results for international roaming facility charges are insignificant. This shows that people are unaware of this particular service. This service is offered for those people who are frequent travelers of foreign countries. In Pakistan, there lies a

huge population of Lower middle class who have never been abroad. So, most of the people are unaware of this service

Price Components	Group of people who are cautious about a particular price component		
SMS/MMS Rates	Females	Intermediate to Graduation	18-24 years
Call Rates	Males	Post Graduation or Above	25-31 years
GPRS Rates	Males	Post Graduation or Above	25-31 years
Int. Roaming Charges	Insignificant in Pakistan Market		

Place

Females, according to our study seem more concerned about the network coverage of the services and the franchise network. Network coverage means the availability of mobile services at maximum places and quality of service also comes under this. Franchise network means the number of service provider franchises in a particular location.

Females seem unconcerned to location of availability of the services like recharge ease or the where the franchise is located. This is again the social aspect of our culture. Females do not go out of their house so frequently for fulfilling their needs. They have to get support of their male family members for small things like to recharge their phone or to make a complaint about any problem occurring in the service. If there occurs any problem in the service, males have to walk to the franchise and get the problem solved, this might be the reason that they seem more concerned about the location of franchise.

Place Factors	Group of people who seek the ease in the availability of particular service		
Network Coverage	Females	Post Graduation or Above	18-24 years
Franchise network %	Females	Post Graduation or Above	25-31 years
Location of Franchise %	Males	Secondary Level Education	18-24 years
Recharge Ease %	Males	Secondary Level Education	25-31 years

Conclusion

After this study we made a point that extended marketing mix of services is not well suited for telecom industry. Our results have clearly shown that additional three Ps could not get a minimum level of significance. For this particular industry, these three Ps can be taken as supportive tools for creating the marketing strategy but conventional four Ps of marketing are still significant. Our next aim was to identify the crucial elements in this mix to make a good quality perception in the mind of the customers. This would help the marketers to devise their marketing strategy in a better way to get a maximum level of attention and the market share. Place is resulted as the important most factor in devising the quality perception in the minds of the customers. This result shows that the market of a country like Pakistan is price sensitive. Fluctuations in the prices charged for the service may make or break the quality perception. Now practitioners will be able to design their market strategies in a fruitful way. Although the results suggest that the extended market mix has not yet gained acceptance in this service sector of cellular phones but still there is a great opportunity for the marketers to grab a better market share if they consider the proposed demographic groups for targeting their particular services.

This research can be utilized as an improvement tool by the market practitioners. They have now got the preferences of their customers; they should now focus on those areas where they are lacking in building a good image in the minds of their customers. This will not only improve their corporate image but ultimately give benefit financially.

Limitations

- ◆ Questionnaire was made lengthy to get a better insight that is why respondents seemed tired at the end of it.
- ◆ AHP requires a pair wise comparison, but it was confusing for many of the respondents
- ◆ Most of the respondents were not fully aware of all the services provided by the cellular companies like GPRS and International Roaming.
- ◆ Some questionnaires were mailed to respondents of distant areas so making the respondent understand about the question asked might have been an issue there.
- ◆ Less educated respondents were also difficult to deal.

Future Path:

This research was conducted in cellular industry. Researches must be conducted in other services industries.

If this research will be conducted after 3 to 5 years, this may show some different results. This is due to the fact that cellular industry in Pakistan is growing in terms of subscribers, but still the subscribers are not fully aware of all the services provided to them. After some years when innovative services like 3G will be introduced in cellular industry, this research will be more fruitful.

Note:

Product: describe the product or service in detail including its special features.

Price: The pricing components. Your price constitutes on which charges.

Promotion: How you inform your existing customers about new offerings and attract potential customers.

Place: How and what place you will be offering your services to the customers.

Process: Refers to the systems used to assist the organization in delivering the service.

People: An essential ingredient to any service provision is the use of appropriate staff and people.

Physical Evidence: Where is the service being delivered? Physical Evidence is the element of the service mix which allows the consumer again to make judgments on the organization.

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