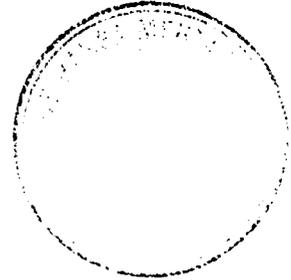


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***Market Strategies and Consumer Behavior in  
Vadodara District for Telecommunication***

**Summary of  
Thesis  
Submitted  
To**



**THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA**

**For the Degree of  
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**ECONOMICS**

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## Summary of the Thesis

Less Developed Countries (LDC) are experiencing fastest growth in the telecommunication network. In the mid 1990s, growth in total telephone subscribers per 100 inhabitants of the LDCs surpassed that of the developed countries. Given the relationship between telecommunication expansion and growth, there is hope for narrowing down of digital-divide, provided LDCs are able to sustain growth momentum in the long run. It is but natural that markets in high-income countries are saturated while expansion in developing countries is still in continuation. Telecommunication sector in India is the fastest growing sector after 1990's. The economic reform initiated in 1990's invite private sector service providers in the telecommunication sector, which provide the growth to the industry. DOT has taken initiative to increase the growth of the sector by various telecommunication policies.

The present study highlights the growth of telecommunication sector in a country during pre and post economic reform. Major policies laid down by the authorities, evolution of mobile phones around the world, followed with their entry in Indian infrastructure environment. Not only present state of affairs in the Gujarat circle and within the nation but an international comparison and its future revelation with special emphasis on mobile phone services have been discussed.

The study is based on the primary data collection and secondary data is used, where needed. The study analyzes the consumers' behavior in regard to the private mobile phone service providers. The socio-economic conditions of the respondents and their usage patterns towards the mobile phone services are also analyzed. This will help to understand the basic important variables of the present study. In the current study, all the respondents possess mobile phones. Therefore, study of their socio-economic conditions will emphasize their mobile phone usage pattern in Vadodara district. Important socio-economic factors are analyzed on rural and urban basis. Main motive to study the demographic trend is to identify and take advantage of change in population size, growth, and composition. Factors showing standard of living of the respondents are studied separately. Such factors play an important role in determining the role of their telecommunication needs.

The present study is based on the field work carried out in the Vadodara district of Gujarat during the year 2004-2005. The sample of 1,250 respondents was selected by following a random sampling method, from rural as well as urban areas were interviewed and the primary data for the study was collected.

This study is organized in seven chapters.

Chapter 1 is the introductory chapter. Chapter 2 reviews the basics of consumer behavior. Concept of consumer behavior is highlighted here. Various consumer behavior models are discussed. Important factors including consumer behavior, in terms of economic and non-economic aspects are also reviewed here.

Chapter 3 presents the overview of the telecom sector. Short history of the period immediately after the introduction of economic reforms is provided and this is followed by a description of the policy framework. Mobile phone evaluation, emergence of mobile phones in India, and all the development in the telecommunication services have been emphasized here. Major policies and regulations laid by the government for the telecommunication services with special emphasis on mobile phone services along with its present and future scenario in Indian economy are presented here.

Chapter 4 brings forth the socio economic condition in general and of the respondents in the study area in particular. An attempt has been made to understand the structure of the society of mobile phone consumers. Also the geographical perspectives of all the selected representative talukas of Vadodara district are studied. Brief review of literature i.e. work on mobile phone usage pattern is studied here, which emphasis on all the socio economic conditions. Studies included are irrespective of the place but only those, emphasizing the mobile phone usage pattern after millennium has been given weightage as present study calls attention to the acceptance of innovative technology in present daily life.

Chapter 5 analyzes the various hypothesis set well in advance to study the impact of mobile phone services on the consumers of Vadodara district. Socio economic factors and the consumers' usage pattern are examined. Important demographic factors studied in

detail include: age, occupation, marital status, educational level, composition of family, and standard of living. All these factors have been studied with the help of statistical and econometric tools.

Chapter 6 presents the, Market structure by discussing the profile of mobile phone service providers i.e. their objectives and visions along with the market strategies for pricing and promotional policies, have been discussed from government and consumers point of view. Tariff plans as implemented by TRAI's Telecommunication Tariff Order 1999 (TTO 1999) and the amendments in TTO 99 are studied in detail. A reasonable guideline issued to mobile phone service providers to obtain and maintain a competitive advantage in the market place by government is included here.

Finally, main findings have been summarized in chapter 7.

Main results of the study follows:

Chapter 2: The interdisciplinary richness of the field of consumer behavior is studied in the present chapter. Here the fundamentals for critical thinking in the area of consumer behavior are emphasized. Communication technology has enabled consumers to become more aware of things and hence, more options are available in the market. This has made the marketers to undertake a broader view on individual consumption behavior.

Basic models of consumer behavior will always be the same, irrespective of the market environment and growth. Individual behavior can be analyzed and studied but the collective behavior of the consumers should be considered with the basic guidelines, as specified in the present chapter.

In the light of various theories presented in this chapter, the questionnaire is prepared to examine consumer behavior.

Chapter 3: Telecommunication services as said by layman is a communication over distance by cable, is no more bound by wires. In less than a decade, there are over half a dozen service providers available in the market. However, early imposition of monopoly

structures on the telecommunication industry was not only due to governments strategic interest in it, but also to a certain view of public interest-a view whose relies continues to be found in the development process.

While most countries in 1980s adopted the cheaper wireless mobile technology and grew their tele-densities and economy. Deregulation of Indian telecommunication sector shows how infrastructure can be brought to global standards. Achievements of excellent telecommunication services as per the world standard are the result of NTP 94, NTP 99, CCB 2001 and TRAI.

In the post liberalization era, there has been a surge in telephone connections in India. Telecommunication sector has been struggle in the name of security. A basic reason for the improvement in telecommunication quality is the national government realized that a reliable telecommunication infrastructure is essential for socio-economic development.

The economic reforms initiated in 1990's, through an invitation to the private service providers, resulted in the growth of the industry. Pitroda, S., father of the development of the Indian telecommunication sector started with many more like minded future seekers and as a result, today telecommunications is a do or die situation. DOT took the initiative to increase the growth of the sector by various telecommunications policy. Achievements of the excellent telecommunications services as per the world standard are the result of NTP 94, NTP 99, CCB 2001, and TRAI.

Increasing demand of telecommunication services, in the remote areas of the nation shows the continuous increase in the number of future consumers. Rate of acceptance of mobile phone services can not only be judged by the number of fixed landline phone consumers but also with the revenue generated by both the services.

Today telecommunication is a central part of people's lives. It is the fastest growing sector with the huge investment opportunities. Society is always in the process of change and the pace of change is becoming more rapid every day. Communication environment contributes to quality of life, to social, political, and security objectives with the ability to improve the scope and efficiency of business operations.

A more competitive market structure is possible, but it requires a very different approach to the present one where government licenses operators and the regulator fitfully interferes in the tariffs.

Chapter 4: Mobile phone market is at a boom all over the world. Studies by various scholars from all over the world, highlights the importance of telecommunication services with special emphasis on mobile phone services. These studies show the acceptance and development of mobile phone services. The mobile phone study encourages exploration of world beyond local boundaries. All over the world the age of possessing mobile phone is declining day-by-day. Beside age, another important demographic factor studied by many scholars is gender. Gender variation among teenagers and adults is emphasized here. Usage of various mobile phone services varies with these demographic factors. SMS is the highly acceptable mobile phone service by all mobile phone users irrespective of demographic factors. Besides SMS, usages of other mobile phone services are also studied. Cross-country variation in mobile phone usage pattern shows that, everyone and everywhere had accepted this technological gizmo, though the variation among acceptance and usage pattern occurs. Comparisons of mobile phone services along with other modern technological gadget are also studied beside the acceptance of the mobile phone services in business sector. Mobile phone advertising is also studied and the consumers have a similar opinion about the service. Overall satisfaction of mobile phone services is also studied by the scholars and the results of the same are varying from region to region. Acceptance of fixed landline phone and mobile phone services as complementary or substitute goods are discussed along with the FMC. Therefore it is seen from the various studies done by scholars in relation to gender, income, and age etc., there is a relation among these factors.

Geographical perspectives of five talukas namely Dabhoi, Padra, Savali, Vaghodia and Vadodara are discussed here. Except Vaghodia taluka, other four study areas are well developed and therefore transportation facility was easily available. Reason for studying these areas is the availability of mobile phone service providers in the region. Almost all mobile phone service providers network is available in these talukas of Vadodara district,

with large number of retail outlets providing recharge coupons and new connection facility.

This chapter also discussed the socio-economic factors in general and of the respondents in particular. It makes the picture of mobile phone consumers in Vadodara district. Inverse relationship among all the factors of composition of households (number of members in a family, composition of household, number of mobile phone users in a family etc.) exists. This upward sloping trend is related among all the factors. If there are less number of members in a family their will be less earning members and few mobile phone users in it. These figures are an indicator of the growing nature of the market and also the pointer to the fact that there lies a big opportunity for all the mobile phone service providers.

Mobile phone market is at a boom all over the world. Study of the socio-economic conditions of the consumers in the present chapter; emphasize the mobile phone usage pattern in Vadodara district. Study of mobile phone consumers and their socio-economic factors shows an inverse relationship between increase in the number of respondents and the socio-economic variables (number of members in a family, number of mobile phone consumers in a family, number of earning members in a family, age, gender, marital status, occupation of the respondents, family income, possession of fixed landline phone connection, two wheelers, four wheelers, computer, C.D. player, television, and house). Both rural and urban talukas of Vadodara district follows the same trend. Similar pattern exists for all the variables of composition of household, demographic factors, and the standard of living. Education is the only demographic factor showing a variation among itself in rural talukas. As the maximum numbers of respondents are from urban area of Vadodara district, still the same trend is followed by rural areas. Final household profile of the consumers will help in analyzing the diverse impact of mobile phones in their day-to-day life.

Presence of gender variation among mobile phone users along with the mobile phone usage pattern among teenagers is also studied here. Features that influence young mobile phone consumers are emphasized and studied separately. Demand and usage of fixed

landline phone connection beside the role and acceptance of FMC in future is also taken into. Trend of acceptance of mobile phone services and each and every socio economic factor of the consumers emphasizes a unique relationship in both the rural and urban areas.

Besides usage pattern, consumer preference for mobile phone services (pre-paid and post-paid) along with the penchant for mobile phone handsets are also emphasized here. Mobile phone consumers of Vadodara district prefer post-paid services more than the pre-paid ones. The technical innovations in mobile phone have been accepted in consumers every daily life, at every place including the work place.

Chapter 5: The present chapter has examined the actual usage pattern of mobile phone services by the respondents of Vadodara district. Various econometric and statistical models are applied here. Mobile phone services and the opinion about mobile phone usage pattern along with an important demographic factor are studied in detail. Various socio-economic factors like age, educational qualification, and the possession of the fixed landline phone connection of the respondents are studied separately.

An attempt is made to analyze the relation between young mobile phone consumers in Vadodara district and their mobile phone VAS usage pattern. And for the same LPM is made use of. The study found out that the consumers in Vadodara district are well aware of various mobile phone services (SMS, Roaming, GPRS etc.). The analyses shows that the probability of awareness irrespective of age is very high in case of SMS (99 percent) and roaming facilities (92 percent) whereas, it is relatively lower in case of video application, GPRS, and infrared. For the CUG facility, the probability of awareness is 80 percent. Basic reason for the development of the VAS market is that mobile phone consumers are not satisfied only with voice. They are looking for more and more intelligence, comfortable, individual, and entertainment services, which only VAS can provide. All the mobile phone service providers are focusing on providing better VAS services to its consumers and thus increasing the competition in the market.

The standard of living variables (possession of assets) in relation to possession to fixed landline phone connection are analyzed. For analyzing the aspect, regression technique is made use of. It is found from the analysis that the assets under study have some positive effect on the possession of fixed landline phone connection. The analysis found the importance of possession of fixed landline phone in Vadodara district in relation to the components of family structure and assets. Further it shows that the increase in possession of all goods will also result in increase in owning of fixed landline phone connection. Total number of members in a family and the number of mobile phone users in a family have positive impact on fixed landline phone connection. It is interesting to note that with the increase in the number of earning members in the family, the probability of fixed landline phone connection goes on falling. The educational qualification of the respondent, marital status, possession of four wheelers, computer, C. D. Player, house and television are affecting positively the possibility of possession of fixed landline phone connection.

The possession of fixed landline phone connection in Vadodara district in relation to the components of family structure and assets highlights the importance of fixed landline phone besides the availability of mobile phone services. Purpose of getting fixed landline phone connection is to be in contact and to have some common contact number in a family where all the members can be traced out collectively and also individually, will never let down the growth of fixed landline phone market in Vadodara district. It will not just flourish but its demand will increase with time without having any impact on growth of the mobile phone market. One can easily consider the importance of fixed landline phone besides the availability of mobile phones.

An attempt is made to analyze the difference between usage of mobile phone connection in relation to playing games, requesting news updates and participating in quiz competitions. Also opinion about different variables like - accepting mobile phone as status symbol, considering mobile phones as a necessity for daily life, influence of mobile phones on health of the user, ban on using camera phones in public place and also its usage in schools and collages is also studied. On the basis of response of 1,250 respondents', educational level is studied in not less than seven different categories.

To analyze the acceptance of telecommunication services, number of members in a family and number of mobile phone users in a family are also taken into consideration. Monthly rents of mobile phones as specified by the respondents are highlighted here. Maximum number of the respondents in all the talukas irrespective of the region has their monthly bill between Rs. 300 to Rs. 500. As 72 percent of the respondents are possessing pre-paid mobile phone connection and therefore, only recharge of more than Rs. 350 irrespective of the mobile phone service provider, has to be spend for being in contact for a period of one month. 215 respondents have a monthly expenditure between Rs. 100 to Rs. 300. 92 respondents have monthly rent of Rs. 1,100 and more whereas, only 22 respondents of Vadodara taluka has monthly expenditure between Rs. 700 to Rs. 900. None of the respondents in Savali and Vaghodia taluka has an expenditure of Rs. 700 to Rs. 900 on mobile phone in a month, but 5 respondents of both these talukas has monthly expenditure of Rs. 900 and more. Out of 1,250 respondents, 105 respondents pay a monthly bill of Rs. 1,100 and more.

The number of mobile phone users in a family and the number of members in a family shows the lack of relationship with the dependent variable of the model. Number of consumers possessing fixed landline phone connection has positive and strong association with the monthly rent of the mobile phone services. Regression coefficient of the number of mobile phone users in a family shows a negative sign, indicating the inverse relationship between the monthly rents of the mobile phones paid by a family. As the number of mobile phone users in a family increases, monthly rent of mobile phone also increases. Number of members in a family and the number of consumers possessing fixed landline phone connection have positive and strong association with the independent variables (monthly rent of the mobile phone). Indicating the increase in the value of independent variables will further result in an increase in the value dependent variable also.

Telecommunication services have made a room in every day life of the residents of Vadodara district in the same manner as in the other parts of the world. As per the analysis, fixed landline phone and mobile phone connection are complementary. Purpose of getting fixed landline phone connection is to be in contact and to have some common

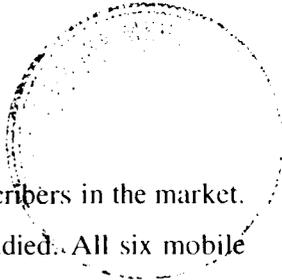
contact number in a family where all the members can be traced out collectively and also individually, will never let down the growth of fixed landline phone market in Vadodara district. It will not just flourish but its demand will increase with time without having any impact on growth of the mobile phone market.

Fixed landline phone and mobile phone services, both are important telecommunication services. Possession of these services in relation to socio economic variables is studied here. Possession of fixed landline phone connection and mobile phone in relation to these variables shows a similar trend. Telecommunication services have made a room in every day life of the residents of Vadodara district in the same manner as in the other parts of the world. As per the analysis, fixed landline phone and mobile phone connection are complementary and competitive to each other. Mobile phone connection in India has taken over the number of fixed landline phone connection and also the revenues generated by fixed landline phone connection.

Chapter 6: Time has come when the Indian mobile phone sector is ready to leap forward and realize its enormous growth potential. Only GSM technology based service providers were operating their services till 2002. All major mobile phone service providers of Gujarat circle are available in Vadodara district and no firm data in relation to district is available and therefore state level service offerings of mobile phone service providers has to be measured. Here all the mobile phone service providers are discussed in brief.

Various marketing strategies adapted by the mobile phone service providers are taken into consideration. The study found that mobile phone service providers are adapting various marketing strategies to attract consumers. Impacts of these strategies on consumers, in relation to use of the services are scrutinized. To analyze the marketing strategy important variables such as price, product segmentation and market segmentation are used.

The finding of the chapter is that the mobile phone service providers uses various strategies for marketing their products such as advertisement, sales promotion and other means, are not affecting the choice of consumers to a great extent. The price strategy of



the service provider is the basic variable, which determines the subscribers in the market. Various tariff plans available in market during last one year are studied. All six mobile phone service providers are available in Vadodara district and no firm data in relation to district is available and therefore state level service offerings of mobile phone service providers has to be measured.

The pricing strategy of the mobile phone service providers with the tariff offerings for both the services, pre-paid and post-paid can be studied separately. As it is very difficult to make the figures comparable, the information is not analyzed by any model. The most upcoming and accepted tariff plan for the pre-paid consumers is lifetime validity scheme is studied here. Tata Indicom was the first mobile phone service provider who opted for the non-stop mobile (lifetime validity scheme) on October 14, 2005. The easy recharge coupon of value up to Rs. 500 by all the mobile phone service providers, along with the processing fees of the service is studied.

In relation with the promotional strategies opted by the mobile phone service providers, In Indian advertising arena, mobile phone service providers are on the sixth position in using promotional strategy during first half of the year 2006, with 4 percent of market share. Only four advertisers in Indian market have used all sales promotional techniques in the specified period, three of the advertisers are the mobile phone service providers namely Reliance Infocom, BSNL, and Tata Teleservices.

An important promotional strategy adopted by all the mobile phone service providers is advertising. Most common way of advertising opted by the mobile phone service providers is the use of theme, memorable slogan. Such attractive and influencing theme by the mobile phone service providers helps the consumers to memorize the service provider at the time of buying. Slogans supports companies' current image by generating awareness, the most successfully communicated messages had a greater propensity to be unique.

For the first time, Airtel used Bollywood film stars, to promote telecommunication products, with the aim to break into the mass market and to double the existing base. The

response of the advertisement was overwhelming, just as it was intended. Idea Cellular is the only mobile phone service provider not considering having a brand ambassador, they believe in local branding. Hutch believes in the more established connection between what consumers sees and what they experience and get gives more chances that the advertising campaign would be successful. Reliance explored the new and unconventional channels for advertising. The Reliance name embossed on every handset gave it a sole prestige, while the costs of many of the advertisements were discounted since they were also borne by the handset makers.

Mobile phone service providers are trying to use every media vehicle and channel effectively. The advertising campaigns had an emotional arena, assistance on cricket and bollywood thus, effectively connecting with every Indian. Advertising has become an effective way of educating masses and evoking passions. The fast growth of consumer base of mobile phone services reflects the impact of a powerful promotional strategy.

Product segmentation strategy started with the consent of TRAI in 1999, by allowing the mobile phone service providers to use any digital divide technology, including CDMA. Till this point, all mobile phone service providers have to use GSM 900 MHz, band based on TDMA. Thus now a days, Indian mobile phone service providers have an option to serve the consumers either with GSM or CDMA technology.

To capture the market share, all the mobile phone service providers have to workout the proper and effective strategies. For mobile phone service providers, the service-based strategy is the key to success. Major marketing strategies are pricing, promotion, and product segmentation is discussed, from the service providers' as well as consumers point of view. All the mobile phone service providers are emphasizing on the consumer satisfaction. Mobile phone service providers in Gujarat are using the sales promotion techniques by making their services available to consumers through different offers in air. Mobile phone service providers are trying to use every media vehicle and channel effectively. Important promotional strategies adopted by all the mobile phone service providers are sales promotion and advertising. Preference towards mobile phone service

provider and the service provider in use emphasizes the loyalty towards the service providers.

Besides the consumers own preferences and opinions for the service providers marketing strategies, in relation to service providers marketing strategy are also discussed. Government rules and regulations also play an important and effective means in today's competitive market environment. All the mobile phone service providers irrespective of the region have to follow these norms. Important rules as per the authority are also highlighted here.