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"MARKETING PLAN FOR NEW MOBILE PHONES"

A Thesis submitted in partial fulfillment of the requirements for the degree of:

Master in Telecommunications Management

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Abstract

The purpose of this thesis is to identify the key factors that mobile phone users in Mexico City consider when they acquire a new mobile phone, in order to have the variables to create a valuable marketing plan. This study has as objective to understand the relationship between income, demographic variables and product choice in order to help targeting.
This study was based on a questionnaire applied to 200 respondents in Mexico City. The main variables obtained on this study were the following: IT variables (technology, physical attributes, size, weight, accessories, compatibility, use application, upgrading, security, self-service technologies and innovation), Economic variables (price, durability, social status, ownership, appearance, guarantee, availability, payment method and occupation) and Relational variables (social status, communication, promotion, style, brand loyalty, age, gender, color, product attractiveness and service efficiency).

This study shows the identification of key variables for the mobile phone users. The key variables are shown in a correlation table. This will help the reader to understand the relationship between those key variables (occupation, income, buyer's compliance to price, price, buying frequency, service, technology and manufacturer support).

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Chapter 1

Introduction

Background

Information and communications technologies (ICT) are concerned with the use of technology to gather and process information, they help people all around the world to communicate with others, keep a fresh look of what is happening out there. World ICT spending was up 5.6% a year between 2000 and 2005. The ICT industry is expected to grow by 6% in 2006, according to the OECD (Organization for Economic Co-operation and Development); Not only the creation of new IC technologies is growing, but also the trade of IC technologies, between 1996 and 2004, total OECD ICT goods trade increased by 6.5% a year, while that of Mexico and Eastern European OECD countries increased by 17.4% a year (OECD, 2006).

Growth of the ICT sector means that new products will appear for the users of communications products, in other words more IC technologies means more products and a change on the consumer's behavior, as well as on the market. As all new products, they can have a positive or a negative impact on the consumer, not only this impact can affect the companies, there is also a financial risk; with all the users having access to all the information for all the products combined with the fact that most users are looking for the

newest products allowing that the consumers adopt the new products (Hirunyawipada and Paswan, 2006).

Advances in wireless technology have increased the number of people using mobile devices and also accelerated the development of mobile services conducted with these devices. Although this new services may offer new business possibilities for the companies, research on mobile commerce suggests that consumers may not adopt these mobile services despite of their availability (Wang *et. al.*, 2006).

The new technologies provide new business possibilities, like mobile marketing and mobile commerce; these are the main reasons for investing on new technologies, as well as supporting new services (information services, transaction messages) by mobile devices. The new services are being adopted by more users every day; these services are growing therefore new strategies are needed this way the new services will be known by all the potential users (Mort and Drennan, 2005).

There is a study which discusses device convergence based on the consumer preferences, and explores main attributes of the mobile terminal of the future (Kim and Lee, 2005). Hence, companies can have a look of the devices for future high technology products marketing such as mobile phones.

As the market demand changes, products preference changes as well and also the strategies should change. There are mass customization strategies developed by mobile phone operators that are intended to identify the types of customer value perceived by

mobile phone users and customize services based on the profile of each customer. These strategies are customer centered and they can increase the amount of customer value perceived by the mobile phone users, since they got customized mobile phone services, increasing the perceived value (Sigala, 2006).

Statement of Problem

Increasing competition and changing customer preferences to enhance access to the information are making the IT companies to establish effective and realistic goals to lead in the target markets. Mobile phones may be described as a revolution in the communication industry and customers are adapting the new technology faster in communication products as compared to other technology related product segments (Research and consultancy outsourcing services, 2006). Hence, manufacturing and marketing companies for mobile phones are leaning towards developing sustainable marketing plan to gain competitive advantage. Introducing a new product is a way for companies to grow, however this can be a risky and time consuming project (Wagner, 1990).

The technological advances introduces every day new products with high speed of diffusion and products becomes available to the market, the companies sometimes are unprepared and fail respond to this new products on a correct way, with the planning of an effective marketing plan. The most issue related to new product introduction is the timing of entry into a new market (Capon and Glazer, 1987). Marketing plan is required to be developed carefully by the communication product marketing companies in view of changing customer's preferences towards technology advancement, product attractiveness, and effectiveness of the associated services providers to mobile phones, economic value additions, and other dimensions of the marketing-mix.

The mobiles phones users on Mexico are growing every day (and so in the Mexico City); the cell phones companies are creating new and more sophisticated devices, there are different kinds of devices for different users, there are some mobile phones that are just for use them as phones, but there are others that have more functions: mp3 players, movie players, cameras, web browsers and so. Hence, it is necessary for the companies to plan for product differentiation, target marketing and market segmentation to gain competitive advantage.

The following table (Table1.2) exhibits the mobile subscribers at the moment for all the technologies working in Mexico and their operator, as well as their annual change. With the annual change it is possible to see the growth of mobile phone users.

Table 1.2 "Mobile subscribers by operator and technology and annual change 2005"

Operator	System	Subscribers	Annual change
Telcel (America Movil)	AMPS	23,300	-91.2%
Telcel (America Movil)	GSM1900	20,388,400	+81.7%
Telcel (America Movil)	US TDMA800	15,502,300	-10.7%
Movistar (Telefónica)	AMPS	20,000	-87.3%
Movistar (Telefónica)	CDMA800/1900	760,000	-46.5%
Movistar (Telefónica)	GSM1900	5,588,000	+37.6%
Iusacell (Grupo Salinas)	AMPS	114,200	-60.9%
Iusacell (Grupo Salinas)	CDMA800/1900	1,685,800	+44.3%
Iusacell (Grupo Salinas)	CDMA1900	1,424,000	+1.4%
Nextel Mexico	iDEN	1,119,800	+34.1%
Total		**46,625,800**	**+22.1%**

Source: Paul Budde, Communications based on Global Mobile, 2006

To make a marketing plan effective, it is necessary that the companies pursuit it, as well as to evaluate the results and install feedback mechanisms, with the purpose of being able to modify the adapted plan to one more adequate to the circumstances.

The Strategic Business Unit (SBU) of a company serves a defined external market, with his own strategic plan to defined products and markets (Kotler and Keller, 2006). The SBU is a tool for marketing planning, because it concentrates all the effort of the company in a certain product and market, allowing the company to identify the target market and thanks to that create the best marketing strategy.

Objective & Purpose of Study

The principal objective of the study is to identify the primary variables that can make an impact on the buying decision for a mobile phone user in order to create a model for a marketing plan for products that aren't available on this moment according to Carl E. Hunt (1992), "Any new product should have a marketing plan, which should include expected penetration rates at various prices and the length of time required to achieve those rates. It also should include cost estimates for various levels of production." on one of the reports from The National Regulatory Research Institute (NRRI). Therefore the new products should have marketing plans, including those that are not available at this time.

However, the specific objectives of the study are:

- To understand the relationship between income and product choice, in order to help targeting.
- To measure the interdependence of mobile phones and their associated service provider services.
- To develop appropriate marketing strategies for the mobile phone marketing companies in reference to the existing competitive environment.

In view of the above, the focus of this study is to create a model of a marketing plan, depending on certain characteristics of the consumers. This will help the companies creating a strategy that will allow them to obtain a place on the market (positioning) on the right time. A marketing plan that is structured on the right way helps the companies to

know the situation of the market, competition, schemes of distribution which allows them to develop a strategy of commercialization of products.

A good strategy from the companies, created by the marketing plan can give a lot of benefits for them; it will help them to increase their market share, enhance the volume of operations, monitor the effectiveness of the services delivery, increase their market coverage, help growth in profit of the company SBU's.

Hypotheses

Since most of the people have limits on what they'll spend, cost plays a big role in most of the people buying decisions, it can be said that the price it's a key buying factor. From a consumer's perspective the price of a product is one of the key buying factors (Fetscherin and Vlietstra, 2004). The companies work on competitive marketing strategies (product positioning, product improvements, new product development, value pricing, branding, marketing communications, to name a few) and they use the techniques and tools to execute their strategies to outperform competitors (Gale, 1994).

Price can be an indicator of product quality, if a price is high, then the product has high-quality, if it is low, then it has low-quality; and status, higher price usually means premium products (Nagale and Holden, 2002). Therefore, the price that a buyer is willing to pay for a product also depends on what customer wants; different economic profiles will have different needs. The hypothesis can be stated as:

H1: The people of certain economic profile choose the products to buy for price.

Service providers are working with mobile phones manufacturers in order to create mobile phones compatible with their networks and the services they offer (PC World LA, 2005). Some extra functions that mobile phones can do are email and Internet access. But in order to have these services the service provider must support them. Another service that needs to be compatible with mobile phones and service providers are the Multimedia Message Service (MMS) or picture messaging (images, video, audio and text), some mobile phones support this service, but if the service provider don't support them, the mobile phones capabilities are useless. Users of mobile phones are looking for more and new services, so they are looking for phones that have the services and a service provider that can support the service. Therefore, a hypothesis can be stated as follows:

H2: Demands of the mobile phones depend on the service offered by the service providers.

Consumer needs and preferences change with age and life style. The preferences when a person is young are different that the preference of the same person when he is older. People have different wants and needs at different ages. Just like preferences changes with the age, also change with the gender. Men and women tend to have different attitudinal and behavioral orientations. The preferences of men are not the same as the preferences of women (Kotler and Keller, 2006). The product with certain characteristics

should be attractive for certain ages and certain gender. Hence the hypothesis can be stated as:

H3: Product attractiveness is closely related to the consumer preferences.

Sales promotions are a common tool that companies use in order to gain attention from the consumers. They serve as a buy incentive since they incorporate some extra value to the consumers. With a promotion, that is attractive to the buyers, the sales of a product can increment on the companies market share (Macalister, 2001). A good promotion can influence the decision of the buyer towards certain product or service. Therefore:

H4: Consumer behavior is influenced by the promotional packages associated with the product.

Advertising can be used to build up an image for a product and to trigger quick sales. There are many forms and uses of advertising (massive channels like TV, radio, and others) and just the presence of advertising might have an effect on sales. The objective of advertise something is to communicate the values offered by the product to the possible consumers. Hence a hypothesis can be stated as:

H5: Consumer decision of buying mobile phones is a fact of communication by the brands (advisement).

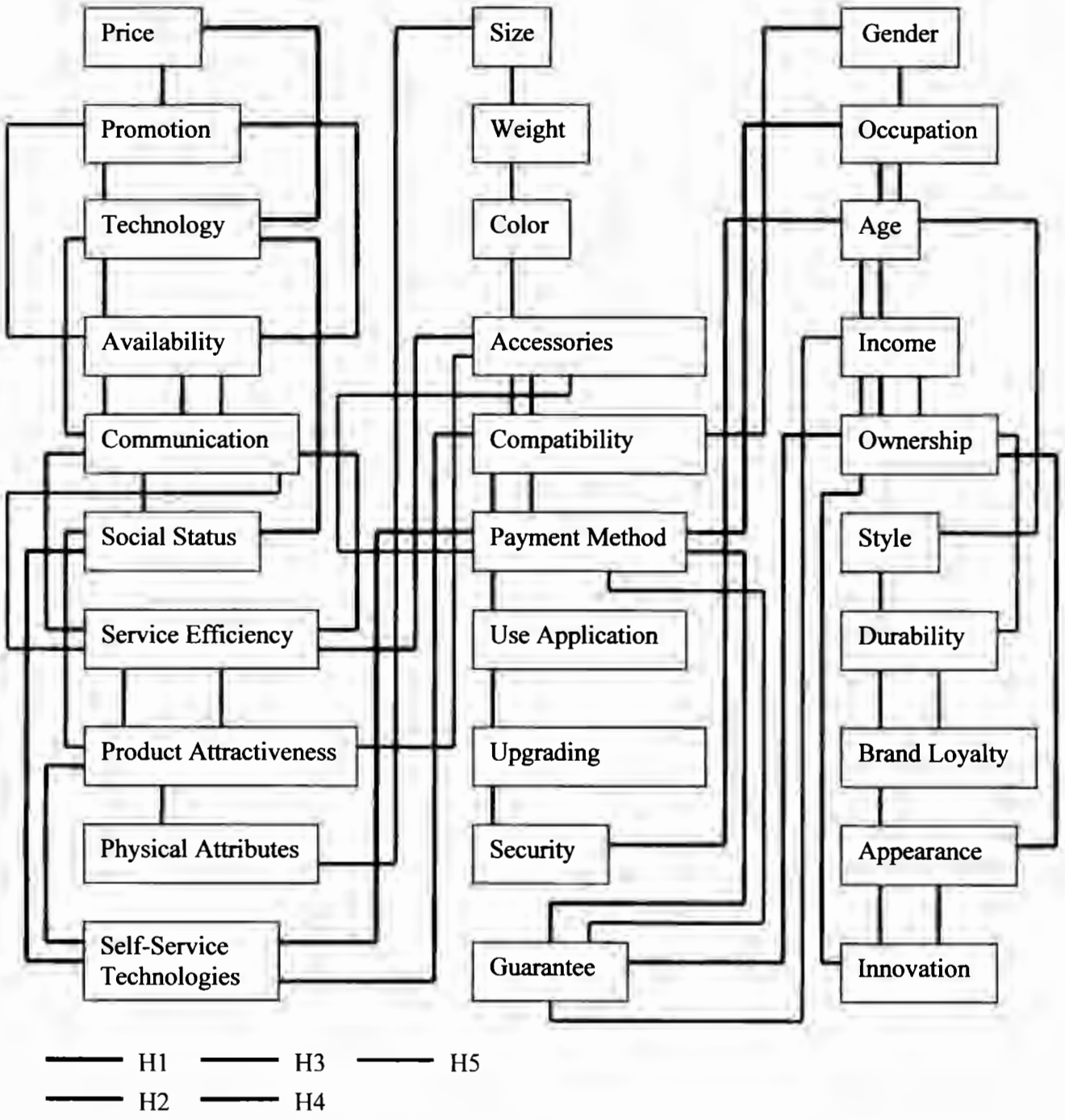
Each hypothesis has number of variables close related to each of them, as well as some support variables. The following table (Table 1.4) shows the variables that will be used on this study, as well as the relation with the hypotheses stated.

Table 1.4 "Hypotheses variables and their relationship"

Variables/Hypothesis	H1	H2	H3	H4	H5
Price	O	O	O	O	O
Promotion		O	O	O	O
Technology	O	O	O		O
Availability	O	O	O	O	O
Communication		O	O	O	O
Social Status	O		O		O
Service Efficiency		O		O	O
Product Attractiveness		O	O	O	O
Physical Attributes			O	O	O
Size	O		O		
Weight	O		O		
Color			O	O	
Accessories		O	O	O	O
Compatibility		O	O	O	O
Payment Method	O	O	O	O	O
Use Application	O	O	O	O	O
Upgrading		O	O		O
Security		O	O		O
Gender			O	O	O
Occupation	O		O	O	O
Age	O	O	O	O	O
Income	O	O	O	O	O
Ownership	O	O		O	O
Style	O		O	O	O
Durability			O	O	O
Brand Loyalty			O	O	O
Self-Service Technologies	O	O	O		O
Appearance			O	O	O
Guarantee		O	O	O	O
Innovation		O	O	O	O

The hypotheses variables and the relationship between the variables and the hypotheses as well as the relationship between the hypotheses have been exhibited in Figure 1.4.

Figure 1.4 "Relationship between the hypotheses variables"



Scope and Limitations

The analysis of data (market analysis) on this study will help to create the proposal for models of a marketing plan for commercialize new mobile phones. This marketing plan will only be presented in order to help the companies to save time while trying to commercialize new mobile phones not available on the market on this moment but will be available on the future. Although this thesis will present the key variables in order to create a model for a marketing plan, it will not present how it should be implemented on the company it's intended to serve as help for the development of a marketing plan.

Information presented in this study will be helpful to the companies to develop and implement marketing plan. The marketing plan length will depend on the information gathered during the realization of this study, which will last approximately 8 months.

Chapter 2 Review of Literature

Growth of Information Technologies

Currently, the world is a place where information and communication technology (ICT) is being diffused into all human activities at an unprecedented rate. Along with this development, there is also an intense debate on the contribution of ICT towards productivity and growth in both developed and developing countries (Joseph, 2002).

Given the rapid growth of technology markets, the ICT industry is growing. The importance of the information is critical, everybody needs information, about the work, school or personal issues, and there is a need for information. The access to information can give a company a strategic advantage over the others, so investments on ICT have been increasing over the years (Rao *et. al.*, 2004).

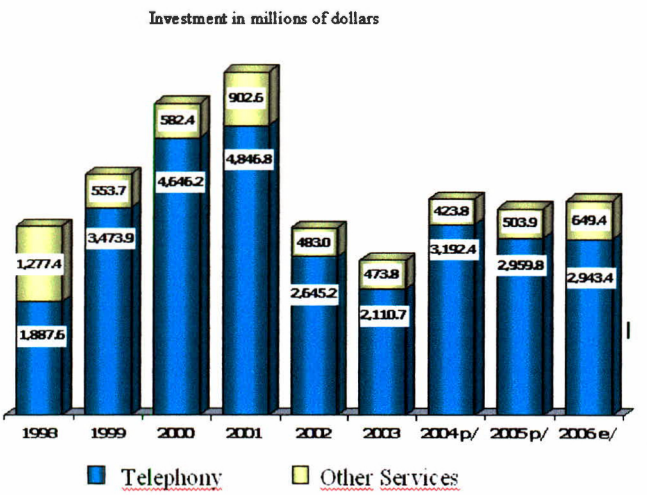
It is important that developing countries, as Mexico invest on ICT since it has a critical role to play in development efforts around the world. Developing countries that use ICT grow faster, invest more and are more productive than those that do not (World Bank, 2006). In recent years, developing countries and the international development community have started taking concrete actions to incorporate ICT into their economic policies and development agendas. Many countries are preparing and implementing

national e-strategies that emphasize the ubiquity of connectivity as well as new applications in areas like e-business.

ICT has become the key driver for socioeconomic development in recent years (Kuppusamy and Santhapparaj, 2005). The benefits of ICT can be for economic growth and development. The rapid diffusion of the Internet, of mobile telephony and of broadband networks all demonstrates how pervasive this technology has become (OECD, 2003). All countries are investing on ICT in order to increment the Gross Domestic Product (GDP); Mexico has done ICT investment over the years, to provide an infrastructure to support the growth of mobile users.

Figure 2.1 shows the investment made on ICT in Mexico on the years 1998-2006. As it can be seen on the figure, the investments were higher on the year 2000, since it was the mobile boom, for mobile phones so mobile operators made investments to create the mobile infrastructure.

Figure 2.1 "Investment made on ICT in Mexico 1998-2006"



Source: Telmex, 2007

The impact of the ICT capital can be shown on real output growth; the benefits gained from the ICT-based investment made by the countries over the years. The growth on ICT has made a positive impact on the economic growth of the countries that made the investments (O'Mahoney and Vecchi, 2005).

Another key factor for ICT growth, besides economic factors, is the growth on the service industries; this growth is responsible for the acceleration in ICT capital, and as a consequence the economic growth. The ICT can also boost the labor productivity when used (Inklaar *et. al.*, 2005). The contribution of ICT on productivity growth has increased in production and investment, not only ICT contributes to increment the production but also the investment received by the countries thanks for the new ICT adoption (Viljselaar and Albers, 2004).

In order to achieve high performance, while implementing ICT there should be considerations associated with the adoption and use of this ICT, and not only the direct effect on problems associated with information flow, distribution and management; in other words, the ICT by themselves cannot achieve any goal, the people who use them achieve them, and in order to do this, they need to know what does the new ICT can provide them (Cordella, 2006).

Over the last few years there has been a growth of ICT investment, mainly due the fact that ICT can help a country on his economics and productivity. ICT can make people

lives easier allowing them to do more functions and tasks therefore ICT has been incorporated as a part of ordinary life.

Consumer Value and Technology

The role of consumer value can be used by the companies as an instrument to stimulate the market and improve their profit the companies need to ascertain a continuous organizational learning process with respect to the value creation and measure performance of new products introduced in the market (Rajagopal, 2005). Value is a subjective perception of the trade off between multiple benefits and sacrifices, relative to competition (Ulaga, 2003). The customer value can be related to a single purchase of a good or service, or to the relationship between customer and a supplier.

The customer values are created towards the new products through individual perceptions, and organizational and relational competence. Technological development and especially the fast development of IT is one of the forces changing the value creation in the services. Innovations in information technology continue to open up areas for new kinds of professional services (Komulainen *et. al.,* 2004).

Convergence represents an important trend in information technology. In service convergence various services are incorporated into one converged service. There is also a device convergence, where many kinds of extant devices and terminals used for various

devices are incorporated into a new, converged device that enables consumers to use the converged services and connect to the converged network (video, audio and data). The new technologic device allows multiple applications with just one device, making it easier for the user adding customer value to them (Yeonabe *et. al.*, 2005).

The mobile communication providers need to give more applications to the users, some new features, as paying by mobile phones; new products and services will be designed to tap into the convenience of "non-contact" payment technologies, particularly those that leverage the growing array of cell phones and other mobile data devices. In a near future, consumers will be able to pay for a variety of Internet, mobile and physical goods with a single contact-less device, allowing them to do more with their mobile phones, adding costumer value (CRM Today, 2003).

The investments in information technology (IT) create consumer value; this consumer value evaluates the magnitude of the benefits that have been passed on the consumers. There are only two ways to obtain value: value can be created, and value can be redistributed from others. While the processes of value creation and value redistribution are often linked, they can also be considered separately (Hitt and Brynjolfsson, 1995).

Consumer value will be a critical factor for the mobile operators in the future, since all service providers are having almost the same services, as the technology advances. An example of adding consumer value is the adoption of new payment methods; these can

add tangible value over existing consumer payment habits, adding more value with just a little investment on technology infrastructure (Tower Group, 2003).

Innovation makes companies achieve future performance; if they achieve this the company creates value and can satisfy customers better than before (Sahut and Lantz, 2003). Innovate on the ICT can add value to a customer, by making easier the processes, devices easier to use, and so.

Examining the customer-perceived value elements in the emerging mobile advertising business is an important topic. Mobile devices can help to transmit customer value, thanks to mobile advertising (Durlacher Research, 2000). This kind of advertising can give the users the information needed or wanted.

The technology can be used not only to create new services it can also be used to improve the actual ones. If the service gets improved, the perception from the customer side will be that the service is better, adding value to him (Parasuraman and Grewal, 2000). Technologic innovations can help the companies to add value to their customers, creating loyalty. Technology is close related to customer value since technology can give more applications, make process easier, allow customers to do more things, in other words technology can add value to the customer.

Technology Services and Consumer Behavior

The Mexican mobile providers support the following services:

- SMS (Short Message System): This service allows users to send a text message to another user. Text messaging is an enormously popular service. Sending and receiving text messages requires users to look at the display; the text message needs to be written using a numeric keypad (the one from the mobile phone) and the user has to tap the keys in order to write a message (Mc Connell, 2005). The Mexican SMS market has been growing since 2004, when the operators in Mexico decided to focus on domestic SMS interoperability (Chavez, 2006). According to Telcel, SMS traffic grew 1000% in three years, from 3.3 million messages daily in 2002 to 33 million messages every day in 2005.
- MMS (Multimedia Message System): MMS is the evolution of SMS. With MMS the mobile device can send not only pure text messages, but can send and receive multimedia messages such as graphics, video, audio and so on (Le Bodic, 2005). Mobile subscribers are beginning to embrace MMS and are becoming aware of its potential as a platform for delivering much more rich content and services, like ringtones, background images and even applications, directly to the handset. Most mobile operators have limits on the overall size of an MMS message; these limitations are increasing, allowing for a significant variety of content to be delivered to the hand set (Dudley, 2005).
- GPRS (General Packet Radio Service): GPRS is a service available for GSM mobile phones and is a mobile data service, is a GSM packet-based data

transmission technique that offers continuous connection to the Internet for mobile phone and computer uses. It uses the existing GSM network to transmit and receive TCP/IP based to and from GPRS mobile devices (Comtech, 2006). The mobile devices that uses this technique are called 2.5G, since they are between the second generation and the third generation.

- WAP (Wireless Application Protocol): WAP is an open international standard for applications that use wireless communication, its principal application is to enable access to the Internet from a mobile phone (Romo, 2004). WAP is the protocol used for the majority of the world's mobile internet sites, known as WAP sites. The trend is that every site creates his WML (Wireless Markup Language) versions in order to be viewed with WAP (Van Der Henst, 2004). A WAP service allows mobile phones to browse over Internet.
- PTT (Push to Talk): PTT is a two-way communication service that works like a "walkie talkie". Is a method based on half-duplex (communication can travel in only one direction at a given moment) using a momentary button to switch from voice reception mode to transmit mode (press the button for talking and release it for receive); in other words PTT is a one way communication service, while one person talks the other listens (NOKIA, 2005). Operators use VoIP technologies to provide the service over high-speed data networks.
- EDGE (Enhanced Data for GSM Evolution): EDGE is a digital mobile phone technology that allows increased data transmission rate and improved data transmission reliability. Is the global standard regarded as a key factor in the convergence of TDMA and GSM networks. EDGE provides up to three times the

data capability of GPRS and offers data transmissions speeds up to four times faster than GSM (GSM World, 2006).

- High capacity mobile voice/data services (1xRTT): 1xRTT is short for Single Carrier (1x) Radio Transmission Technology (RTT), 1xRTT has the capability of providing greater speeds, up to 144kbps. 1xRTT qualifies as a 3G technology, although sometimes it is considered as a 2.5 – 2.75G (TECH-FAQ, 2004).
- Broadband wireless data service (1xEV-DO): 1xEV-DO is short for Single Carrier Evolution Data Optimized, is an evolution of 1xRTT with High Data Rate (HDR) capability added and where the forward link is time-division multiplexed. It's a 3G technology. The data transmission speeds can be up to 2.4Mbps (download) and 155kbps (upload) and has compatibility with the 1xRTT standard (Telefonica Móviles, 2005). Because of his higher data transmission rates, it is used to transmit television signals on mobile phones over the 1xEV-DO networks.
- LBS (Location-Based Service): The LBS are a way to send some information to cell-phone subscribers based on their current location (Billing options, track of people, etc.). The provider gets the location form a GPS chip on the phone or using radiolocation, based on the signal-strength of the closest cell-phone towers (Steiniger *et. al.*, 2005).

Those are the services that Mexican mobile providers are offering to their customers at this moment. Although some of those services are only offered by mobile providers under contract, some of them don't need any contract, just a phone that supports the service.

There are various factors for the mobile success in Mexico: the Mexican economic recovery, increased competition that lead to reduced services prices (prepaid and post paid), the introduction of SMS and the migration to GSM technology. The prepaid method contributed to the growth of the mobile market in Mexico.

Mexico has one of the largest prepaid bases in Latin America, it was the first Latin American country to introduce this service, and the Mexican operators have been really effective in developing successful prepaid programs (Budde, 2006). Prepaid card have made mobile phones accessible to those segments that have limited budgets, or make few outgoing calls and that don't want to make a contract with one of the mobile providers. In September of 2005 prepaid subscribers made up 93% of the country's total subscriber base (COFETEL). Prepaid method became so popular that operators have been unable to migrate subscribers from prepaid to contract plans. Table 2.3 shows the growth of mobile subscribers in prepaid and postpaid services.

Table 2.3 "Prepaid and postpaid subscribers"

Year	Prepaid	Annual change	Postpaid	Annual change
1997	1.000.000	+141%	741.000	−22%
1998	2.315.000	+132%	1.035.000	−40%
1999	6.370.000	+175%	1.362.000	−32%
2000	12.450.000	+95%	1.628.000	−20%
2001	19.974.000	+60%	1.784.000	−10%
2002	23.922.000	+20%	2.006.000	−12%
2003	28.069.000	+17%	2.029.000	+1%
2004	35.943.000	+28%	2.508.000	−24%
2005	43.873.000	+22%	3.268.000	−30%

Source: Dirección de Información Estadística de Mercados, COFETEL, 2005

It has been observed that consumer's behavior is heading more towards the prepaid option and it has been impossible for the mobile providers to shift the users from prepaid to a postpaid (contract plan). Prepaid has some advantage for the operators, as lower acquisition costs, the elimination of bad debt problems since subscribers pay up-front for airtime and wider distribution as operators can sell their prepaid packages. The disadvantage of prepaid for operators is the lower ARPU, short for Average Revenue per User (Infoamericas, 2002).

Mobile Phones Technologies and Market Behavior in Mexico

In Mexico there are four mobile phone technologies:

- Analogue:
    - Advanced Mobile Phone Service (AMPS)
- Digital:
    - Time Division Multiple Access (TDMA)
    - Code Division Multiple Access (CDMA)
    - Global System for Mobile Communications (GSM)

There are 4 mobile operators in Mexico: Telcel (America Movil Group), Telefónica Movistar, Iusacell and Unefon. Telcel and Telefónica Movistar adopted GSM technologies, while Iusacell and Unefon choose CDMA. Besides GSM Telcel also uses

TDMA, while Movistar also uses CDMA; however both of them are trying to encourage their users to GSM (Budde, 2006). Table 2.4 shows the market share that each mobile provider has.

Table 2.4 "Mobile market share by operator"

Year	Telcel	Movistar	Iusacell	Unefon
2001	81%	6%	9%	4%
2002	78%	10%	8%	4%
2003	80%	12%	4%	4%
2004	77%	15%	4%	4%
2005	79%	14%	4%	3%
2006 (Mar)	79%	14%	4%	3%

Source: Paul Budde based on company data, 2006

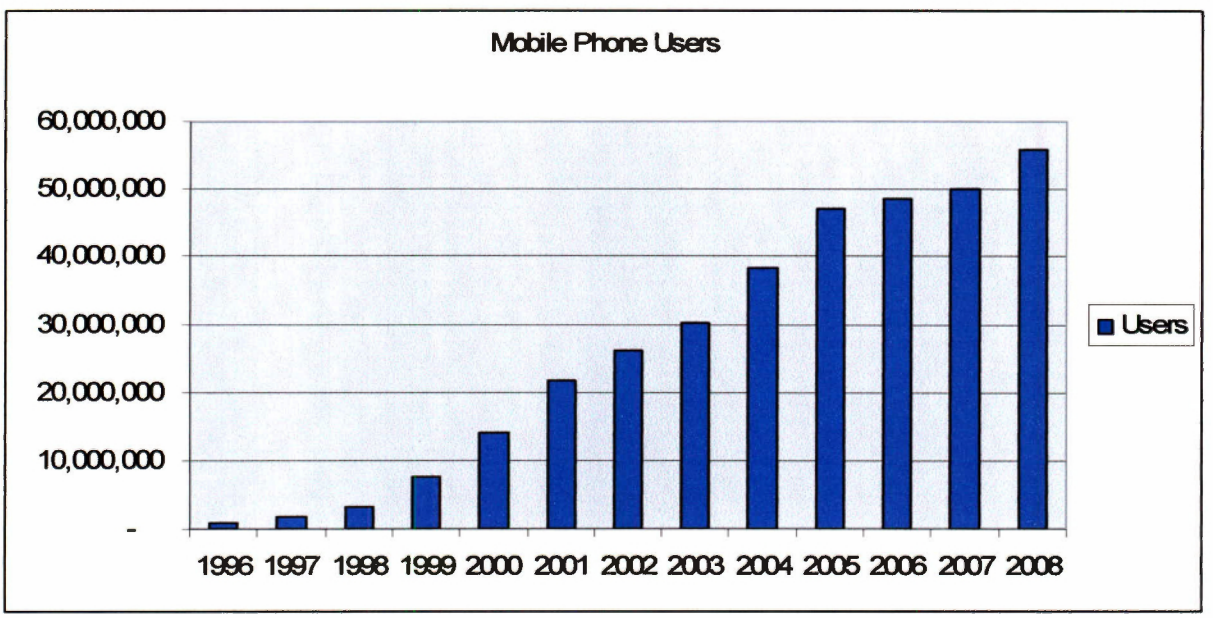
GSM is the fastest growing mobile technology in Mexico. During 2004, it grew by 221% and continued growing at a 40% rate in 2005. CDMA fell by 5% in 2004 and continued falling by a 4% rate in 2005. TDMA fell by 8% in 2004 and continued by about 9% in 2005, mainly due to migration from TDMA to GSM system. AMPS is on his way out of the Mexican mobile market, falling 55% in 2004 and 160% in 2005, currently has less than 1% of the total subscriber base (Frost and Sullivan, 2006).

Those were the so called 2G technologies; however some mobile operators are using 2.5G and 3G technologies as well. In July of 2004 Movistar was the first operator in Mexico to launch EDGE technology, providing high-speed mobile Internet access on its GSM network (Yankee Group, 2005) but by 2006 all the operators had 3G technologies.

Mobile communications operate within a competitive environment in Mexico, although the market is clearly dominated by Telcel, with movistar in second place. GSM covers 50% of the market, and the goal is to make the entire market GSM, except for Iusacell, which has incorporated 3G technology under CDMA (Chavez, 2006).

The mobile market in Mexico is growing; according to COFETEL in 2006 there was an increment of 3% on the number of mobile phones users, leading to 48,600,000 users. The projections of the users for the year 2007 is an increment of another 3% on the total number of mobile phones users and for the year 2008 is of 15%, resulting on 56,000,000 users for 2008 (Select, 2002). Figure 2.4.1 shows the increment of the mobile phone users over the years; this figure shows that the mobile market is growing every year.

Figure 2.4.1 "Growth of Mobile Phone Users in Mexico"

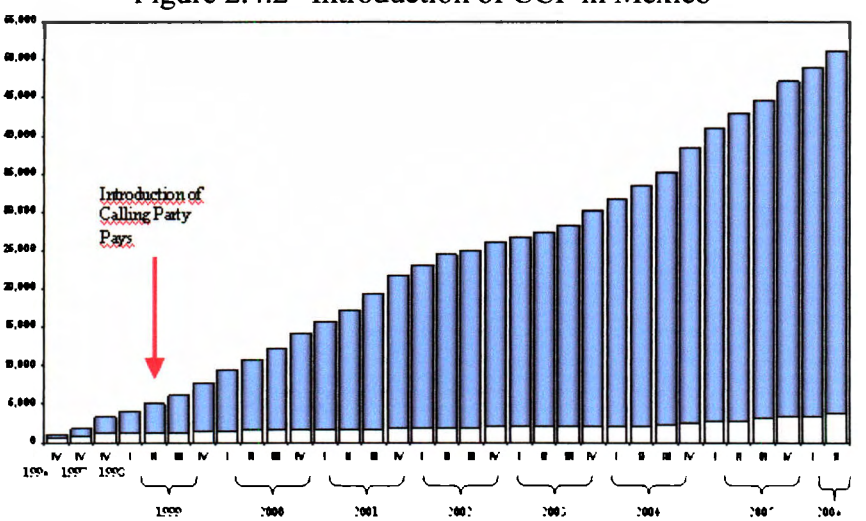


Source: Table based on COFETEL data, 2007

Currently, Mexico is the number two mobile market in Latin America behind Brazil. Mobile subscribers in Mexico overtook fixed-line phones in mid-2000 (Pyramid Research, 2003). Driven by a booming GSM market, the Latin America mobile industry is growing at a rate of around 22% annually, with a mobile penetration rate of around 43% in February 2006 (Ramirez, 2006).

The growth of the Mexican mobile market is fragmented because of the youth is taking advantage of lower cost of ownership of a mobile phone, contributing to a 50% increment in subscribers and an $850 million increase in data revenues by 2007 (Wireless World Forum, 2006). Another factor was the introduction of CCP (Calling Party Pays) implemented by all mobile operators, this caused a massive buying trend of mobile phones (Comisión Federal de Telecomunicaciones, 2000). Figure 2.4.2 shows the growth after the CCP was introduced by Mexican mobile providers, according to COFETEL (2006). On the figure it can be seen that after CCP was introduced the mobile subscribers growth.

Figure 2.4.2 "Introduction of CCP in Mexico"



Source: COFETEL, 2006

According to the World Fact Book, Mexico was until recently the world leader in wireless growth. Between 1998 to the end of 2003, the number of handsets increased 1178 percent from 2.2 million to a little more than 28 million. Despite these stunning growth figures, only about a third of Mexico's nearly 105 million inhabitants have a mobile subscription. And almost 90 percent of these are prepaid, which is largely responsible for the rapid initial growth (ERICSSON, 2005).

The Mexican telecom industry is developing rapidly and has enormous growth potential, making it one of the most interesting telecom markets in the world (Bharat Book Bureau, 2006). With the improvement of technology and the steady growth of subscribers, Mexico has a lucrative mobile market. The youth and corporate markets are the segments where operators will likely concentrate and so developers can also expect to find business opportunities there.

Chapter 3 Methodology

Study Design

This study will be a descriptive study, since this kind of studies pretend to specify the important properties, characteristics and profile of the people, groups, communities or any other thing that it is analyzed (Hernández *et. al.,* 2002). On this type of studies a series of questions are selected and measured or data collected about all of these questions.

The study design will be a non-experimental cross-sectional study, witch has the following characteristics:

A non-experimental study is the one were the research is made without intentional manipulation of the variables; in other words is a study where the independent variables don't change, at least not willingly. A cross-sectional study is a descriptive study were data is collected for a certain moment in time only once in a time. Its purpose is to describe variables and analyze their incidence and interrelation on a certain moment; they are often related with a "snapshot" for a certain period of time, giving the frequency and characteristics of a variable in a population at a particular point in time. The data obtained on this study can be used to assess the prevalence of chronic condition in a population.

Variables of the Study

The following table (Table 3.2) shows the variables groups and the variable on each group that will be used on this work; these variables are the most significant variables that are closed related to buy a mobile phone.

Table 3.2 "Variable Groups"

IT Variables	Economic Variables	Relational Variables
Technology	Price	Social Status
Physical Attributes	Durability	Communication
Size	Social Status	Promotion
Weight	Ownership	Style
Accessories	Appearance	Brand loyalty
Compatibility	Guarantee	Age
Use Application	Availability	Gender
Upgrading	Payment Method	Color
Security	Occupation	Product Attractiveness
Self-Service Technologies		Service Efficiency
Innovation		

These 30 variables were chosen because of the effect they have on the mind of the consumer on their buying decision. All the data collected on this study will have something to do with these variables.

Data Collection

On this study the data will be collected from two sources (primary and secondary data), this two sources will help to get the data needed to do the analysis:

Primary data: this data will be collected through questionnaires; this means that the data will be collected directly from the users or potential users of mobile phones. The number of questionnaires that will be applied will be explained on the sampling section.

Secondary data: this data will help as support data, and it will be obtained on the following sources: INEGI, COFETEL, and some data provided by the national mobile service providers.

In order to obtain correct data from the questionnaires, a pilot test of 10 questionnaires will be applied with the objective to find possible errors on the questions made or weaknesses of the questionnaires; this will also help to see the quality of the questions, if they are linked with the study, and so.

After this test, the questionnaires will be corrected so they can be applied to the final users of the mobile phones; this will be done in order to know why they change their mobile phones.

The questionnaires will have from 25 – 30 questions, with an answer format of multiple choices, as well as some Y/N questions this way the answers will be easier to collect and analyze.

Sampling

This study is confined to the population of Mexico City that uses mobile phones (people from economic classes from A to D). According to the INEGI the number of people (total, sum of all the classes) on Mexico City that of those characteristics is 7,661,807 (INEGI). This number will help us to get the total population used on the formula showed above.

Since this study is largely based on the primary data it is necessary to define the sample size to administer the questionnaires. This sample has been calculated through the following formula (Weiers, 1996):

$$n = \frac{P*(1-P)}{\frac{E^2}{Z^2} + \frac{P*(1-P)}{N}}$$

Where:

n = sample size

Z = Standard deviation

E = Error

P = Population proportion trying to estimate.

N = Total population

On this case for a 95% of credibility, and for México City citizen's economic classes, the formula can be with the following data:

Z = 1.96

E = .07

P = 0.5

N will be calculated here:

Economic Class population:

A = 2,842,874 B = 2,421,537 C = 1,976,059 D = 421,337

$$N = \frac{4A + 3B + 2C + D}{10} = 2{,}300{,}956.2 \approx 2{,}300{,}956$$

Therefore;

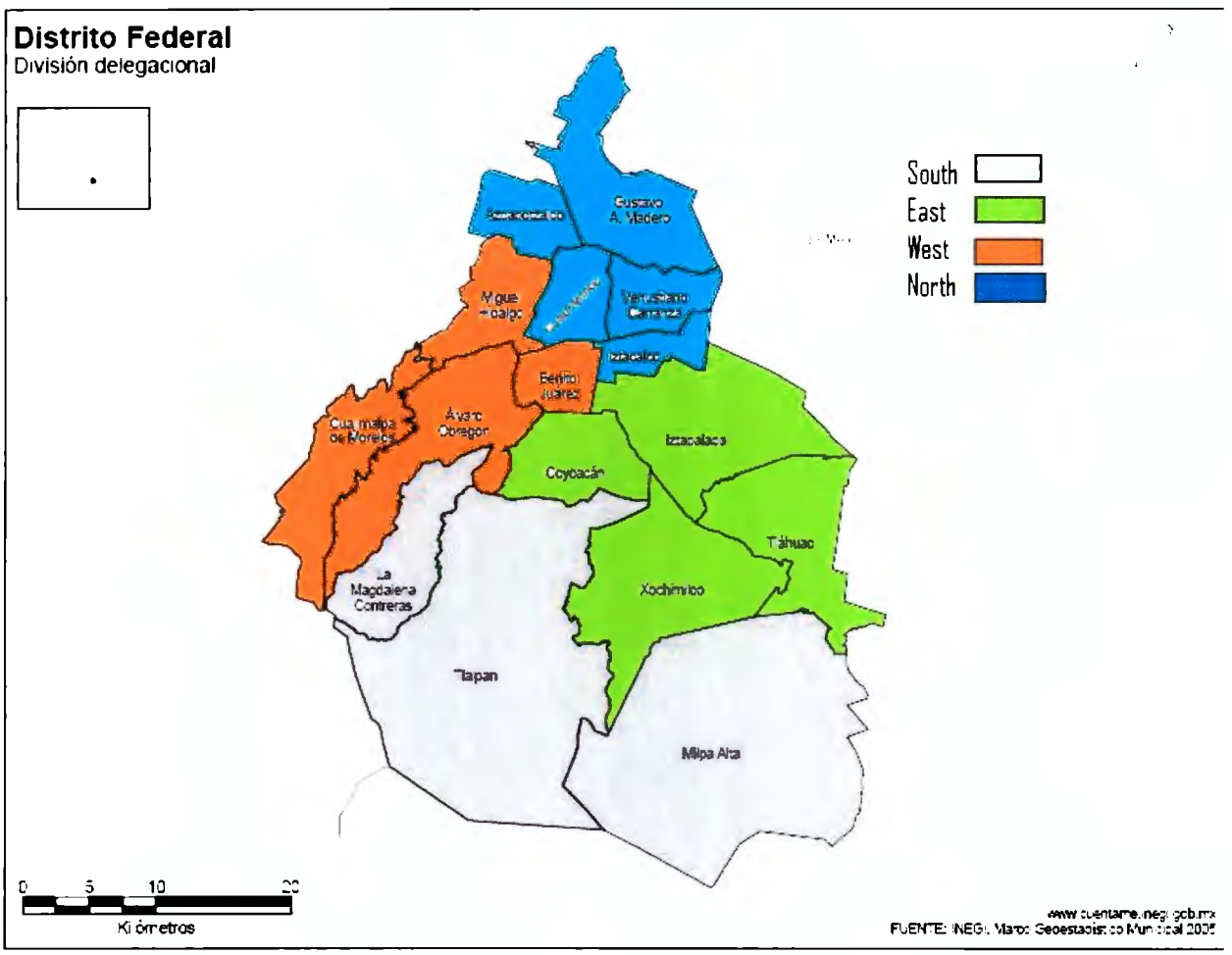
N = 2,300,956

$$n = \frac{0.5 * (1 - 0.5)}{\frac{(.07)^2}{(1.96)^2} + \frac{0.5 * (1 - 0.5)}{2300956}} = 195.98 \approx 196$$

Therefore the sample size is confined 196. The questionnaires will be applied to 200 people from different delegations of Mexico City.

Figure 3.1 Shows the division made for this study, it divides Mexico City into 4 regions (each one with a different color: south region in grey, east region in green, west region in orange and north region in blue)..

Figure 3.1 "Regions of the study in Mexico City"



Data Analysis

To analyze the data collected from the questionnaires (primary data) the data has been gathered on spreadsheet software; this will facilitate the data analysis. This part of the data analysis will help to support the hypothesis stated on the chapter 1.

Each question of the questionnaire is related to one or more of the variables of the study, also the variables are related to the hypothesis therefore it will be possible to find a trend of the data.

The secondary data has been collected to quantify the market share of the companies, the market trends, and some other useful information that will support the primary data while supporting the hypothesis.

Organization of the Thesis

This thesis will be presented as followed:

It will be divided on 7 chapters: Introduction, Literature Review, Methodology, Theoretical Motivation, Findings and Discussion, Summary and Recommendations, References.

This work will also include an Image section containing all the images of the thesis. Each chapter contains relevant information about the thesis.

Chapter 4

Theoretical Motivation

On this section of the work some mathematical explanation will be presented; this will help to understand the relationship between customer and some of the variables shown on chapter 3 as well as their importance on the buying decision.

Customer value

The customer values for goods and services are largely associated with the service providers and their customer services offered. Customer preferences are a critical part in making a buying decision and maximizing the value of a product, for the customer. The value of product and service are not always the same and are subject to value life cycle that governs the customer preferences (Rajagopal, 2006); in other words customer preferences change with time or at least their value for a given product or service. If the value of a product change because it has been upgraded or improved in some way, then the value from the customer changes. Therefore it can be assumed that customer preferences have high variability that grows the value factors in buyer's decisions and can be expressed as:

$$D_{bm} = \sum_{t=1}^{N} \beta^{t} \mu(C_t, \hat{Z}) + \beta^{N+1} Q_t$$

Where D_{bm} is expressed as initial buying decision of the customers, C_t represents the consumption of a product or service in some time, $\hat{Z}$ is a vector of customer attributes (preferential variables), Q_t is the value perceived by the customer on the time.

The customer value plays a key role in buying and is a factor that needs to be considered in all marketing and selling functions. The value equation for a customer satisfaction can be expressed as:

$$V' = K_s, K_m, K_d, K_c[\Pi\langle V(x,t,q,p)\rangle]$$

Where V' is a specific customer value driver, K are constants for supplies, margins, distribution and cost to customers; x is volume, t is time, q is quality and p is price. V is the perceived customer value and is a function of price and non-price factors in a given time. Here Π has been used as a multiplication operator.

The value addition in the conventional products provides lesser enhancement in customer satisfaction as compared to the innovative products. Such transition in the customer value, due to shift in the technology can be expressed as:

$$V_{hj}^{'} = a[\sum \frac{T_p}{(1+V_p)^{(1+j+i)}}] + b(X_j)$$

Here $V_{hj}^{'}$ represent enhancements in customer value over the transition from conventional to innovative products, a and b are constants, T_p is high-tech and high-value products, V_p represents value of product performance that leads to enhance the customer value, the volume is X and j is the period during which customer value is measured.

Product attractiveness

The attractiveness of new products is one of the key factors affecting the decision making of customers and is related to market growth and sales. If the attractiveness of the product is high, the growth in sales and market share is high. Product attractiveness can be expressed as:

$$F_x = M_t^{i_n,j} \frac{\partial v^{'}}{\partial t} = M_t^{i_n,j} \frac{\partial b^{'}}{\partial s} \frac{\partial s}{\partial t} = M_t^{i_n,j} \frac{\partial v}{\partial s}(V_{np})(C_{at})$$

Where F_x is the new product attractiveness, $M_t^{i_n,j}$ denotes the initial investment for introducing the new product "t", $v^{'}$ represents the volume of penetration of new product in a given market in time t with estimated market share s; V_{np} is the perceived customer value of the new product and C_{at} is the competitive advantage driver for the customer in a given time.

Willingness to Pay

The costumer's willingness to buy new products depends on the benefit offered by that product compared to the benefit of the product that currently serves that need; the willingness to pay is the maximum amount of money that a person is willing to give in order to get a product/service (Talukdar et. al., 2002). The willingness to pay is a function of a set of socioeconomic and attitudinal variables (Blaine et. al., 2003).

One model for calculating the Willingness to pay (WTP) is:

$$P_r (\text{WTP} \leq \text{BID}) = \Phi (\alpha - \rho\text{BID} + \lambda' \mathbf{Z})$$

Where WTP is the minimum acceptable price; BID is the bid price offered to some product/service; **Z** is a set of observable characteristics for consumers; Φ is a cumulative normal or logistic distribution function; ρ is the coefficient of external influence for the people and α and λ are unknown parameters.

Chapter 5 Findings and Discussion

This is an empirical study based on the primary investigation around the selected respondents in Mexico City. The study area has been divided into four regions considering demographic and economic profile of the respondents on one have and the geographic distribution of sales outlets on the other. In all the information of 200 respondents have been analyzed and qualitative dimensions of sales outlets of mobile phones have been discussed in the following text.

Attributes of Respondents

Data of respondents has analyzed in reference to anthropometric and economic variables in the study regions. The distribution of respondents by gender in the study area has been exhibited in Table 5.1 which reveals that among the total number of respondents covered in the study 64.5 percent were males.

Table 5.1 "Distribution of Respondents by Gender in the Study Area"

n=200

Region	GENDER	
	Male	Female
West	31 (15.5)	19 (9.5)
North	28 (14)	22 (11)
East	36 (18)	14 (7)
South	34 (17)	16 (8)
TOTAL	129 (64.5)	71 (35.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Age is one of the factors associated with buyer behavior and plays as stimuli towards acquiring new products. It has been observed that respondents between the age group 18-30 had shown significant interest towards buying and/or using new and value added mobile phone. The above referred age group constitutes highest percent (38.5 percent) among the total sample respondents covered under the study. The study revealed that respondents within age group 31-40 also showed the potential towards buying advanced mobile phones.

Table 5.2 "Distribution of Respondents by Age in the Study Area"

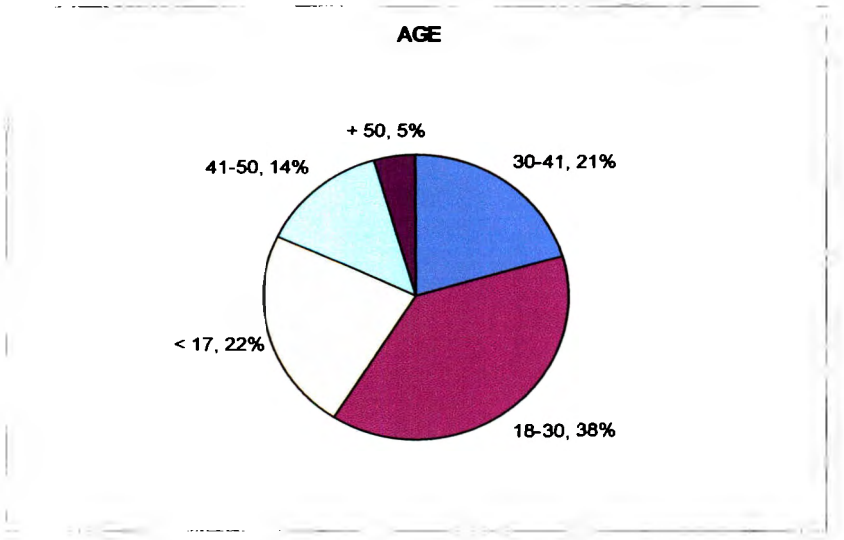
n=200

Region	AGE				
	10 - 17	18-30	31-40	41-50	50+
West	7 (3.5)	15 (7.5)	13 (6.5)	11 (5.5)	4 (2)
North	18 (9)	19 (9.5)	8 (4)	3 (1.5)	2 (1)
East	9 (4.5)	17 (8.5)	13 (6.5)	9 (4.5)	2 (1)
South	7 (3.5)	26 (13)	12 (6)	4 (2)	1 (0.5)
TOTAL	41 (20.5)	77 (38.5)	46 (23)	27 (13.5)	9 (4.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

The respondents in this age group largely belonged to the working managers and use of mobile phones appeared to be an occupational tool. The Table 5.2 exhibits the age-wise distribution of respondents in the study area. Chart 5.1 exhibits the age of the respondents in the study area, the number shown is the percentage of the respondents.

Chart 5.1 "Distribution of Respondents by Age in the Study Area"



Nature of occupation has close relationship with the acquisition and usage of mobile phones. It has been observed during the study that buying and extent of usage of mobile phones were higher among the field level executives followed by students while the usage appeared to be lowest among the housewives. In this study, the occupational profile of respondents constituted students field executives (29 percent), students (24 percent), corporate executives (13 percent), service executives (12.5 percent), professionals (7 percent), housewives (7 percent) and others (7 percent) as exhibited in Table 5.3.

Table 5.3 "Distribution of Respondents by Occupation in the Study Area"

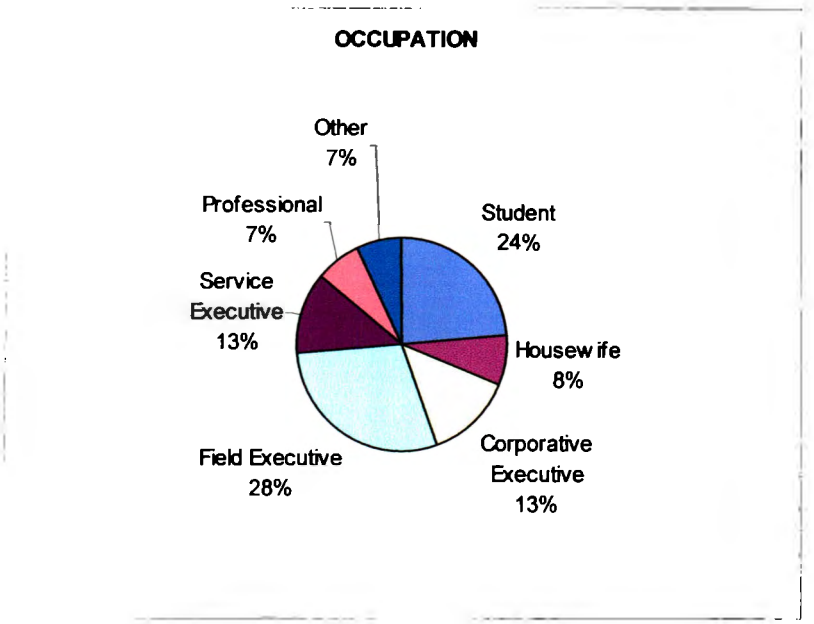
n=200

Region	OCCUPATION						
	Student	Housewife	Corporative executive	Field executive	Service executive	Professional	Other **
West	10 (5)	5 (2.5)	10 (5)	13 (6.5)	7 (3.5)	4 (2)	1 (0.5)
North	12 (6)	5 (2.5)	5 (2.5)	11 (5.5)	6 (3)	4 (2)	7 (3.5)
East	8 (4)	4 (2)	6 (3)	20 (10)	7 (3.5)	1 (0.5)	4 (2)
South	18 (9)	1 (0.5)	5 (2.5)	14 (7)	5 (2.5)	5 (2.5)	2 (1)
TOTAL	48 (24)	15 (7.5)	26 (13)	58 (29)	25 (12.5)	14 (7)	14 (7)

The number in the parentheses indicates the percentage of the respondents in terms of n.

**Other occupation includes: handyman, 2 security personal, baker, 4 public servers, maid, bricklayer, gardener, 2 chefs, maid and a taxi driver. Chart 5.2 exhibits the percentage of occupation per respondent in the study area.

Chart 5.2 "Distribution of Respondents by Occupation in the Study Area"



Income has close relationship with the acquisition and type of mobile phone owned by the respondents. It has been observed during this study that the people with higher income spent more on their mobile phones than those with lower income, as stated on hypothesis 1 (H1). In this study the income of respondents constituted for 9001-11000 (30.5%), more than 11001 (23.5%), and between 100-3000 and 3001-9000 (23% each) as exhibited in Table 5.4.

Table 5.4 "Distribution of Respondents by Income in the Study Area"

n=200

Region	INCOME			
	100-3000	3001-9000	9001-11000	11001+
West	8 (4)	8 (4)	14 (7)	20 (10)
North	14 (7)	19 (9.5)	9 (4.5)	8 (4)
East	7 (3.5)	12 (6)	18 (9)	13 (6.5)
South	17 (8.5)	7 (3.5)	20 (10)	6 (3)
TOTAL	46 (23)	46 (23)	61 (30.5)	47 (23.5)

The number in the parentheses indicates the percentage of the respondents in terms of n

As we can observe on this part of the chapter, from the 200 respondents 64.5% were males and 35.5% females, the majority from the respondents had between 18 and 30 years old. The principal occupations on the area of the study were field executive and students, which can be understood due the age of the respondents. The majority of the respondents claimed that their income was from $9001 to $11000; however the other amounts were almost the same percentage as this one. With this data we can have an idea of the kind of people were the respondents, this will be useful later in order to identify the factors that contribute the users to buy new mobile phones.

Buyers Perspectives towards Mobile Phones

Ownership is one of the factors related with buying behavior, since if you own a mobile phone you will look for some features, but if you own an office mobile phone then it's not really yours, so the features might change. In this study the mobile phones owned by the respondents its higher (60%) than those respondents that owned mobile phones (38.5%), a personal mobile phone and an office mobile phone. Only a few number of respondents had only an office mobile phone (1.5%) as shown on Table 5.5.

Table 5.5 "Mobile Phones Owned by Respondents on the Study Area"

n=200

Region	OWNERSHIP		
	Bought by you	Office mobile phone	Both
West	23 (11.5)	0	27 (13.5)
North	34 (17)	1 (0.5)	15 (7.5)
East	31 (15.5)	0	19 (9.5)
South	32 (16)	2 (1)	16 (8)
TOTAL	120 (60)	3 (1.5)	77 (38.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Number of mobile phone owned by a person is a factor when buying another one since usually a user with more than one mobile phone has more experience as a customer so he knows what he wants and what to look on a mobile phone. Most of the respondents own 2 mobile phones (49%), followed by just one mobile phone (26.5%) and then more than 3 mobile phones (24.5%) as exhibited on Table 5.6

Table 5.6 "Number of Mobile Phones Owned by Respondents"

n=200

Region	NUMBER OF MOBILE PHONES OWNED		
	1	2	3+
West	13 (6.5)	27 (13.5)	10 (5)
North	17 (8.5)	21 (10.5)	12 (6)
East	10 (5)	25 (12.5)	15 (7.5)
South	13 (6.5)	25 (12.5)	12 (6)
TOTAL	53 (26.5)	98 (49)	49 (24.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Buying frequency is another key factor for buying mobile phones, since it can tell us the frequency of change of the mobile phone by the user. The study shows that 58.5% of the respondents change their mobile phone every 1 or 2 years, most of them don't care about the newest technologies but they do about the look of their new mobile phone. 17% of the respondents change their mobile phone every 6 months, and most of them are looking for the newest features as well as trends on mobile phones. 13% of the respondents change their mobile phone only when the one they own stops working. 9% of the respondents change their mobile phone every 2-4 years; these users usually don't care about technologies nor look of the mobile phone they just want that the new mobile phone is cheap. 2.5% of the respondents change their mobile phone after 4 years; these users don't use their mobile phone for other than talking; Table 5.7 shows this.

Table 5.7 "Buying Frequency for Mobile Phones"

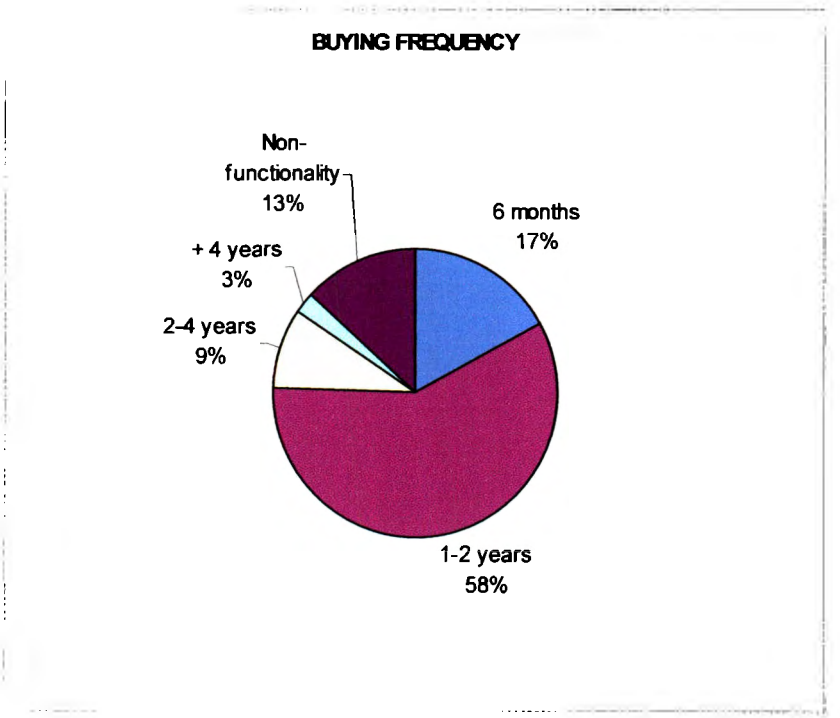
n=200

Region	BUYING FREQUENCY				
	Every 6 months	1-2 years	2-4 years	after 4 years	Upon non-functionality
West	12 (6)	26 (13)	5 (2.5)	0	7 (3.5)
North	9 (4.5)	27 (13.5)	2 (1)	3 (1.5)	9 (4.5)
East	7 (3.5)	31 (15.5)	6 (3)	0	6 (3)
South	6 (3)	33 (16.5)	5 (2.5)	2 (1)	4 (2)
TOTAL	34 (17)	117 (58.5)	18 (9)	5 (2.5)	26 (13)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Chart 5.3 shows the distribution of the buying frequency among the respondents; On this chart it can be seen that the majority of the respondents, mobile phone users, tend to change their mobile phone after 1 or 2 years of use, but there is also a big number of users that change their mobile phone every 6 months, mainly every time a new technology or addition to the mobile phones is released.

Chart 5.3 "Buying Frequency for Mobile Phones"



Main use of the mobile phone is another key factor for the buyer while acquiring a new mobile phone, since the features looked on the new mobile phone will depend on the main use that the phone has; the features for a user that only uses his mobile phone for calling will be different than those users that use their phones for sending SMS or hear mp3. In this study 63% of the respondents use their mobile phones for making calls, 28% for SMS, 5.5% for hearing mp3, 1.5% for video, and 1% for Internet and Other (Agenda) as exhibited on Table 5.8.

Table 5.8 "Main Use of Mobile Phones"

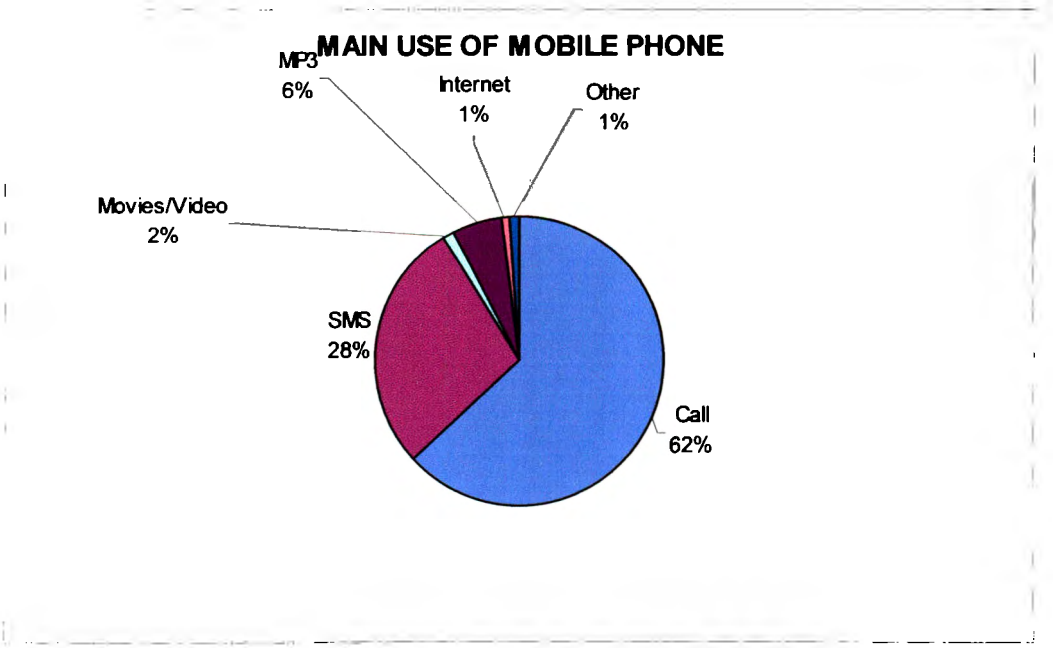
n=200

Region	MAIN USE OF MOBILE PHONE						
	Calls	SMS	Games	Video	MP3	Internet	Other **
West	37 (18.5)	8	0	1	3	1	0
North	26 (13)	23	0	0	1	0	0
East	35 (17.5)	13	0	0	2	0	0
South	28 (14)	12	0	2	5	1	2
TOTAL	126 (63)	56 (28)	0	3 (1.5)	11 (5.5)	2 (1)	2 (1)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Chart 5.4 exhibits the main use that users give to their mobile phones, as we can observe on the chart, the majority of the users use their mobile phone to make/get calls, however there are other users that use their mobile phone to send SMS (message system) to other mobile phones.

Chart 5.4 "Main Use of Mobile Phone"



The groups of factors just shown here are close related to the perspectives that users can have at the time of buying a new mobile phone. The factors can describe if a user is an experimented one, or a relative new one, because of the number of mobile phones owned, use they give to the mobile phone, buying frequency.

Consumer Preferences towards Product and Services

The features that a user of the mobile phone depends on certain factors, such as main use and age of the users therefore the features on a mobile phone will depend on the respondents. According to this study, the main feature as first choice that the users wanted on their mobile phones were: 62% of the respondents wanted that the mobile phone were easy to use, 48.5% wanted SMS features, 25.5% wanted some call

administration features, 19.5% wanted some agenda features, 17.5% wanted some entertainment features, 11% wanted call transfer features, 9% some file transfer features and 8% wanted some files transfer features, as exhibited on Table 5.9.

Table 5.9 "Choice of Features for Respondents"

n=200

Region	FEATURES							
	Call administration	Call transfer	SMS	Easy to use	Internet	Entertainment	Files	Agenda
West	21 (10.5)	11 (5.5)	20 (10)	36 (18)	4 (2)	8 (4)	2 (1)	9(4.5)
North	7 (3.5)	4 (2)	25 (12.5)	38 (19)	3 (1.5)	10 (5)	4 (2)	11(5.5)
East	11 (5.5)	6 (3)	22 (11)	24 (12)	2 (1)	6 (3)	5(2.5)	10(5)
South	12 (6)	1 (0.5)	30 (15)	26 (13)	7 (3.5)	11 (5.5)	7(3.5)	9(4.5)
TOTAL	51 (25.5)	22 (11)	97 (48.5)	124 (62)	16 (8)	35 (17.5)	18 (9)	39 (19.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Respondents of this question could choose more than one option of the features, so the total number shown will be higher than 200, however since they were only 200 respondents the percentages were calculated as if there were 200.

Since the respondents had the chance to choose not only 1 of the features, but 3 of them, some respondents choose a second and a third one. With these choices from the users, companies can have an idea of what people are looking for future mobile phones, what features to add, upgrade and so. This can help also to aim the potential buyers.

Some respondents use their mobile phones for other things besides making calls, they use other applications so they have some important factors to consider, these factors are: 64% compatibility with other devices, 18.9% security factors and 17.1% upgrade factors, as exhibited on Table 5.10.

Since not all of the respondents used their mobile phones for other applications, the number of the sample size changed.

Table 5.10 "Important Value Additions for the Respondents when Using Mobile Phones for Other Applications besides Making Calls"

n=111

Region	VALUE ADDED FACTORS		
	Compatibility	Upgrading	Security
West	9 (8.1)	5 (4.5)	8 (7.2)
North	24 (21.6)	3 (2.7)	3 (2.7)
East	15 (13.5)	4 (3.6)	9 (8.1)
South	23 (20.7)	7 (6.3)	1 (0.9)
TOTAL	71 (64)	19 (17.1)	21 (18.9)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Table 5.11 exhibits the importance of the physical attributes of the mobile phone for the respondents. As shown on the table, 73.5% of the respondents think that the physical attributes are key factors when buying new mobile phones while 26.5% consider that physical attributes aren't a key factor.

Table 5.11 "Physical Attributes as a Key Factor for the Respondents"

n=200

Region	PHYSICAL ATTRIBUTES AS KEY FACTOR	
	Yes	No
West	37 (18.5)	13 (6.5)
North	36 (18)	14 (7)
East	32 (16)	18 (9)
South	42 (21)	8 (4)
TOTAL	147 (73.5)	53 (26.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

For the respondents that thought that the physical attributes are a key factor while buying a new mobile phone, the first choice for the respondents of the physical attributes where like this: 57.8% of the respondents choose brand, 53.7% thought that accessories were the most important attribute, 48.3% appearance, 27.9% style of the mobile phone, 21.1% size, 17.7% color and 8.2% weight as shown on Table 5.12. It can be observed that the physical attributes changes mainly because users were different in ages, gender and so, therefore the Hypothesis 3 (H3) was fulfilled.

Table 5.12 "Important Physical Attributes for Respondents"

n=14

Region	PHYSICAL ATTRIBUTES						
	Appearance	Brand	Style	Size	Color	Weight	Accessories
West	18 (12.3)	19 (12.9)	13 (8.8)	8 (5.4)	6 (4.1)	5 (3.4)	15 (10.2)
North	21 (14.3)	17 (11.6)	15 (10.2)	4 (2.7)	10 (6.8)	4 (2.7)	19 (12.9)
East	12 (8.2)	22 (15)	6 (4.1)	5 (3.4)	3 (2)	1 (0.7)	21 (14.3)
South	20 (13.6)	27 (18.4)	7 (4.8)	14 (9.5)	7 (4.8)	2 (1.4)	23 (15.6)
TOTAL	71 (48.3)	85 (57.8)	41 (27.9)	31 (21.1)	26 (17.7)	12 (8.2)	79 (53.7)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Respondents of this question could choose more than one option of the physical attributes, so there will be more tables of the same variable. Since only 147 cared about the physical attributes, as a key factor, the percentage shown were calculated as if 147 were the only responses, but since some user choose more than 1 option, the number will be higher than 147.

Mobile phones are common devices therefore they can be bought on several places, and for some users it makes a difference the place were they bought they mobile phone. The

places where respondents like to buy their mobile phones were: 62.5% like to buy their phones on a service provider store, 18.5% on a self service store, for 13.5% of the respondents it doesn't mater the place where is bought and 5.5% like to buy their phones on Internet, as exhibited on Table 5.13.

Table 5.13 "Places Where Respondents Buy their Mobile Phones"

n=200

Region	BUYING PLACE FOR MOBILE PHONE			
	Service provider store	Internet	Self service store	Doesn't mater
West	29 (14.5)	3 (1.5)	8 (4)	10 (5)
North	32 (16)	2 (1)	13 (6.5)	3 (1.5)
East	29 (14.5)	2 (1)	12 (6)	7 (3.5)
South	35 (17.5)	4 (2)	4 (2)	7 (3.5)
TOTAL	125 (62.5)	11 (5.5)	37 (18.5)	27 (13.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Chart 5.5 exhibits the preferred places to buy a new mobile phone according to the respondents in this study; The majority of the users said that they like to buy their new mobile phone on a service provider store, this is because there they can see the device, as well as ask the sales personnel about guarantee, promotional packages, etc; A big number of users claimed that they liked to buy their new mobile phone in a self-service store like Walmart, Sanborns, etc.

Chart 5.5 "Places Where Respondents Buy their Mobile Phones"

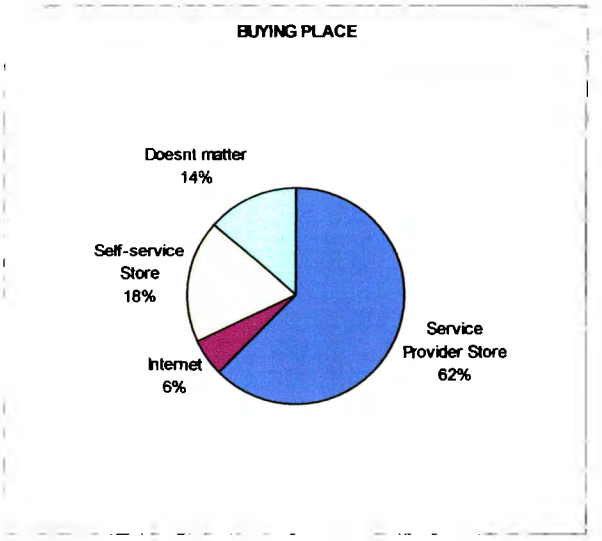


Table 5.14 exhibits the importance of the service provider of the mobile phone for the respondents. As shown on the table, 80% of the respondents think that the service provider is a key factor when buying new mobile phones while 20% don't think as that. As stated on Hypothesis 2 (H2), most of the users think that the service provider is a key factor while making a decision to buy a new mobile phone.

Table 5.14 "Service Provider as Key Factor for Respondents"

n=200

Region	SERVICE PROVIDER AS KEY FACTOR	
	Yes	No
West	37 (18.5)	13 (6.5)
North	38 (19)	12 (6)
East	42 (21)	8 (4)
South	43 (21.5)	7 (3.5)
TOTAL	160 (80)	40 (20)

The number in the parentheses indicates the percentage of the respondents in terms of n.

For the respondents that thought that the service provider is a key factor while buying a new mobile phone has several factors, the respondents answered like this: 52.5% of the respondents said that promotional packages is the most important factor while choosing a new mobile phone while 51.9% of the respondents thought that the service efficiency was a key factor, 35% advertising from the service providers, 33.2% payment facilities, 26.9% for the availability of certain equipments and 20% because of the guarantee that the service provider gives as shown on Table 5.15. As shown on the Table 5.15 most of the users care about promotional packages (52.5%), therefore Hypothesis (H4) was fulfilled.

Table 5.15 "Critical Factors on the Service Provider for Respondents"

n=160

Region	SERVICE PROVIDER FACTORS					
	Service efficiency	Advertising	Guarantee	Payment method	Availability	Promotion
West	28 (17.5)	10 (6.3)	11 (6.9)	8 (5)	13 (8.1)	15 (9.4)
North	17 (10.6)	17 (10.6)	6 (3.8)	10 (6.3)	7 (4.4)	27 (16.9)
East	16 (10)	13 (8.2)	6 (3.8)	18 (11.3)	20 (12.5)	19 (11.9)
South	22 (13.8)	14 (8.8)	9 (5.6)	17 (10.6)	13 (8.1)	23 (14.4)
TOTAL	83 (51.9)	56 (35)	32 (20)	53 (33.2)	43 (26.9)	84 (52.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Respondents of this question could choose more than one option of the service provider factors, so there will be more tables of the same variable. The percentages however were calculated using n as 160.

With this group of factors we can identify some of the consumer preferences in terms of products and services; these factors can show what is what the buyers are looking in their products and services in order to understand the needs of the buyers.

Economic Issues Guiding Buying Behavior

Price is one of the key factors for most of the respondents while making a decision to buy a new mobile phone, 66% of the respondents in this study stated that the price was a key factor while 34% said that the price wasn't a key factor as exhibited on Table 5.16. This table can also help to explain the fulfillment of Hypothesis 2 (H2).

Table 5.16 "Price as Key Factor for Respondents"

n=200

Region	PRICE AS KEY FACTOR	
	Yes	No
West	27 (13.5)	23 (11.5)
North	38 (19)	12 (6)
East	34 (17)	16 (8)
South	33 (16.5)	17 (8.5)
TOTAL	132 (66)	68 (34)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Another factor, close related to price is the willingness to pay; this is the amount of money that the users are willing to pay for a new mobile phone. In this study the amount of money than the users are willing to pay is like this: 32% of the respondents are willing to pay between $1001 and $2000 Mexican pesos, 25.5% between $2001 and $5000, 22.5% less than $1000, 17.5% between $5001 and $10000 and only 2.5% more than $10001 as shown on Table 5.17.

Table 5.17 "Willingness to Pay of Respondents"

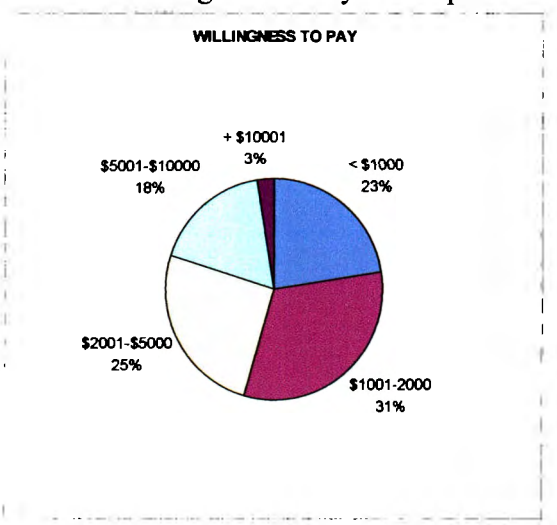
n=200

Region	WILLINGNESS TO PAY				
	<1000	1001-2000	2001-5000	5001-10000	10001+
West	11 (5.5)	12 (6)	13 (6.5)	13 (6.5)	1 (0.5)
North	19 (9.5)	15 (7.5)	10 (5)	5 (2.5)	1 (0.5)
East	8 (4)	20 (10)	13 (6.5)	7 (3.5)	2 (1)
South	7 (3.5)	17 (8.5)	15 (7.5)	10 (5)	1 (0.5)
TOTAL	45 (22.5)	64 (32)	51 (25.5)	35 (17.5)	5 (2.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Chart 5.6 exhibits the amount of money that users are willing to pay for a new mobile phone, the majority of users are willing to spent from $1001 to $2000 (Mexican pesos) for a new mobile phone, but there were others that are willing to pay a little bit more, since they consider a mobile phone as an investment, so they want a mobile phone that can do several other things besides calling. But there were also respondents that didn't wanted to invest much on a new mobile phone, because they use it only for calling and they don't take good care of their mobile phones.

Chart 5.6 "Willingness to Pay of Respondents"



This group of factors shows the economic preferences of the respondents towards buying a new mobile phone; it has the price as a key factor, where the majority of the respondents answered that the price is indeed a key factor; also it shows the price that the users are willing to pay for a new mobile phone, for the respondents that price is from $1001 to $2000; this means that they are not willing to pay more than 2000 for a new mobile phone that has all the functions they want. The willingness to pay depends on the income of the user as well as the use it gives to the new mobile phone, if he uses only for calling, then he will not invest much on a new mobile phone, if we wants more functionalities then he is willing to pay a little bit more for this extra functions.

Technology Factors Affecting Buying Decision

Table 5.18 exhibits the importance of the technology of the mobile phone for the respondents. As shown on the table, 58.5% of the respondents think that the technology is a key factor when buying new mobile phones while 41.5% consider that technology isn't a key factor.

Table 5.18 "Technology as Key Factor for Respondents"

n=200

Region	TECHNOLOGY AS KEY FACTOR	
	Yes	No
West	27 (13.5)	23 (11.5)
North	26 (13)	24 (12)
East	30 (15)	20 (10)
South	34 (17)	16 (8)
TOTAL	117 (58.5)	83 (41.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Table 5.19 exhibits the technological factors consider more important by the respondents, in this study the respondent choose the factor that they consider the most important, giving us the following results: 41% go for self-service technologies, 22.5% durability of the mobile phone, 15% trend, 14.5% innovation and 7% communication protocols.

Table 5.19 "Important Technological Factors for Respondents"

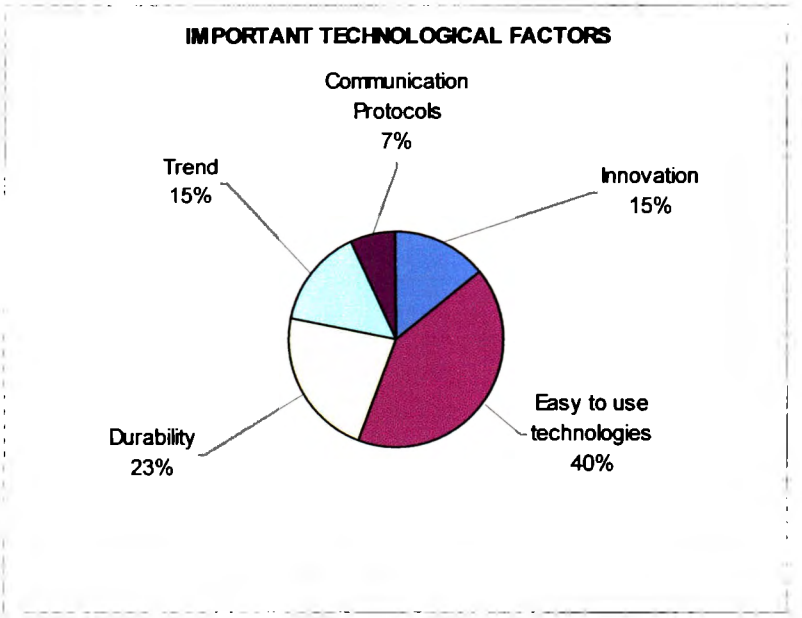
n=200

Region	IMPORTANT TECHNOLOGICAL FACTORS				
	Innovation	Self-service technologies	Durability	Trend	Communication
West	7 (3.5)	21 (10.5)	9 (4.5)	10 (5)	3 (1.5)
North	9 (4.5)	21 (10.5)	14 (7)	6 (3)	0
East	4 (2)	20 (10)	15 (7.5)	9 (4.5)	2 (1)
South	9 (4.5)	20 (10)	7 (3.5)	5 (2.5)	9 (4.5)
TOTAL	29 (14.5)	82 (41)	45 (22.5)	30 (15)	14 (7)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Chart 5.7 shows the technological factors that influence a user when buying a new mobile phone, like new technologies (innovation), self-service, durability, trend, communication protocol. According to the respondents the most important factor, for the majority of the users is that a new mobile phone need to have self-service technologies, meaning that the phone needs to be easy to use.

Chart 5.7 "Important Technological Factors for Respondents"



Most common operational problems of the mobile phones for the respondents according to the study were: 47% service related problems, 24.5% communication errors, 17% technical problems and 5.5% other problems, such as incompatibility with other devices, hardware failures and service not available as shown on Table 5.20. The operational problems are a common thing when you buy a new device, with this question the respondent could identify what is the cause of most of the problems when they buy a new mobile phone, allowing the companies identify them and solve these before they present to a new user.

Table 5.20 "Operational Problems for Respondents"

n=200

Region	OPERATIONAL PROBLEMS				
	Technical	Service	Security	Communication	Other
West	11 (5.5)	24 (12)	0	11 (5.5)	1 (0.5)
North	7 (3.5)	23 (11.5)	0	12 (6)	4 (2)
East	7 (3.5)	24 (12)	0	14 (7)	2 (1)
South	9 (4.5)	23 (11.5)	0	12 (6)	4 (2)
TOTAL	34 (17)	94 (47)	0	49 (24.5)	11 (5.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

For the respondents on the study area, they get value for their money if their get the best deal while buying their mobile phone. The study shows that: 27.5% of the respondents thought that they get more value for their money if they get the best price, 27% if they get the best service, 22% if they get nice features on their mobile phones, 14% if they get a brand name and only 9.5% if they get the latest technology as shown on Table 5.21.

Table 5.21 "Value for Money for Respondents"

n=200

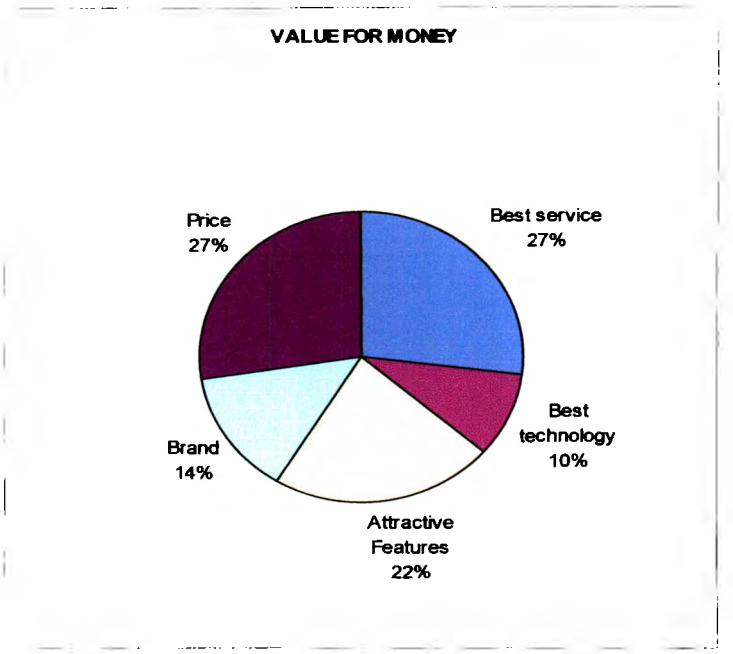
Region	VALUE FOR MONEY				
	Service	Technology	Features	Brand	Price
West	19 (9.5)	7 (3.5)	6 (3)	3 (1.5)	15 (7.5)
North	17 (8.5)	2 (1)	8 (4)	9 (4.5)	14 (7)
East	13 (6.5)	1 (0.5)	13 (6.5)	9 (4.5)	14 (7)
South	5 (2.5)	9 (4.5)	17 (8.5)	7 (3.5)	12 (6)
TOTAL	54 (27)	19 (9.5)	44 (22)	28 (14)	55 (27.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Chart 5.8 exhibits the perceived value for money from the respondents, its interesting see that getting a good price is value for the users, meaning that if they think that they had a

great deal or promotional package then they are getting more value almost the same number of respondents thought that getting a better service added value to their purchase.

Chart 5.8 "Value for money"



Respondents get information about the new mobile phones from different sources; this is an important thing for the companies, in order to place the right information on the right source. This study shows that: 38.5% of the respondents get the information on TV ads, 20.5% from service providers, 13.5% from personal references, 11.5% from brochures on sales points, 10.5% from Internet and 5.5% from magazines as exhibited on Table 5.22.

Table 5.22 "Information Acquisition"

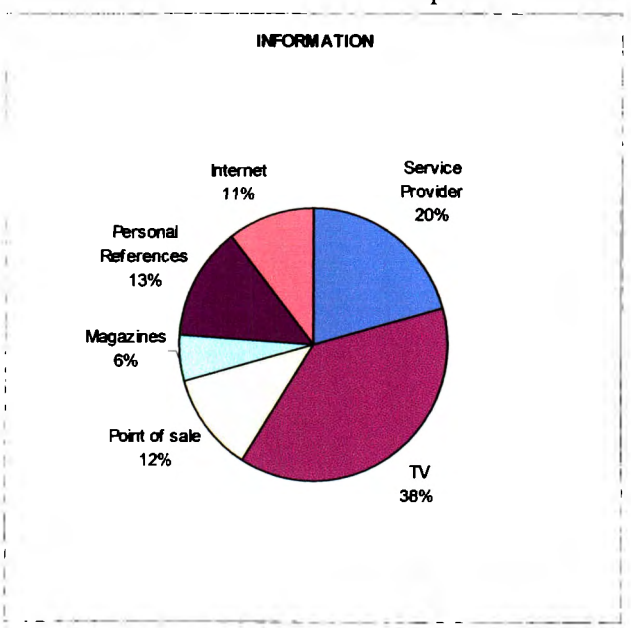
n=200

Region	INFORMATION					
	Service provider	TV	Brochures	Magazines	Personal references	Internet
West	9 (4.5)	18 (9)	3 (1.5)	5 (2.5)	12 (6)	3 (1.5)
North	13 (6.5)	21 (10.5)	6 (3)	2 (1)	6 (3)	2 (1)
East	11 (5.5)	24 (12)	9 (4.5)	1 (0.5)	3 (1.5)	2 (1)
South	8 (4)	14 (7)	5 (2.5)	3 (1.5)	6 (3)	14 (7)
TOTAL	41 (20.5)	77 (38.5)	23 (11.5)	11 (5.5)	27 (13.5)	21 (10.5)

The number in the parentheses indicates the percentage of the respondents in terms of n.

Chart 5.9 exhibits were the users are acquiring the information about the new mobile phones on the market, we can observe that the majority of mobile phone users get the information of mobile phones from television, but also from the service provider were they can ask the personnel there about specific doubts from the model or technology. One important thing shown here is that a big number of users (13.5%) ask their relatives or friends about new mobile phones and they consider this as a source of information.

Chart 5.9 "Information Acquisition"



The last group of factors shows the importance of the technology as a factor for buying new mobile phones. The group shows what technological factors are important for the mobile phone users as well as what they consider a great deal in terms of "value for money" for the respondents of the questionnaire. On this group also it's shown where the users get the information in order to acquire a new mobile phone.

Variable Correlations

It has been observed during the study that some economic and relational variables play major role in determining the buying decision on mobile phones. These key variables include: occupation, income, buyer's compliance to price, price factor, buying frequency, service factor, technology factor and manufacturer support and service provider factors. The correlation indicates the degree of relationship between two variables which shows the strength of association among variables. Table 5.23 shows the correlation matrix between the key variables described above.

Table 5.23 "Correlation between Key Variables"

Variables	Occupation	Income	Buyers compliance to price	Price factor	Buying frequency	Service factor	Technology factor	Manufacturer Support
Occupation	1							
Income	0.7576292	1						
Buyers compliance to price	0.80962082	0.97468394	1					
Price factor	0.88166375	0.98551969	0.9839755	1				
Buying frequency	0.75738095	0.91369535	0.9650248	0.9189451	1			
Service factor	0.60928893	0.97562869	0.9320778	0.9073713	0.87039756	1		
Technology factor	0.61481314	0.97815322	0.9461804	0.9080183	0.8765335	0.99923501	1	
Manufacturer Support	0.99842966	0.72142217	0.7755152	0.8547808	0.72190785	0.56241172*	0.57168733*	1

*Significant at 5 percent level and rest of the results are significant at 1 percent level.

Table 5.23 shows that the highest correlation of the variables is the one regarding with service and technology, meaning that users of mobile phones think that service providers gives them the best technology and this makes them a key factor for some users while buying mobile phones. The Table also shows that the variables less correlated are Service and Manufacturer Support this means that users don't think that the service provider is related with the service that manufacturers give to their mobile phone users. The variable "service factor" is the importance that service provider attention towards the users has while new users are trying to buy a new mobile phone, while manufacturer support refers to the attention given by the manufacturer and service providers, like help to solve problems, manuals, guarantee, etc.

Variables which are highly correlated are associated with occupation, manufacturer support, income and price factor. Occupation is highly correlated with Manufacturers support so for certain persons (with different occupations) the manufacturer support is

needed; Income is highly correlated with the price of the mobile phone as a key factor, for certain income levels the price is a key factor while buying a new mobile phone and another interesting finding from this table is that Price is highly correlated with buying frequency.

Retailers Perspectives in Selling Mobile Phones

Besides the 200 respondents for this study, an additional questionnaire (see appendix A.3) was given to mobile phone sellers from the service providers Telcel and Movistar; five questions were asked in order to get more info about the customers.

According to the service providers the customers preferences for a specific mobile phone change as they are different kind of people; if the customer is young the mobile phone selected will be different than if the customer is old, in other words, the selection for buying a new mobile phone depends on the characteristics of the users, such as age, gender, economic profile, etc; this can also be observed on this study, since the respondents were different, some were males other females, different ages, occupations, etc, and they all choose different mobile phones.

Another interesting thing stated by the service providers was that according to them, the service provider makes a huge difference as a factor when buying a new mobile phone; most of the users take the service offered by the service providers as a key factor, as well

as the attention given by them, according to this study 80% of the respondents thing that the service provider is a key factor.

Advertising from part of either service providers or mobile phones brands make a huge impact on the potential buyers; according to the service providers, when a new advertising campaign is out, an increase on sales can be observed on the specific mobile phone shown on the add. Another important thing said by the service providers is that whenever a promotional package (free time, free DVD, free accessories, etc) is out, sales on that equipment goes up, this can show us that for most of the users, if they get something for free then they get more value for their money. Although users didn't state this on the questionnaires applied, the people from the service providers claimed that advertising campaigns do make an impact and can affect a decision of buying a new mobile phone from the users, fulfilling the Hypothesis 5 (H5).

On this chapter it was observed that all the 5 hypotheses stated on Chapter 1 were fulfilled. Although the results obtained by the questionnaires (both from users and service providers) could not be the true answers, therefore there is no guarantee that the 5 hypotheses were truly fulfilled.

Chapter 6

Summary and Recommendations

This study has been conducted to explore the impact of various economic, behavioral and services related factors on the buying decision for a mobile phone and develop a model for a marketing plan to increase the efficiency in marketing of mobile phones in Mexico. Accordingly, the study has been aimed at analyzing the corporate, retailer and user profiles in Mexico City. The specific objectives of this study are:

- To understand the relationship between income and product choice, in order to help targeting.
- To measure the interdependence of mobile phones and their associated service provider services.
- To develop appropriate marketing strategies for the mobile phone marketing companies in reference to the existing competitive environment.

This study is largely based on the primary investigation covering 200 respondents in 4 regions of Mexico City.

This study is descriptive in nature and based on non-experimental cross-sectional research design. Data has been collected on 30 variables and organized into 3 main groups that are showed below:

- IT Variables: Technology, Physical Attributes, Size, Weight, Accessories, Compatibility, Use Application, Upgrading, Security, Self-Service Technologies and Innovation.
- Economic Variables: Price, Durability, Social Status, Ownership, Appearance, Guarantee, Availability, Payment Method and Occupation.
- Relational Variables: Social Status, Communication, Promotion, Style, Brand Loyalty, Age, Gender, Color, Product Attractiveness and Service Efficiency.

The data has been collected directly from the existing and potential users of mobile phones administrating structured questionnaires carrying 22 questions covering above variables. Responses collected were pooled and analyzed using spreadsheet. Besides administering questionnaires to the mobile phone users, a second questionnaire was applied containing a few questions on retailers' perspectives aimed at of service providers and mobile phone retailers in order to get more information on the buying behavior of consumers towards technology led new mobile phones.

The thesis has been spread into seven chapters comprising Introduction, Literature Review, Methodology, Theoretical Motivation, Findings and Discussion, Conclusions and References.

The market analysis discussed in this study will help to create the proposal for models of a marketing plan for commercialize new mobile phones.

In the previous chapter the results of the research were discussed. In this final chapter the discussion focuses on the main conclusions, recommendations and limitations of the study made. Final conclusions on key factors affecting the buying decisions for new mobile phones will also be presented. Recommendations for further research will also be presented.

New information technology is becoming an important factor in the future development of communication services, which has disseminated largely through mobile phones. The developments on information and communication technology have significantly contributed to the exponential growth and profits of the public communication industry worldwide. This evolution had transformed the way mobile phone service providers offer value to the user, using technologies such as push to talk, text messaging, graphics transmission, internet access, multi-media messaging, instant messaging and the like. However, there are many underlying issues pertaining to communication services for deriving full advantage of new technology opportunities and tracking electronic development changes affecting interactions with the customers.

This study analyzes importance of the factors that affect the buying decisions for new mobile phones from the users and how those factors affect the decision making on the Mexican mobile phone market.

The key variables used in the study include occupation, income, buyer's compliance to price, price as a key factor, buying frequency, service as a key factor, technology as a key factor and Manufacturer Support. A multivariate correlation analysis has been presented in Chapter 5 on the above key variables , wherein, we can observe there that almost all of the variables are highly correlated, this indicate us that the key variables are key factors for the user of mobile phones where they are considering to buy a new mobile phone. The technology based services imply different combinations of accessibility attributes (time, distance, and search costs), ease of use and price. Another factor in determining the magnitude of the surplus that the bank can seize is the relative importance of cross-selling.

The study also discusses the qualitative perspectives on selling mobile phones and linking the technology led communication services to augment the customer value. Personnel working on service provider's outlets (Telcel, Iusacell, and Movistar) also argued that new mobile phone users have preferences depending on certain characteristics of the user, like age, gender, income, profession, etc; therefore marketing campaigns should be directed according to the target market. For this reason new technology, based communication services with high customer value may offer better service conditions to harmonize the flow of information and services across the spatial and temporal dimensions.

The value of corporate brand endorsement across different products and product lines, and at lower levels of the brand hierarchy also needs to be assessed as a customer value driver. Use of corporate brand endorsement either as a name identifier or logo identifies

the product with the company, and provides reassurance for the customer (Rajagopal and Sanchez, 2004). Advertising campaigns can make a huge impact on the minds of the consumers, especially those who are planning to buy a new mobile phone soon. These campaigns should be targeted correctly and highlight the factors that are important for the targeted sector (like color, weight, technology, functionalities, etc.) in order to get the best impact on the users.

Technology in the public domain communication industry also has cost implications which lead to slow down the adoption process in many market segments. Thus, price is a major factor for the users while buying a new mobile phone. The study shows that 66% of the respondents are price sensitive, however most of the respondents (according to the service providers) think that a high price means better functionalities and accessories or better technologies. Thus, it is important that mobile phone manufacturers companies make strong advertise campaigns showing the benefits of the mobile phone in order to get the attention of the possible buyers as well as give them added features and make them aware of the economic advantages of mobile phones offering an appropriate rationale as why it is so expensive or cheap. It has been established that increasing the role of technology in a service organization can serve to reduce costs and often improve service reliability. It remains the case however, that there is an important role for personalized relationships in the delivery of any service proposition (Durkin and O'donnell. 2005).

It has been observed in the study that mobile phone users consider the attributes associated with the service provider as a principal decision factor. Thus, role of service

providers in the mobile communication industry is vital in the buyer's decision towards new mobile phones. Customer attention paid by the service provider is a critical factor to the users of mobile phones.

When a major technology innovation arrives, a wave of new firms enters the market implementing the innovation for profits. However, if the innovation complements existing technology, some new entrants will later be forced out as more and more incumbent firms succeed in adopting the innovation (Wang, 2005). To outperform competitors in a market, it is necessary to develop effective coordination among the manufacturer, sales and services providers support in the markets. Hence, companies need to offer new devices with new functions and features to attract potential users over the competitors. The companies need to come up with new designs for mobile phones complying with the preferences of the target market as well as accessories to complement the functions of the mobile phones.

However, not only manufacturing companies need to upgrade their mobile phone devices, the local service providers need to do something to make them different from the other service providers. Latin American countries are weak in services and despite many policy reforms, Latin America's economic performance continues to disappoint, mainly because of the weak performance of services, they represent a large share of the economy, given its level of development, yet their productivity is relatively low (Farrel and Remes, 2007). Nevertheless, one of the biggest challenges for Latin America is to improve communication services through value-added. Service industries can became a

more important source of job growth than manufacturing, so it is needed that countries like Mexico start giving better services.

Although services sector constitutes an important growth indicator in Latin America, it holds low priorities in government policy for two main reasons. Firstly, manufacturing is technologically more advanced and more desirable than services and secondly, services have a poor reputation, low-skill and low-wage jobs such as street vendors or beauty parlor owners are hardly seem like the building blocks of a modern economy (Farrel and Remes, 2007).

Also good local services can help to attract foreign direct investment (like the case of Telefónica Movistar from Spain). With good telecommunication services plus the cost and quality of transportation, electricity can influence the attractiveness of a country to companies that are looking places to invest.

The research made by the McKinsey Global Institute (MGI, 2007) shows that after years of regulatory constraints and neglect, the productivity of the local service sector in many Latin America economies lags far behind its potential. Governments of Latin American countries have already taken major steps through privatization and the opening up of local services to foreign direct investment, these measures have improved the performance of capital-intensive services such as banking, telecommunications and utilities in many countries, though more remains to be done.

In Mexico after the market opening for telecommunications there aren't still enough policies regarding the commerce entry barriers that can make the telecommunications market a competitive market; therefore some new policies regarding regulations aspects that can assure that all the participants of the telecommunications market have the same opportunities are needed.

The removal of barriers to foreign direct investment has significantly boosted the performance of the service sector. When most Latin America countries lifted such restrictions in retail banking, during the 1990s, foreign companies invested more than $50 billion in banking over the next decade, providing greatly needed capital and diffusing best practices more broadly (Farrel and Remes, 2007).

The mobile communications market in Mexico is regulated by the Federal Telecommunications Commission (Comisión Federal de Telecomunicaciones or Cofetel), while legislation and licenses are issued by the Ministry for Communications and Transport (Secretaría de Comunicaciones y Transportes or SCT). While other telecom licenses are only granted to individuals or corporations of Mexican nationality with no greater than 49% foreign investment, for the mobile phones or cellular telephony permission can be obtained from the Commission of Foreign Investment for a higher level of foreign participation; this can allow companies to get investment from foreign companies and they can use that to make their process better or technologies and that way to improve their services.

Managerial Implications

Services are dynamic by nature, so to maximize overall service employment companies must be free to start up, grow, and create more jobs or if they can't compete, they must be free to shrink, lay off workers and eventually to close. Service industries are mostly composed of small companies, which are particularly likely to operate informally, ignoring tax requirements, employee benefits, and other regulations. Informality is a much larger barrier to growth than most policy makers in Latin America acknowledge. Steps to make informality less common will be rewarded with significant gains in productivity, growth and employment. Less informality will also make companies to give better services to their clients, improving loyalty and creating stronger brands which will help them to make the companies different from their competitors. Therefore the biggest challenge for Latin America is to help services become the engine of growth in high value added jobs, something that most of Latin America's countries need.

The trend of the Mexican mobile phone market is quite simple; stay communicated during all time in all places and available all the time. Manufacturers know this so there has been an increment on the number of competitors, as well as the number of mobile phone numbers. Service providers in Mexico are creating new ways to improve the services offered by them, and they are creating more support centers, points of sales, etc. Mobile phones are creating new ways for doing business and new ways to communicate with others. In order to achieve these new ways prepared personnel is required, as well as

investment in certain areas, like technology in order to create new features which can make a difference to the users and with this retain and obtain new users.

An augmented and sustainable customer value builds the loyalty towards the product and brand implying that bank managers should develop customer driven strategies so that relationship augmentations can be achieved. This is not simply a matter of segmenting customers, but also signals the need to manage the reciprocities of relationship. It has been argued that relationships are constituted by value creating transformations in which the customer may contribute in different ways. Relationship development is to improve these processes by capitalizing on an increasing customer involvement in adoption of new technology used in the telecommunication services. However, acquiring new customers is the easiest way to develop enhanced customer-technology relations favoring the growth of the telecommunication services industry (Rajagopal, 2005b).

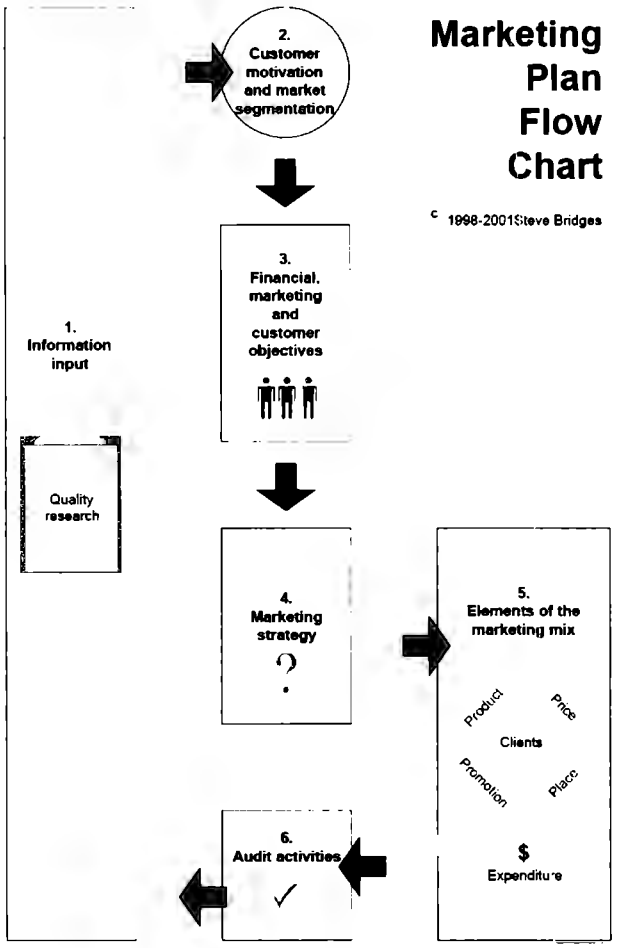
Systematically explored concepts in the field of customer value, and market driven approach towards new products would be beneficial for a company to derive long-term profit optimization strategy over the period. Hence, a comprehensive framework for estimating both the value of a customer and profit optimization need to be developed. On a tactical level, managers need to consider the optimum spread of customers on a matrix of product attractiveness and market coverage. This needs careful attention and the application of managerial judgment and experience to measure the value driven performance of the product of the firm. It is necessary for the managers to understand that customer value is context dependent and there exists a whole value network to measure,

not just a value chain. This value network will contain important entities far beyond the ones commonly taken into consideration in financial projections and business analyses (Rajagopal, 2006).

Suggested Marketing Plan

The marketing plan process begins with a *situation analysis* of a specific product or market. Whereas the strategies plans look ahead three to five years, the situation analysis requires that you look back three to five years to obtain a historical perspective of business. The situation analysis is divided into three parts: marketing mix analysis, market background, and competitor analysis. *Marketing mix analysis* may be done *objectively* in reference to pricing, promotion and distribution strategies. *Market background* deals with the nature of audience, human factor, the image you convey, what customers think of product, and the frequency of its use. The examination of the background permits the firm to think extensively about marketplace and customers. The third part comprises *analyze competitors* in detail. The main sections of a marketing plan and the process to follow in developing a plan has been exhibited in Figure 6.1. A marketing plan should include product name, activity schedule and time allocation for performing tasks.

Figure 6.1 "Marketing Plan Flowchart"



Source: Steve Bridges, 2001

Figure 6.1 shows the basic sections (components) of a marketing flowchart. Each one of the sections of the flowchart has been described below.

1. Information inputs: The quality of the marketing plan will be determined by the quality of the market research and the information that goes into it. Usually the information here includes the following points:

i. Origin and objectives of the project: it describes the marketing plan and its reason of being. The objectives, guidelines or constraints imposed by management should be identified here.

ii. Market size: if it's an existing market it should be expressed size in terms of money, showing historical sales. Type(s) of product(s).

iii. Analysis of the market environment: demographic trends, economic trends, social and cultural trends, political and legal forces, competitors and technology.

iv. Consumer: understanding the consumer is vital in order to create a good marketing plan (understanding of this needs, attitudes, perceptions, purchase/usage behavior, satisfaction, what he likes, dislikes, etc.). Usually to get this information a market research is needed.

v. Company analysis: SWOT analysis.

vi. Assumptions: critical assumptions made while developing a marketing plan.

2. Customer motivation and market segmentation: The motivation describe the consumer's buying motive, the fulfillment of a need or want, the solution to a problem, etc; The segment describe the group of people who are seeking a solution for a need. The segmentation can be done in terms of lifestyle, activities, interests, attitudes, opinions, demographic characteristics, value, etc. It also includes the size of the market (number of people in the segment).

3. Financial, marketing and customer objectives: these objectives must be consistent with the corporative objectives. The financial objectives may include money sales, gross profit, net profit, return on investment, etc; The marketing objectives may include unit sales, share of market, rate of repeat purchases, awareness, levels of satisfaction, etc; The customer objectives may include acquisition of new customers, retention of existing customers, stimulation of existing customers or re-activation of lapsed customers.

4. Marketing strategy: it includes the following points:
    i. Overall marketing strategy: competing mainly on service, product differentiation, innovation, price, etc.
    ii. Definition of competition: identify those products which are your main competitors.
    iii. Market demand: achievement of sales target mainly by expanding the total market (primary) or by gaining a share of the existing market (secondary).
    iv. Competitive positioning: how to position the product relative to competitive products.
    v. Promotional strategy: use a pull strategy (heavy advertising and promotion to the end consumer), a push strategy (offer of special incentives to middlemen) or a combination of those two.
    vi. Communication theme: state the theme or message to communicate to the consumer via your advertising, packaging, promotion, point-of-sale material, public relations, direct mail, etc.

5. Elements of the marketing mix: the main elements are the following (4 traditional elements plus an additional 7 more):
    i. Product: the main features of the product cost per unit. The brand name, packaging, etc.
    ii. Place: distribution, where the product will be bought, middlemen's, points of sale, etc.
    iii. Price: retail price, the price that the consumer is willing to pay.
    iv. Promotion: costumer advertising, media that will be used on the campaigns, media cost per period. The promotion for each type of costumer, public relationships, etc.
    v. Packaging: how the product is presented to the consumers.
    vi. Pace (competitive dynamics): series of competitive actions and responses among firms in the same industry.
    vii. People (sales force performance): the training of the sales force, the quality of the attention, the number of sales made, preparation of the sales force personnel.
    viii. Performance: market share of related brands of the company.
    ix. Psychodynamics: consumer to consumer dynamics, the word of mouth, comments of certain products based on personal experience, etc.
    x. Posture: the image of the company/service providers to the eyes of the consumers.
    xi. Proliferation: expansion of marketing area.

6. Audit activities: state the research activities that will be undertaken to determine whether or not the objectives have been reached. For the marketing mix it is needed to state the expenditures of each of the variables (cost per unit, per advertising campaign, etc.).

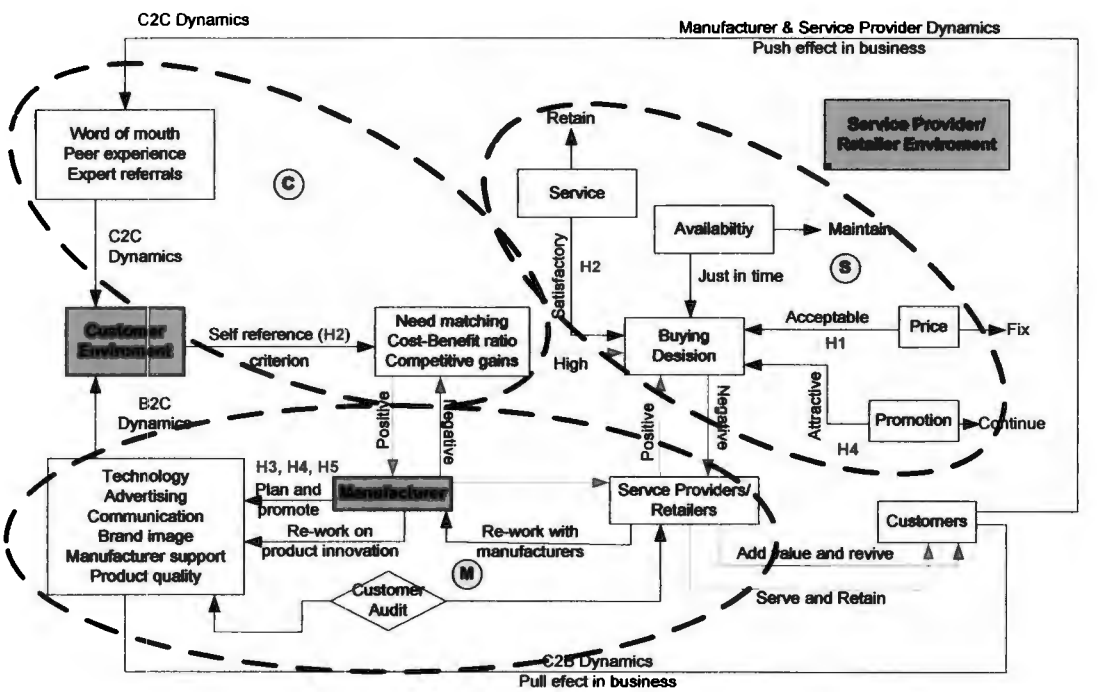
Marketing plan need to consider also the factors associated with dynamics of the market. The dynamics of a market includes Costumer to Costumer (C2C), Business to Costumer (B2C), Business to Business (B2B) and Costumer to Business (C2B).

When a customer makes a buying decision, he moves through a process. Usually such decision can take place instantly or it could take a long period of time, nonetheless it's a process not a single event.

The buying decision process begins when buyer recognizes the need Once the need is identified a search is made in order to find possible products for meeting that need. The information can be gathered from several sources (Word of mouth from other users, personal experience, expert referrals or expert users, etc.). Customers' match the products offered by the companies with the identified need, cost-benefit ratio, competitive gains, etc. which determines the decision to purchase and narrow the choice to a few "best" alternatives. The customer will choose then the best alternative and make a purchase. The final step in this process involves a re-evaluation of the decision and its results, which may lead to decision on repeat buying.

For the service provider and manufacturers the process is little bit different. Once they have identified the consumer needs they need to make their clients aware of them (improving quality, differentiation [technology, brand image, service, price, promotional packages], add value, and so. It must be important to remind that although every consumer is different (in terms of their needs) they can be grouped into different segments; these segments will help to direct the advertising campaigns (once identified the needs of each segments, the advertising campaigns can be focused on features, brand, colors, size, technology, prize, etc.).

Figure 6.2 "Buying Decision Process"



Source: Rajagopal (2007),Brand Management: Strategy, Measurement and Yield Analysis, Nova Science Publishers, Hauppague, NY (In Press)

Figure 6.2 represents the process described above. It consists on 3 blocks (C [Customer Environment], M [Manufacturer] and S [Service Provider/Retailer Environment]). Each block has the different dynamics on the retailing business (C2C dynamics, B2C dynamics and C2B dynamics), as well as the process involving the buying decision and the retention and acquisition of customers.

Limitations of the Study

There are three main limitations in this study. First the questions from the questionnaires relied on users to report how they use their mobile phones, income level, and all the other questions made, as well as the assumptions that all the responses were accurate answers. Second the questionnaires where applied only to 200 mobile phone users, therefore the information gathered might be different from the information of other reports. Third the study was made dividing Mexico City in 4 quadrants (North, East, South and West) to try to segment the respondents by income level in those quadrants, however the respondents might not be from the area were the questionnaire was applied.

The study had these limitations and they influenced the interpretation of the results with the major issue being the relatively small sample and inability to track the subjects (users) in order to confirm they answers. However, despite the limitations of the study, the results provide an important baseline that captures the profile of the average mobile phone user.

Since the number of questions was high (around 22 questions) some users might not gave the right answer, and they just have lied about some issues like age, income level, occupation, etc; this could affect the results of the study and may lead to wrong conclusions.

Chapter 7

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Chapter A Appendices

A.1 "Questionnaire"

The data questionnaire will be compatible with the hypotheses and the objective of this study.
The objective of it is to understand the relationship between income and product choice to help targeting as well as to measure the interdependence of mobile phones and their associated service provider services.

1.- Gender ☐
(1) M (2) F

2.- Age ☐
(1) 10–17 (2) 18-30 (3) 31-40 (4) 41-50 (5) 50

3.- What is your occupation? ☐
(1) Student
(2) Housewife
(3) Corporate executive
(4) Field executive (sales/marketing)
(5) Service executive (insurance/banking)
(6) Professional (academic/doctor/lawyer)
(7) Skilled labor
(8) Unskilled labor

4.- What is your average income per month? (In Mexican pesos) ☐
(1) 100–3000 (2) 3001-9000 (3) 9001-11000 (4) 11001 +

5.- Do you have : ☐
(1) A mobile phone (bought by you)
(2) Office mobile phone
(3) Both

6.- How many mobile phones do you have? ☐
(1) 1 (2) 2 (3) 3 or more

7.- How frequently do you buy mobile phones? ☐
(1) Once in six months
(2) 1-2 years

(3) 2-4 years
(4) after 4 years
(5) Upon non-functionality of existing

8.- What is the main use of your mobile phone? ☐
(1) Making calls
(2) SMS
(3) Games
(4) Video watching
(5) MP3
(6) Internet access
(7) Other, specify _____

9.- Which features of the phone you look for? ☐
(1) Call management (more than one at a time)
(2) Call transfer
(3) SMS/Messaging
(4) Internet Access
(5) Entertainment
(6) File Manager
(7) Calendar/agenda
(8) E-banking
(9) Stocks
(10) Professional

10.- If you use the mobile phone for other applications besides making calls, please check the factor/factors that are more important: ☐
(1) Compatibility with other devices
(2) Upgrading
(3) Security

11.- Are Physical Attributes a key factor when buying a new mobile phone ☐
(1) Yes (2) No

12.- If yes, please check the attributes that are important when you choose a new mobile phone: ☐

(1) Appearance
(2) Brand
(3) Style
(4) Size
(5) Color
(6) Weight
(7) Accessories

☐

13.- Is the service provider a key factor when buying a mobile phone?
(1) Yes (2) No

14.- If yes what are the reasons? (Choose one or more factors from the list) ☐
(1) Service Efficiency
(2) Communication (advertising)
(3) Guarantee
(4) Payment method (pre-paid cards, credit cards, etc.)
(5) Availability
(6) Promotion

15.- Is the price of the mobile phone a key factor when buying a new mobile phone? ☐
(1) Yes (2) No

16.- What are your preferred price ranges to make buying decisions? ☐
(1) <1000 (2) 1001-2000 (3) 2001-5000 (4) 5001-10000 (5) >10001

17.- From where you buy the mobile phone? (Distributor/retailer) ☐
(1) From any retail outlet
(2) From service providers outlet
(3) Through Internet
(4) Other outlets (specify) _____

18.- Is the technology a key factor when buying a new mobile phone? ☐
(1) Yes (2) No

19.- What are the technological factors that are important for you when you buy a mobile phone: ☐

(1) Innovation
(2) Self-service technologies (easy to use technologies)
(3) Durability
(4) Trend
(5) Communication

20.- Have you ever come across operational problems during post-purchase usage? ☐
(1) Technical problems
(2) Services problems
(3) Security problems
(4) Communication errors
(5) Others (specify) _____

21.- What are views on 'value for money' to your purchase? ☐
(1) Best service
(2) Best technology
(3) Attractive features

(4) Brand
(5) Price
(6) Peer reputation

22.- How do you find information on new mobile phones? ☐
(1) Through service providers
(2) Commercials on TV
(3) Point of Sales Brochures
(4) Print media communications
(5) Personal reference
(6) Others (specify) _____

A.2 "Questionnaire in Spanish"

Favor de poner en el cuadro la respuesta seleccionada.

1.- Genero ☐
(1) M (2) F

2.- Edad ☐
(1) 10–17 (2) 18-30 (3) 31-40 (4) 41-50 (5) 50+

3.- ¿Cuál es tú ocupación? ☐
(1) Estudiante
(2) Ama de casa
(3) Ejecutivo de corporativo
(4) Ejecutivo de campo (ventas/mercadotecnia)
(5) Ejecutivo de servicio (seguros/banco)
(6) Profesional (académico/doctor/abogado)
(7) Otro (especificar) _____

4.- ¿Cuál es tú ingreso mensual promedio? (en pesos) ☐
(1) 100–3000 (2) 3001-9000 (3) 9001-11000 (4) 11001 +

5.- Tienes: ☐
(1) Un teléfono celular (comprado por ti)
(2) Un teléfono celular de la oficina
(3) Ambos

6.- ¿Cuántos teléfonos celulares tienes ☐
(1) 1 (2) 2 (3) 3 ó más

7.- ¿Qué tan frecuente compras un teléfono celular? ☐
(1) Cada 6 meses
(2) De 1 a 2 años
(3) De 2-4 años
(4) Después de 4 años
(5) Cuando el que tengo deja de funcionar

8.- ¿Cuál es el uso principal que le das a tú teléfono celular? ☐
(1) Hacer llamadas
(2) Mensajes
(3) Jugar
(4) Ver videos/películas
(5) MP3/música
(6) Acceso a Internet

(7) Cámara Fotográfica
(8) Otro (especificar) _____

9.- ¿Qué características es lo que buscas en un teléfono celular? ☐ ☐ ☐
(1) Administrador de llamadas (más de una llamada al mismo tiempo)
(2) Transferencia de llamadas
(3) SMS/Mensajes
(4) Facilidad de hacer llamadas
(5) Acceso a Internet
(6) Entretenimiento
(7) Administrador de archivos
(8) Calendario/agenda
(9) E-banking

10.- Si usas el teléfono celular para otras aplicaciones, además de hacer llamadas, por favor marca el factor/factores más importantes para ti: ☐
(1) Compatibilidad con otros aparatos
(2) Actualización (Facilidad, posibilidad, etc.)
(3) Seguridad
(4) Ninguna

11.- ¿Son los atributos físicos un factor clave cuando compras un teléfono celular nuevo? ☐
(1) Sí (2) No

12.- En caso de afirmativo, por favor selecciona el/los atributos que son los más importantes al elegir un teléfono celular nuevo (los más importantes): ☐ ☐ ☐
(1) Apariencia
(2) Marca
(3) Estilo/Moda
(4) Tamaño
(5) Color
(6) Peso
(7) Accesorios

13.- ¿El proveedor del servicio es un factor clave al comprar un teléfono celular? ☐
(1) Sí (2) No

14.- Si su respuesta fue sí, ¿Cuáles son las razones? (Escoja los más importantes) ☐ ☐ ☐
(1) Eficiencia en la atención
(2) Comunicación (campañas publicitarias)
(3) Garantía
(4) Métodos de pago (tarjetas prepagadas, planes, etc.)
(5) Disponibilidad del servicio
(6) Promociones

15.- ¿Es el precio del teléfono celular un factor clave al momento de comprar? ☐

(1) Sí (2) No

16.- ¿Cuál es el precio dispuesto a pagar por un teléfono celular nuevo? ☐
(1) <1000 (2) 1001-2000 (3) 2001-5000 (4) 5001-10000 (5) >10001

17.- ¿Dónde compras el teléfono celular? ☐
(1) En alguna tienda de una marca específica
(2) En alguna tienda de un proveedor de servicio (Telcel, Iusacel, Movistar, etc.)
(3) A través de Internet
(4) Tiendas de autoservicio
(5) No importa el lugar
(6) Otros (especificar) _____

18.- ¿Es la tecnología un factor clave al momento de comprar un teléfono celular nuevo? ☐
(1) Sí (2) No

19.- ¿Cuáles son los factores tecnológicos más importantes para ti, al momento de comprar un teléfono celular? ☐

(1) Innovación
(2) Tecnologías de autoservicio (Tecnologías fáciles de usar)
(3) Durabilidad
(4) Moda/tendencia
(5) Comunicación

20.- ¿Alguna ves has tenido problemas de operación después de la compra? ¿Qué tipo? ☐
(1) Problemas técnicos
(2) Problemas de servicio
(3) Problemas de seguridad
(4) Errores en la comunicación
(5) Otros (especificar) _____

21.- ¿Cuáles son los aspectos que dan "valor por tú dinero" en la compra? ☐
(1) Obtener el mejor servicio
(2) Obtener la mejor tecnología
(3) Características atractivas
(4) Marca
(5) Precio

22.- ¿Cómo obtienes información acerca de los nuevos teléfonos celulares? ☐
(1) A través de los proveedores de servicio
(2) Comerciales de televisión
(3) Folletos en los puntos de venta
(4) Comunicaciones impresas (revistas, espectaculares, etc.)
(5) Referencias personales

(6) Internet
(7) Otros (especificar) _____

A.3 "Questionnaire for service providers in Spanish"

Distribuidor:

1.- ¿Qué tipo de teléfono celular compra la mayoría de los usuarios?

2.- ¿Por qué crees que los usuarios se inclinan por esa opción?

3.- ¿Crees que el proveedor de servicio afecta las decisiones de las personas al momento de seleccionar un teléfono nuevo?

4.- ¿Las campañas publicitarias afectan la selección del teléfono celular?

5.- ¿Consideras que los teléfonos se venden más si hay paquetes promociónales?