MOBILE PHONE SERVICE PROVIDERS IN SAUDI ARABIA: STUDENTS' CUSTOMER SATISFACTION

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Mobile Phone Service Providers in Saudi Arabia: Students' Customer Satisfaction

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Abstract

The mobile phone services sector in Saudi Arabia, whether in terms of its total subscription numbers or volume of usage, is a booming market with extensive reach across all sections of consumers. There are now three mobile phone providers in the KSA and the competitive environment will require careful management by the companies to attract and retain customers, especially young customers, as the industry continues to be privatised. But the Saudi mobile phone services market has not yet been subjected to a comprehensive study outlining the factors that influence Saudi customers in their choice of service provider and their decision to either retain or terminate their subscription with a particular provider. This study examines customer satisfaction, choice of service provider and usage characteristics of young Saudis, with a cross-sectional survey of data gathered through self-reported questionnaires from 323 students at universities in Riyadh, Jeddah, Dammam and other cities.

The results show that STC was the most popular provider followed by Mobily and Zain. Majority of the students were dissatisfied with their service providers due to poor pricing and service quality, and one-third of the customers intended to terminate their contracts after expiration date. Minimum cost service packages, lower rates of call, and free allowances on the contract for social calls were significant predictors of the intention to change provider. Inferential statistics revealed that gender is a relevant demographic factor in determining the respondents' satisfaction and usage characteristics, whereas location is was tangentially related to satisfaction due to a gender skew in some locations. Males tended to pay their own bills and use their phone more than females for social calls than business/education, and males were more likely to change their providers when their contract expired.

It is recommended that high quality mobile phone services should be designed and marketed specifically to satisfy the needs and expectations of the rapidly expanding generation of young Arab users. As gender exerted a significant influence, market segmentation with relationship marketing tactics targeted towards males may be useful, because males tend to be more demanding about service quality and concerned about their relationships with the service provider. A stakeholder analysis based on qualitative data from focus groups and/or face-to-face interviews is recommended to expand the findings of this study and explain the subjective motivations driving customer choice/retention of service provider and the differences between men and women in their satisfaction and usage patterns.

Student Declaration

Doctor of Business Administration Declaration

"I, Badr alharbi, declare that the DBA thesis entitled Mobile Phone Service Providers in Saudi Arabia: Student Customer Satisfaction is no more than 65,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work".

Signature

Date 16 - 10 - 2013

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Conference and journal publications

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Badr Alharbi, Customer Choice in Mobile Service Providers in Saudi Arabia, International Journal of Business and Social Science, Vol. 3 No. 18 – September 2012

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Chapter 1 INTRODUCTION

1.1 Introduction

Developing the market and infrastructure for information and communications technology (ICT) in the Kingdom of Saudi Arabia (KSA) has long been recognised as a key objective in the successive five-year economic plans of the Saudi government. A considerable amount of resources have been employed to build the telecommunications infrastructure to spread computer literacy in the population, and maintain a competitive position in the global economy (Ramady 2010). From a country that was perennially under-served by fixed telecommunication infrastructure with around 16 telephone connections per 100 inhabitants, the advent of mobile technology has led to an exponential increase in the communication infrastructure and opened up a vast market for communication devices. The mobile services sector, whether in terms of its total subscription or volume of usage, is a booming market with extensive reach across all sections of consumers in the Saudi market. There are now three mobile phone providers in the KSA and the high level of penetration will require careful management by the companies to attract and retain customers, especially young customers, as the industry continues to be privatised.

The Saudi mobile phone services market has not yet been subjected to a comprehensive study that outlines the factors influencing Saudi customers in their choice of service provider and their decision to either retain or terminate their subscription with a particular provider. Although there

are now voluminous investigations pertaining to mobile phones and its usage, most of these researches were done outside of Saudi Arabia. Consumer needs and expectations when making their choices in the mobile phone environment in Saudi Arabia has not yet been investigated. Also, over 90% of the research on the factors associated with customer retention has taken place in the United States and Europe (Dass and Jain 2011), so the existing research may not be necessarily generalizable to Saudi Arabia where the cultural and business context differs significantly from Western countries. Hence, this study was put forward to fill this gap in knowledge to provide a better understanding of the consumption behaviour of Saudi mobile phone users and develop appropriate relationship marketing strategies that can help the Saudi mobile phone services industry.

1.2 Research Background

Mobile phones are now in the hands of about 75% of the world population (Fitzpatrick 2012; Bosomworth 2012). Statistics on mobile phone usage and adoption reveal that people worldwide are now devoting more time on their mobile phones than in the past. From being just a 'technological object', mobile phones are now viewed as 'social objects' that can shape, create, and enhance social relations (Srivastava 2005). Mobile phones are also being seen as a significant commercial product that can propel the economic development of a nation (Aker and Mabiti 2010). Data collected by Bosomworth (2012) in Smart Insights showed that in the last two years, worldwide mobile share of web traffic has increased exponentially from 3.81% in 2010 to 10.01% as of May 2012. Today, there are 4 billion mobile phones in use, of which 1.08 billion are smartphones, and 3.05 billion are SMS enabled (Bosomworth 2012). If the current

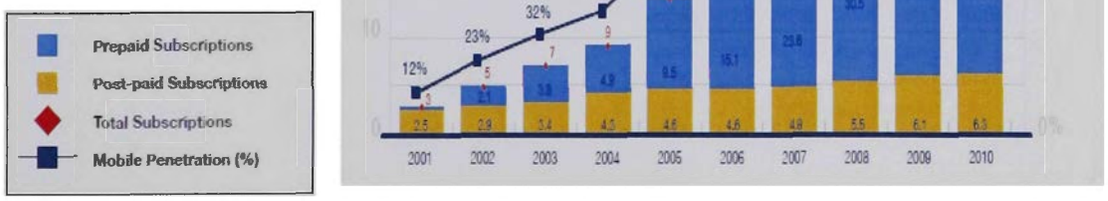
rate at which people are using and adopting mobile phones continues, it is predicted that "by 2014, mobile internet will take over desktop internet usage" (Bosomworth 2012).

With regard to the statistics on mobile phone industry in KSA, the latest 2012 official data shows that Saudi Arabia is now the "number one country in the world to lead with the highest proportion of mobile phone users, with a ratio of 180 mobile phones to each 100 residents" (Sacha Orloff Consulting Group 2012, p. 9). Official data from the Kingdom's telecommunications regulator or CITC also shows that there were around 53.7 million mobile subscribers at the end of 2011 with a penetration rate of 188% (CITC 2011, p. 16).

The Communications and Information Technology Commission (CITC) has regulated the telecommunications industry since 2001 and played a role in the development of the industry since 2003. The regulations state that ICT service providers who are licensed to offer specific services may utilise technologies of their choice. The Commission promotes a competitive environment to enable existing and new ICT entrants to undertake infrastructure projects, introduce new licensed services, improve service provision, reduce prices, and ensure complete coverage of their services (CITC 2010). The Commission has also conducted public forums to consider input from stakeholders and interested parties, and provided a dispute resolution service, receiving and resolving 16,033 complaints in 2010 as compared to 9,370 in 2009. It has been reported that the majority of complaints concerned billing, annoying calls, service interruptions, quality of service, disconnection of service, and mobile number portability (CITC 2010).

Considering the fact that in 2001 (the year CITC was established) mobile subscription was only 2.5 million, analysts from CITC see these figures as dramatic. While fixed telephone lines did not see any significant increase in subscriptions between 2005 and 2010, mobile phone subscriptions tripled in the five years, from 58.9 to 187.9 per hundred residents. Also, the Commission placed the penetration rate for active services somewhat lower than the ITU, at 1.49 times the population. It also stated that mobile penetration of the country (186%) was "higher than the world average of 76%, the developing countries average of 73% and the developed countries average of 116%" (CITC Annual Report 2010, p. 2). CITC observed the continuous rise (***Figure 1***) in mobile telecommunications in their 2010 Annual Report.

Figure 1 Mobile service market growth- total subscriptions, 2001 – 2010, Saudi Arabia

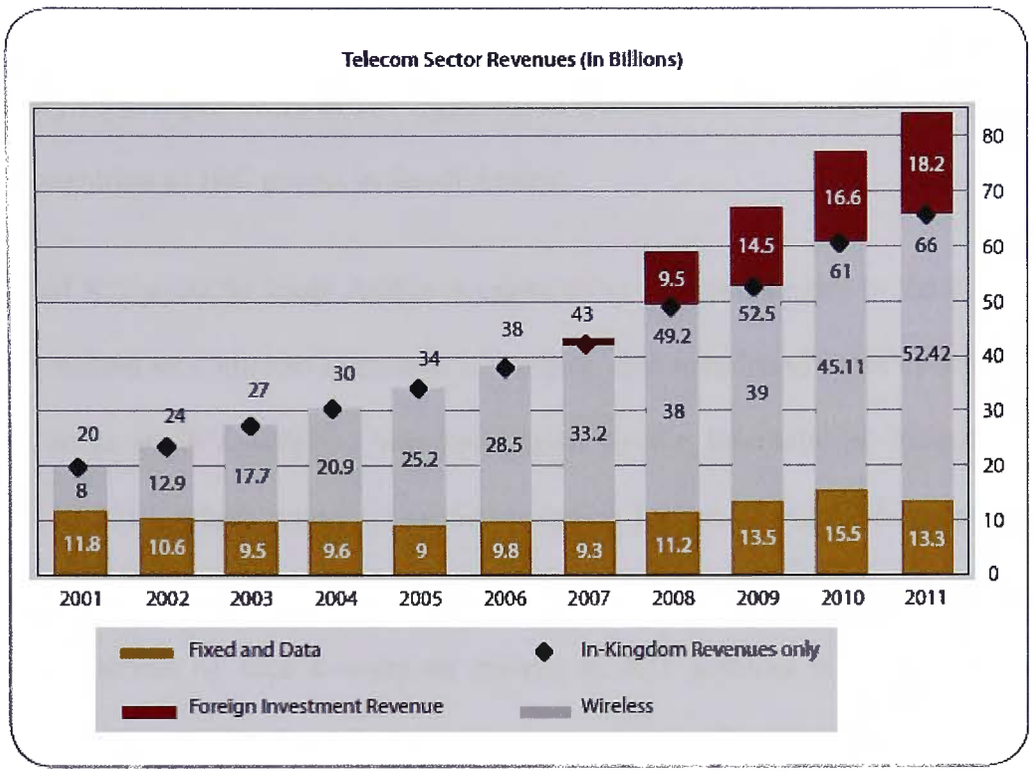


(Source: CITC 2010, p. 20)

There is, however, an agreement among analysts that the use of mobile penetration is a poor measure of ICT usage specifically in the mobile phone services sector because oftentimes what is measured by mobile companies is the number of SIM cards per 100 individuals (STC 2011, p. 29). People can often own multiple sim cards to be used at different times, which could lead to an over-estimation of the actual number of unique subscriptions. Hence, it is suggested that a more reliable measure of mobile penetration would be derived from unique users of mobile devices per 100 individuals (STC 2011, p. 29). Despite these issues in methods of measurements, the meteoric rise in the volume and number of subscriptions attests to the fact that Saudi Arabia has indeed gone a long way in mobile phone penetration. Data attests to the pervasiveness of mobile phones in Saudi Arabia and the country now is one of the strongest contenders in the race of mobile phone subscription.

The argument that mobile services can propel economic development has also been proven by statistics. Compound annual growth rate (CAGR) of telecom services revenues rose from SAR 20 billion or US$5.3 billion in 2001 to SAR 65.7 billion or US$17.5 billion in 2011 (CITC 2011 Annual Report, p. 20). As shown in ***Figure 2***, about 80% of all telecom sector revenues come from the mobile services revenues.

Figure 2 Telecom sector revenues in Saudi Arabia



(Source: CITC 2011 Annual Report, p. 20)

Partial privatisation of telecommunications sector has led to an explosion of subscription services with figures now showing that there are nearly two subscriptions per resident. These subscriptions also include temporary mobile services purchased by the two million Muslim pilgrims on the annual pilgrimage of *hajj* to Makkah the birthplace of Prophet Mohammad. The CITC reported that 86% of Saudi mobile services were dominated by pre-paid subscriptions in 2009, and there were seasonal peaks because of the nearly two million foreign pilgrims on *hajj*.

Similarly, internet usage has more than tripled (3.22 times) and there was a rapid uptake of fixed broadband subscriptions (up 6.3 times), possibly replacing fixed internet subscriptions (up 32%).

Statistics show that whilst internet subscriptions for state-controlled fixed lines are showing robust growth, they lag behind the high growth in internet subscriptions for mobile services. Since the entry of new providers in 2004, growth in wireless services surged and this supported the ITU's recognition of IRC access in Saudi Arabia.

The number of ICT users in Saudi Arabia is expected to continue its rise in the next few years, with about 4 million new internet users and 2.7 million new broadband users by 2014 (Que et al. 2010). This surge in ICT adoption was recognised by the International Telecommunication Union (ITU) in 2010, which reported that Saudi Arabia had made outstanding progress in ICT access. ITU (2010) ranks world economies on a basket of prices for ICT and also against the gross national income of each country as pricing of ICT services is a significant factor in adoption (Alshurideh 2010). Nevertheless, the country still trails behind many other nations in ICT development, so there is still need for accelerated development to maintain the country's position in a dynamic global ICT environment. ITU reported that the Arab and Saudi telecommunications industry have issues regarding limits in foreign ownership and investment, which in turn slowed the development of fixed line and mobile services, and internet/broadband. ITU recommended the development of ICT policy with effective monitoring and measurement mechanisms, further liberalisation of all ICT markets, development of high-speed broadband networks, enhanced digital literacy and ICT skills throughout the population, and attention to the infrastructure necessary for the next generation ICT environment. Further, there are tensions over internet access and content in the highly conservative social environment of KSA, although the security aspect is increasingly shared across the international community, for example,

restriction of websites for schools, financial transactions over the internet and malevolent intrusion, particularly of wireless devices.

The surge in the mobile phone market in Saudi Arabia may be attributed to its very high youth population. As of 2010, about 62.3% of the total population was constituted by young Saudis below 24 years of age (NATO 2010). The youth (15-24 years) and expatriate segments, represent 5.2 million and 8.4 million respectively, out of a total population of 27.1 million (Saudi Arabia Census 2010), and they are the most influential population segment in terms of consumer effect on the dynamics of the mobile phone sector. The youth segment, in particular, are experts in this technology, quick to adopt new products and services, have significant purchasing power, and potentially represent a lifetime of value for service providers. The expatriate segment also has significant purchasing power, and demand high services to keep in contact with families and friends abroad.

Across the world, youth segment of the population show the highest uptake of mobile phones. This may be the reason why there is an emerging interest to investigate the young adults' motivations for new media adoption and usage. Recently, a 'groundbreaking' study was conducted by Microsoft Advertising and Synovate (2012) among 18 to 24 year-old respondents drawn from 26 countries. Called the young adults, this age group is described in the *Young Adults Revealed* study as "savvy, cautious, influential, and new technology experts" (Microsoft Advertising and Synovate 2012, p. 5). This research presents a pioneering investigation of young adults' motivations providing important information about ICT adoption and usage and its future prospects profiling the world's young adults' new media practices. It was revealed that 92%

owned a handset and mobile phone bills ranked 2nd in the list of their expenditures (p. 5). But as a generic global study it throws no light on the specific contextual details of mobile phone subscription and usage in different countries.

Today, KSA has the largest market for mobile phone services among all the GCC countries (Bahrain, Kuwait, Oman, Qatar, and Saudi Arabia). The main features of the Saudi mobile market are: the majority of is the sector is made up of pre-paid subscription services, the market is driven by a financial system that is interest-free, and the market sees a seasonal spike in numbers due to an annual influx of pilgrims. With the dynamism in mobile technology providing increased flexibility for mobile device users, Saudi Arabia is experiencing a further surge in mobile usage due to an unfolding privatisation program for its telecommunications industry, notably mobile phone services.

An exponential growth in mobile phone users in Saudi Arabia began in 2005 after the liberalization of the telecommunications sector. Privatisation of the telecommunications sector has given the opportunity to three large companies to compete for a share in the mobile telecom market. There are three major retail telecommunications corporations in the country: the Saudi Telecom Company or STC, which was established in 2002 from public ownership, with a monopoly in the telecommunications sector that dated from 1998 as the state telephone services provider; Mobily Company which was established in 2004 and licensed for mobile telephony); and Zain Saudi Arabia which was established in 2008 with mobile service license).

The major provider of ICT services in the country is the Saudi Telecommunication Group. It was established in 1998 as the government-owned Saudi Telecom Company, and was relaunched as a public company on the Tadawul (Saudi Stock Exchange) in 2002 as STC. It introduced digital subscriber line (DSA) services in 2003, and launched 3G mobile technology in 2005. The company now provides integrated mobile, fixed and broadband communications services to over 126 million subscribers in 10 countries, and is the largest telecommunications company in the Arab region. It is also one of the top five telecommunications corporations in the world. STC provides 98% coverage of the country's telecommunications services, which now include 3.5G, LTE mobile technology, the BlackBerry platform, Internet Protocol Television (IPTV), and Multimedia Messaging Service (MMS) in Saudi Arabia (ITU-D nd).

Etihad Etisalat (Mobily), based in United Arab Emirates, became the Kingdom's first alternative mobile service operator in early 2004 and listed on the Tadawul later that year. It paid SAR 12.964 billion ($AU3.3b) for its Global System for Mobile Communications and 3G licenses. It was the first operator to launch MMS, high volume mobile broadband bundles, BlackBerry and iPhone services. The company now has the largest 3.75G high speed packet access (HSPA) network and active mobile broadband subscriber base in the Middle East and North Africa region (ITU-D nd, Mobily 2011).

Zain, from Kuwait, received its mobile license in 2007 and was launched as a service provider and listed on the Tadawul exchange in 2008. It provides voice services (calls, international roaming, voicemail, conference call, voice SMS), SMS and MMS services, SIM applications

(subscription channels, downloadable applications), 3G and 3.5G services. It covers 93% of Saudi Arabia and has 2,200 staff on its payroll (ITU-D nd, Zain 2011).

This competition in mobile technology is proving highly beneficial for the country, as it moves from its previous slow-paced development of fixed information and communications technology (ICT) infrastructure into the flexibility offered by private mobile technology suppliers. Currently, STC has the largest market share in Saudi Arabia. This is mainly due to innovative realignment of its operations by developing a new operating model to improve customer experience and retention, including heavy investment in new IT systems to improve service quality (Al-Aklabi and Al-Allack 2011). Strategic planning in STC has been (a) factor driven, because of the exponential growth in the number and diversity of subscribers in Saudi Arabia; (b) efficiency-driven, because of the need to improve the quality of services to customers; and (c) innovation-driven, through the development of the latest technology and product features, including fast connectivity, clear voice calls, video calls, mobile internet, free calls, and discounted call rates.

Innovation is central to success in the mobile phone sector to provide an advantage over rivals in a competitive market. To capture this growth, mobile service providers in Saudi Arabia need to invest heavily in more advanced data networks, without lowering their margins. This means that they need to determine the required level of investment without decreasing profit per unit of data consumed. Consequently, offers of unlimited data packages combined with increased speeds and content available need to be carefully controlled. According to Que et al. (2010), the factors shaping growth opportunities for the mobile phone sector in Saudi Arabia include: (a) the expanding youth and expatriate consumer generation; (b) unleashing the growth of internet and

broadband; (c) expanding the range of "smart" devices as integral lifestyle choices; (d) innovations in the provision of applications and value-added services; and (e) the expansion of mobile financial services.

1.3 Statement of the Problem

The liberalization of ICT in Saudi Arabia and the ambition of its government to have a "universally available, high quality and affordable communications and information technology services" (CITC 2011 p. 13) has opened the doors of the ICT sector to lively competition. However, the extent to which competitive advantage in the mobile phone sector in Saudi Arabia could be driven by factors affecting consumer choice and demographic characteristics of customers (e.g. by their gender or location) has not been ascertained. Neither have the unique cultural dimensions of Saudis been taken into account as drivers for decisions regarding the choice and retention of service providers made by Saudi mobile phone users. Given that there are now varied options available in mobile phone services, customers in this industry have the freedom to move to a wider range of choices and not be tied to a single provider. Therefore, it is important to uncover Saudi consumers' expectations concerning mobile phone services, and understand how their satisfaction and loyalty is shaped in this customer-driven industry.

Furthermore, the majority of studies regarding mobile phones focus on providing statistics for market status and trends, and not about rendering an in-depth analysis of consumer profile, expectations, customer satisfaction and loyalty, and customer demographics as related to choice or decision-making. Considering the dynamism of today's mobile phone technology and the changing scenario in mobile phone services, data about consumers must be gathered and updated

to extract information about who they are, what they need, and what they want. Thus, there is a research gap in the literature on a comprehensive study of consumer expectations and behaviours towards mobile phone services in Saudi Arabia. Improved knowledge of the multitude of factors that influence customer choice, satisfaction, and loyalty in the mobile phone sector may be applied by service providers in managing customer satisfaction and prolonging customer retention.

1.4 Research Questions and Hypotheses

The guiding research question of this study is: What are the most important factors that influence customer satisfaction/loyalty and choice/retention among young adult mobile phone users in Saudi Arabia? Apart from that, two questions pertaining to generic factors affecting mobile phone users' behaviour and their sources of information for adopting a service are posed.

Because this study was conducted in Saudi Arabia to examine specific implications for Saudi service providers and users, local contextual issues need to be considered in more detail. Gender and location are potentially important market segmentation factors for mobile phone users. This study examines two demographic characteristics of mobile phone users (gender and location) as they relate to customer satisfaction and loyalty, choice of service provider, and mobile usage characteristics. Specifically, it analyses the formulated hypotheses using statistical tests to establish whether significant relationships exist between the variables.

By examining these different aspects, the study expects to increase the degree of understanding of mobile phone consumer's behaviour and factors that may affect the choice of service

providers and intention to shift to another service provider. Based on gaps found from the literature review, the main question was divided into sub-questions.

RQ#1: Is there a significant relationship between respondents' gender and their loyalty/ satisfaction, choice of mobile service provider, and mobile usage characteristics?

RQ#2: Is there a significant relationship between respondents' location and their loyalty/satisfaction, choice of service provider, and mobile usage characteristics?

RQ#3: What are the factors affecting respondents' choice of mobile phone providers and aspects of service that may influence their intention to change providers?

RQ#4: What are respondents' sources of information for mobile phone service providers?

RQ#3 and RQ#4 are exploratory in nature so they will be used as they are stated, but RQ#1 and #2 are confirmatory in nature, so the following hypotheses were postulated to be tested with data gathered from the research. Each hypothesis consists of a null and a positive version. Null hypotheses have been accepted to be a more accurate evidence as positive evidence for any phenomenon can result from unrelated sources, so it is important to first prove that the null hypothesis is negative before testing evidence for the positive hypothesis. The literature on scientific methodology has come to agree that confirmatory observations cannot prove that a hypothesis is true, whereas falsification (i.e. providing evidence to disprove a hypothesis) is logically considered to me a more decisive form of evidence (Edmund 2011). A null hypothesis (H_0) is a default statement proposing that no relationships exist among the observed data, and is

the opposite of the research hypothesis. A good falsification test involves using a null hypothesis test, where it is possible to disprove a null hypothesis at a prescribed level of probability. Accordingly, the research questions (RQ) were formulated into corresponding null hypotheses.

RQ#1: Is there a significant relationship between respondents' gender and their loyalty/ satisfaction, factors affecting their choice of mobile service provider, and mobile phone usage characteristics?

For relationship between gender and customer loyalty/satisfaction

H_0#1: There is no significant relationship between respondents' gender and their loyalty/satisfaction with their mobile service provider.

Ha#1: There is a significant relationship between respondents' gender and their loyalty/satisfaction with their mobile service provider.

For relationship between gender and factors affecting choice of service provider

H_0#2: There is no significant relationship between respondents' gender and the factors affecting their choice of service provider.

Ha#2: There is a significant relationship between respondents' gender and the factors affecting their choice of service provider.

For relationship between gender and mobile usage characteristics

H_0#3: There is no significant relationship between respondents' gender and their mobile usage characteristics.

Ha#3: There is a significant relationship between respondents' gender and their mobile usage characteristics.

RQ#2: Is there a significant relationship between respondents' location and their loyalty/satisfaction, factors affecting respondents' choice of service provider and mobile phone usage characteristics?

For relationship between respondents' location and customer loyalty/satisfaction

H_0#4: There is no significant relationship between respondents' location and their loyalty/satisfaction with their mobile service provider.

Ha#4: There is a significant relationship between respondents' location and their loyalty/satisfaction with their mobile service provider.

For relationship between respondents' location and factors affecting choice of service provider

H_0#5: There is no significant relationship between respondents' location and the factors affecting choice of service provider.

Ha#5: There is a significant relationship between respondents' location and the factors affecting choice of service provider.

For relationship between respondents' location and mobile usage characteristics

H_0#6: There is no significant relationship between respondents' location and their mobile usage characteristics.

Ha#6: There is a significant relationship between respondents' location and their mobile usage characteristics.

1.5 Significance of the Study

This research investigates the perceptions of Saudi Arabia's young adult customers (consisting of university students from various parts of KSA) with regard to the mobile phone services they purchase and use. The setting of the research in the KSA is shaped by a unique set of environmental features, specifically (a) the youth population and the novelty of its initial encounters with telecommunications, given the low penetration of fixed telephone lines in the past; (b) the recent privatisation of the ICT sector, and the availability of choice in an attractive social environment; (c) the demographic and cultural factors, such as the low average age of the population, a high number of religious visitors, the traditional family and tribal structures, a high expatriate labour force, and strict gender differentiation, and (d) the majority of subscriptions (86%) are prepaid and susceptible to high turnover.

The unique cultural and technological environment of Saudi Arabia as a traditionalist country facing unprecedented growth from a petroleum–based economy serves as a fertile context to test previous conceptual models and findings, provide new information and insights, and fill gaps in the research literature. Hofstede's (2009) cultural dimensions of the Arab world and the results

of the GLOBE survey of business managers in 62 countries (House, 2004) were used as frames of reference to describe the cultural characteristics of Saudis for the purposes of this study.

The present study addresses a significant gap in the literature and examines Saudi Arabian customers' insights about their needs, expectations that can act as drivers for customer satisfaction/loyalty, choice and usage patterns of mobile phones. It will contribute towards a better understanding of the dynamic environment of the mobile phone sector and the consumer profile of young adult Saudi mobile phone users. The challenges for the development and functioning of ICT in the region also framed the purpose anchoring this research. More specifically, it seeks to foster better marketing and customer service strategies in the telecom sector by providing an understanding of consumers' decisions in selecting a mobile phone service provider.

The contribution to knowledge made by this research covers several fields, including relationship marketing, client-centred view of the firm, co-creation, customer satisfaction, service quality, brand image, loyalty, and pricing issues. These factors and theories in marketing are of continuing interest to researchers and marketers throughout the world in relation to generic global standards as well as specific contexts of national markets.

This research is focussed on understanding the reasons that drive customer satisfaction and loyalty towards the mobile phone service providers they use and the factors that determine their choice of mobile phone service provider. Such a customer-centric approach oriented towards understanding the motivations and perceptions of customers is important because customers can

make or un-make any business. No business can survive in a competitive environment if customers are dissatisfied with the product or service being offered. Customer satisfaction and decision to stay with a particular provider is anchored on whether the business was able to meet customers' needs and expectations. This study, therefore, provides valuable insights into customers' preferences and expectations pertaining to mobile phones and services.

Moreover, findings answers to the research questions posed by the study can provide valuable input for mobile phone service providers to have a better understanding of their customers. The research gives service providers up-to-date information on mobile phone usage characteristics and commercially useful recommendations to support the development of relationship marketing techniques. These factors are of interest to the three mobile providers in Saudi Arabia (STC, Mobily, and Zain), and the findings and recommendations of this study have implications, not only for other providers in the Arab and Islamic countries, but for global companies seeking to enter the Islamic and Arabic markets. This way, service providers will be able to strategize the delivery of an attractive package that can have a positive and satisfying impact on mobile phone customers. In the light of the foregoing, the investigator is confident in asserting that this research is a pioneering work in the field and will contribute greatly to the body of knowledge on the mobile phone market in KSA.

1.6 Structure of the Dissertation

The present chapter has provided an introduction to the research. This dissertation consists of five main chapters which are briefly explained below to familiarise the reader with the issues to be covered in this study.

Chapter 2 presents a literature review of relevant concepts pertaining to customer retention/churn, generic factors of consumer choice/satisfaction, substantive attributes that affect choice of mobile services and influence of demographic factors that can be used as an empirical framework to underpin this study. It surveys the theoretical assumptions used in previous research to derive principles that are most suited for the purpose and context of this study.

The methodology of this study is the topic of Chapter 3. Here, all issues pertaining to the research methodology of the study are described and justified. Beginning from broader issues of research design and paradigm, it explains all other aspects including the population and sample, development of research instrument, procedures used for data collection and statistical tests used for analysis.

Chapter 4 is the most important chapter and takes a substantial amount of space in this thesis as it presents the results of this study. The chapter begins with a descriptive statistic outlining the demographic profile of the participants, and then lists the results of the statistical analyses along with visual presentation of the evidence for each of the research questions and hypotheses in this study.

Chapter 5 is the discussion chapter where the findings are interpreted in relation to the guiding research questions and compared with the results of previous studies in the literature review. Consideration is given to the theoretical and practical implications of the results especially in terms of recommendations for deepening research on the subject and improving practice and policy in the mobile phone services sector.

Chapter 6 is the concluding chapter of the thesis and it summarises the research processs and findings with respect to the research questions. It reflects on the strengths and limitations of the study in terms of the procedures followed in the study and its contribution to and understanding of the subject. The thesis concludes with a final note on themes for future research that can extend the findings of this study and provide more understanding on the issue of Saudi consumer behaviour in choice/ use and retention of mobile phone service providers.

Chapter 2 LITERATURE REVIEW

2.1 Introduction

This chapter presents a literature review of existing research to elaborate the contextual and theoretical framework that underpins this study. The focus on the intricacies of consumer choice and motivation adopted in this study is based on a research paradigm in business literature which lays emphasis on the importance of customer experience through co-creation and relationship management. The review then considers the dynamics of customer retention and customer churn which respectively explain why mobile phone users tend to remain with a chosen provider, and why they switch to other providers. The chapter then turns to a detailed investigation of the factors that determine customer intention to remain or switch, including customer satisfaction, customer trust, customer loyalty and emotional attachment. This is followed by a discussion of the substantive attributes of a particular mobile phone service provider that draw customers—pricing, product offering, brand image, service quality. Most of this discussion is based on the conceptual model developed by Dass and Jain (2011) but modified to some extent to suit the needs of this research. Apart from these generic theories explaining customer behaviour, there is also a need to explain how phone usage varies with respect to a complex network of contextual factors. So the last section turns to the contextual factors of demographic variations and cultural influence that are critical for understanding consumer behaviour in a traditionalist, gender-differentiated society like Saudi Arabia.

2.2 Theoretical Framework

Theories are sets of concepts and propositions that have not yet been completely validated within the actual empirical context they purport to explain. Theories serve to summarize data, to describe the relationships between data, to turn propositions into hypotheses that may be accepted or refuted, and to provide a conceptual framework from which other theories can emerge (Calhoun 2007). Theories are always subjective, under development, and open to modification. No theory is sacrosanct and theories can be easily manipulated and changed when new information becomes available. The history of science has highlighted that all theories, such as the earth is flat, can ultimately be undermined and discarded (Kuhn 1970). Nevertheless, Kurt Lewin, the founding father of social psychology, famously surmised in 1951 that "There's nothing more practical than a good theory" (cited in Vanseenkiste and Sheldon 2006, p. 63). Even if it is hypothetical in nature, a good theory is critical to good practice, and practice should be a source of theory. In other words, there should be a mutual interchange between the two so that theory and practice inform each other to provide better explanations of actual phenomena in the world (Creswell 2009). The importance of this mutual interaction means that (a) theoretical researchers should be encouraged to generate new ideas to conceptualize social phenomena; (b) applied researchers should provide theorists with information relevant to conceptualizing social phenomena, and (c) applied researchers should make practical use of theoretical frameworks upon which to base their research. Accordingly, this chapter considers the theories upon which this study was based, and which may ultimately be changed and developed to take the Saudi context into account. This discussion includes theories relating to the factors that influence

customer satisfaction, loyalty, choice, and retention among mobile phone users and how these theories also underpin marketing tactics and retention strategies.

2.3 Theoretical Approaches for Customer-Centric Research

This research is focussed on understanding the reasons that drive customer satisfaction and loyalty towards the mobile phone service providers they use and the factors that determine their choice of mobile phone service provider. Such a customer-centric approach oriented towards understanding the motivations and perceptions of customers is important because customers can make or un-make any business. This research is based in two main paradigms in current marketing literature that emphasise the importance of customer relationship and improving customer experience. Co-creation emphasises the importance of continued interaction between the firm and consumer to create value. Relationship marketing focuses on the development of marketing strategies that seek to translate the firm-customer relationship from a transaction to a lasting and mutually beneficial relationship.

2.3.1 Co-creation

A retail organisation may either take a firm-centric view or a client-centric view of its business. The firm-centric view posits that the organisation unilaterally creates value for its customers through the services it is capable of imparting, whereas the client-centric view posits that value is co-created from constructive communication and feedback between the clients and the firm (Holbrook 2006, Vargo and Lusch 2008). Vargo and Lusch (2008) proposed that a client-centric approach particularly important for the retail sector as its business is about dealing directly with consumers. A selling organization which has a strong collaboration and communication ability

with its customers will be able to cater to their demands and that is how real value will be co-created.

For more than one hundred years, a firm-centric, efficiency-driven view of value creation was used as the standard; however, there has seen a shift from the firm-centric to the client-centric view in recent business theory. Prahalad and Ramaswamy (2009) have asserted that "Companies spent the 20th century managing efficiencies. They must spend the 21st century managing experiences (p. 27)." Consequently, a shift in business models is taking place. The firm-centric view, where value is defined by a transaction of goods or services for money, is being replaced by the client-centric view, in which clients must be ensured of value throughout the experience of buying and using a product or service (Prahalad and Ramaswamy 2009).

The focus on customer experiences was echoed by Qualman (2009) who stated that modern business is "about a people-driven economy" (p. 279). Prahalad and Ramaswamy (2009) further add that a client-centric perspective involves a path to co-creation which shows an "obsessive focus on personalized interactions between the customer and the company" (p.7). Co-creation occurs when a firm can successfully demonstrate a high level of collaboration with its clients, through mutual access, open dialog, and transparency. Co-creation is manifested by satisfying the needs and expectations of customers in various ways. It is argued that the competitive edge given by co-creation will only grow in the future economic environment and client-centred firms with co-creation ability will be in a position to compete more effectively in the market compared to their firm-centred competitors (Prahalad and Ramaswamy 2004). High levels of satisfaction and trust are overriding factors that enhance the quality of the relationship between customers

and service providers. This is because the firm and client are able to build co-creation, thereby decreasing the likelihood of switching behaviour even if switching costs may be favourable. Consequently, pricing is not the only factor to be taken into consideration when analysing the factors that predict switching behaviour.

2.3.2 Relationship Marketing

Apart from the provision of quality services throughout the duration of use, the client-centred view of the firm in the mobile phone sector also dictates that firms ensure that customers are satisfied and maintain healthy relationships with them. This will help to mitigate competition from rival and retain loyal customers who will then contribute to long-term profits. Relationship marketing has received much attention from researchers in the last decade. The term has its origins in a study by Berry (2002) who found that market thought and practice in 1980 focussed entirely on new sales and instead advocated an integrated concept to relationship marketing based on the concept of "the right service performed well" (Berry 2002, p. 73). Berry was explaining that relationship marketing comprised customer contact over time using different media. Relationship marketing is essentially a means of developing customers as long-term partners rather than occasional transactors. Interdependence, mutual cooperation, and commitment between provider and customer are viewed as the key to competitive advantage (Bowen and Shoemaker 2003). It is actually a combination of numerous customer-centred approaches which seek to maintain strong ongoing associations with customers.

The differences between relationship marketing and traditional marketing are outlined in Table 1, which has been adapted from Zhang and Feng (2009).

Table 1 Differences between relationship marketing and traditional marketing

Approach	Relationship Marketing	Traditional Marketing
Orientation	Customer retention	Single sales
Customer contact	Continuous	Episodic
Focus	Customer value	Product features
Customer service	High emphasis	Little emphasis
Commitment to customer expectations	High commitment	Limited commitment
Organizational concern for quality	All staff	Only production staff

There are, however, some caveats to be made in relation to the effectiveness of relationship marketing. In some sectors, such as financial services, the costs of relationship marketing strategies may outweigh the benefits, so such strategies have consistently over-promised but under-delivered. Also, it has been argued that although customer satisfaction may be increased by relationship marketing tactics, loyalty rates do not necessarily change (Norman and Zafar 2001).

Relationship marketing has, however, received universal support from researchers around the world with respect to the development of the ICT sector. In a recent assessment of the United Kingdom's mobile phone market, Alshurideh (2010) concluded that purchasers of mobile voice and data packages tend to remain with a chosen provider only if they received the expected emotional benefits (e.g. high levels of satisfaction and feelings of trust), and a positive

experience with both the product and the service. From their survey of mobile phone users in Sweden, Zhang and Feng (2009) also identified similar relationships between customer loyalty and the emotional and functional benefits to users.

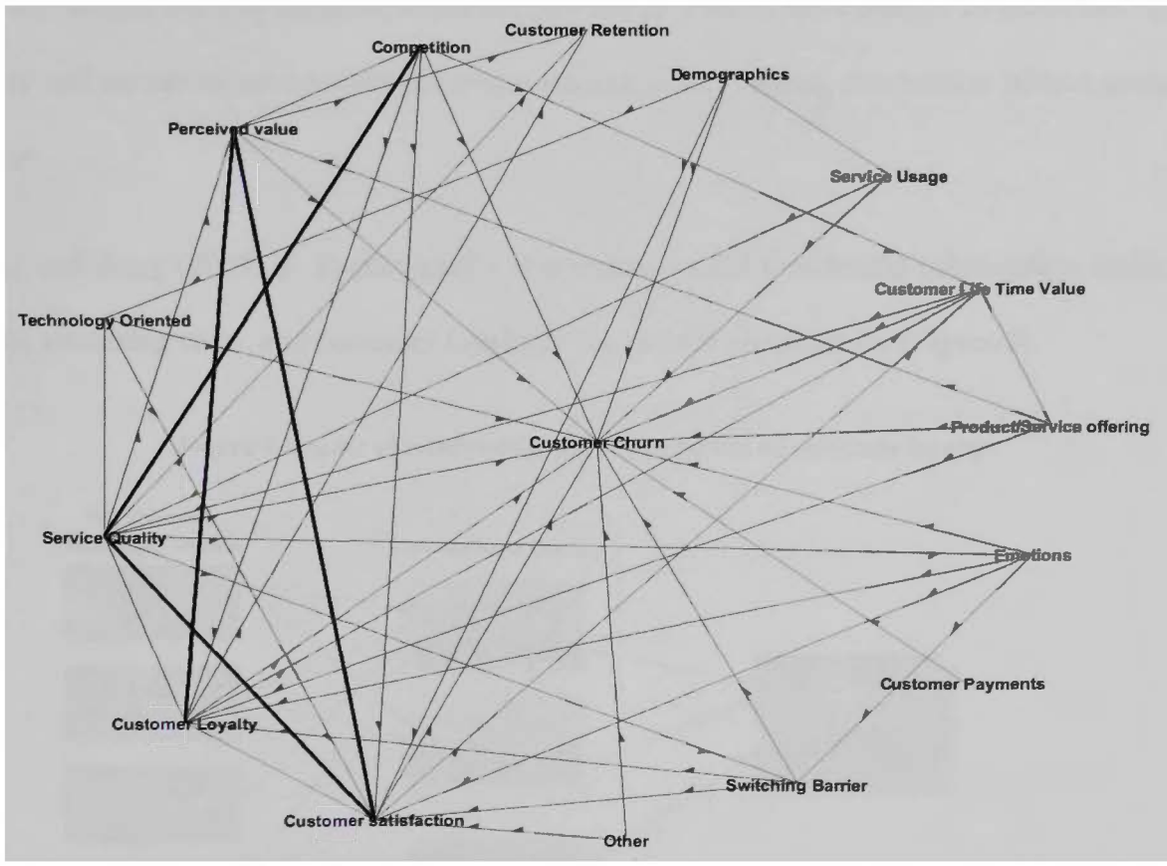
2.3 Customer Retention and Churn

The ultimate goal of all mobile phone service providers is to retain customers to increase market share and profits (Dass and Jain 2011). Customer retention is, therefore, a critical area of theory in the context of relationship marketing in the mobile phone service sector. Customer retention is defined as a "deeply held commitment to buy or patronize a preferred product or service consistently in the future" (Oliver 1997, p. 392). If service providers cannot provide long-term value to their customers, they may lose their consumer base to competitors, resulting in lower sales and profits, which may ultimately lead to the failure of business.

Theoretically, the issue of customer retention is quite clear but the problem is that customer retention is not easy to manage in real life. For example, between 2000 and 2005, the four major mobile network operators in the UK lost over one-third of their younger subscribers to rival providers; however, the managers were unable to identify the reasons for their losses and were unable to directly address the problem (Andic 2006). This is because customer retention is a complex phenomenon and there can be multiple intertwined factors associated with customer retention. Many researchers have attempted to explain customer retention from a demographic, psychological, and/or behavioural perspective. However, what is needed is a sound theoretical framework that is capable of incorporating these particular perspectives into a holistic framework.

Based upon a meta-study of the literature, Dass and Jain (2011) constructed a preliminary conceptual model (Figure 3) which attempted to explain the network of processes and factors associated with the churn or switching behaviour of mobile phone users between competing service providers.

Figure 3 Relationships between factors identifying churn of mobile phone users



Source: Dass and Jain 2011, p.6

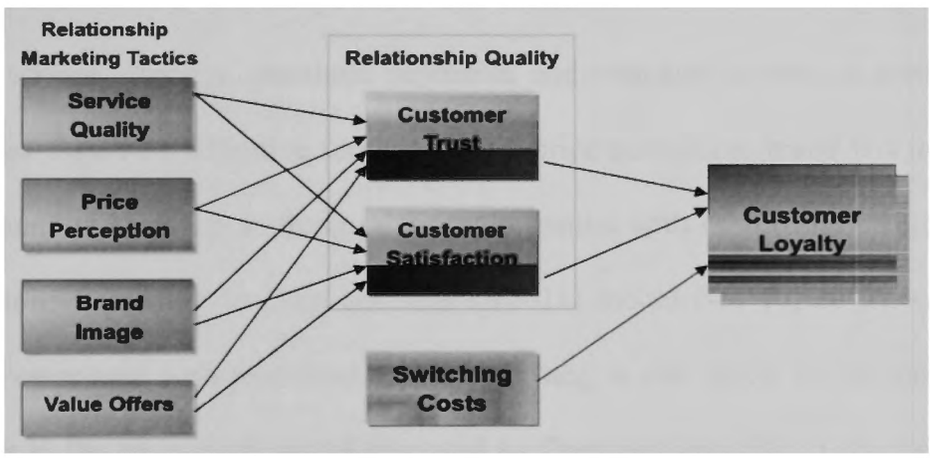
(Note: Bold lines indicate mutual relations between the factor groups, green lines are network of processes associated with switching behaviour of mobile phone users Dass and Jain found in their study)

Dass and Jain's model points to interaction between competition, perceived value, service quality and customer satisfaction as the most influential source of customer loyalty. In summary, the

model posits that (a) perceived value, service quality, and customer loyalty are the primary factors that directly influence customer retention; (b) with respect to service quality, an efficient customer complaint resolution system is crucial for all service providers; (c) customer loyalty is also influenced by emotions (positive feelings and enjoyment in using the service); (d) trust plays a significant role in customer loyalty; (e) customer emotions are highly influenced by many external factors, but it is difficult, if not impossible, to control the influence of emotions; (f) the quality and variety of services can aid corporate image and gaining competitive advantage in the market.

Zhang and Feng (2009, p. 3) proposed a conceptual model that linked relationship marketing tactics, switching costs, and customer loyalty in the mobile phone sector (Figure 4).

Figure 4 Impact of relationship marketing tactics on customer loyalty



Source: Zhang and Feng 2009, p.3

This model is consistent with the proposals of Dass and Jain (2011) in that it assumes that customer satisfaction is correlated with perceived value (price perception), service quality, and

customer loyalty. Unlike Dass and Jain's model, however, it highlights the correlation between customer loyalty, trust, and satisfaction, but does not emphasize competition as an important factor. According to Zhang and Feng's (2009) model, customer loyalty is theoretically linked to relationship quality incorporating customer trust, customer satisfaction, and switching costs, which are in turn influenced by relationships marketing tactics, including service quality, price perception, brand image, and value offers.

It is important for mobile service providers to understand the reasons for switching behaviour or churn, which is characterized by customers intending to change their providers, or actually changing their providers, because it is necessary to eliminate switching in order to sustain loyalty. Dass and Jain's (2011) theoretical model to predict customer churn posits that there is interaction between many factors, including perceived value, service quality, customer loyalty, customer satisfaction, and competition. The model also includes demographics, service usage, product service offerings, emotions, payments, and switching barriers as predictors of customer churn (see Figure 3). Effective service quality, price perception, brand image, and value offers, are assumed to build up a strong relationship quality with customers, manifested by trust and satisfaction. According to Dass and Jain's (2011) model (see Figure 3), customer loyalty is strongly correlated with perceived value. Switching is also linked to customer satisfaction and emotions in the conceptual model proposed by Dass and Jain (2011). In contrast, according to Zhang and Feng's (2009) model (see Figure 4), customer loyalty is predicted to be the goal that results from applying relationship market tactics. According to this model, switching costs incurred by a customer on changing from an existing service provider to another one is not

directly linked to trust and satisfaction, but are associated with the customers' willingness to remain loyal to their current service providers.

All the previous researches have highlighted that the cost incurred in switching, which may be monetary or non-monetary, is a very important factor that may strongly influence the decision to change provider. It is proposed by some researchers that the switching costs of customers changing their service provider are linked to loyalty and/or satisfaction (Dass and Jain 2011, N'Goala 2007, Spath and Fahnrich 2007). Gustaffson et al. (2005) suggested that the link between loyalty and satisfaction is severely weakened when customers react to a negative situation (e.g. waiting to see if their provider addresses their service problems).

Several other surveys have identified more specific reasons for switching behaviour including (a) time limitation, money constraints, and unavailable access to information (Bitner et al. 1991); (b) unreported service failures (Bolton 1998); (c) attraction by competitors, inappropriate responses to service failures, pricing problems, problems with core services and encounters with service staff, inconvenience, ethical problems, and changes in personal situations (Keaveney 1995); (d) the perception that ending a relationship with one provider and securing an alternative will be beneficial to the user (Patterson and Smith 2003) where costs of switching, including expenditure, time, effort, are perceived to be worthwhile (N'Goala 2007); or the technical, financial, and psychological switching costs make it profitable for a customer to change brands (Selnes 1993); and (e) customers change their expectations and levels of loyalty and satisfaction at different stages in their life cycle with a service provider (Spath and Fahnrich 2007).

A conceptual model, such as the one defined by Dass and Jain (2011) and Zhang and Feng (2009), helps to describe and clarify the underlying network of relationships between the variables that control the turnover of mobile phone users between competing service providers. Such a model, however, is not predictive, meaning that it is not able to make use of values derived from certain variables, such as service quality, customer satisfaction, and customer demographics, to forecast the number of customers retained or lost in a given length of time for a given service provider. Nor does it facilitate the evaluation of any particular marketing strategy that service providers can implement to improve customer retention.

Nevertheless, the principles put forward by them in their conceptual model are useful and can be extrapolated into variables with testable measurements that can be applied as an empirical framework to understand factors influencing customer retention and churn. In view of the important contribution made by these models in the mobile phone sector, this review therefore continues by considering the factors that are relevant to the purpose and context of this study. While Dass and Jain's model is more comprehensive in terms of the extent of factors considered, Zhang and Feng provide a more stratified model that outlines the category of the concept as well as causality between them. Drawing on the positive aspects from both these models, this review will incorporate a comprehensive list of relevant concepts categorised according to the nature of their influence.

The first is a set of basic concepts representing consumer perceptions, including consumer satisfaction, loyalty, trust and emotional attachment, which can indicate Saudi mobile phone users' subjective attitude to their mobile phone service providers. The next section is comprised

of a list of substantive attributes that can influence consumer retention/ churn and include pricing, service quality, brand image and. Although a strict relation of causality is not drawn here between the sets of variables, the question items and hypotheses (discussed in the next chapter) will extrapolate relevant concepts into predictive relationships. Generally speaking, the second list of substantive attributes of mobile phone services will assume the position of independent variables and the first list of subjective consumer perceptions will be measured as the resultant variable. For example, a hypothesis can examine whether careful pricing of mobile phone services has an impact on customer retention by improving customer satisfaction.

2.5 Factors Affecting Customer Retention/Churn

The relationships between switching costs, loyalty, and satisfaction are not simple or linear as the variables interact strongly. In a survey of mobile phone users in Sweden, Zhang and Feng (2009) used a correlation design and found that the relationships between switching costs and customer loyalty were mediated or controlled by satisfaction and trust. The correlation between switching costs and loyalty disappeared when satisfaction and trust were both very high. This review therefore continues by considering how theory may be applied in practice to predict and manage customer retention/churn in the mobile phone sector on basis of the four main factors of customer satisfaction, loyalty, trust and emotional attachment.

2.5.1 Customer Loyalty

The definition of customer loyalty emphasizes the concept of repurchase or re-patronizing. Thus, marketing experts have more or less agreed to a general definition of customer loyalty as a "very strong commitment to repurchase or re-patronize a preferred product or service consistently in

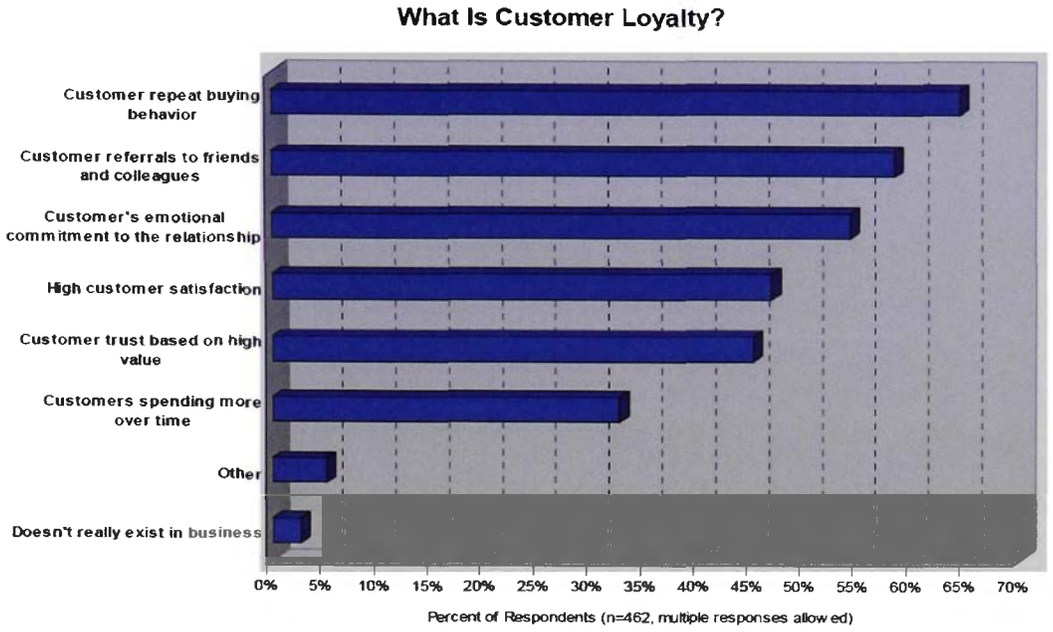
the future, and a resistance in switching brand, although having powerful situational influences and marketing efforts" (cited in Chaipoopirutana, 2010, p. 200). As this particular research on mobile phones is situated within the relationship marketing paradigm, the definition of Heskett (2002) is seen as most appropriate for defining customer loyalty. This definition states that,

> "The strongest form of loyalty is reached if consumers are willing to actively engage in company matters and invest time, energy and money into the relationship. They function as ambassadors for the firm; participate in clubs and forums; and see themselves as an active part of the company" (cited in Robens 2007, p. 30).

The above view is in alignment with Smith's (2003) summary of the components of customer loyalty, where a loyal customer is defined as one who: (1) repeatedly purchases from the company, preferring and choosing it to others; (2) has a high level of satisfaction with the company (3) will recommend the company to others; (4) will trust the company; (5) will be committed to the company; and (6) spends proportionally more with that provider than others.

CRMGuru surveyed 462 business leaders in 2004 to provide an understanding of customer loyalty from the perspective of business leaders. The results of the study revealed that 64 percent of business leaders defined loyalty as repeat buying behaviour; 58 percent as a customer who makes referrals to friends and colleagues; and 54 percent as a customer's emotional commitment to the relationship. Only 32 percent respondents defined loyalty as increased customer expenditure on the brand over time (Thompson, 2005, p. 2). The results of this study are shown in Figure 5.

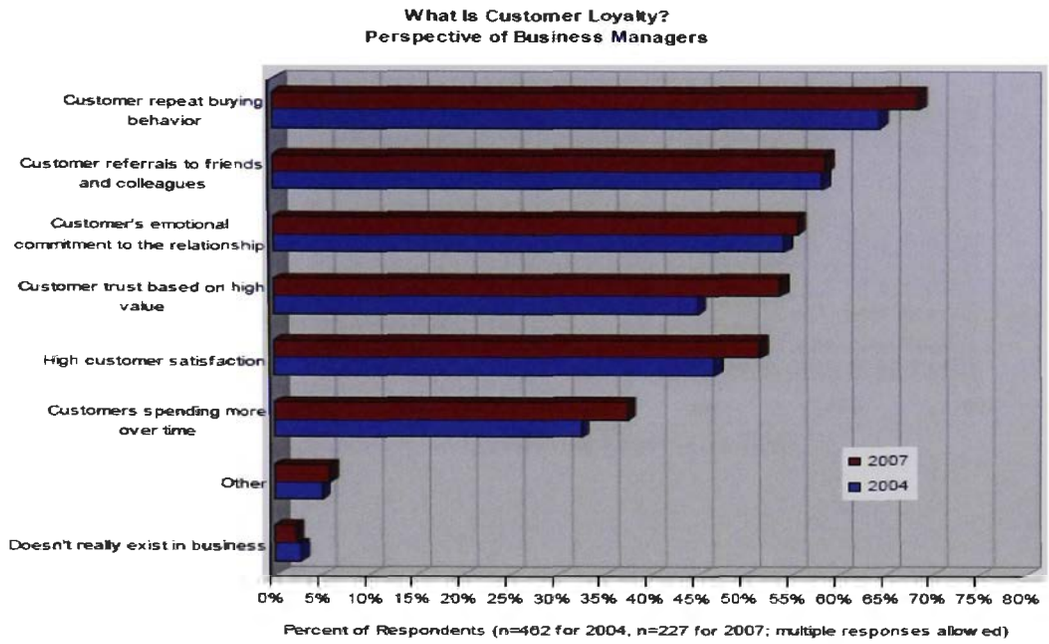
Figure 5 Business leaders' concept of customer loyalty



(Source: CRMGuru Survey, December 2004, as cited by Thompson, 2005, p. 2)

After three years, the study of CRMGuru was replicated by Customer Think in September 2007 (Figure 6). Findings revealed that 68% defined loyalty as repeat buying behaviour, 59% as making referrals to friends and colleagues, and 56% as customer's emotional commitment. The results gathered from both studies (2004 and 2007) were noted to be nearly identical (Thompson 2007, p. 2). The top three factors consistently considered in defining customer loyalty are: customer repeat-buying behaviour, customer referrals to friends and colleagues, and customers' emotional commitment to the relationship.

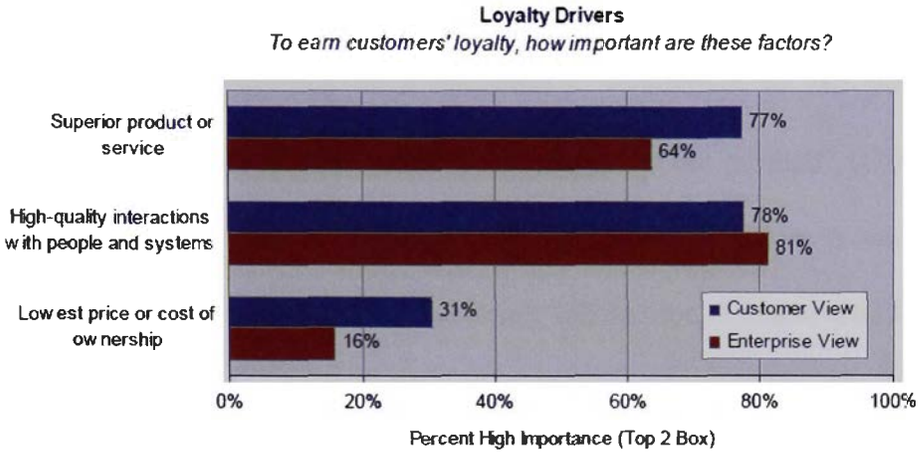
Figure 6 Definition of customer loyalty by business managers, comparative data, 2004 and 2007



(Source: Thompson, 2007, p. 2)

In a survey by Customer Think in 2006, it was found that both customers and enterprises believe that high quality interaction is the most important factor for driving loyalty, followed by superior product or service and lastly, lowest price or cost of ownership was seen as the least important loyalty driver, as shown in Figure 7 (Thompson 2007).

Figure 7 Loyalty drivers, customer view and enterprise view



(Source: Thompson, 2007, p. 3)

Although customer loyalty is the goal of relationship marketing, it may have an impact on the resource decisions and innovative performance of mobile phone service providers. Arnold et al. (2011) studied a firm's strategic focus on acquiring new customers and/or retaining existing customers through its innovation and performance. They found that focusing on new customers enhanced radical innovation performance but hindered incremental innovation; conversely, a customer retention strategy had the opposite effect, enhancing incremental innovation, but sometimes hindering a more radical approach. In contrast to the above premise where loyalty is seen as the end-goal of relationship marketing, Duffy's (1998) perspective viewed loyalty as "more [of] a journey than a destination" (cited in Callaghan and Keegan 2005, p. 3). This perspective then suggests that, to create strong relationship marketing, businesses should continually search for ways to hold the loyalty of their customers, which is the essence of customer retention.

2.5.2 Customer Satisfaction

Customer satisfaction is defined as a customer's "evaluation of the perceived discrepancy between prior expectations and the actual performance of the product" (Oliver 1999 p. 3). Any business is more likely to lose its customers and investors if it fails to satisfy its customers as effectively as its competitors, therefore, customer satisfaction is considered to be one of the most important factors behind a competitive and successful business (Anderson et al. 2004). Conducting a quantitative survey of the users of telecommunications services in Sweden, Gustafsson et al. (2005) created a multiple regression test of customer satisfaction and found that it has a negative effect on churn and a positive effect on retention. According to Gustafsson et al. (2005), customer satisfaction is established when a brand fulfils the needs and desires of its customers, and exerts a strong positive impact on customer loyalty across a wide range of product and service categories.

This applies to the telecommunications industry too, and it means that if a mobile phone service provider fulfils its promises, then the customer believes that he/she has chosen the best brand, and remains loyal to that brand (Hanif et al. 2010). Customer satisfaction is the most important factor behind customer loyalty to their telecommunications service provider (Eshgi et al. 2007). There is much empirical evidence to support this proposition. Bolton and Lemon (1999) constructed a dynamic model predicting that the duration of subscriptions to telecommunication services increased over time with respect to the levels of customer satisfaction. The ability of a telecommunications service provider to create a high degree of satisfaction among its customers was considered to be crucial to the development of strong customer relationships and promotion

of customer loyalty in China (Deng et al. 2009). Similarly, Arnold et al. (2011) found that customer satisfaction positively influenced post-purchase intention, and Blery et al. (2009) confirmed a relationship between service quality and intention to repurchase in the Greek mobile telephone sector in a cross-sectional survey of 180 users.

This extensive evidence given by previous research is only contradicted by one study by Aurier and N'Goala (2009) who found that satisfaction did not necessarily lead to further engagement. Thus, satisfaction 'must be efficiently converted into trust and relationship commitment before providing business results' (Aurier and N'Goala 2009, p. 303). Similarly, Guo et al. (2009) found that the effect of customer satisfaction on retention is mediated by actual retention behaviour; customer satisfaction has both direct and indirect effects on customers' attitudes toward retention. But Guo et al. (2009) recommend that satisfaction alone cannot guarantee customer retention and customers' perceived control over the relationship with a service provider has a direct effect on their intention to remain with them.

This provides an understanding of the level of customer satisfaction as it is related to the perceived level of performance and expectations. However, there is a problem of distinguishing the thin line between mere satisfaction and the optimum level of customer satisfaction. Thus, one question would be: how does one differentiate between mere confirmation and positive confirmation, since confirmation itself does not necessarily suggest a positive degree of assessment of performance but may merely be a neutral reaction. Patterson (1993) devised a theoretical framework for satisfaction suggesting that,

"Consumers compare between perceived performance (P) and prior expectation (E), which results in negative confirmation (when P<E), confirmation (when P=E), and positive confirmation when (P>E). Negative confirmation tends to lead to a customer's dissatisfaction. Confirmation is likely to lead to customer (merely) satisfaction. Lastly, positive confirmation tends to lead to a greater level of customer satisfaction" (in Chaipoopirutana 2010, p. 200).

2.5.3 Customer Trust

Trust is perceived to be a mandatory condition for building a strong relationship between customers and mobile phone service providers (Zhang and Feng 2009). The development of trust is considered to be critical for the development of a long-term partnership between supplier and consumer (Chu 2009, Liang and Wang 2008, Liu et al. 2008). In practical terms, the development of trust is perceived to be essential in order to achieve customer loyalty and establish long-term relationships among parties involved in any type of business activity. It is assumed that products and services can only become credible to customers when suppliers provide evidence that they can be trusted, they are reliable and benevolent, they are concerned about their customers' interests, and they are willing to satisfy their customer's needs. With respect to the mobile phone sector, Morgan and Hunt (1994) found that customers who trusted the capabilities of their service providers were willing to commit to a long term service relationship. When customers trust a service provider, they believe that their interests will be taken into account, and their relationship will not be harmed, even in the face of a rapidly changing technological developments and pricing structures (Liu et al. 2008).

Aurier and N'Goala (2009) found that trust directly influences the development of customer engagement. According to them, trust is critical for the development of a relationship that is premised on more than basic level of satisfaction. Trust is also correlated with relationship commitment. N'Goala (2005) identified this correlation by studying the reasons behind why customers resist switching service providers in the case of a critical incident. The researcher found that the type of critical incident influenced perceived reliability, affective commitment, and calculative commitment, which is an evaluation of the costs associated with leaving the service provider. Incidents involving service failure, the firm's response to the customer's service failure, and pricing problems were found to have a less effect, whereas the two situations of inconvenience, and changes in the consumer or service provider situation were found to lead to disengagement. N'Goala explained that customer reaction to a critical incident illustrated the complementary roles of trust and relationship commitment.

2.5.4 Emotional Attachment

Dass and Jain (2011) incorporated emotions in their conceptual model to explain customer churn in the mobile phone sector (see Figure 3). Emotions were assumed to be linked to customer loyalty, satisfaction, and service quality, but limited research has been conducted concerning the importance of emotions with respect to the choice, usage, satisfaction and retention of mobile phone service providers. The importance of emotional factors in the choice and retention of products and services, underpinned by the conceptual framework of attachment theory is, nevertheless, generally recognized in market research.

Attachment theory advocates emotion-focused marketing towards the emotional needs of the individual users, looking beyond the physical functionality and effectiveness of products and services, and general demographic characterisations describing their motivations. A certain sense of belongingness, involving an emotional attachment to a particular service provider, which overrules pricing considerations, may be linked to brand loyalty among some customers (Hanif et al. 2010). Consequently, some customers may remain loyal to a certain provider irrespective of the financial benefits of switching (Lommeruda and Sorgard 2003). Zhang and Feng (2009) found that the relationships between switching costs and customer loyalty were mediated or controlled by satisfaction and trust, both of which involve attitudes that people develop as a result of emotional as well as cognitive reactions to events and objects (Pickens 2005).

Attachment theory may also be related to perceived value, since consumers may be more willing to pay a price premium for a product or service to which they become emotionally bonded (Thomson et al. 2005). A product or service to which a person becomes attached is perceived to have an emotional meaning for that person, and given this attachment, it is unlikely that the person will deliberately dispose of or change it (Shifferstein et al. 2004). So, it is possible that, the emotional rather than the functional value of a mobile phone is more important in spite of other rational motivations of cost etc. The product's inherent ability to generate pleasurable thoughts, heightened feelings, reflective recollections, and/or emotional states such as enjoyment or excitement, impacts upon and manipulates the attachment of individuals to their service providers, and this could potentially be exploited for purposes of relationship marketing (Desmet and Hekkert 2002, Mugge et al. 2007).

2.6 Attributes Affecting Choice of Mobile Phone Services

2.6.1 Service Quality

The mobile phone sector is essentially a service industry, which means that service quality is an important indicator to evaluate a provider's performance. Service quality includes all aspects of the provision of customer services, including the availability of support systems, the ease and speed of complaint processing, and the friendliness of the staff who handle customers. According to the widely used SERVQUAL scale (Parasuraman et al. 1988), perceived service quality is a multidimensional concept, resulting from the consumers' comparison of expected services with the actual services received. It involves (a) tangible elements, or the equipment and communication materials provided by a service company; (b) reliability, or the company's ability to dependably perform a promised service; (c) assurance, or the company's ability to convey trust and confidence: (d) responsiveness, or the company's ability to help customers and provide punctual services; and (e) empathy, or the company's ability to provide care and individualized attention to customers. All of these dimensions relate to the human interaction elements of service quality.

Customer surveys using the SERVQUAL scale across a wide range of service sectors have revealed that perceived service quality directly influences their satisfaction as well as their trust in the service provider (Parasuraman et al. 1991). When customers perceive that service quality is low, relationships quality is diminished, and loyalty is weakened (Zeithami et al. 1996). The use of the SERVQUAL scale among a survey of 229 mobile phone users in Thailand (Sirikit 2000) indicated that perceived service quality was also an important predictor of customer

behavioural intentions with respect to their choice and retention of service provider. Similarly, Rust and Zahorik (1993) agreed that customers who have high perceptions of service quality are more likely to buy again from the same provider. If customers do not get their complaints (e.g. concerning network coverage or call quality) considered very quickly and efficiently, then most of them are not prepared to wait, and will start looking for other brands (Ahn et al. 2006). Furthermore, a positive impression left by the workers at service call centres (e.g. a "smiling service") will lead to customer satisfaction (Soderlund and Rosengren 2008, p. 552).

Service quality was found by Trasorras (2008) to be a significant indicator of customer loyalty. Service quality was considered to be one of the most important factors for achieving customer satisfaction by other researchers such as Berry (2002) and Gustafsson et al. (2005). Kuo et al. (2009) constructed a model to evaluate the relationships between service quality and perceived value, customer satisfaction, and post-purchase intention among mobile phone users. In agreement with existing research, Kuo et al. found that service quality positively influenced both perceived value and customer satisfaction.

Research on the relationship between service quality and customer satisfaction in Saudi Arabia is sparse. Talet et al. (2011) recently conducted a survey among 440 mobile telecom customers to determine their perceptions about the quality of offered customer services by mobile telecom companies and its impact on satisfaction. The study concentrated on customer service offices, phone operator and web site services. Evidence showed that the quality of customer service significantly affected customer satisfaction and hence customer loyalty. Moreover, it was found that the majority of customers preferred to use phone operators than office customer services.

2.6.2 Pricing

Pricing, defined as the amount of money charged for a product or service, is a critical determinant that often influences customer buying decisions (Kotler and Armstrong 2010). Customers frequently select their mobile phone service provider on the basis of its perceived value for money (Dass and Jain 2011). Customers may change their service providers due to pricing issues, such as the price being perceived as too high, or because the provider's pricing practices appear to be deceptive (Peng and Wang 2006). All customers of telecommunications services, however, are not automatically sensitive to pricing. Some customers may remain loyal to a certain brand (e.g. an old monopolist) irrespective of the price (Lommeruda and Sorgard 2003).

Two widely used pricing models for mobile providers are pay-per-use, and two-part tariff (fee plus price per use). In a multi-national study based in USA, Turkey, and Australia, Iyenga et al. (2011) investigated the relationship between pricing structures and consumer retention. They found that consumers preferred pay-per-use pricing. They also found that a two-part tariff structure led to a decline in customer retention rate, and a significant decline in usage relative to pay-per-use pricing. However, the two-part tariff was the more profitable model for service providers. Iyenga et al. (2011) conclude that pricing is instrumental to the successful introduction of a new mobile service, and registered their agreement with Bertini and Wathieu's (2008) argument that, "pricing can transform, as well as capture, the utility of an offer" (p. 236).

Turel and Surenko (2006) who surveyed mobile phone users in Canada found that, more than any other factor, the price charged by a service provider was the critical measure that determined

the satisfaction level of its customers. Because pricing in the mobile phone sector influences consumers' perception of value, it may lead to churn or disengagement from the current service provider. Pricing was also investigated by Srinuan et al. (2011) to determine whether termination-based prices impact on retention. The results showed that only the largest providers can use termination-based pricing to retain mobile subscribers.

Price perception also influences customer satisfaction and trust, which explains why these variables are correlated in the models conceptualized by Zhang and Feng (2009) and Dass and Jain (2011), shown in Figures 3 and 4 respectively. Arnold et al. (2011) found that perceived value has a positive influence on both customer satisfaction and post-purchase intention. Hanif et al. (2010) found that fair pricing had a greater impact than service quality on customer satisfaction. Since customers may switch service providers due to pricing issues, it is essential for providers to increase customer satisfaction and trust. For this reason, service providers may actively manage their customers' price perceptions. For example, they may implement attractive pricing policies, and offer attractive value offers, or deals involving lower pricing without decreasing quality (Paeg and Wang 2006).

2.6.3 Value Offers

According to the conceptual model proposed by Ravald and Groonros (1996), customer retention is positively stimulated by offering customers deals that increase their perceived benefits, and hence satisfaction without increasing their monetary costs. Value offers are therefore an important relationship marketing strategy. Increasing perceived benefits implies that mobile service providers should add something important to their core services, such as reward refunds

and promotional offers that customers believe are valuable. There is, however, limited information in the literature to determine the extent to which value offers predict satisfaction and loyalty.

Dass and Jain's (2011) model does not assume that value offers are associated with the churn of mobile phone service providers. Although value offers were included in the conceptual model developed by Zhang and Feng (2009), the results of the accompanying survey in Sweden indicated that value offers were not significantly correlated with customer satisfaction, trust, and loyalty at 5% level of significance. However, this does not imply that value offers are neither important nor ineffective because the absence of statistical evidence does not prove the absence of a phenomenon in reality (Alderson 2004). This could, in fact, imply that there is a gap in the literature determining the importance and effectiveness of value offers in the mobile phone sector. So, more empirical evidence is needed to ascertain the situation in differing national contexts.

2.6.4 Brand Image

Brand image was defined by Keller (1993) as "perceptions about a brand as reflected by the brand associations held in consumers' memory" (p. 3). On the other hand, image, according to Kotler (2001) is "the set of beliefs, ideas, and impression that a person holds regarding an object" (p. 273). Aaker (1991) defined the concept of brand image as "a set of associations, usually organized in some meaningful way" (cited in Sondoh et al. 2007, p. 109), whereas for Biel (1992), it is "a cluster of attributes and associations that consumers connect to the brand name" (cited in Sondoh et al. 2007, p. 8). All these definitions indicate that brand image results from

how a customer perceives his/her relationship with a brand over time, and it generates favourable word-of-mouth endorsements for a particular brand.

For Robens (2007), brands create a "point of differentiation" (p. 1) in an environment where there is stiff competition. Therefore, brands may be considered as a critical success factor for a company. Wood (2000) argues that a brand as "a name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers" (cited in Robens 2007, p. 1). Consequently, more sales can be expected if the brand image is perceived to be strong.

The argument that brand image is correlated to customer loyalty has been strongly supported by some authors. For instance, Selbes (2010) noted that, "if a consumer has a strong commitment to a brand, that consumer will show more resistance to negative information" (p. 10). Moreover, Robens (2007) asserts that brand image is an important factor for the formation of loyalty (p. 28). Bennett and Rundle-Thiele (2005) stress that brands that convey image may have a greater impact on loyalty.

Research on brand image in the mobile phone sector is, however, limited. Brand image was not included in Dass and Jain's (2011) model of customer churn in the mobile phone sectors. But, according to Zhang and Feng's (2009) model, a positive brand image is positively correlated with customer satisfaction and trust. The results of their survey of mobile phone users in Sweden indicated that the correlation between satisfaction and trust may be partially explained by brand image. Brand image is assumed to lead to customer loyalty, irrespective of the mediating effects

of satisfaction and trust. In a research on the relationships between service quality, value, brand image, satisfaction, and loyalty of a mobile phone company in China, Lai et al. (2009) found that brand image had a strong influence on customer satisfaction. This finding was also supported by Kim and Lee (2010) who found a very strong correlation between brand image and customer loyalty in mobile communications service markets. Similarly, Srinuan et al. (2011) found that brand image and pricing were the most significant factors in retaining subscribers.

2.7 Contextual Factors

The significance of this study is derived primarily from its focus on consumer behaviour in the Saudi mobile phone services market which has never been investigated in existing research. So, the influence of contextual factors, including the demographic characteristics and the cultural dimensions that frame the sample of Saudi mobile phone users, is an important issue to be considered. This involves looking at the market through the eyes of specific segments of consumers, classified according to their demographic and/or psychographic characteristics. The focus on the specificities of the demographic profile and cultural context of the Saudi mobile phone services market may be used to understand variations and similarities for similar research in cross-cultural contexts.

2.7.1 Demographic Factors

Race, gender, socio-economic status, age, and location may be important demographic factors linked to mobile phone usage characteristics, customer satisfaction and loyalty. The evidence for demographic influences in the literature, however, is fragmented and oftentimes contradictory. A survey in the USA revealed that people belonging from different races use mobile phones

differently. For instance, it was revealed that, compared with other racial group, African-Americans talk and text more accruing more than 1,300 minutes per month. While Anglo-Americans, on average, use 647 minutes per month, Asian/Pacific Islanders use 697 monthly minutes and Hispanics talk an average of 826 minutes per month.

Age is another demographic factor associated with mobile phone usage and retention. Children in the USA use their mobile devices differently than adults. Teens were found have a higher SMS usage more than any other group, sending an average of 2,779 texts per month. Text usage drops off steadily among older age groups, with senior citizens receiving an average of just 30 per month (Blackburn 2010). Based mainly on a review of survey data collected in the USA and Europe, Dass and Jain (2011) cited that older customers were less likely to change providers than younger customers. Also, males were more likely to change their providers than females. In Pakistan, Iqbal (2010) found that young male adults between 21 to 23 years in low income groups tended to make more voice calls and text messages than other groups of users. Qin (2012) used data mining techniques to produce a decision tree for age as a factor predicting customer retention in telecommunication services. In Thailand, Sirikrit (2000) found that the customers' perceived service quality depended upon their age, but was independent of gender, education, occupation, income, and marital status. Significantly, more younger Thai users (less than 29 years) were completely satisfied with their phone service providers than the older users (greater than 29 years), which led the researcher to recommend that age should form the basis of a market segmentation strategy. Furthermore, it was suggested that the Thai customer service

representatives should pay more respect when dealing with older customers, and should be more careful when rendering explanations on any issue.

Gender is recognized as an extremely important variable of demographic segmentation (Popcorn and Marigold 2000) and much research has focused on the differential extent to which men and women respond to the design of consumer products (Xue and Yen 2007, Moss 2009a, Moss 2009b). A gender divide has been reported in the USA with respect to the use of mobile telephony (Ling 2001, Cotton et al. 2009). According to a recent survey, women in the USA use 22% more mobile phone minutes per month on average than men, and they text more, sending 154 more messages per month than the average American man (Blackburn 2010). A study among young mobile phone users in Finland (age 16 to 20) revealed that young men tend to focus on trendy designs and technology functions when choosing a mobile phone and provider, whereas women tend to focus more on the usage value of their phone (Wilska 2003). A survey conducted in Europe revealed that young women tended to make more SMS calls than male users (Peters et al. 2003, cited by Iqbal 2010).

In contrast, Iqbal (2010) reported that men in Pakistan tended to make more voice and SMS calls than women. Exploring the gender differences in the motivations for using mobile phones, he suggested that these differences may be associated with financial constraints and gender inequality. In a Muslim society such as Pakistan, many women are financially dependent on men, and are therefore comparatively restricted in their ability to buy and use mobile phones. In contrast, surveys conducted in the developing countries in Asia (India, Sri-Lanka, Philippines, and Thailand) revealed no significant differences between mobile phone usage among males and

females (Samarajiva 2008). In India, however, Kiri and Menon (2006) found that significantly more men used mobile phone service call centres than women.

In some studies, gender differences correlated with socio-economic background were found in mobile phone use. Several studies have revealed that women in high-income groups tend to use mobile phones more than men for social calls, whereas men tend to use mobile phones more as an instrument for doing business (Lung and Wei 2000, Horst and Miller 2006). Similarly, a relationship between socio-economic status, gender, and mobile phone use has been found in Africa. Blumenstock and Eagle (2012) conducted a study in Rwanda with self-reported survey data and found that the most frequent mobile phone users in terms of number of calls and lengths of calls were males who were wealthier and better educated than most other members of the population. This relationship between socio-economic status, gender, and mobile phone usage was consistent with the results of surveys of mobile phone users in other parts of Africa (Scott et al. 2004, Burrell 2010) in which affluent male users predominated over females.

Marketing of products and services may be undifferentiated (all consumers are treated the same way), or differentiated (involves producing different products for specific market segments). Because men and women are emotionally different, a large body of psychometric research has been conducted to explore how gender differences play an important role in attachment theory in terms of both choices and preferences. Previous studies have indicated that men and women differ systematically in their choice of products and services, and there are significant emotional differences between the two genders, be they functional, emotional or symbolic (Dittmar et al. 1995, Popcorn and Marigold 2000). Gender differences have been identified between self-image

and a number of social influences, notably the need to make an impression on others, and the importance that is placed on the opinions of others. Functionality impacts more upon men far more than women, whereas issues relating to social worth and making an impression upon others is the prevalent inspiring characteristic for women (Moss 1999a).

Accordingly, the choices of products and services to purchase or retain and the motivations that lie behind these contrasting perspectives must be deemed as being based on the differing personal mindsets of men and women. In an extensive review of the literature, Moss (2009b) provides convincing evidence that gender differences in choices, tastes, and preferences are both biologically and sociologically rooted and, therefore cannot be downplayed by marketing specialists, even though they often are. So, marketing specialists must gain a better understanding of how gender drives the unique decision-making styles of men and women in order to solve problems of promoting an extended and enriched relationship between customers and mobile phone providers. The theoretical and practical implications of how attachment theory may potentially offer solutions with regard to the segmentation of the market and different groups of users, particularly men and women, has not, however, received much attention from researchers or marketing specialists.

Seo et al. (2008) focused on the influence of behavioural factors such as switching costs, customer satisfaction, and demographic factors on retention. Their first aim was to test variables such as length of association, service plan complexity, handset sophistication, and the quality of connection, in relation to switching costs and customer satisfaction. The second element of the study sought information on customer demographics such as age and gender affect, choice of

service plan complexity and handset sophistication. It was found that customer demographics including gender and location lead to differences in customer retention. They recommend that service providers should segment their customers to distinguish behaviour patterns relating to customer retention.

Given this extensive evidence in previous research, it is clear that demographic differences, such as gender, age, geographic location, socio-economic status should be taken into account when evaluating mobile phone usage, customer satisfaction and retention. In addition, it must be emphasized that demographic influences are not universal and vary with respect to local contexts, depending on cultural and other factors. This makes it all the more important to incorporate a thorough study of demographic influences for a comprehensive understanding of the behaviours and motivations of consumers in a particular national market.

2.7.2 Cultural Dimensions

Cultural dimension reflects the distinct patterns of behaviours and beliefs which classify and characterize a defined group of people. Cultural dimensions are relevant to the contextual considerations of this study because they may influence the way people choose and use mobile phone service providers, and also the way managers in the telecommunications sector make policy decisions to develop their companies. Hofstede (2009) identified four cultural dimensions that serve to distinguish one nation from another, namely Power Distance Index (PDI), Uncertainty Avoidance Index (UDI), Masculinity Index (MAS) and Individualism (IDV). Hofstede's research was based on employees of one multinational company, where patterns of differences between national cultures were identified, uncontaminated by differences between

corporate cultures. Hofstede scored each country using a scale from 0 to 100 for each dimension. The higher the score, the more that dimension is exhibited. Hofstede's dimensions may be criticized because they support the existence of cultural stereotypes and fail to deeply engage with local contexts in Saudi Arabia. Nevertheless, Hofstede's cultural dimensions contribute to the contextual framework because they describe the generalized behaviours and beliefs of people in the Arab world from which the sample used in this study was drawn.

Hofstede's analysis for the Arab world, including the KSA, demonstrates that a large Power Distance (PDI = 80) and Uncertainty Avoidance (UAI = 68) are the predominant characteristics. The high PDI ranking is indicative of a high level of inequality. The high UAI ranking reflects a low level of tolerance towards uncertainty. As a result of their high UAI characteristic, it may be generalised that Saudis do not readily accept change and are averse to risk. High uncertainty avoidance may explain why some Saudis are resistant to using the Internet as perceived risks, such as the loss of privacy when disclosing information online, are of major concern to Saudi Internet users, (Abdulla 2007).

Hofstede's Masculinity Index refers to the distribution of roles between genders, ranging from an assertive masculine pole to a modest, caring feminine pole. MAS = 52 for the Arab world is above the global average and indicates that the population here experience a higher degree of differentiation between gender roles than most. This means that men assume the dominant position in Saudi society and power structure, and women are somewhat limited in their rights, relative to other nations. Women in many other parts of the world are expected to be very self-reliant, to openly express themselves as unique individuals, and to be responsible for and look

after themselves. In contrast, women in the Arab world have to conform to authority, and depend on their family and close friends for stability, security, and well-being. This gender differentiation is actually fostered through social norms as well as institutional laws. Article 155 of the Policy of Education in the Kingdom of Saudi Arabia prohibits the mixing of males and females throughout all stages of their education. Segregation of the sexes is also prescribed in Article 160 of the Labour Code which prohibits the mingling of men and women in the workplace. It is possible that the relatively limited rights of women in Saudi Arabia may in some way be related to gender differences in choice, satisfaction and usage of mobile phone services.

The lowest Hofstede Dimension for Saudi Arabia is for Individualism (IDV = 38) compared to a world average of 64. This low IDV ranking reflects a collectivist society as compared to an individualist culture. The low level of individualism is manifested by an overwhelming long-term commitment of Saudis to their in-groups, consisting of nuclear families (parents and siblings) and extended families (uncles, aunts, nephews, nieces and grandparents), as well as extended relationships with friends and other families. Loyalty to the in-group is of paramount importance in a collectivist culture, and over-rides most other rules of their society. The dominance of collectivism over individualism explains why some Arabs tend to be more concerned with conforming to the opinions of their in-group when answering questionnaires, rather than expressing their own individual opinions (Baron-Epel et al. 2010; Smith 2004).

The GLOBE survey conducted by House (2004) also provides a frame of reference to describe the national characteristics of groups of people. The GLOBE researchers asked respondents to rate the extent to which 112 traits characterized 17,300 managers from 951 companies in the

food processing, financial services, and telecommunications sectors in 62 countries. The GLOBE survey's major finding was that the characteristics of company managers are contextual, meaning that they are embedded in the organizational norms as well as values and beliefs of their culture. Business managers from the Arab region, including Kuwait and Qatar, scored significantly lower than elsewhere on charismatic, team-orientedness, and participative qualities, and the extent to which they engaged in risky future-oriented behaviours. Arab businessmen scored significantly higher on self-protective traits, namely self-centredness, status-consciousness, face-saving, conflict induction, and reliance on formal procedures, reflecting Hofstede's dimensions of Power Distance and Uncertainty Avoidance. The GLOBE survey does not specifically refer to managers in the telecommunications sector in the KSA, but their generalisations about the characteristics of Arab management personnel in Kuwait and Qatar may hold some bearing for this study too. The general personality profile etched by the cultural characteristics of Arab professionals as managers may influence the future development of the mobile phone service providers, particularly with respect to the implementation of relationship marketing tactics, in which the opinions of the customers, and not the managers, are of paramount importance.

2.8 Summary

Chapter 2 has presented a literature review outlining the main concepts that can be used for the theoretical framework to underpin this study. The review focused mainly on the factors that determine why mobile phone users tend to remain with a chosen provider, including perceived levels of satisfaction, trust, service quality, pricing, demographic, and cultural influences. The

findings of these surveys carried out in USA, Europe, and Asia, have revealed correlative relationships between customer satisfaction, trust, service quality, pricing, loyalty, demographics, and choice of mobile phone provider. The literature review highlighted the importance of a complex network of inter-relationships between these factors in the context of relationship marketing. It was also clarified in this review that while conceptual models have been constructed to explain the complexities of this network, no predictive models have yet been formulated to forecast the impact of relationship marketing tactics.

The literature has also rarely focused on the cultural contexts in which such relationships developed, nor has previous research provided relevant information pertaining specifically to the development of relationship marketing in the mobile phone sector of KSA. A gap in the literature exists regarding the factors associated with the usage characteristics and choice of mobile phone providers among Saudi users. The literature review also emphasised the importance of gender and location differentiation in the context of mobile phone usage characteristics and choice of providers in the Saudi population. After this literature review, the next chapter in this thesis is concerned with the research methodology used for this study. The next chapter discusses how a self-report questionnaire with closed questions and quantitative data, was chosen as the most relevant and cost-effective approach.

Chapter 3 METHODOLOGY

3.1 Introduction

This chapter provides a description of the study's methodological approach. It begins with an explanation of the research design and justifies a quantitative research methodology as the most suitable approach for the purposes of this study. The second section provides a description of the population, location and institutions considered in the study along with the sampling method used to achieve the target sample. Following this, the chapter explains the use of self-reported questionnaires as the survey instrument, the procedure for data collection and ethical considerations observed in this study. Validity and reliability is critical to obtain objective results and accurate answers to research questions and hypotheses, so a thorough statistical treatment and analysis of quantitatively derived data was done to ensure that these parameters were satisfied. The chapter ends with an explanation of the various statistical tests including Pearson's Chi-Square, Kruskal-Wallis Test, Binary Logistic Regression and Hierarchical Cluster Analysis.

3.2 Research Design

Having formulated the research questions and developed the theoretical framework for the study, the logical problem is to justify the most appropriate design that will generate the most valid, reliable, and convincing evidence, and thereby, confirm, refute, develop, or generalize the underlying theory. A research design is not just a work plan to achieve a stipulated goal but determines the results of the study as it defines the nature of the phenomenon under investigation. It does not just consider the logistical problem, but also the logical problem

associated with the purpose of the study and the advantages and disadvantages of alternative approaches. The function of a research design is to structure an investigation in such a way that the evidence obtained enables the researcher to answer the research question(s) "as unambiguously as possible" (DeVaus 2001, p. 9).

There is no consensus on how research designs should be classified, but there has been some discussion about the variety of approaches to research design (DeVaus 2001). Most of the research on the subject of mobile phone market focuses on the perceptions and experiences of consumers, with limited input from designers, manufacturers, or marketers. One of the main difficulties in this type of research is to develop valid and reliable measurements for the multitude of variables required to illustrate the complexities of consumer behaviour. There may be a need for complex psychometric variables like customer satisfaction, loyalty, choice, and attachment to provide a comprehensive understanding of customer motivation and intention.

Another issue is the complexity of the statistical analysis required to construct empirical models, especially those with predictive capabilities that can correlate multiple variables. As a result, most of the models which have been constructed to explain customer choice and retention in the mobile phone sector (e.g. Dass and Jain 2011) are conceptual rather than statistical. The road seems to be left open for researchers interested in the mobile phone sector to pursue whatever qualitative and/or quantitative methods they choose, without reference to any kind of discipline-based empirical framework.

Yin (2009) described five common research designs that can be implemented for collecting and analysing primary data in business and social science research, these include experiments, surveys, case studies, phenomenological and ethnographic studies. Experimental, phenomenological, or ethnographic approaches were not considered feasible for the purposes of this study. Experimental research in the context of marketing would require the researcher to manipulate randomly assigned groups of customers to prescribed interventions (e.g. allocation to different mobile service providers) and to measure their consequent responses (e.g. their relative levels of satisfaction). A marketing experiment is very time-consuming and costly to implement, and can potentially disturb competitors who are not included as an intervention, leading to ethical problems (McQuarrie 2006). Phenomenology (i.e. the study of human conscious experiences, including value-judgments, perceptions, and emotions, generally involving the use of interviews and/or focus groups to collect a large amount of qualitative data) and ethnography (involving observing the behaviour of people in natural settings over a long period of time) would also be too time-consuming and expensive (Creswell 2009). Both these methods are more suited to social science research that focus on a small research locale and seek to draw qualitative inferences about people through sustained reflection on the researcher's part. As the purpose of this research to arrive at some substantive and quantifiable findings about the general attributes of mobile users, methods involving subjective and abstract researcher-generated descriptions will not be useful.

The research design used in this study is rooted in the positivist paradigm involving a quantitative approach in which empirical numerical data were analysed to draw conclusions.

Guba (1990) explains that the positivist enquiry paradigm is realist, formed from generalisations removed from time and context, and can be used to form the potential basis of laws relating causes to effects. As the study seeks to measure customer behaviour in quantifiable variables and then describe predictive relationships between variables, a descriptive correlation design based in a quantitative research methodology involving the use of inferential statistics was found to be the most appropriate. Descriptive correlation design is defined as a method in which the research questions are concerned with describing the statistical relationships (associations and correlations) between two or more variables. It must be acknowledged here that part from its suitability, the researcher's constraints of time and resources was the main reason for using a quantitative survey to collect the data for this study, rather than implementing these more rigorous qualitative methodologies.

A review of the literature revealed that there is currently no agreement on the best method to conduct quantitative studies, in terms of whose voices should be heard, or the most appropriate research methodologies. Creswell (2009) and Marczyk et al. (2005) have identified longitudinal/cross-sectional surveys, descriptive, case, naturalistic, case-control, observational, cohort, and correlation studies. Questionnaires and interviews were, however, the most frequently used instruments. An online self-report questionnaire was considered to be the most cost-effective way for collecting a large quantity of valid and reliable data from the target population in a limited period of time with the least expenditure. Empirical data for all the categorical variables underlying the research hypotheses were collected through a cross-sectional survey with self-reported questionnaire (see Appendix B). The researcher adopted a non-

interventionist stance that eliminated personal values and bias from influencing the outcomes. The survey was constructed with closed questionnaire items in which the respondents choose options from a list of categories. Closed questions were chosen over open questions because they are not only easier to process, but more importantly they generate numerically coded responses that can be interpreted into quantifiable figures and generalised to the target population (Bryman and Bell 2003).

The problem with quantitative research methodologies based on the positivist research paradigm is that they simplify the phenomenon into predictive laws on basis of selected data that are then generalised to the whole population, and in so doing, miss many important aspects. Although information relating to a defined population may be summarized, predicted and generalized in terms of statistics, it is much more difficult to analyse the perceptions and behaviours of every individual. In contrast, qualitative methods that collect data from focus groups and face-to-face interviews, especially if the topic of interest is complex, enables the researcher to develop a rapport with the participants, assisting responses, clarifying questions, and encouraging much more detailed answers than could be achieved only by use of self-report questionnaires (Merriam 2009). Interviews also permit the researcher to "achieve a better idea of the psychological set from which the person is answering the questions" (Ray 2006, p.29).

In spite of these limitations of a quantitative approach, it was found to be appropriate for the current study. Also, this is the first study to examine consumer behaviour of mobile phone users in Saudi Arabia, and due to paucity of research in this area, it needs to establish some crude generalisations to establish an approximate profile of this market. Future studies in this area can

adopt a more nuanced approach exploring the subjective perceptions driving the motivations of consumers in detail.

3.3 Population and sample

About 60% of the Saudi population is 20 years old or younger, and they are very rapidly adapting to new technologies. It is a widely held perception of the younger generation that ICT has the potential to bridge the cultural gap between the Arab world and the west (Abdulla 2007). Studies have shown that the majority of Saudi students are well acquainted with email and text messaging and have a positive attitude towards ICT due to the benefits they believe it offers (Al-Jarf 2005, Abdelraheem 2006, Al Dawood 2009).

The target population for this study consisted of male and female students over 18 years, who owned a mobile phone, and who are studying at tertiary educational institutions. The study chose to derive its sample from college and university students for many reasons: (a) to maximise the probability of accessing a large and diverse segment of Saudi population at a convenient public locale, and universities provided the ideal location as tertiary education is free and attracts all segments of Saudi citizens; (b) to capture the responses of a cohort of young articulate Saudi citizens who are capable of forming opinions of service providers, and can be expected to discuss valid reasons for their choices; (c) the youth have a range of sophisticated mobile phone service needs, like web browsing, using downloadable content in novel ways, which means that they are more discerning in their choice of service provider and (d) perhaps most importantly, this study focussed on the youth as they are expected to be the main consumers in the future, to utilise

mobile phone services to the maximum. The sample for the study was drawn from universities in Riyadh, Jeddah, and Dammam in Saudi Arabia (Figure 8).

Figure 8 Location of Riyadh, Jeddah, and Dammam in Saudi Arabia

Situated in the centre of the Arabian Peninsula on a large plateau, Riyadh is the capital and largest city in Saudi Arabia, with a population of approximately 5.25 million, and is the urban centre of a region with a population of approximately 7 million. It is claimed that the population growth rate in Riyadh is one of the highest in the world, expanding at an average of 8.2% per year. According to the High Commission for the Development of Al Riyadh (http://www.arriyadh.com), expatriates represent about one-third of the Riyadh population, including residents from Pakistan, India, Bangladesh, Yemen, and Sudan. The population of Riyadh is about 60% Saudi and 40% foreign, with foreigners mainly coming from Asia and Arab countries. The rapid need for labour to support the oil industry has drawn people to Riyadh from

the neighbouring Arab countries and all over Asia. About two-thirds of the expatriates are men, whereas the Saudi male population accounts for half of the capital's indigenous population.

Riyadh has the largest adult student population in Saudi Arabia as it is the location of over 20 institutions, including Al Yamamah University, Alfaisal University, AlFarabi College of Dentistry and Nursing, Almaarefa College for Science and Technology, Arab East College, Arab Open University, Dar Al Uloom University, Imam Muhammad bin Saud Islamic University, King Abdulaziz University, King Saud bin Abdulaziz University for Health Sciences, Prince Sultan University, Princess Nora bint Abdul Rahman University, Riyadh College of Dentistry and Pharmacy, and Saudi Electronic University. Princess Nora bint Abdulrahman University is the largest all-female university in the world with the capacity to host up to 40,000 students and it has enough places in its first year classes for 60% of all the female high school graduates in the country (Miller 2012).

Situated on the coast of the Red Sea, Jeddah is the second largest city in Saudi Arabia, with a population of approximately 3.2 million. This city attracts a large number of Muslim travellers who pass by on their way to the holy city of Mecca. It has also a large adult student population located at over 14 institutions, including Arab Open University, Batterjee Medical College, College of Business Administration, College of Telecom and Electronics, Dar Al-Hekma College, Effat College, Ibn Sina National College for Medical Studies, Jeddah College of Health Care, Jeddah College of Technology, Jeddah Private College, Jeddah Teacher's College, King Abdulaziz University, King Abdullah University of Science and Technology, Prince Sultan Aviation Academy, and Prince Sultan College For Tourism and Business.

Dammam is the capital of the Eastern Province of Saudi Arabia, and the location of the judicial and administrative bodies of the province, and several government departments. Dammam is the largest city in the Eastern Province and forms part of the greater Dammam metropolitan area along with Dhahran and Khobar, which together have a combined population of over 2.5 million, and the fifth largest in Saudi Arabia, after Riyadh, Jeddah, Mecca and Medina. Dammam also supports a substantial student population with over 8 colleges and universities, including Academy of Health Sciences, Al-Ghad International Medical Science Colleges, Arab Open University, Dammam College of Technology, Dammam Community College, King Fahd University for Petroleum and Minerals, Prince Mohammad bin Fahd University, and University of Dammam (previously a branch of King Faisal University).

The six institutions included in this study (Table 2) were Princess Nora bin Abdul Rahman University, King Saud University, and Alfaisal University in Riyadh, King Abdulaziz University and King Abdullah University of Science and Technology in Jeddah, and King Fahd University of Petroleum and Minerals, in Dammam.

Table 2 Institutions included in the study

Institution	City	Gender	Faculty
Princess Nora bint Abdul Rahman University,	Riyadh	Female	Colleges of Computer and Information Sciences, and Education
King Saud University	Riyadh	Male and female	Colleges of Computer

			and Information Sciences, and Education
Alfaisal University	Riyadh	Male and female	College of Science and General Studies
King Abdulaziz University,	Jeddah	Male and female	English Language Institute
King Abdullah University of Science and Technology	Jeddah	Male and female	New university, first co-educational. Mathematical and Computer Sciences and Engineering Division
King Fahd University of Petroleum and Minerals, Dammam	Dammam	Predominantly male	College of Computer Science and Engineering

The King Fahd University of Petroleum and Minerals was founded in 1963 (1382/83 AH) under the name of the College of Petroleum and Minerals with fewer than 100 students. In 1964 (1383/84 AH), the University decided to admit other Arab and Muslim students along with Saudi students. The College was officially inaugurated in 1965 (1384/85 AH) by the late King Faisal who, on that occasion, declared it as one of the pillars of scientific, economic, and industrial development. By 1974 (1394 AH), student enrolment had increased to 1,500 and it was accorded university status in 1975 (1395 AH). In December 1986 (1407 AH), the University became the

King Fahd University of Petroleum and Minerals. In 2000-2001, the University had 680 teachers and 5,739 students.

Abdulaziz Al-Saud, who was proclaimed the King in 1932, began laying the foundations for modernizing the country and establishing an educational system. In 1953, Saud, the eldest son of Abdulaziz, acceded to the throne upon his father's death. He instituted the Council of Ministers and established the Ministry Education. Prince Fahd, who eventually became the Saudi King himself, assumed the office of the first Ministry of Education and established Saudi Arabia's first university, King Saud University, in Riyadh in 1957 as a response to the educational and professional needs of a young nation.

Alfaisal University was founded by the highly reputed King Faisal Foundation in 2002 as one of the first private non-profit research and teaching universities in the Kingdom. Committed to achieving international standards of excellence, it has the support of national and international co-founders and distinguished Board Members that have continually supported the university in its mission to beome a student–centred institution committed to research. Alfaisal University is made up of four faculties, spanning from Business, Engineering, Medicine, Science and General Studies offering world-class marketable undergraduate and graduate programs to the brightest male and female students in the Kingdom and the Region. Located in the heart of Riyadh, the centre for commerce, industry and research, Alfaisal offers its students opportunities to develop their full potential with outstanding facilities, inspirational academics and research-led teaching that enable students to leave as highly skilled, well-developed individuals ready for transition into a workplace environment.

Named after the first monarch of Saudi Arabia, King Abdulaziz University was established in 1967 as a national university with an aim to spread higher education in the western area of Saudi Arabia. Beginning with a few students (68 male students and 30 female students) in 1968, the university inaugurated its first college (the College of Economics and Management) followed by the College of Arts and Human Sciences. After issuance of the resolution of the Council of Ministers in 1974, the university came under government administration, and the national university was changed into a government university.

3.4 Data Collection

The secondary data for this study were sourced from different e-libraries and other forms of internet search. They consist of books, statistical reports and country reports, journal articles, theses/dissertations, newspapers, and other related reading materials. The more scholarly forms of secondary data, such as journal articles, books and dissertations, provided the basis for the theoretical framework of the study. Along with these academic sources, documents like newspapers, country reports provided information that enriched the analytical discussion of the results.

The primary quantitative data were collected online through a questionnaire designed in English (see Appendix B) but translated into Arabic, and administered online by Survey Monkey. After development of this instrument, the researcher applied for permission to conduct the study from the home university. Permission was requested from the Ethics Committee of the Victoria University to conduct the study as it involved human subjects. Ethical procedures appropriate for conducting research on human participants were followed. The services of a respected online

commercial data collection firm reduced apprehension on privacy concerns and the names of the respondents were to be kept anonymous and untraceable. Additionally, all participants were informed that the survey was voluntary, and assured that their responses would be kept anonymous and that their privacy would be respected (see Appendix A). To ensure that ethical sensitivity to cross-cultural issues was ensured (Trimmer and Warnock 1992), the researcher took explicit account of the Saudi context when interpreting the responses of the participants in this study. The translations of the questionnaire from Arabic to English were certified by a translator.

After the grant of ethics approval, the researcher approached administrators at the six institutions for permission to access students. A letter asking for permission to conduct the study was sent to administrators and professors. After obtaining the approval from these personnel, the students' cooperation in the study was sought. Students were then contacted through advertisements using a range of media, inclduing, printed material, the internet, and mobile devices. All students who consented to participate in the survey were volunteers. Little effort was required by the researcher to distribute questionnaires or convince people into participating in the survey.

A volunteer sampling procedure was used because random sampling was not practical and no sampling frame was required. The main difference between a pure volunteer sample and a random volunteer sample is that, in the former, volunteers need to make all the effort to participate, whereas in the latter, a sampling frame is constructed by the researcher to select appropriate participants (Saunders et al. 2009). Nevertheless, since all survey research involves

some degree of volunteering, there is no clear distinction between a volunteer sample and a random sample.

After they had agreed to participate in the study, the students were directed to the encoded questions administered by surveymonkey.com so that they could provide their answers online. The respondents simply clicked on the options to provide their answers. The survey was stopped after 323 students had provided their responses, and the data were downloaded to a Microsoft Excel file to check and verify the information. A sample size of about 300 participants was chosen on basis of guidelines for appropriate sample numbers for various inferential statistical tests used here to correctly test the null hypotheses. According to Cohen (1992, Table 2, p. 158), the minimum sample size required to conduct Chi-Square tests with up to five categories is 151, assuming a conventional significance level of $\alpha = .05$ and a moderate effect size. Logistic regression requires a minimum sample size of 20 to 30 cases for each independent variable (Hosmer and Lemeshow 2000), so a sample size of at least 200-300 was necessary to construct valid models with up to 10 independent variables. Gender ratio was equally proportioned in the survey, with 155 (48.8%) male and 168 (51.2%) female respondents.

3.5 Validity, Reliability and Accuracy of Data

3.5.1 Validity

It is essential to consider the construct and content validity of any instrument used in social science as these ensure that the data collected through the instrument are valid and applicable to the phenomenon under investigation (Creswell 2009). Construct validity refers to whether or not the measurements collected using an instrument (e.g. a questionnaire) are consistent with the

theories that explain the real behaviours and/or perceptions of people. Content validity, on the other hand, considers the extent to which the instrument contains the questions needed to achieve the aim of the study, and collects the data it intends to collect. The steps undertaken to ensure construct and content validity are explained in this section.

Construct validity requires that the information collected in a study is closely related to the theories to which it is supposed to be related to. Construct validity in survey research is enhanced by relating the content of an instrument to a theoretical framework based on previous research in the literature, so that the hypotheses are tested on basis of previous knowledge (Bryman and Bell 2003). It is also enhanced by ensuring that other researchers approve the appropriateness, meaningfulness, correctness, and usefulness of the instrument (Creswell 2009). To ensure construct validity in this study, the items used in the questionnaire were underpinned by the findings of previous research discussed in the literature review.

In addition, a pilot study or pre-testing was conducted, where the questionnaire was presented to a pool of experts in the telecommunications sector and students with different mobile telecommunications. They were asked if the instrument was suited to the research embarked upon by the researcher and the questions were directed towards the information required for the intended purpose of the research. They were also asked to provide their comments on the survey's readability and understand ability. The suggestions of the experts were considered by the researcher for improving the content validity of the instrument used in the main survey.

3.5.2 Reliability

Reliability refers to the extent to which measurements collected by an instrument produce consistent results when tested again in multiple studies. Although an instrument may be valid, it cannot be deemed to be reliable if it does not produce consistent results every time it is used. The reliability of the instrument was checked in a pilot study. The responses of a small sample of students who did not take part in the main survey were checked to determine if there were any discrepancies or unreliable responses. The responses of the students were evaluated by the researcher for improving the reliability of the instrument.

Reliability analysis was also performed to estimate the consistency and uniformity of the participants' responses. Reliability analysis indicates how well the items inter-correlate, and how precisely one or more groups of items tap the same underlying construct. Cronbach's alpha was estimated in this study to analyze the internal consistency of the items used in the conceptual model. Cronbach's alpha is the most conventional, powerful, and widespread measure of the internal consistency and reliability of item scores in questionnaires (Gravetter and Forzano 2009). Values of Cronbach's alpha show an increase when there is a related increase in correlations between the items. If alpha = 1, then a group of items is considered to have a perfectly reliable and consistent measure of a construct. However, alpha = 1 is rarely encountered, due to the influence of random error in the item responses. So a cut-off value of alpha of at least .6 has been set as a threshold before a group of items can be considered as consistently reliable, and over .8 before internal consistency reliability is considered to be good.

3.5.3 Coding Errors and Missing Values

Coding errors can occur when the researcher mistakenly places information on one item into the wrong category when transferring the raw data from surveys into the analytical software. Missing data can occur when a respondent does not answer certain questions and responses with excessive amount of missing data need to be removed as they will skew the overall results from the survey. Responses to all survey items were evaluated to ensure there were no coding errors, or items or cases with an excess of missing data. A total of 328 responded to the 43 options included in the 24 items. There were 17, 0.1% missing values and 99.9% valid values. Missing values were recorded for Items: 14 (2 missing); 15 (1 missing); 19: (1 missing); 20 (1 missing); 21 (2 missing); and 23: (8 missing). Since only few values were missing from the data set, and these appeared to be in a random pattern, there was unlikely to be any systematic bias, and any procedure for handling the data was likely to give similar results (Tabachnick and Fidell 2007). The missing values were disregarded during the analysis that included the responses to Items 19, 20, and 21. Because the scores for Items 14, 15, and 23 were summated to create composite scales, and missing values would cause bias, the four missing values were imputed with the mean score for the corresponding items.

3.6 Measurements and Hypotheses

It is essential to consider the measurement levels of the variables, because they must be specified in the SPSS data editor, and they determine the type of statistical analysis that can be conducted (Field 2009). All the variables were either measured at the nominal level (i.e. numerically coded qualitative categories, endorsed by the participants, that could not be organized into ranks) or the

ordinal level (i.e. numerically coded categories, rated by the participants, that could be ranked into a logical hierarchy).

3.6.1 Questionnaire items

The responses to Items 1 to 4 of the instrument, reflecting the demographic characteristics of the participants, were measured at the nominal or ordinal level (Table 3). The categories specified in this section of the questionnaire (see Appendix B) classified the participants according to their location, age, gender, socio-economic status.

Table 3 Demographic variables

SPSS variable name	Items	Measures
Location	1. What city do you live in?	Four nominal categories: 1 = Riyadh ; 2 = Jeddah 3 = Damamm; 4 = Other
Age	2. What is your age?	Three ordinal categories: 1 = 18-22 years; 2 = 23-27 years 3 = > 27 years
Gender	3. What is your gender?	Dichotomous categories: 0 = Female; 1 = Male
Socio-economic status	4. What is your gross monthly income/allowance	Five ordinal categories: 1 = 0 to 1000 SAR; 2 = 1001 to 2000 SAR; 3 = 2001 to 3300 SAR;4 = 2201 to 5000 SAR; 5 = > 5000 SAR

Items 5 to 23 of the questionnaire were classified into four main categories based on the variables relevant to the research questions, namely, customer loyalty/satisfaction, choice of provider, usage characteristics, and endorsement (Table 4).

Table 4 Questionnaire items

Category	Items	Measures
1.Customer Loyalty/ Satisfaction	5. Who is your current mobile phone service provider?	Three nominal categories: 1 = Mobily; 2 = STC; 3 = Zain
	6. Have you had problems with your current provider? 6.1. If so, please select the problems you are facing	Dichotomous: 0 = No; 1 = Yes Five nominal categories: 1 = Prices; 2 = Quality of services; 3 = Credibility; 4 = Dealing with customers
	7. Have you had another provider?	Dichotomous categories: 0 = No; 1 = Yes
	8. What is the name of the other provider?	Three nominal categories: 1 = Mobily; 2 = STC; 3 = Zain
	9. Did you have problems with this provider? 9.1 If so, please select the problems you are facing	Dichotomous 0 = No; 1 = Yes Five nominal categories: 1 = Prices; 2 = Quality of services; 3 = Credibility; 4 = Dealing with customers
1.Customer Loyalty/ Satisfaction	10. Do you intend to change providers after your contract runs out?	Dichotomous: 0 = No; 1 = Yes
	11. Please indicate which provider you would select.	Three nominal categories: 1 = Mobily; 2 = STC; 3 = Zain
	12. Please select the reason for the change.	Five nominal categories:1 = Nothing; 2 = Price is better; 3 = Quality is better; 4 = Package

		offering of services is available; 5 = Customer service is better
2.Choice of Provider	14. To what extent do you think the following items affect your choice of mobile phone provider?	Eight items 14.1 to 14.8) rated on a 5-point ordinal scale scored from 1 = Definitely not important to 5: Very important.
	23. If you wish to renew your contract with your current mobile service provider, what aspects of the service would influence you the most to do so?	Eight items (23.1 to 23.8) : rated on a 5-point ordinal scale, scored from 1 = Definitely not important to 5 = Very important
3.Usage Characteristics	13. What type of service contract do you have?	Three nominal categories: 1 = Prepaid; 2 = Contract with low monthly fee/high call rate; 3 = Contract with high monthly fee/low call rate
	15. How often do you use the following services per week?	Eight items (15.1 to 15.8): rated on a 6-point ordinal scale from: 1 = I don't know the service to 6 = More than 20 times per week
	16. Who pays the phone bills?	Four nominal categories: 1 = Myself; 2 = Employer; 3 = Parents/Relatives; 4 = Other
	17. For what purposes do you use your mobile phone?	Four nominal categories: 1 = Exclusively private; 2 = 50/50 private/ business/education; 3 = More for business/education; 4 = Exclusively business/education
	18. How long ago did you get your first mobile phone service?	Four ordinal categories: 1 < 1 year; 2 = 6 months to 1 year; 3 = 1 to 2 years; 4 > 2 years

	19. How old is your current mobile phone contract?	Four ordinal categories: 1 < 6 months; 2 = 6 months to 1 year; 3 = 1 to 2 years; 4 > 2 years
	20. How long is your total mobile calling time (initiated and received) on an average day?	Five ordinal categories: Four ordinal categories: 1 = 0-5 min; 2 = 5-15 min; 3 = 15-30 min; 4 = 30-60 min; 5 > 60 min
	21. What is your average monthly mobile phone expenditure?	Four ordinal categories: 1 < 100 SAR; 2 = 100-300 SAR; 3 = 301-500 SAR; 4 > 500 SAR
4.Endorsement	22. How did you hear about the mobile and Internet services you use?	Seven nominal categories, ranked in order, according to their frequency

3.6.2 Hypotheses

The literature on scientific methodology has come to agree that confirmatory observations cannot prove that a hypothesis is true, whereas falsification (i.e. providing evidence to disprove a hypothesis) is logically more decisive evidence (Edmund 2011). A good falsification test involves using a null hypothesis test, where it is possible to disprove a null hypothesis at a prescribed level of probability. A null hypothesis (H_0) is a default statement proposing that no relationships exist among the observed data, and is the opposite of the research hypothesis.

Accordingly, the research questions (RQ) were formulated into corresponding null hypotheses with question items incorporating relevant variables. Appropriate inferential statistics were chosen to test all the null hypotheses depending on the nature of the relationship to be tested and the confirmatory value to be derived (Table 5).

Table 5 Research questions, hypotheses, statistics, and variables

Null Hypothesis	Inferential Statistics	Dependent variables	Independent Variables
H_0#1: There is no significant relationship between respondents' gender and their loyalty/satisfaction with their mobile service provider.	Pearson's Chi-Square tests	Problems with service provider. Use of other providers. Names of other providers. Problems with other service providers. Intention to change provider. Choice of other provider Reasons for changing provider	Gender (Male or Female)
H_0#2: There is no significant relationship between respondents' gender and the factors affecting their choice of service provider.	Kruskal-Wallis tests.	Eight items affecting choice of mobile phone service providers scored from 1 to 5. Eight aspects of service affecting choice to renew contract scored from 1 to 5.	Gender (Male or Female)
H_0#3: There is no significant relationship between respondents' gender and their frequency of serviceuse.	Kruskal-Wallis test.	Frequency of use of eight mobile phone services scored from 1 to 5.	Gender (Male or Female)
H_0#4: There is no significant relationship between respondents' gender and the their mobile usage characteristics.	Pearson's Chi-Square test	Type of service contract. Phone bill payment. Purposes of using phone. Time since obtained mobile phone. Age of current contract. Calling time usage. Expenditure.	Gender (Male or Female)
H_0#5: There is no significant relationship between respondents' location and customer loyalty/satisfaction.	Pearson's Chi-Square tests	Problems with service provider. Use of other providers. Names of other providers. Problems with other service providers. Intention to change provider.	Location (Riyadh, Jeddah, Dammam, or others)

		Choice of other provider Reasons for changing provider	
H_0#6: There is no significant relationship between respondents' location and the factors affecting choice of service provider.	Kruskal-Wallis test Cluster Analysis	Eight items affecting choice of mobile phone service providers scored from 1 to 5. Eight aspects of service affecting choice to renew contract scored from 1 to 5	Location (Riyadh, Jeddah, Dammam, or others)
H_0#7: There is no significant relationship between respondents' location and the frequency of service use.	Kruskal-Wallis test Cluster Analysis	Frequency of use of eight mobile phone services scored from 1 to 5.	Location (Riyadh, Jeddah, Dammam, or others)
H_0#8: There is no significant relationship between respondents' location and their mobile usage characteristics.	Pearson's Chi-Square test	Type of service contract. Phone bill payment. Purposes of using phone. Time since obtained mobile phone. Age of current contract. Calling time usage. Expenditure	Location (Riyadh, Jeddah, Dammam, or others

3.7 Statistical Analysis

Data collected from the online survey instrument was downloaded into Microsoft Excel and then transferred directly to the data editor of SPSS version 17. The research questions were addressed using descriptive and inferential statistics using the SPSS procedures described by Field (2009) and Muijs (2011). Because the variables were categorical, descriptive parametric statistics (e.g. means and standard deviations) and inferential statistics (e.g. t-tests, linear regression, and analysis of variance) were not justified as they are only appropriate for normally distributed variables, measured at the interval level. None of the variables collected in this study were

measured at the interval/scale level (i.e. on a continuous scale, with an equal distance between each unit on the scale). Computing the mean value from item scores ranked on a five point ordinal scale (defined by 1 = Definitely not important; 2 = Not important; 3 = Neutral; 4 = Important, and 5 =Very important) is pointless because (a) the respondents did not necessarily perceive that the distance between each successive rank was equal; and (b) it does not make sense to add the scores, e.g. adding 1 = Definitely not important added to 2 = Not important does not equal 3 = Neutral (Ciff 1996, Long et al. 2003, Mogey 1999). It has been found that if parametric statistics, (e.g. mean, standard deviation, t-test, and analysis of variance) are used to analyze variables measured at the ordinal level using 5-point scales in response to questionnaire items, then the results may be erroneous (Kahler et al. 2008). Consequently, only non-parametric inferential tests appropriate for categorical variables (e.g. Chi-Square tests, Kruskal-Wallis tests, and logistic regression could be applied in this study (Agresti 2007)

3.7.1 Pearson's Chi-Square

Cross-tabulations were constructed, with the frequencies corresponding to the categories of one nominal variable in the rows, and the frequencies corresponding to the categories of another nominal variable in the columns. Pearson's Chi-Square (χ^2) statistics was computed to indicate the significance of the association between two categorical variables using the Crosstabs procedure in SPSS.

Chi-Square tested the hypotheses to establish that the frequencies in the rows were not associated with the frequencies in the columns (Field 2009). The decision-rule was to reject the null hypothesis and accept the alternative hypothesis (Ha) at the conventional significance level of α

= .05 if $p < .05$ for the χ^2 statistic. The Chi-Square test is deemed to be inaccurate if the sample size is too small, and more than 50% of the cells of the cross-tabulation contain low expected frequencies (< 5). To compensate for this inaccuracy, Fisher's exact test was used when necessary as it helps to compensate for low sample sizes (Agresti 2007).

3.7.2 Kruskal-Wallis Test

The Kruskal-Wallis test compared the median scores between groups of participants classified by gender or location. This is a non-parametric test meaning that, unlike parametric tests which compare mean values, it does not assume that the data are normally distributed or measured at the interval level. The Kruskal-Wallis test can be used to analyse the responses for questionnaire items scored on an ordinal scale using integers from 1 to 5 (Agresti 2007). The null hypothesis postulated that the median scores for the items were the same across the genders or locations of the respondents. The decision rule was to reject the null hypothesis at the conventional significance level of $\alpha = .05$ if $p < .05$ for Kruskal-Wallis χ^2 statistic.

3.7.3 Binary Logistic Regression

Binary logistic regression models were also constructed by following this formula:

$$\log \gamma/(1-\gamma) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_k X_k$$

Where: $\log \gamma/(1-\gamma)$ is the logit function or log odds of the dependent variable; γ is the probability of a dichotomous nominal outcome (coded by 1) relative to an the opposite outcome (coded by 0); β_0 is the threshold value, or intercept; $X_1 \ldots Xk$ are the independent (predictor) variables; β_1, $\beta_2 \ldots \beta_k$ are the binary logistic regression coefficients for k independent variables.

In binary logistic regression, the dependent variable must be dichotomous, representing two possible nominal outcomes. It is coded in binary format with 1 for a positive outcome and 0 for the opposite of a positive outcome. In this study, the dependent variable of intention to change mobile phone service provider, was coded in binary form with 1 = Yes and 0 = No. The independent variables were the factors affecting the choice of providers and services, measured using Items 14 and 23, which were numerically coded ordinal variables. The logistic regression models predicted the log odds of the highest coded outcome of the dependent variable using an iterative procedure (maximum likelihood method) which was cycled through repetitions to find the best fit to the data. Unlike linear regression, a normal distribution of variables and homogeneity of variance of the dependent variable across the independent variables was not assumed (Hosmer and Lemeshow 2000). The decision rules using the output provided by SPSS was to reject the null hypothesis that a β coefficient was significantly different from zero if $p \leq .05$ for its corresponding Wald χ^2 statistic.

3.7.4 Odds ratio

An odds ratio ($OR = e^{\beta}$) was computed for each independent variable to predict the factor by which the log odds of the outcome would change for a one unit change in the independent variable, e.g. from an ordinal score of 1 to an ordinal score of 2. The OR was used to compare the relative importance of each independent variable as a predictor of the dependent variable. If the OR = 1.0, then a change in the independent variable would not cause a significant change in the dependent variable. If the OR > 1.0 then an increase in the independent variable would increase the log odds. If the OR < 1.0 then an increase in the independent variable would

decrease the log odds. The statistical significance of the OR was indicated by its 95% confidence intervals. If the 95% confidence intervals for the OR did not include 1.0 then the OR was significantly different from 1.0 at $\alpha = .05$. If the 95% confidence intervals for the OR did include 1.0 then the OR was not significantly different from 1.0 at $\alpha = .05$.

3.7.5 Hierarchical Cluster Analysis

Hierarchical cluster analysis was used to partition the participants into groups according to (a) their scores for the eight items affecting choice of mobile phone supplier and (b) their scores for the eight items related to renewing one's contract with the current mobile phone supplier. In this method, each participant begins in a separate group but is merged in similar groups in successive steps until the process is stopped by the researcher. It was necessary to choose an appropriate linkage method (e.g. single, average, centroid, complete, McQuitty or Ward) as it determines whether the clusters are sufficiently similar to be linked together. It was also necessary to determine the most appropriate partitioning (i.e. the classification of the hierarchical clusters that would, hopefully, identify groups of participants who shared common characteristics). Ward's method was used in this study to produce distinct clusters without the problem of excessive chaining which is often experienced with other linkage methods. Ward's method is different from other linkage methods because it uses analysis of variance to evaluate the distances between the clusters and works by minimizing the sums of squares between the clusters. Ward's method ensures that the major clusters are as widely separated as possible on different dichotomous branches (Everitt et al. 2001). The dendrogram was cut to generate the major dichotomous branches, identified visually as black lines. The black lines represented the lowest

levels of similarity which could, according to the judgment of the researcher, be used to separate the clusters into distinct groups. For convenience, each group of participants was visually identified in the dendrogram using a different colour.

Ward's method is regarded as a very efficient method to discriminate between individuals, but sometimes it creates a very large number of small clusters which may not be very easy to partition into discrete groups (Shaw 2003). It was necessary to select an appropriate distance measure (e.g. Euclidean, Squared Euclidian, or Pearson) to determine how the similarities and the structure of the clusters should be calculated. Some observations may be located closer to each other using one distance measure but farther apart using another distance measure. Squared Euclidean method was found to the most appropriate and consistent distance measure as it is usually linked with Ward's linkage to place progressively greater weight on sampling sites that are further apart in terms of the responses of the participants.

3.8 Summary

This chapter has explained all aspects of the research methodology used in this study, beginning with the broader questions about the general research approach to specific issues like research instrument, procedure of data collection and population sampling. The questionnaire items with their measurement scales were explained in conjunction with the overall structure of the hypotheses underlying the study. Preliminary procedures for ensuring the reliability and validity of the data as well as statistical tests to interpret the collected data were also discussed. The next chapter turns to the results of the statistical analyses of the data and explains the findings in relation to each of the research questions.

Chapter 4 RESULTS

4.1 Introduction

The data collected from the surveys were statistically analysed to provide information about the students and their choice of service provider, customer satisfaction and mobile usage characteristics. Data were categorised according to demographic types to produce segmented results based on location and gender. The chapter begins with a descriptive statistic of the demographic profile of the respondents. Then, it proceeds to a systematic presentation of the findings in relation to each research question and associated hypotheses mentioned in the introduction and methodology chapters of this dissertation. The findings are explained along with the relevant graphical and tabular presentations of the responses obtained from data collection.

4.2 Descriptive Statistics: Demographic Profile

4.2.1 Respondents' Demographic Profile

As explained in the last chapter, the first part of the questionnaire asked the respondents to provide information on relevant demographic categories such as age, location, gender. This information is necessary to get a general picture of the characteristics of the respondents involved in the study, but also necessary for the actual statistical analysis of influence of the demographic factors of gender and location on mobile phone usage. The respondents' demographic profile is tabulated in Table 6.

Table 6 Demographic profile of respondents (N = 328)

Characteristic	Sub-Categories	Frequency	(Percentage)%
City of Residence	Riyadh	137	41.8
	Jeddah	111	33.8
	Dammam	36	11.0
	Other cities	44	13.4
Age-group	18 – 22 years	183	55.8
	23 -27 years	80	24.4
	Over 27 years	65	19.8
Gender	Male	160	48.8
	Female	168	51.2
Gross Monthly Income	< 1000 SAR	157	47.9
	1001 – 2000 SAR	52	15.9
	2001 – 3300 SAR	20	6.1
	3301 – 5000 SAR	32	9.8
	> 5000 SAR	67	20.4

The distribution of respondents according to their mobile phone provider is shown in Table 7, indicating that majority of them (323, 98.5%) own a mobile phone at the time of the study. STC was the most popular provider (187, 57.0%) followed by Mobily (107, 32.6%) and Zain (29, 8.8%), as the least popular provider. Of the 5 respondents who did not possess mobile phones, 1 (or 20%) noted the lack of credibility of service providers, whereas 4 of them (80%) reported that they were not satisfied with the treatment accorded to them by the service providers (Figure 10).

Table 7 Distribution of respondents according to mobile phone service providers, (N = 328)

Provider	Frequency	%
STC	187	57.0
Mobily	107	32.6
Zain	29	8.8
None	5	1.5

4.2.2 Relationships between Demographic Variables

In order to get a clearer understanding of the demographic makeup of the respondent sample, some further analyses were done by correlating the variables with each other. The following presents the relationships between the different demographic variables characterising the sample:

Gender and Age The relationship between gender and age of respondents is reflected in the cross-tabulation and percentage distribution (Table 8).

Table 8 Cross-tabulation of respondents' gender by age-group

Age (Years)	Female		Male	
	N	%	N	%
18 – 22	113	42.6	66	67.3
23 – 27	33	29.7%	46	19.6%
> 27	22	27.7%	43	13.1%

Note: Chi-Square = 20.775, p <.001

A significant association between gender and age was indicated by $\chi^2 = 20.775$, $p < .001$, due to the relatively higher proportion of female respondents in the 18-22 age bracket (67.3%) against male respondents (42.6%). Also, the proportions of male respondents in the 23 to 27 age bracket was higher than the female (29.7% vs. 19.6%), and this ratio is also similar for older age groups (27.7% male vs. 13.1% female).

Gender and Location The relationship between gender and location (city of residence) is shown in the cross-tabulation (Table 9).

Table 9 Respondents' gender by location

City	Female		Male	
	N	%	N	%
Riyadh	40	23.8%	97	62.6%
Jeddah	86	51.2%	20	12.9%
Dammam	26	15.5%	10	6.5%
Others	16	9.5%%	28	18.1%

Note: Chi-Square = 74.791, $p < .001$

A significant association between gender and location was indicated by $\chi^2 = 74.791$, $p < .001$. On probing further, the result showed there were a higher proportion of male respondents from Riyadh (62.6% vs. 23.8%) and more male (18.1%) than female (9.5%) respondents coming from other cities. In contrast, there was a higher proportion of female respondents from Jeddah (51.2%

vs. 12.9%). and also there were more female respondents from Dammam (15.5%) than male (6.5%). This means that the difference in proportion of gender from individual cities is balanced out in the overall sample, as there are two sample groups each with higher male and female populations respectively.

4.3 Descriptive Correlation: Research Questions

This section presents the data obtained from responses to questions that would answer the study's research questions. Only those participants who own mobile phones were included in the study. Hence, succeeding statistical analysis considered the responses of 323 students, leaving out the five students without mobile phones from the total of 328 respondents. The data are presented in order in relation to the research questions formulated for the study and the order in which they were listed in the introductory chapter.

4.4 Influence of Gender on Mobile Phone Use

RQ#1: Is there a significant relationship between respondents' gender and their loyalty/satisfaction with their mobile service provider?

As explained in the introductory chapter, this study seeks to understand the influence of demographic factors on the consumption behaviour of mobile phone users. This section explores the influence of gender on key aspects of mobile phone use explored in this study, namely, loyalty/satisfaction, choice of service provider and mobile phone usage characteristics. This is particularly important in the context of a gender-differentiated society like Saudi Arabia as the disparity in the economic status between men and women and other social norms may result in significant differences in their behaviour and usage patterns.

4.4.1 Relationship between Gender and Loyalty/Satisfaction

This section examines whether the demographic variable of gender has any influence on the level of satisfaction reported by respondents with their current mobile phone service provider. It correlates the gender of the respondents with a range of items including their current service provider, problems experienced with their service providers, their experience with other service providers, intention to change provider after expiration of their current contract, and their preferred provider for the change.

i. Gender and Current Mobile Service Provider

The cross-tabulation of the choice of mobile service providers and respondents' gender is presented in Table 10. The Chi-Square test obtained no significant association between gender and service provider (χ^2 = 1.897, p = .387). Thus, it was concluded that gender of respondents has no bearing on their choice of current provider.

Table 10 Respondents' gender and current mobile service provider

Provider	Male (N)	Male (%)	Female (N)	Female (%)
Mobily	53	54.8%	54	60.7%
STC	85	34.2%	102	32.1%
Zain	17	11.0%	12	7.1%

Note: Chi-Square = 1.897, p = .387

ii. Gender and Problems with Current Mobile Service Provider

The variable of gender of the respondents and their problems with their current mobile service providers were cross-tabulated, and the results are in Table 11. About a quarter (90) of the respondents did not have problems with their current service providers. Those with problems (233) indicated price as their major problem (108/233), followed by quality of services (60 respondents).

Table 11 Respondents' gender and problems with current service provider

Problems	Male	Female	Total
None	41	49	90
Prices	40	68	108
Quality of services	30	30	60
Credibility	26	10	36
Dealing with customers	18	11	29
Total	155	168	323

Note: Chi-Square = 16.274, p = .003

Respondents' gender and existence of problems with current mobile service providers were found to be significantly associated (χ^2 = 16.274, p = .003). The percentage distribution is illustrated in Figure 9. There were more female respondents (40.5%) than males (25.8%) who had problems related to price, whereas males noted more problems related to credibility (16.8%)

than females (6.0%). Males also reported more problems dealing with customers (11.6%) than females (6.5%).

Figure 9 Respondents' gender and their problems with current mobile service provider

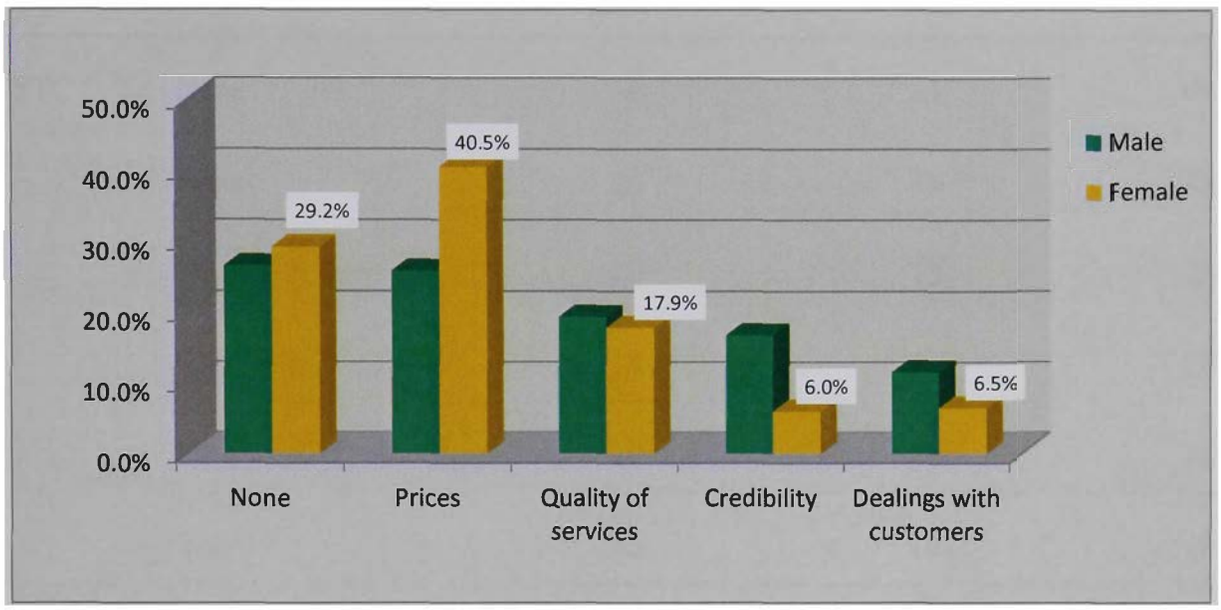


Table 12 lists the problems reported by customers of Mobily and STC separately. The percentage distribution of gender in relation to problems with Mobily and STC are illustrated in Figure 10 and 11.

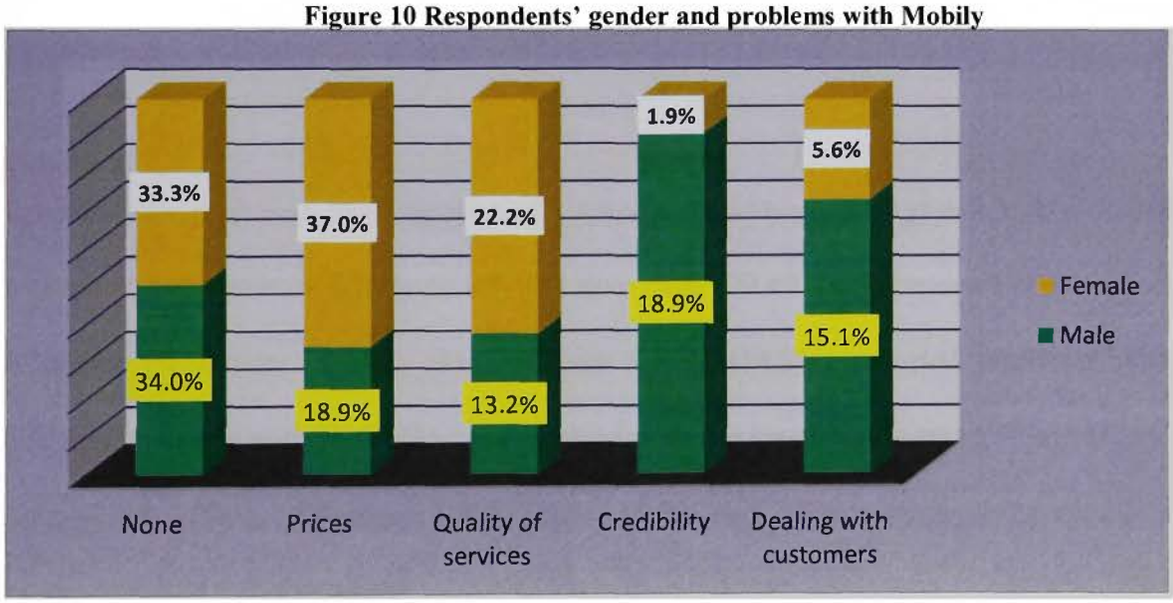
Table 12 Respondents' gender and problems with Mobily and STC

Provider	Problem	Male		Female		Total
Mobily	None	18	33.3%	18	34.0%	36
	Prices	10	37.0%	20	18.9%	30
	Quality of services	7		12		19

	Credibility	10	1	11
	Dealing with customers	8	3	11
	Total	53	54	107
STC	None	16	24	40
	Prices	25	46	71
	Quality of services	20	15	35
	Credibility	14	9	23
	Dealing with customers	10	8	18
	Total	85	102	187

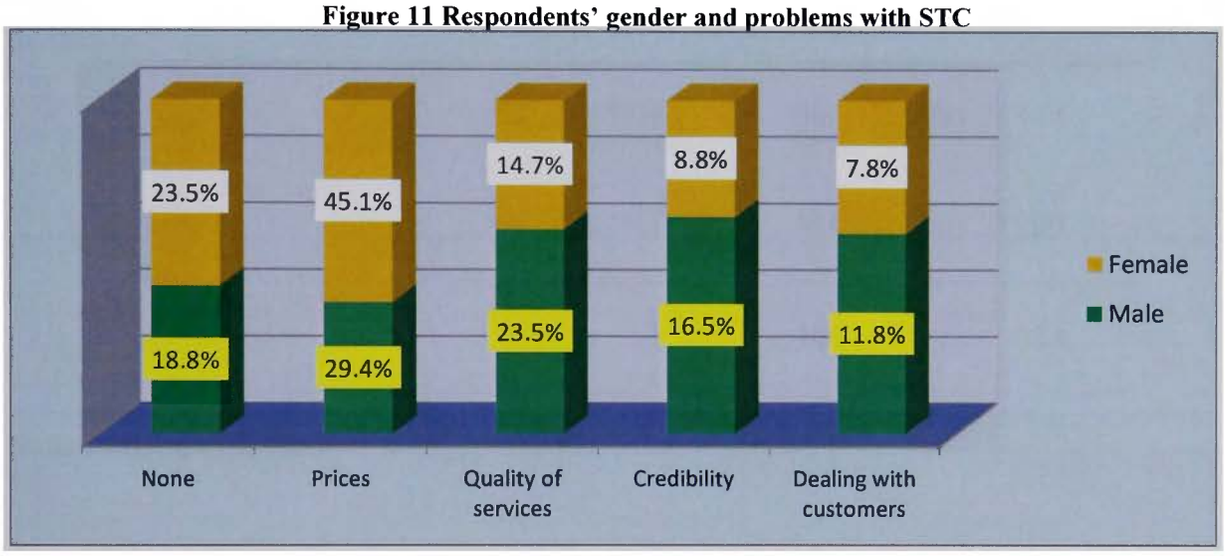
Note. Mobily: Chi-Square = 14.277, p = .006; STC: Chi-Square = 8.358, p = .049.

Figure 10 Respondents' gender and problems with Mobily



For Mobily, the reported problems were significantly associated with gender (χ^2 = 14.277, p = .006). There were more female than male respondents who had problems with price (37% female vs. 18.9% male). Also, more female than male respondents had problems with service quality (22.2% female vs. 13.2% male). Problems with credibility and handling customers were more frequent among males (18.9% and 15.1%, respectively) than female (1.9% and 5.6%, respectively). These data are shown in Figure 15.

Figure 11 Respondents' gender and problems with STC



For STC, the problems were significantly associated with gender (χ^2 = 8.358, p = .049). There was a higher proportion of female (45.1%) than male (29.4%) who reported problems with price. A higher proportion of male (23.5%) than female (14.7%) reported problems with service quality. Problems with credibility and dealing with customers were more frequent among male (16.5% and 11.8%, respectively) than female (8.8% and 7.8% respectively) respondents. These results are shown in Figure 16.

iii. Influence of Gender on Use of Other Providers

When respondents were asked whether they had tried other service providers, majority (209 or 64.7%) of them answered negatively but more than one-third (114 or 35.3%) responded positively. The cross tabulation for gender and use of another provider is in Table 13. Gender and use of another mobile service provider were significantly associated ($\chi^2 = 4.692$, $p = .030$).

Table 13 Respondents' gender and use of other service providers

Used other provider	Male	Female	Total
Yes	64 (41.3%)	50 (29.8%)	114
No	91 (58.7%)	118 (70.2%)	209
Total	155	168	323

Note. Pearson Chi-Square = 4.692, p = .030

As mentioned earlier, about one-third of the respondents had used another provider. The names of other service providers were cross-tabulated against gender in Table 14 while the percentage distribution is in Figure 12. It was found that gender was significantly associated with the service provider used ($\chi^2 = 1.031$, $p = .004$).

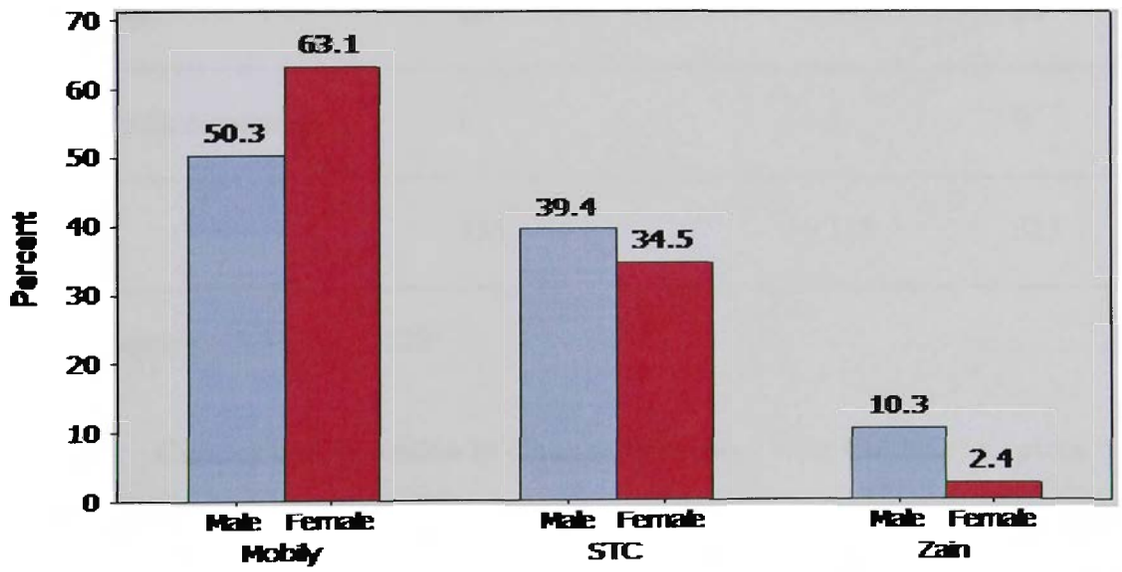
Table 14 Respondents' gender and other mobile service provider

Provider	Male		Female		Total
Mobily	78	(50.3%)	106	(63.1%)	184
STC	61	(39.4%)	58	(34.5%)	119
Zain	16	(10.3%)	4	(2.4%)	20
Total	155		168		323

Note: Chi-Square 11.031, p = .004

More female respondents (63.1%) than male (50.3%) had tried Mobily, and more male respondents (39.4%) than female (34.5%) had tried STC. There were 10.3% male respondents (10.3%) who tried Zain, compared to only 2.4% female.

Figure 12 Respondents' percentage distribution by gender and tried service provider



iv. Gender and Experience of Problems with Other Providers

Majority (299 or 92.6%) of the respondents reported having experienced problems with other service providers (Table 15). However, finding showed no significant association between gender and reported problems with other service providers, as indicated by $\chi^2 = 5.713$, $p = .222$. The top three problems mentioned by respondents in descending order were: pricing, quality of services, and credibility.

Table 15 Respondents' gender and problems encountered with other service providers

Problem	Male	Female	Total
None	10	14	24
Prices	64	52	116
Quality of services	49	64	113
Credibility	26	35	61
Dealing with customers	6	3	9
Total	155	168	323

Note. Chi-Square = 5.713, p = .222

v. Gender and Intention to Change Providers after Contract Expires

The respondents were asked if they intended to change their service provider after contract expiration. Using the Pearson Chi-Square, it was revealed that the intention to change service

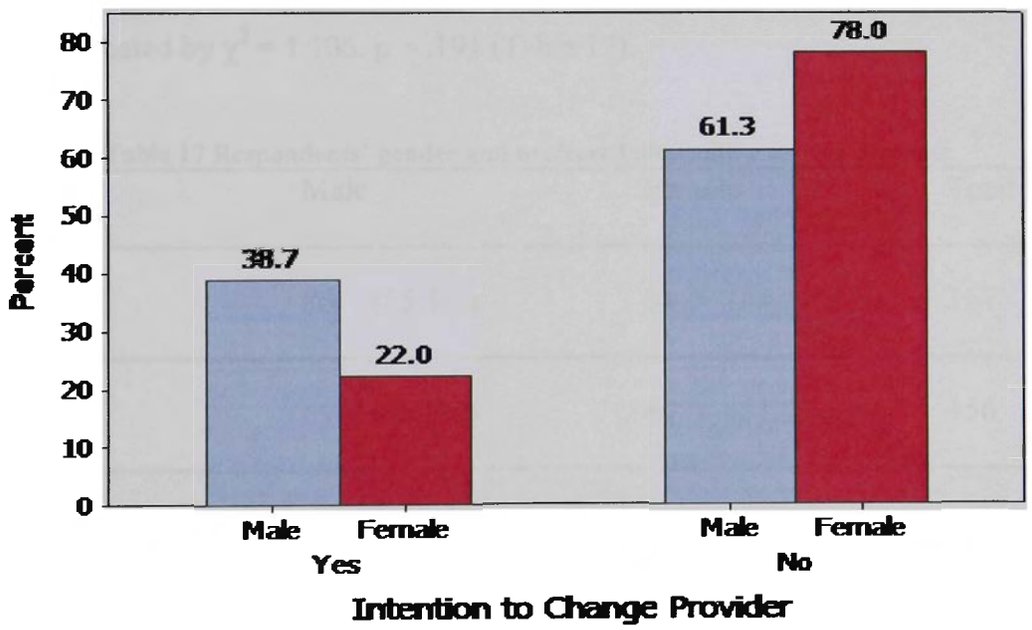
provider was significantly associated with gender (χ^2 = 10.682, p = .001). The responses are cross tabulated against gender in Table 16 and the percentage distribution of these responses is presented in Figure 13.

Table 16 Respondents' gender and their intention to change service provider

Intention to change provider	Male	Female	Total
Yes	60 (38.7%)	37 (22.0%)	97
No	95 (61.3%)	131 (78.0%)	226
Total	155	168	323

Note. Pearson Chi-Square = 10.682, p = .001

Figure 13 Percentage distribution of respondents by gender and intention to change provider



Although a large majority of both male (61.3%) and female (78.0%) respondents did not intend to change provider, almost one-third of them (97 or 30.0%) expressed intention to shift to another service provider after contract expiration (Table 16). Comparatively, there were more male (38.7%) than female respondents (22.0%) who intended to change their providers (Figure 13).

vi. Gender and Preferred Alternative Service Provider

About half of the respondents (167 or 51.7%) indicated Mobily as their preferred choice for their next subscription, and nearly half would prefer STC (156, 48.3%) after expiry of their current contract. Thus, respondents were almost equally divided between Mobily and STC as their preferred alternative service provider, although Mobily was rated fractionally higher than STC. Not even a single respondent mentioned Zain as an alternative choice. Statistical test further showed that there was no significant relationship between gender and preferred alternative provider, as indicated by $\chi^2 = 1.706$, $p = .191$ (Table 17).

Table 17 Respondents' gender and preferred alternative service provider

Provider	Male		Female		Total
Mobily	86	(55.5%)	81	(44.5%)	167
STC	69	(48.2%)	87	(51.8%)	156
Total	155		168		323

Note. Pearson Chi-Square (1) = 1.706, p = .191

vii. Gender and Reasons for Changing Service Provider

The reasons put forward by the respondents for wanting to change service providers were cross-tabulated against gender in Table 18. The reasons for changing provider were significantly associated with gender (χ^2 = 14.886, p = .005). The percentage distribution of respondents by gender and reasons for changing providers are illustrated in Figure 14. The top three reasons for changing providers were: "package offering of services" (88 or 27.2%); "price is better" (87, 26.9%); and "quality is better" (80 or 24.8%).

Table 18 Respondents' cross-tabulation of gender and reasons for changing service providers

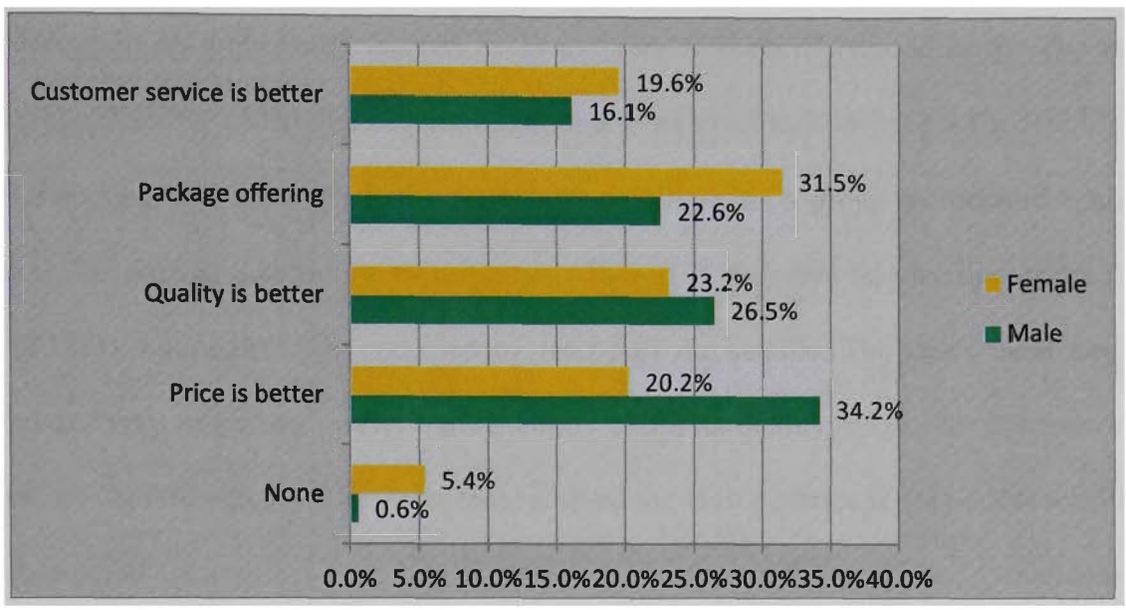
Reason	Male	Female	Total
None	1	9	10
Price is better	53	34	87
Quality is better	41	39	80
Package offering of services available	35	53	88
Customer service is better	25	33	58
Total	155	168	323

Note. Pearson Chi-Square (4) = 14.886, p = .005

As revealed by Figure 14, the three major reasons that drive male respondents to change service provider were (in descending order): price (34.2%), quality (26.5%), and package offering (22.6%). On the other hand, female respondents were driven by the following factors (in

descending order) to change service provider: package offering (31.5%), quality (23.2%), and price (20.2%).

Figure 14 Percentage distribution of respondents by gender and reasons for changing service provider



4.4.2 Relationship between Gender and Choice of Mobile Service Provider

Gender was then correlated with factors determining the choice of mobile service provider made by the respondents to investigate whether the reasons for the choice of a provider differed between men and women. The items under this section were categorised under factors that affected their choice of mobile service provider and their decision to renew their contract.

i. Gender and Items Affecting Choice of Mobile Service Provider

Respondents' ratings to eight items affecting choice of mobile phone service providers were tested by the Kruskal-Wallis test. The eight items were: (1) voice clarity and data quality; (2) rates of calls, (3) geographical coverage of the mobile network; (4) customer service for query or

an issue; (5) package offering the most access to services; (6) minimum cost service package; (7) package offering the most free services, and (8) provider's brand name and status.

The eight items affecting choice of mobile phone service provider were rated by respondents from "definitely not important" (scored as 1) to "very important" (scored as 5). The internal consistency reliability of the eight items was found to be good as it showed a Cronbach's alpha of .839, meaning that the eight items were inter-correlated as a group to measure a unifying construct. The skewed distribution of responses (Table 19) indicated that for five of the items a rating of "very important" was endorsed by over half the sample. The items most frequently endorsed as "very important" were: "voice clarity and data quality" (228, 70.6%) followed by "rates of calls" (210, 65.0%). The items that received the least percentage (did not reach 50%) of "very important" response were: "brand name and status of the provider", "minimum cost service package", and "package offering the most free services". Brand name and status was perceived to be very important by only about one third of the respondents.

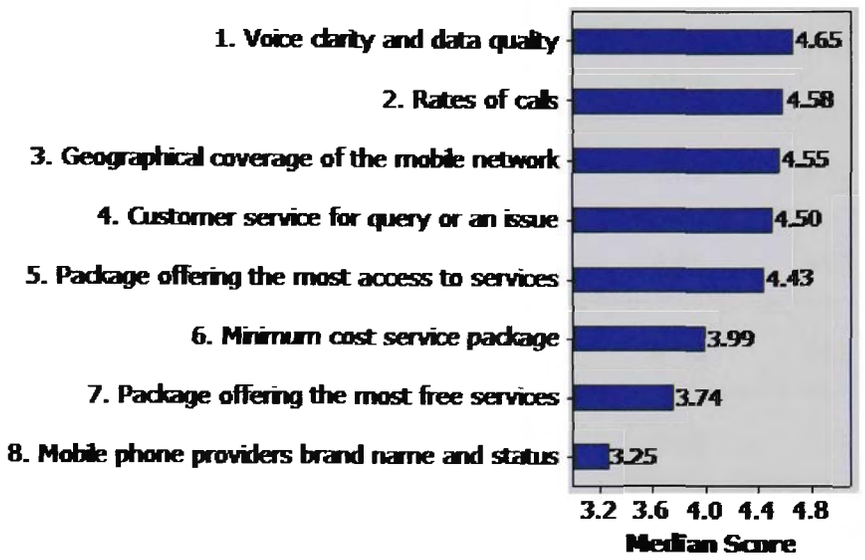
Table 19 Extent to which the eight items affect choice of mobile phone service providers

Item	Definitely not important	Not important	Neutral	Important	Very important
1. Voice clarity and data quality	11 (3.4%)	6 (1.9%)	30 (9.3%)	46 (14.2%)	228 (70.6%)
2. Rates of calls	10 (3.1%)	10 (3.1%)	31 (9.6%)	62 (19.2%)	210 (65.0%)

3. Geographical coverage of the mobile network	13 (4.0%)	16 (5.0%)	19 (5.9%)	75 (23.2%)	200 (61.9%)
4. Customer service for query or an issue	14 (4.3%)	7 (2.2%)	63 (19.5%)	36 (11.1%)	203 (62.8%)
5. Package offering the most access to services	11 (3.4%)	13 (4.0%)	45 (13.9%)	75 (23.2%)	178 (55.1%)
6. Minimum cost service package	11 (3.4%)	11 (3.4%)	117 (36.2%)	47 (14.6%)	137 (42.4%)
7. Package offering the most free services	15 (4.6%)	37 (11.5%)	102 (31.6%)	56 (17.3%)	113 (35.0%)
8. Mobile phone providers brand name and status	50 (15.5%)	65 (20.1%)	65 (20.1%)	41 (12.7%)	101 (31.3%)

The grouped median scores for each item in Table 19 were compared visually using a bar chart (Figure 15). According to the relative magnitudes of the median scores, the items were ranked in order: 1 = Voice clarity and data quality 2 = Rates of calls; 3 = Geographical coverage of the mobile network; 4 = Customer service for query or an issue; 5 = Package offering the most access to services; 6. = Minimum cost service package; 7. = Package offering the most free services; 8. = Mobile phone provider's brand name and status.

Figure 15 Median scores for the eight items that affect choice of service provider



The grouped median scores for each of the eight items stratified by the gender of the respondents and these are shown in Table 20. Kruskal-Wallis tests were used to compare the grouped median scores with respect to the genders of the respondents. None of the Kruskal-Wallis statistics were significant at $\alpha = .05$, indicated by $p > .05$. It is concluded that there was no significant difference between the responses of male and female respondents with respect to the eight items that affect respondents' choice of mobile phone service providers. The median scores for the top five items were between 4.36 and 4.68, reflecting the central tendency of the respondents to endorse these items as important (rating of 4) to very important (rating of 5). The median scores for the bottom three items were between 3.16 and 4.08, reflecting the central tendency of the respondents to endorse these items as neutral (rating of 3) to important (rating of 4).

Table 20 Grouped median scores for eight items that affect choice of service provider

Item	Grouped Median		Kruskal-Wallis χ^2	P
	Female	Male		
1. Voice clarity and data quality	4.68	4.62	.680	.410
2. Rates of calls	4.61	4.56	.494	.482
3. Geographical coverage of the mobile network	4.56	4.54	.088	.767
4. Customer service for query or an issue	4.58	4.40	3.565	.059
5. Package offering the most access to services	4.49	4.36	2.148	.143
6. Minimum cost service package	4.08	3.87	1.869	.172
7. Package offering the most free services	3.86	3.61	2.148	.143
8. Provider's brand name and status	3.36	3.16	1.014	.314

ii. Gender and Factors Affecting Choice to Renew Contract with Current Provider

Similarly, respondents' ratings to eight aspects of service affecting choice to renew contract were subjected to Kruskal-Wallis tests. These eight aspects were: (1) using free allowances on the contract for social calls; (2) using the website to browse for plans; (3) accessing live assistance for asking; (4) ability to change type of device without penalty; (5) contract flexibility and allowances; (6) cost of terminating contracts; (7) cost of upgrading contract or buying extra time/data; and (8) risk in mobile shopping. Participants were asked to rate to what degree they felt that eight aspects of service influenced their choice to renew their contract with their current

mobile phone supplier. Response options ranged from "definitely not important" (rated as 1) to "very important" (rated as 5). The distributions of the responses are presented in Table 21.

The internal consistency reliability of the eight items was good, as indicated by Cronbach's alpha = .809. The eight items were inter-correlated as a group to measure a unifying construct. The skewed distribution of responses (Table 21) reflected that a rating of "important" or "very important" was endorsed by more than half of the respondents for each item.

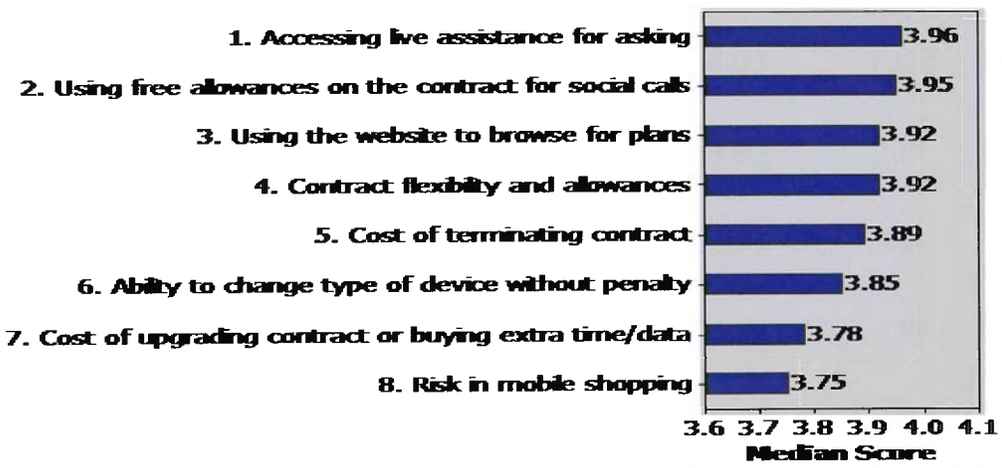
Table 21 Aspects of service influencing choice to renew contract with current provider

Item	Definitely not important	Not important	Neutral	Important	Very important
1. Using free allowances on the contract for social calls	18 (5.6%)	40 (12.4%)	36 (11.1%)	135 (41.8%)	86 (26.6%)
2. Using the website to browse for plans	11 (3.4%)	22 (6.8%)	77 (23.8%)	119 (36.8%)	94 (29.1%)
3. Accessing live assistance for asking	9 (2.8%)	23 (7.1%)	59 (18.3%)	150 (46.4%)	82 (25.4%)
4. Ability to change type of device without penalty	7 (2.2%)	30 (9.3%)	68 (21.1%)	144 (44.6%)	74 (22.9%)
5. Contract flexibility and allowances	7 (2.2%)	26 (8.0%)	64 (19.8%)	146 (45.2%)	80 (24.8%)

6. Cost of terminating contract	13 (4.0%)	28 (8.7%)	55 (17.0%)	152 (47.1%)	74 (22.9%)
7. Cost of upgrading contract or buying extra time/data	17 (5.3%)	25 (7.7%)	80 (24.8%)	124 (38.4%)	77 (23.8%)
8. Risk in mobile shopping	21 (6.5%)	29 (9.0%)	75 (23.2%)	123 (38.1%)	75 (23.2%)

The grouped median scores for each item in Table 21 were compared visually using a bar chart in Figure 16. According to the relative magnitude of the median scores, the items were ranked in order: 1 = Accessing live assistance for asking; 2 = Using free allowances on the contract for social calls; 3 = Using the website to browse for plans; 4. = Contract flexibility and allowances; 5 = Cost of terminating contract; 6. = Ability to change type of device without penalty; 7 = Cost of upgrading contract or buying extra time/data; 8. = Risk in mobile shopping.

Figure 16 Median scores for eight items influencing choice to renew contract



The grouped median scores for each of the eight items according to the gender of the respondents were also computed (Table 22). Kruskal-Wallis tests were used to compare the grouped median scores with respect to the gender of the respondents. None of the Kruskal-Wallis χ^2 statistics were significant at $\alpha = .05$, indicated by $p > .05$. It is concluded that there was no significant difference in the responses of male and female respondents with respect to the eight items influencing their choice to renew contract. The median scores for the top five items were all encompassed within a narrow range, from 3.68 to 4.05, reflecting the central tendency of the respondents to endorse these items as "neutral" (rating of 3) or "important" (rating of 4).

Table 22 Grouped median scores for eight items influencing choice to renew contract

Item	Grouped Median		Kruskal-Wallis χ^2	P
	Female	Male		
1. Accessing live assistance for asking	3.87	4.05	2.326	.127
2. Free allowances on the contract for social calls	3.88	4.04	1.336	.248
3. Using the website to browse for plans	3.86	3.99	.645	.422
5. Contract flexibility and allowances	3.85	4.00	1.153	.283
6. Ability to change type of device without penalty	3.82	3.90	.307	.580
6. Cost of terminating contract	3.85	3.94	.506	.477
7. Cost of upgrading contract or extra time/data	3.75	3.82	.278	.598
8. Risk in mobile shopping	3.81	3.68	.988	.320

4.4.3 Relationship of Gender with Mobile Usage Characteristics

This section elaborates the research findings about the influence of gender on mobile usage characteristics. It reports the results from the correlation of respondents' gender with a number of mobile usage characteristics, including, type of service contract, average calling time, purpose of mobile phone use, bill payer, monthly mobile phone expenditure, frequency of use of different mobile phone services.

i. Gender and Type of Service Contract

A Chi-Square test based on the cross-tabulation indicated no significant association between users' gender and type of mobile phone contract as revealed by $\chi^2 = 3.454$, $p = .178$). Nearly half of the respondents (161 or 49.8%) had a prepaid mobile phone contract, whilst 87 (26.9%) had a contract with low monthly fee and higher call rate, and 75 (23.2%) had a contract with a high monthly fee and lower call rate (Table 23). It was found that an almost equal proportion of male and female respondents in each type of contract. But if minute differences are to be considered, then it can be argued that more female respondents had prepaid contract as well as post paid contract with low monthly fee and higher call rate, whereas there were more male respondents than female with post-paid contracts that had high monthly fee and lower call rate.

Table 23 Cross-tabulation of respondents' gender by type of mobile phone service contract

Contract	Male		Female		Total
Prepaid	72	(46.5%)	89	(53%)	161
Low monthly fee and higher call rate	40	(25.8%)	47	(28%)	87
High monthly fee and lower call rate	43	(27.7%)	32	(19%)	75
Total	155		168		323

Note. Pearson Chi-Square = 3.454, p = .178

ii. Gender and Phone Bill Payment

The Chi-Square test based on Table 24 indicates a significant association between gender and who paid the bill (χ^2 = 26.480, p < .001). The percentage distribution of respondents by gender and who paid the bill is illustrated in Figure 17.

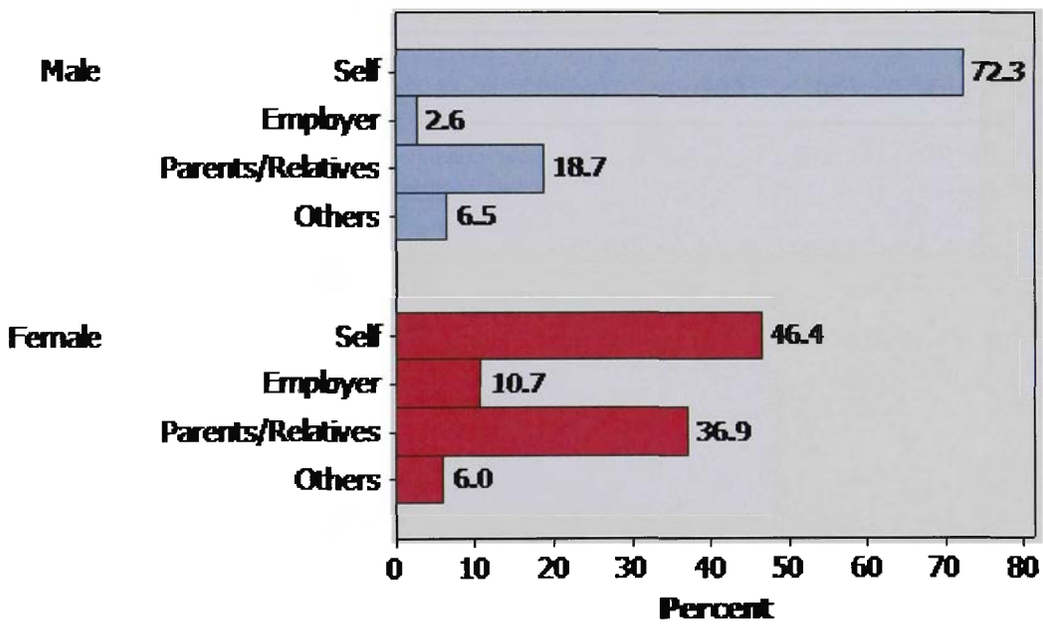
Table 24 Cross-tabulation of gender and 'who pays the mobile phone bill'

Payer	Male	Female	Total
Self	112	78	190
Employer	4	18	22
Parents / relatives	29	62	91
Others	10	10	20
Total	155	168	323

Note: Chi-Square = 26.480, p < .001

The proportion of male respondents paying the bill themselves (72.3%) was higher than the female respondents (46.4%). Parents/relatives or employers paid the bill for more female respondents than male (36.9% and 10.7%, respectively) than for males (18.7% and 2.6%). More than half of the respondents (190 or 58.8%) claimed that they paid their mobile phone subscription bill themselves, whereas 91 respondents (28.2%) said their parents/relatives paid the bill. In addition, some respondents (22 or 6.8%) reported that their employers paid their bill, while the remaining respondents (20 or 6.2%) indicated "others" (Table 24).

Figure 17 Respondents' distribution by gender and who pays the mobile phone subscription bill



iii. Gender and Purposes of Mobile Phone Use

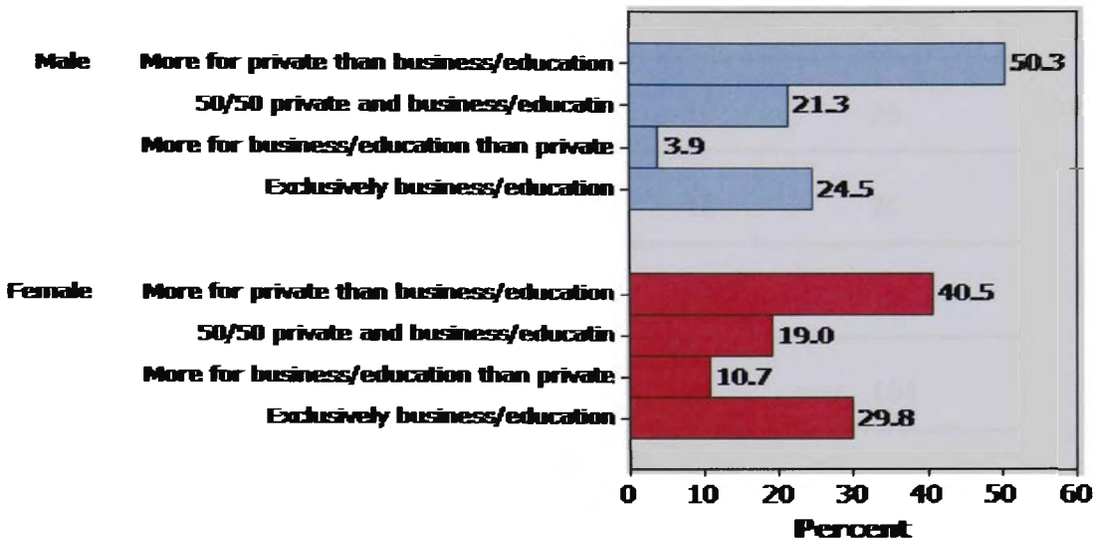
Less than half of the respondents (146 or 45.2%) used their mobile phone largely for private purposes other than business/education (Table 25). The gender distribution of respondents

stratified by purpose of mobile phone use is illustrated in Figure 18. The Chi-Square test indicated that the purposes of mobile phone use were significantly associated with gender as revealed by $\chi^2 = 7.826$, $p = .049$.

Table 25 Cross-tabulation of gender and purposes of using mobile phone

Purpose	Male	Female	Total
More for private than for business/education	78	68	146
About 50/50 private and business/education	33	32	65
More for business/education than for private	6	18	24
Exclusively for business/education	38	50	88
Total	155	168	323

Note: Chi-Square = 7.826, p = .049



As shown in Table 25 and Figure 18, a higher proportion of male (50.3%) than female respondents (40.5%) reported using their phone for private use other than business/education. In contrast, a higher proportion of female respondents (10.7%) than male (3.9%) indicated greater use of phone for business/education rather than private use.

iv. Gender and Length of Time since Obtaining First Mobile Phone

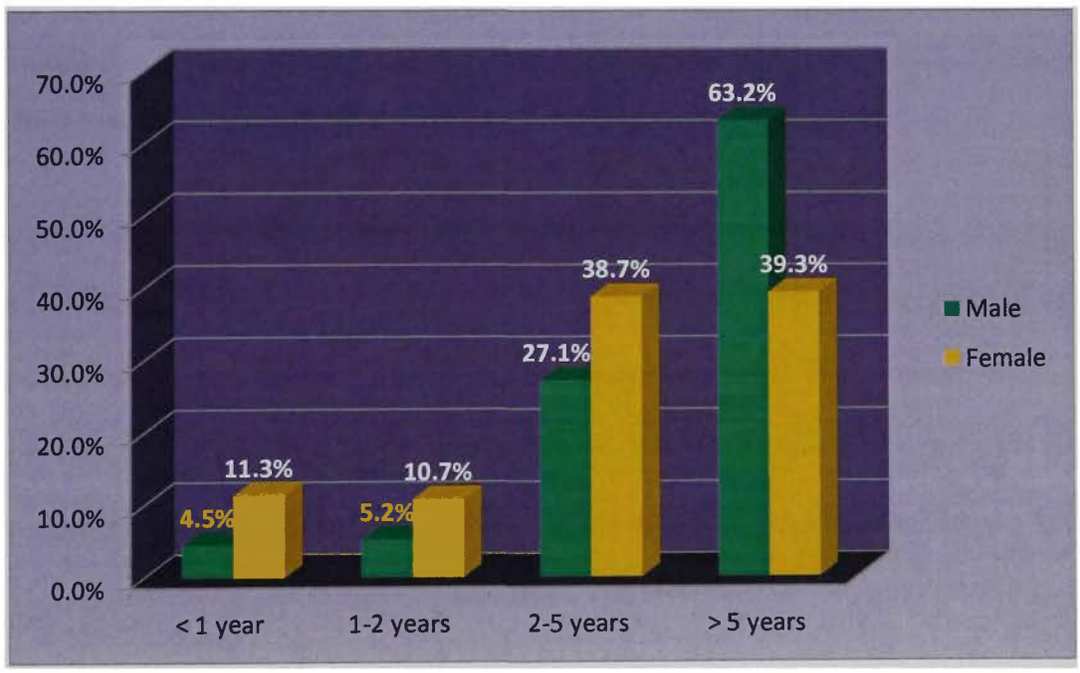
Majority of the respondents (164 or 50.8%) got their first mobile phone more than five years ago (Table 26). A strong association was found between gender and the length of time that respondents had their first mobile phone ($\chi^2 = 20.082$, $p < .001$). Figure 19 illustrates that there are significantly more male (63.2%) than female respondents (39.3%) who had mobile phones for more than 5 years.

Table 26 Cross-tabulation of respondents' gender and length of time since their first mobile phone

Length of time	Male	Female	Total
Less than 1 year	7	19	26
1 to 2 years	8	18	26
2 to 5 years	42	65	107
More than 5 years	98	66	164
Total	155	168	323

Note: Chi-Square = 20.082, $p < .001$

Figure 19 Percentage distribution of respondents by gender and length of time since their first mobile phone



v. Gender and Age of Current Mobile Phone Contract

Table 27 shows that majority of the respondents (142 or 44.0%) had their current contract for more than two years. Of these respondents, 47.7% were male while 45.5% were female. The Chi-Square test showed no significant association between gender and age of their current mobile phone contract ($\chi^2 = 2.705$, p =.439).

Table 27 Cross-tabulation of respondents' gender and age of current mobile phone contract

Age of mobile phone contract	Male		Female		Total
6 months to 1 year	40	(25.8%)	49	(29.2%)	89
1 - 2 years	41	(26.5%)	51	(30.4%)	92
> 2 years	74	(47.7%)	68	(40.5%)	142
Total	155		168		323

Note: Chi-Square = 2.705, p = .439

vi. Gender and Mobile Phone Calling Time

On a typical day, a big majority of the respondents spend between 6 to 30 minutes of calling time (115 respondents spend 6 to 15 minutes; 87 respondents 16 to 30 minutes) on their mobile phones (Table 28). The Chi-Square test indicated that there was no significant association between gender and calling time usage per day, as shown by $\chi^2 = 5.111$, p =.276.

Table 28 Cross-tabulation of respondents' gender and calling time

Calling time (minutes)	Male	Female	Total
0 - 5	25	23	48
6 - 15	52	63	115
16 - 30	49	38	87
31 - 60	18	28	46
> 60	11	16	27
Total	155	168	323

Note. Pearson Chi-Square = 5.111, p = .276

iii. Gender and Mobile Phone Expenditure

A large proportion of the respondents (109 respondents pay 101-300 SAR; 87 respondents pay 301-500 SAR) pay an average of between 101 to 300 SAR per month for mobile phone expenditure (Table 29). The results of the Chi-Square test ($\chi^2 = 4.667$, p =.198) showed that there was no significant association between gender and average mobile phone expenditure. The data showed that more than half of both male (64.3%) and female respondents (57.7%) spent an average of 101-500 SAR per month for mobile phones (Figure 32).

Table 29 Cross-tabulation of respondents' gender and average monthly mobile phone expenditure

Expenditure	Male		Female		Total
	N	%	N	%	
0 - 100 SAR	32	20.8%	44	26.2%	76
101 - 300 SAR	49	31.8%	60	35.7%	109
301 - 500 SAR	50	32.5%	37	22.0%	87
> 500 SAR	23	14.9%	27	16.1%	50

Total	154	168	322

Note: Pearson Chi-Square = 4.667, p = .198

vii. Gender and Frequency of Use of Different Services

The respondents were asked about their frequency of use of eight mobile phone services. Responses by the users ranged from 1 ("I don't know the service") to 6 ("more than 20 times per week"). The reliability and internal consistency of the eight items was found adequate as indicated by Cronbach's alpha = .627. Frequencies of responses to the items are shown in Table 23. WAP (connection to a wired network), data transmission, mobile internet, and SMS (text messaging) were the most frequently used services. Of these, WAP was the most popular, as it is used five or more times a week by 204 (or 63.2%) of the respondents. SMS was used "sometimes" by over half of the participants and only 6.5% did not know about this service.

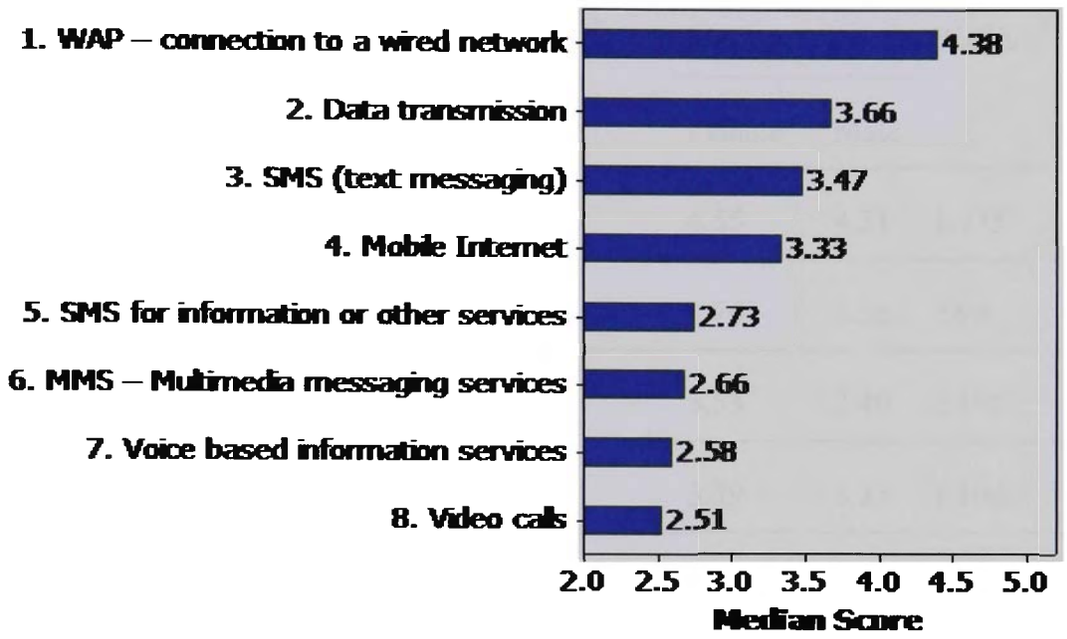
Table 30 Frequency of use of eight mobile phone services

Services	Don't know	I never used it	Sometimes	Up to 5 times per week	6-20 times per week	More than 20 times per week
1. SMS (text messaging)	8 (2.5%)	8 (2.5%)	169 (52.3%)	87 (26.9%)	21 (6.5%)	29 (9.0%)
2. SMS for information or other services	13 (4.0%)	100 (31.0%)	171 (52.9%)	16 (5.0%)	11 (3.4%)	12 (3.7%)
3. MMS – Multimedia messaging services	14 (4.3%)	125 (38.7%)	134 (41.5%)	12 (3.7%)	30 (9.3%)	8 (2.5%)

4. WAP (connection to a wired network)	9 (2.8%)	71 (22.0%)	39 (12.1%)	41 (12.7%)	75 (23.2%)	88 (27.2%)
5. Data transmission	41 (12.7%)	38 (11.8%)	80 (24.8%)	48 (14.9%)	44 (13.6%)	72 (22.3%)
6. Voice based information services	56 (17.3%)	107 (33.1%)	73 (22.6%)	63 (19.5%)	12 (3.7%)	12 (3.7%)
7. Video calls	23 (7.1%)	162 (50.2%)	65 (20.1%)	11 (3.4%)	19 (5.9%)	43 (13.3%)
8. Mobile Internet	41 (12.7%)	48 (14.9%)	103 (31.9%)	26 (8.0%)	42 (13.0%)	63 (19.5%)

The grouped median scores for each item in Table 30 were compared visually using a bar chart (Figure 32). According to the relative magnitude of the median scores, the frequency of use of mobile phone services was ranked in the following order: 1 = WAP - connection to a wired network (5 to 20 times a week); 2 = Data transmission; 3 = SMS (text messaging); 4 = Mobile Internet (sometimes to up to 5 times a week); 5 = SMS for information or other services; 6. MMS = Multimedia messaging services; 7 = Voice based information services; 8 = Video calls (Never used it to sometimes).

Figure 20 Median scores for frequency of use of eight mobile phone services



The grouped median scores for each of the eight items were also computed according to the gender of the respondents (Table 31.). Kruskal-Wallis tests were used to compare the grouped median scores with respect to the genders of the respondents. None of the Kruskal-Wallis statistics were significant at $\alpha = .05$, indicated by $p > .05$. It is concluded that there was no significant difference in the responses of male and female respondents with respect to their frequency of use of the eight mobile phone services.

Table 31 Grouped median scores for frequency of use of eight mobile phone services

Item	Grouped Median		Kruskal-Wallis χ^2	P
	Female	Male		
1. WAP (connection to wired network)	4.55	4.21	1.775	.183
2. Data transmission	3.76	3.56	.998	.318
3. SMS (text messaging)	3.53	3.40	2.198	.138
4. Mobile Internet	3.39	3.25	1.100	.294
5. SMS for information/other services	2.67	2.80	2.664	.103
6. MMS – Multimedia messaging services	2.63	2.69	.473	.491
7. Voice based information services	2.53	2.64	.068	.794
8. Video calls	2.45	2.57	.892	.294

4.5 Influence of Location on Mobile Phone Use

RQ#2 Is there a significant relationship between respondents' location and their loyalty/satisfaction, factors affecting respondents' choice of service provider and mobile phone usage characteristics?

This section explores the influence of the other demographic factor used in this study i.e. location. The study was conducted in universities in Riyadh, Jeddah, Dammam and other cities. The location of the respondents was correlated with the responses gathered from the survey on

the three main aspects of loyalty/satisfaction, choice of service provider and mobile phone usage characteristics. The following sections present the results of this correlation in that order.

4.5.1 Relationship between Location and Loyalty/Satisfaction

i. Location and Mobile Phone Service Provider

Table 32 presents the cross-tabulation of respondents' current mobile service providers by location, while the percentage distribution of providers by location is illustrated in Figure 21. Data obtained showed a significant association between the providers and their locations (χ^2 = 15.205, p = .019).

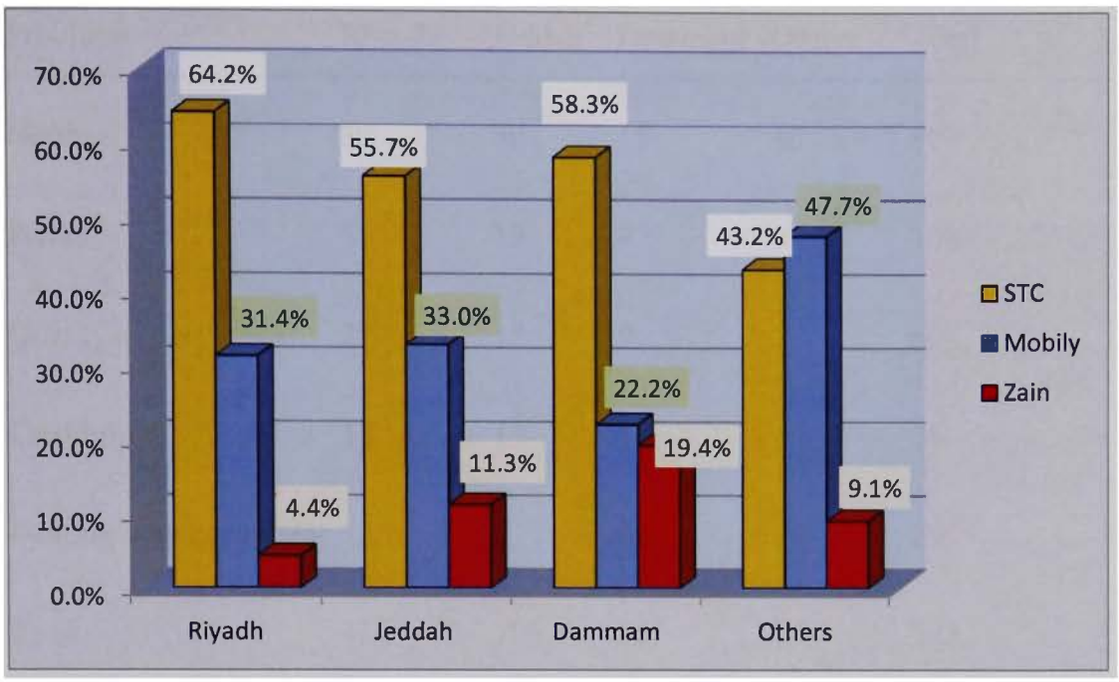
Table 32 Cross-tabulation of current service providers by location

Location	Mobily		STC		Zain		Total
Riyadh	43	(64.2%)	88	(31.4%)	6	(4.4%)	137
Jeddah	35	(55.7%)	59	(33.0%)	12	(11.3%)	106
Dammam	8	(58.3%)	21	(22.2%)	7	(19.4%)	36
Others	21	(43.2%)	19	(47.7%)	4	(9.1%)	44
Total	107		187		29		323

Note: Chi-Square = 15.205, p = .019

As shown by the data, STC was the most popular provider for 187 respondents, followed by Mobily with 107 respondent-clients. Only 29 respondents used Zain.

Figure 21 Percentage distribution of service providers by location



STC was the most popular provider among respondents from Riyadh (64.2%), Jeddah (55.7%) and Dammam (58.3%). For most respondents from other cities, Mobily was the most frequently subscribed provider (47.7%), although the frequency of users patronizing it is not so distant from STC users (43.2%). In all three locations, Mobily was the second most frequently subscribed provider by respondents from Riyadh (31.4%), Jeddah (33.0%) and Dammam (22.2%). Zain was the least popular provider in all locations.

ii. Location and Problems with Current Mobile Service Provider

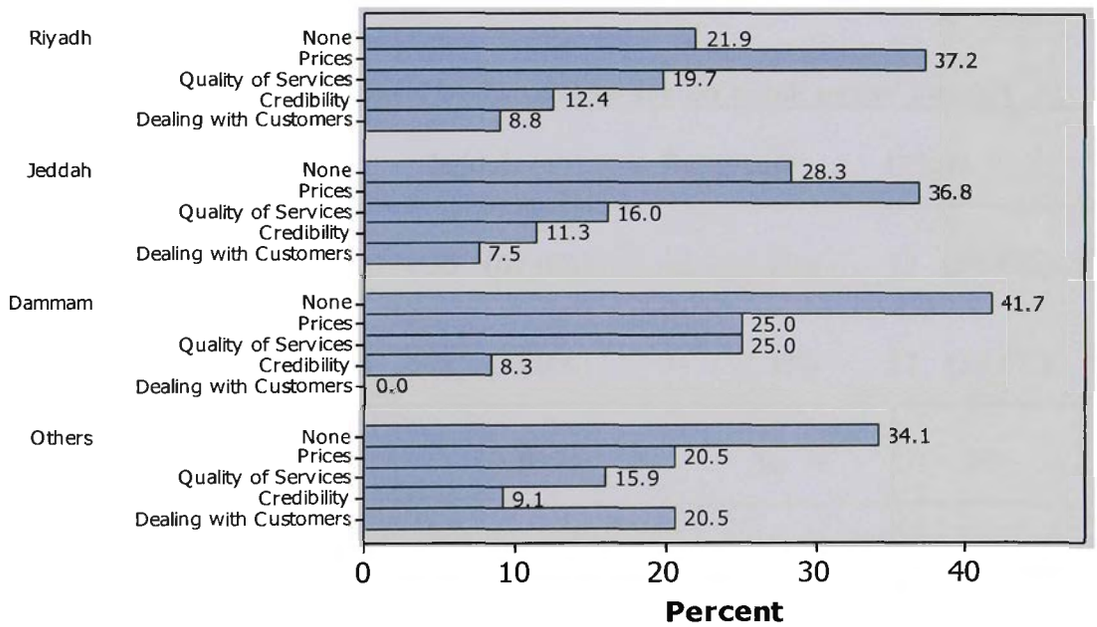
The cross-tabulation of problems experienced with current mobile service providers by location is presented in Table 33, and the percentage distributions of these problems by location is shown in Figure 22. Data showed a significant association between location and problems experienced with current providers ($\chi^2 = 22.409$, $p = .033$).

Table 33 Cross-tabulation of location and problems with current service providers

Problems	Riyadh	Jeddah	Dammam	Others	Total
None	30	30	15	15	90
Prices	51	39	9	9	108
Quality of Services	27	17	9	7	60
Credibility	17	12	3	4	36
Dealing with customers	12	8	0	9	29
Total	137	106	36	44	323

Note: Chi-Square = 22.409, p = .033

Figure 22 Percentage distribution of problems with service providers by location



Prices was the most commonly mentioned problem by respondents from Riyadh (37.2%) and Jeddah (36.8%) but prices were perceived to be less problematic for mobile phone users in Dammam (25.0%) and other cities (20.5%). Quality of service was the second most frequently cited problem by 60 respondents coming from Riyadh (27), Jeddah (17), Damman (9), and those from other cities (7). The number 3 ranking problem was credibility which was cited by 36 respondents (Table 32). On the whole, the top 3 problems were prices, quality of services and credibility.

iii. Location and Use of Other Mobile Phone Service Providers

The frequency of the respondents who had previously used other service providers was cross-tabulated with location and is shown in Table 34. There was no significant association found between the respondents' use of other providers and their locations (χ^2 = .603, p = .886). The proportion of respondents who had used other providers was consistent at about one-third or slightly more than one-third (33.0% to 38.6%) across all locations included in this study.

Table 34 Cross-tabulation of location and use of other mobile service providers

Used other provider	Riyadh	Jeddah	Dammam	Others	Total
Yes	50 (63.5%)	35 (67.0%)	12 (66.7%)	17 (61.4%)	114
No	87 (36.5%)	71 (33.0%)	24 (33.3%)	27 (38.6%)	209
Total	137	106	36	44	323

Note: Chi-Square = .603, p = .886

iv. Location and Alternative Service Providers

The names of other service providers considered by respondents were cross-tabulated with location (Table 35). No significant association was found between location and the considered alternative provider ($\chi^2 = 17.238$, $p = .008$).

Table 35 Cross-tabulation of location and 'other' mobile service provider

	Riyadh	Jeddah	Dammam	Others	Total
Mobily	84	64	15	21	184
STC	39	41	19	20	119
Zain	14	1	2	3	20
Total	137	106	36	44	323

Note: Chi-Square = 17.238, p = .008

v. Location and Problems with Other Providers

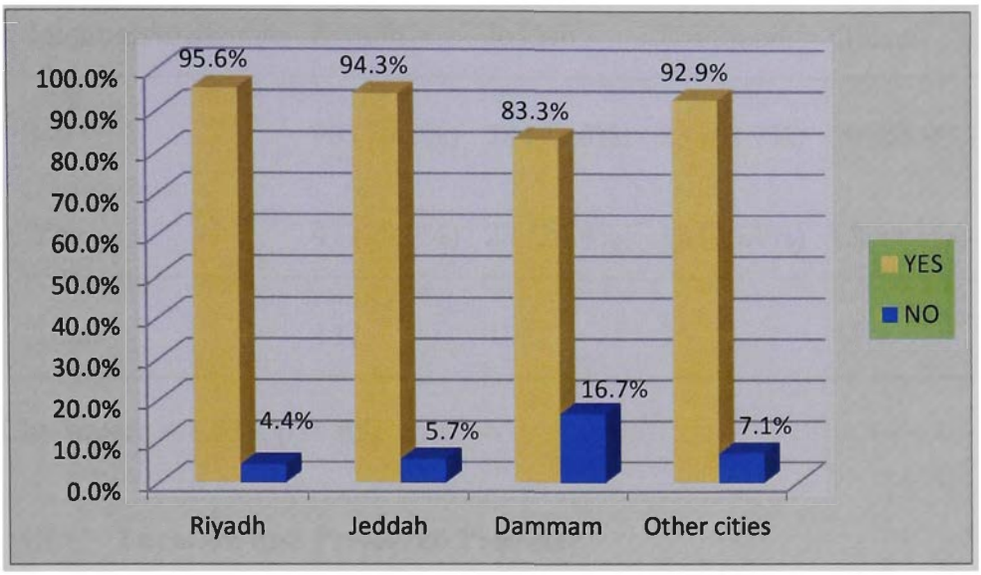
Whether respondents had experienced problems with 'other' service providers was cross-tabulated against location (Table 36). A significant association was found between the responses and location ($\chi^2 = 8.056$, $p = .045$) and the percentage distribution for this shown in Figure 23.

Table 36 Cross-tabulation of location and respondents who had problems with other service providers

Problems	Riyadh	Jeddah	Dammam	Others	Total
No	6 (4.4%)	6 (5.7%)	6 (16.7%)	5 (7.1%)	23
Yes	131 (95.6%)	100 (94.3%)	30 (83.3%)	39 (92.9%)	300
Total	137	106	36	44	323

Note: Chi-Square = 8.056, p = .045

Figure 23 Percentage distribution of respondents who had problems with other service providers by location



Although, most respondents had experienced some type of problem with other providers, fewer users in Dammam (83.3%) and other cities (92.9%) experienced problems with other providers compared to those in Riyadh (95.6%) and Jeddah (94.3%).

vi. Location and Intention to Change Providers after Contract Expires

The intention to change providers was cross-tabulated with location (Table 37). The Chi-Square test showed no significant association between location and intention to change service providers ($\chi^2 = 1.639$, $p = .651$). The proportion of respondents intending to change providers (26.4% to 36.1%) was almost equivalent between Riyadh and Jeddah (29.9% and 26.4%) and Dammam and other cities (36.1% and 34.1%).

Table 37 Cross-tabulation of respondents by location and intention to change service providers

Intention to change	Riyadh	Jeddah	Dammam	Others	Total
No	96 (70.1%)	78 (73.6%)	23 (63.9%)	29 (65.9%)	226
Yes	41 (29.9%)	28 (24.4%)	13 (36.1%)	15(34.1%)	97
Total	137	106	36	44	323

Note: Chi-Square = 1.639, p = .651

vii. Location and Preferred Provider

The preferred provider by respondents after contract expiration with current provider was cross-tabulated against location (Table 38). No significant association was found between respondents' location and preferred service provider according to the results of the Chi-Square test (χ^2 = 4.525, p = .210). The proportions of respondents in each location who intended to change to Mobily was higher in Jeddah, Dammam and other cities at (54.7%, 55.6% and 51.7%) whereas it was higher for STC in Riyadh (54.7%). None of the respondents chose Zain as a preferred provider.

Table 38 Cross-tabulation of respondents' location and preferred service provider

Provider	Riyadh	Jeddah	Dammam	Others	Total
Mobily	62 (45.3%)	58 (54.7%)	20 (55.6%)	27 (51.7%)	167
STC	75 (54.7%)	48 (45.3%)	16 (44.4%)	17 (48.3%)	156

Total	137	106	36	44	323

Note: Chi-Square = 4.525, p = .210

viii. Location and Reasons for Shifting to another Provider

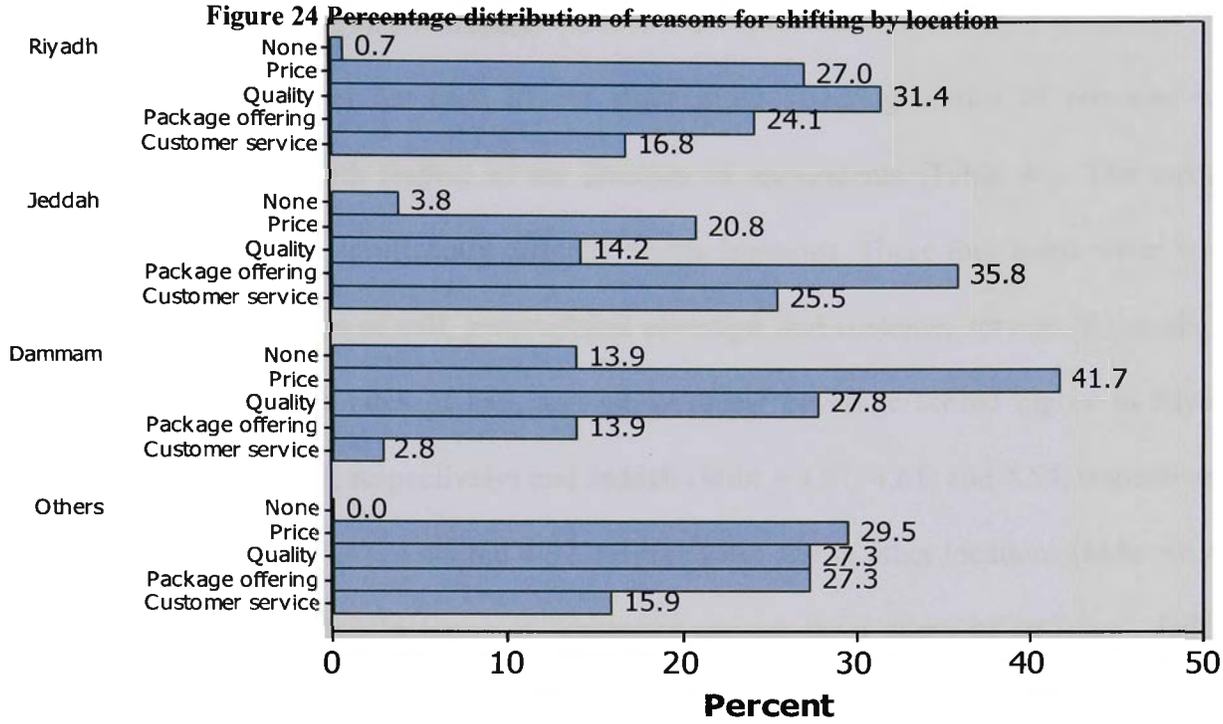
The reasons why respondents wanted to shift to another provide after contract expiration were cross-tabulated against location (Table 39). The percentage distributions for these variables are shown in Figure 24. A significant association was found between location and reasons for shifting ($\chi^2 = 43.446$, $p < .001$).

Table 39 Cross-tabulation of location and reasons for shifting to another service provider

Reason	Riyadh	Jeddah	Dammam	Others	Total
None	1	4	5	0	10
Price	37	22	15	13	87
Quality	43	15	10	12	80
Package offering	33	38	5	12	88
Customer service	23	27	1	7	58
Total	137	106	36	44	323

Note: Chi-Square = 43.446, p < .001

Figure 24 Percentage distribution of reasons for shifting by location



The most cited reason for why respondents wanted to shift was quality (31.4%) in Riyadh; package offering (35.8%) in Jeddah; price (41.7%) in Dammam and other cities. Customer service was the least cited reason in Riyadh (16.8%), Dammam (2.8%) and other cities (15.9%), whereas quality was the least cited reason in Jeddah (14.2%). These data are shown in Figure 24.

4.5.2 Relationship between Location and Choice of Mobile Phone Provider

This section reports the results from testing the influence of location on respondents' choice of mobile phone service provider. Respondents were asked to rate eight items affecting choice of mobile service provider, and eight items affecting choice to renew contract. The grouped median scores for these items were compared using the Kruskal-Wallis test.

i. Choice of Service Provider

The grouped median scores for each of the eight items affecting choice of provider was computed and tabulated with respect to the location of respondents (Table 40). The median scores for four items were significantly different across locations. These four items were: voice clarity and data quality, rates of call, geographical coverage, and customer service. Voice clarity and data quality, including rates of call, and geographical coverage scored higher in Riyadh (Mdn = 4.75, 4.66 and 4.67, respectively) and Jeddah (Mdn = 4.67, 4.61, and 4.54, respectively) than in Dammam (Mdn = 4.47, 4.44 and 4.32, respectively) and in other locations (Mdn = 4.40, 4.34, and 4.34, respectively). In terms of "customer service for a query or an issue", Jeddah scored the highest (Mdn = 4.60), followed by Riyadh (Mdn = 4.57). Similarly, the grouped median scores garnered by Jeddah and Riyadh for "package offering most access and minimum cost package" were too close, thus, both locations are leading in the abovementioned items (Table 39).

Table 40 Median scores for eight items affecting choice of mobile provider by location

Item	Riyadh	Jeddah	Dammam	Others	Kruskal Wallis χ^2	P
1. Voice clarity and data quality	4.75	4.67	4.47	4.40	10.594	.014*
2. Rates of call	4.66	4.61	4.44	4.34	8.964	.043*
3. Geographical coverage	4.67	4.54	4.32	4.34	10.493	.015*

4. Customer service	4.57	4.60	4.14	4.21	8.319	.040*
5. Package offering most access	4.47	4.50	4.22	4.39	3.785	.286
6. Minimum cost package	4.07	4.08	3.67	3.76	2.817	.421
7. Package offering free services	3.71	3.87	3.84	3.37	3.785	.286
8. Provider's brand name/ status	3.19	3.36	3.75	2.9	1.828	.609

Note: * Significant at $\alpha = .0$

ii. Choice to Renew Contract

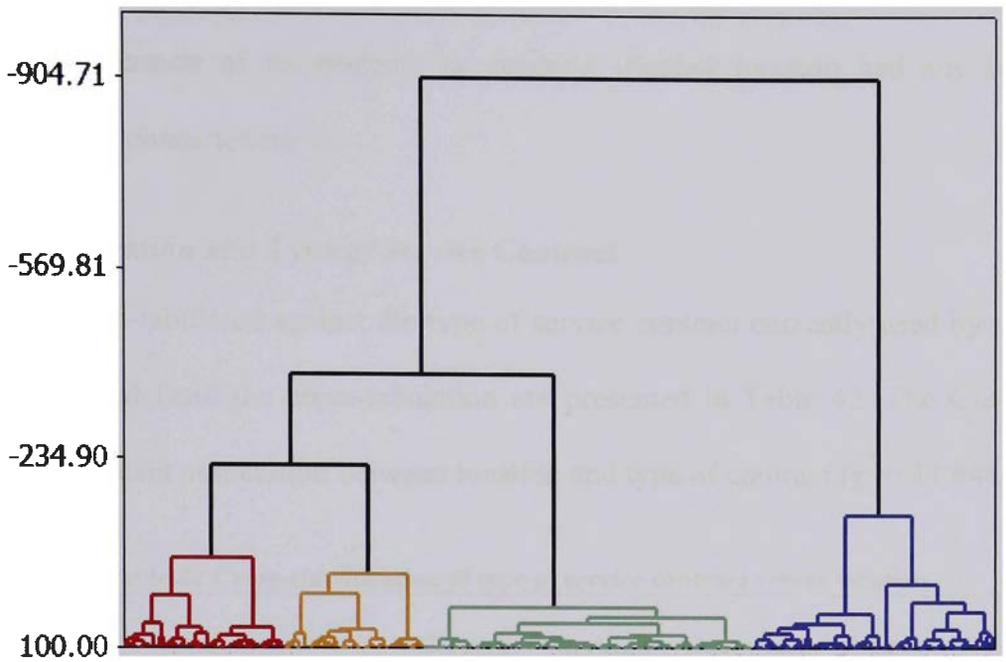
The grouped median scores for each of the eight items affecting the choice to renew an expired contract were computed and tabulated with respect to the location of the respondents (Table 41). The p-values for the Kruskal-Wallis test statistics were used for comparing the grouped median scores. The p-values for the statistical test all exceeded $\alpha = .05$ significance level, indicating that location did not significantly affect the median scores. Because the Kruskal-Wallis test failed to show that both location (Table 40) and gender (see Table 22) influenced the scores of the eight items affecting the choice to renew the contract, this result indicates that demographic factors may not determine respondents' choice of service provider at all.

Table 41 Median scores for eight items affecting choice to renew contract by location

Item	Riyadh	Jeddah	Dammam	Others	Kruskal-Wallis χ^2	p
1. Live assistance to queries	4.06	3.98	3.81	3.69	5.224	.156
2. Free allowances for social calls	4.04	3.81	3.95	4.04	3.053	.383
3. Use website to browse for plans	3.94	3.97	3.81	3.81	.969	.809
4. Contract flexibility/ allowances	4.04	3.9	3.7	3.79	4.383	.223
5. Cost of terminating contract	4.02	3.72	4.07	3.75	5.428	.143
6. Change device without penalty	3.99	3.74	3.91	3.69	4.339	.227
7.Cost of upgrading or buying extras	3.93	3.7	3.87	3.46	6.363	.095
8. Risk in mobile shopping	3.71	3.81	3.90	3.59	2.017	.569

To confirm this finding, a cluster analysis was conducted. All the 232 respondents were classified according to their scores for the eight items listed in Table 40. Four distinct clusters of respondents were revealed in the dendrogram (Figure 25). Each cluster is illustrated using different colours (red, orange, green, and blue).

Figure 25 Clustering of 232 respondents by aspects of service affecting their choice to renew contract with current supplier



It was found that all four clusters contained respondents of both gender groups, male and female, from Riyadh, Jeddah, Dammam, and other locations. The scattering of respondents from both gender and all locations in all the four clusters of participants shows that the reasons behind their decision to renew their contracts was evidently not related to gender or location. If gender and location were significant, then the males and female respondents from the different locations would be classified in different clusters. This implies that factors other than the demographic characteristics of location and gender may be associated with users' decision to renew contract.

4.5.3 Relationship between Location and Mobile Usage Characteristics

Mobile usage characteristics was measured through (1) type of service contract; (2) phone bill payment; (3) purposes for which mobile phones are used; (4) time when first mobile phone was

owned; (5) age of current contract; (6) calling time usage; (7) mobile phone expenditure; and (8) frequency of use of different services. The findings for each of these characteristics were correlated with location of respondents to examine whether location had any influence on variations in usage characteristics.

i. Location and Type of Service Contract

Location was cross-tabulated against the type of service contract currently used by respondents. The figures derived from the cross-tabulation are presented in Table 42. The Chi-Square test revealed no significant association between location and type of contract ($\chi^2 = 11.646$, $p = .070$).

Table 42 Cross-classification of type of service contract versus location

Contract	Riyadh	Jeddah	Dammam	Others	Total
Prepaid	68 (49.6%)	47 (44.3%)	22 (61.1%)	24 (54.5%)	161
Low monthly fee and higher call rate	43 (31.4%)	32 (30.2%)	7 (19.4%)	5 (11.4%)	87
High monthly fee and lower call rate	26 (19.0%)	27 (25.5%)	7 (19.4%)	15 (34.1%)	75
Total	137	106	36	44	323

Note: Chi-Square = 11.646, p = .070

As shown in the table, prepaid contract was the most prevalent contract type across all locations. The respondents from Riyadh and Jeddah had similar distribution with respect to the type of

contract--prepaid ranked first (49.6% and 44.3% respectively), followed by low monthly fee and higher call rate, and high monthly fee and lower call rate came third. The pattern was similar in Dammam, except for the fact that there were equal proportion of users with high monthly fee and lower call rate and low monthly fee and higher call rate (19.1% for both). The situation was a little different in "other cities" where the number of users with low monthly fee and higher call rate was lower than high monthly fee and lower call rate (11.4% versus 34.1%).

ii. Location and Phone Bill Payment

A cross-tabulation of location and who paid the bill is presented in Table 43. The Chi-Square test revealed no significant association between location and the type of bill payer ($\chi^2 = 24.751$, $p = .003$). The table shows that majority of the respondents across all locations pay the phone bill themselves (Riyadh=62.8%; Jeddah=49.1%; Dammam=66.7%; other cities=63.6%).

Table 43 Cross-classification of who paid the mobile phone bills versus location

Payer	Riyadh	Jeddah	Dammam	Others	Total
Self	86 (62.8%)	52 (49.1%)	24 (66.7%)	28 (63.6%)	190
Employer	2 (1.5%)	13 (12.3%)	4 (11.1%)	3 (6.8%)	22
Parents/Relatives	36 (26.3%)	39 (36.8%)	6 (16.7%)	10(22.7%)	91
Others	13 (9.5%)	2 (1.9%)	2 (5.6%)	3 (6.8%)	20
Total	137	106	36	44	323

Note: Chi-Square = 24.751, p = .003

As these figures shows, a relatively lower proportion in Jeddah paid the bills themselves than other cities. In fact, a high proportion of respondents in Jeddah indicated that parents/relatives paid the bill (36.8%). This figure is significantly higher when compared to respondents in other location whose parents/relatives paid the bill, e.g. Riyadh (26.3%), Dammam (16.7%) and other locations (6.8%). The employer of the respondent was also more likely to pay the bill in Jeddah (12.3%) than in Riyadh (1.5%), Dammam (11.1%) and other locations (6.8%). Female users represented the majority (86%) of the respondents in Jeddah and young Saudi women do not have as much economic freedom or independent income as men, so it can be assumed that they are more dependent on parents or employers to pay their bills.

iii. Location and Purposes for which Mobile Phone is Used

The cross-tabulation of location with the purposes for which a mobile phone is used is presented in Table 44. The Chi-Square test revealed a significant association between location and the purposes of using a mobile phone (χ^2 = 26.472, p = .002). The percentage distribution is illustrated in Figure 26.

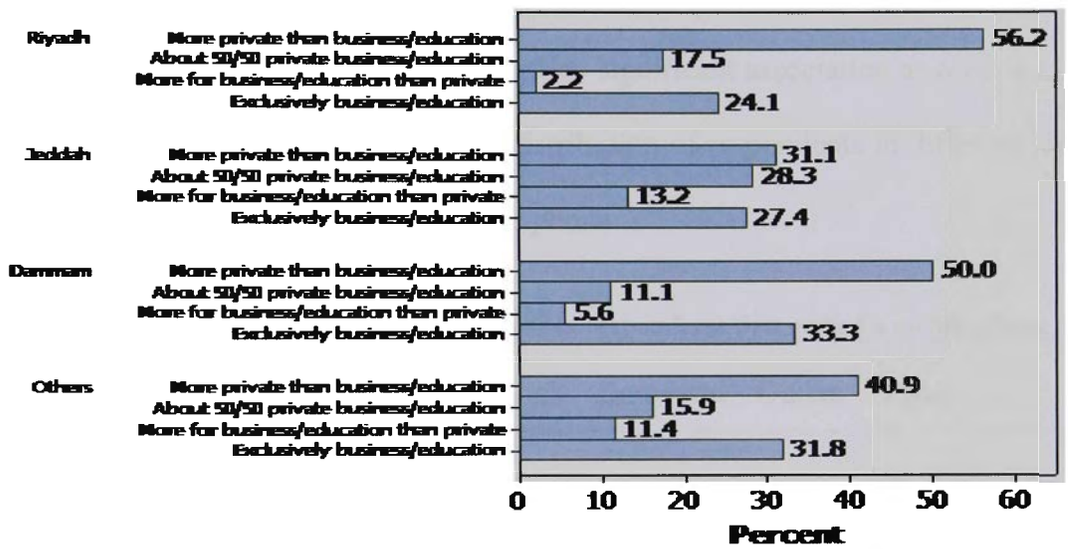
Table 44 Cross-tabulation of location and purposes for which a mobile phone is used

Purpose	Riyadh	Jeddah	Dammam	Others	Total
More for private than business/education	77	33	18	18	146
50/50 private and business/education	24	30	4	7	65
More for business/education than private	3	14	2	5	24
Exclusively for business/education	33	29	12	14	88

Total	137	106	36	44	323

Note: Chi-Square = 26.472, p = .002

Figure 26 Percentage distribution of purposes for which a mobile phone is used by location



The respondents from the different locations listed varied purposes for which they used their mobile phone. As revealed in Figure 26, in Riyadh and Dammam where male respondents dominated, majority (56.2% in Riyadh; 50.0% in Dammam) used mobile phones for private purposes other than business/education. In contrast, in Jeddah, where there were more female respondents, the percentage of respondents who used mobile phones for private purposes was significantly lesser than the other two locations (31.1%). Moreover, a higher proportion of respondents in Jeddah selected both private use/business education as well as more business/education (28.3%; 13.2%) compared with Riyadh (17.5%; 2.2%), Dammam (11.1%;

5.6%) and other locations (15.9%; 11.4%). But, exclusive use of mobile phone for business/education was similar across the board with Jeddah (27.4%), Dammam (33.3%), other locations (31.8%) and lowest in Riyadh (24.1%).

iv. Location and Time since Respondents First Owned a Mobile Phone

The cross-tabulation for location and time since respondents first owned a mobile phone is presented in Table 45. The Chi-Square test showed no significant association as revealed by $\chi^2 = 12.735$, $p = .175$. There was a relatively equal distribution of respondents in different locations with respect to the time they first owned a mobile phone.

Table 45 Cross-tabulation of location and time since respondents first owned a mobile phone

Time	Riyadh	Jeddah	Dammam	Others	Total
< 6 months	12	6	4	4	26
6 months to 1 year	7	9	7	3	26
1 - 2 years	40	40	12	15	107
> 2 years	78	51	13	22	164
Total	137	106	36	44	323

Note: Chi-Square = 12.735, p = .175

v. Age of Current Mobile Phone Contract

Age of current mobile phone contracts and location was cross-tabulated and is presented in Table 46. The Chi-Square test showed no significant association between the variables, as revealed by

χ^2 = 9.066, p = .431. A relatively equal distribution of respondents from the different locations was noted with respect to the age of current mobile phone contract.

Table 46 Cross-tabulation of location and age of current mobile phone contract

Age of contract	Riyadh	Jeddah	Dammam	Others	Total
< 6 months	16	11	8	8	43
<1 year	25	28	14	12	89
1 - 2 years	37	28	11	16	92
> 2 years	65	50	11	16	142
Total	137	106	36	44	323

Note: Chi-Square = 9.066, p = .431

vi. Location and Mobile Pone Calling Time

The average amount of calling time (initiation and received) per respondent was cross-tabulated with their location in Table 47. The Chi-Square test showed no significant association between the two variables (χ^2 = 18.680, p = .097). This means that respondents were distributed relatively equally in the different locations with respect to total calling time usage per day.

Table 47 Cross-tabulation of location and respondents' total calling time usage per day

Minutes	Riyadh	Jeddah	Dammam	Others	Total
0 – 5	22	12	5	9	48
6- 15	53	39	13	10	115
16 – 30	38	20	12	17	87
31 – 60	17	20	4	5	46
> 60	7	15	2	3	27
Total	137	106	36	44	323

Note: Chi-Square = 18.680, p = .097

vii. Location and monthly mobile phone expenditure

Mobile phone expenditure and location was cross-tabulated and is presented in Table 48. The Chi-Square test revealed no significant association (χ^2 = 18.680, p = .401) between the two variables of location of respondent and their mobile phone expenditure. Respondents were relatively distributed equally across the different locations with respect to their monthly mobile phone expenditure. It was observed that, at each location, respondents' average expenditure ranged from 101-300 SAR per month. About one tenth to one fifth of the respondents spent more than 500 SAR per month.

Table 48 Cross-tabulation of monthly mobile phone expenditure by location

Expenditure	Riyadh	Jeddah	Dammam	Others	Total
0 - 100 SAR	34	25	10	7	76
101 - 300 SAR	50	30	10	19	109
301 - 500 SAR	35	28	10	14	87
> 500 SAR	17	23	6	4	50
Total	136	106	36	44	322

Note: Chi-Square = 9.387, p = .401

viii. Location and Frequency of Use of Different Services

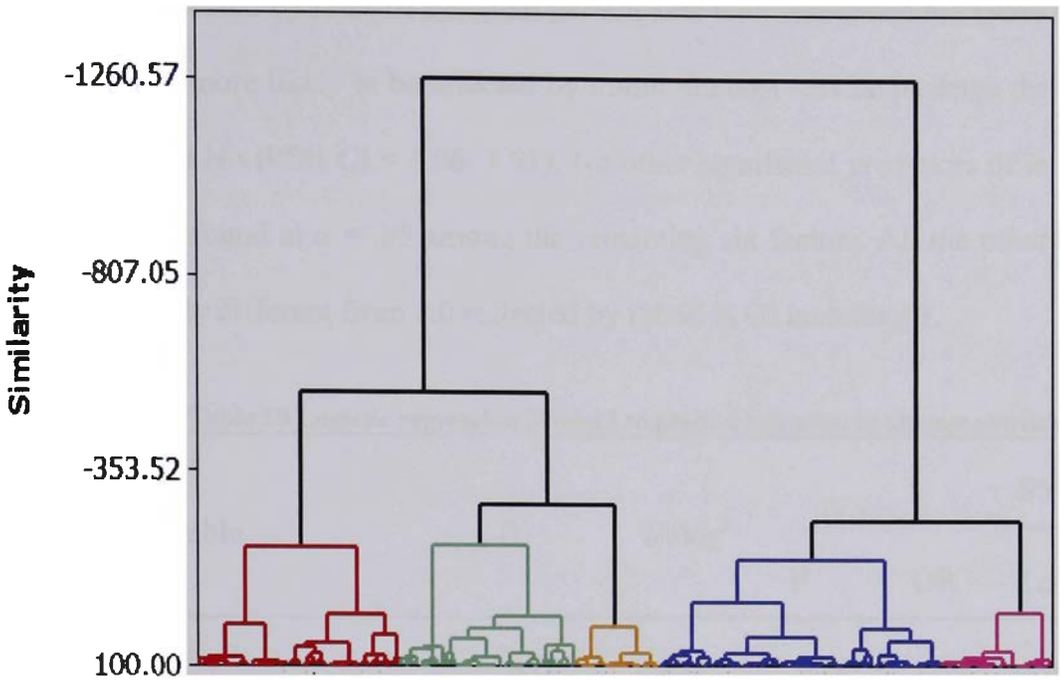
The grouped median scores for each of the eight items measuring the frequency of using the different mobile phone services with respect to the location of respondents were computed (Table 49). The p-values for the Kruskal-Wallis test were used to compare the grouped median scores. The p-values derived from the statistical test all exceeded $\alpha = .05$ significance level, indicating that location had no significant influence on the median scores. Just as the Kruskal-Wallis test failed to show the influence of gender (see Table 24) on the scores for frequency of use of different mobile phone services, the test failed here to show any influence of location. This indicates that demographic factors may not determine mobile phone users' frequency of use of different mobile phone services.

Table 49 Median scores for frequency of use of 8 mobile phone services by location

Item	Riyadh	Jeddah	Dammam	Others	Kruskal Wallis χ^2	P
1. WAP (wired network)	4.45	4.38	4.46	4.07	1.016	.797
2. Data transmission	3.71	3.73	3.62	3.44	.522	.914
3. SMS (Text messaging)	3.42	3.56	3.48	3.42	2.522	.471
4. Mobile Internet	3.17	3.29	3.69	3.55	1.18	.758
5. SMS (for information/other)	2.78	2.74	2.67	2.58	3.351	.341
6. MMS (Multimedia Messaging)	2.58	2.69	2.67	2.81	2.992	.393
7. Voice based information services	2.6	2.52	2.75	2.48	1.235	.745
8. Video Calls	2.47	2.44	2.61	2.69	3.089	.378

To confirm this finding, a cluster analysis was conducted. Respondents were classified according to their scores for the eight items. Five distinct clusters of participants were revealed in the dendrogram (Figure 27). Each cluster is illustrated using different colours (red, green, orange, blue, or pink). Every cluster contained both male and female respondents from Riyadh, Jeddah, Dammam, and other locations. The clustering of participants on the basis of their frequency of using different mobile phone services shows that it was evidently not related to gender or location. It is possible that more complex factors influence the frequency of use of different services.

Figure 27 Clustering of 232 participants by frequency of use of mobile phone services



4.6 Factors Affecting Choice of Mobile Phone Service Providers

RQ#3: What are the factors affecting respondents' choice of mobile phone providers and aspects of service that may influence their intention to change providers?

This question aims to identify the most important factors that would influence users' intention to change providers. Responses to Item 10 (*Do you intend to change providers after your contract runs out?*) and Item 14 (*To what extent do you think the following items affect your choice of mobile phone provider?*) were considered in this analysis. Results of the binary logistic regression analysis (Model I) is presented in Table 50, which revealed that there are two factors which are significant predictors of the intention to change, as indicated by $\alpha = .05$ for the Wald χ^2 statistics. The odds ratios (OR) predicted that respondents who intended to change provider (those who answered "Yes" to the question in Item 10 were, on an average: (a) 1.56 times more

likely to be affected by rates of call than participants who responded No (95% CI = 1.05, 2.29); (b) 1.43 times more likely to be affected by minimum cost service package than the participants who responded No (95% CI = 1.06, 1.91). No other significant predictors of intention to change providers was found at $\alpha = .05$ among the remaining six factors. All the other odds ratios were not significantly different from 1.0 reflected by the 95% CI including 1.

Table 50 Logistic regression Model I to predict intention to change providers

Predictor variable	B	Waldχ^2	P	OR	95% CI for OR	
					Lower	Upper
Rates of call	.438	4.831	.028*	1.56	1.05	2.29
Minimum cost service package	.355	5.681	.017*	1.43	1.06	1.91
Voice clarity and data quality	.05	.033	.855	1.05	.61	1.8
Geographical coverage of network	.048	.045	.833	1.05	.67	1.64
Package offering the most free services	-.055	.199	.655	.95	.75	1.2
Customer service for query or an issue	.109	.322	.571	1.11	.77	1.63
Mobile provider's brand name and status	-.119	1.446	.229	.89	.73	1.08
Package offering most access to services	-.35	2.782	.095	.70	.47	1.06

Note: * Significant predictor of intention to change provider at $\alpha = .05$

In order to identify other important factors that would predict intention to change providers, a binary logistic regression analysis (Model II) was conducted and the results are presented in Table 51. Out of the eight factors, only one item was found to be a significant predictor of intention to change provider, as indicated by $\alpha = .05$ for the Wald χ^2 statistics. The odds ratios (OR) predicted that respondents who answered "Yes" in Question #10, were, on an average, 1.63 times more likely to use free allowances on the contract for social calls (95% CI = 1.23, 2.17) than those who responded "No". The results obtained from the binary logistic regression analysis (Model 1 and II) also indicated that, pricing factors, specifically using free allowances for social calls (OR = 1.64); rates of call (OR = 1.56) and the choice of a minimum cost service package (OR = 1.43), were significant predictors of respondents' intention to change providers at $\alpha = .05$.

Table 51 Logistic regression Model II to predict intention to change providers

Predictor variable	B	Wald χ^2			95% CI for OR	
			P	OR	Lower	Upper
Using free allowances for social calls	.49	11.494	.001*	1.63	1.23	2.17
Cost of upgrading or buying extra time/data	.1	.404	.525	1.1	.81	1.5
Ability to change device without penalty	.088	.301	.584	1.09	.79	1.49
Cost of terminating contract	.015	.009	.922	1.01	.75	1.37

Risk in mobile shopping	.004	.001	.978	1	.78	1.29
Contract flexibility and allowances	-.089	.244	.622	.92	.64	1.3
Using the website to browse for plans	-.137	.798	.372	.87	.65	1.18
Accessing live assistance to asking	-.311	3.262	.071	.73	.52	1.03

Note: * Significant predictor of intention to change provider at $\alpha = .05$

4.7 Sources of Information Used by Respondents

RQ#4: What are respondents' sources of information for mobile phone service providers?

This last question was sought to identify the primary sources of information used by respondents to research the services of different providers and make purchase decisions for their mobile phone services. The question item in the survey asked: *How did you hear of the mobile and internet services you use? (Choose all that apply).* Responses to the question are presented in Table 52. The responses/items were ranked and presented in order of frequency or the number of times all respondents mentioned them. According to the data, most respondents heard of service providers through colleagues (38.4%) and the internet (23.5%). Other respondents sourced information about mobile phone service providers through print media (19.8%), friends (16.7%), providers (15.5%), and endorsements aired on television or radio (12.4%).

Table 52 Ranked distribution of sources of information for service providers

Item	Frequency	(Percentage)
Colleagues	124	(38.4%)
Internet	76	(23.5%)
Print media	64	(19.8%)
Friends	54	(16.7%)
Provider	50	(15.5%)
TV/Radio	40	(12.4%)

4.8 Hypotheses Testing

After the results for all the research questions and their allied items have been explained in the preceding sections, it is now time to describe the correlations achieved there in relation to the hypotheses associated with research questions RQ#1 and RQ#2 which were confirmatory in nature. A summary of the outcomes of the null hypothesis significance tests is provided in Tables 53 and 54. While H1, H2 and H3 are associated with RQ#1 exploring the relationship of gender, H with customer loyalty/satisfaction, choice of service provider and mobile phone usage characteristics, H4, H5 and H6 are associated with RQ#2 exploring the influence of respondents' location on those same variables. All the hypotheses are first formulated in a null format and then if the null hypothesis is rejected it has been tested for the positive version of the hypothesis. As explained in the methodology chapter, null hypothesis have been accepted to be a more accurate evidence as positive evidence for any phenomenon can result from unrelated sources, so

it is important to first prove that the null hypothesis is negative before testing for the positive evidence. The results of the hypotheses testing for all the items included under each hypothesis are specified. The inferential statistical analyses performed in this study are sensitive to sample size. The sample size of 323 participants used in this study satisfied the minimum requirements for the interpretation of the inferential statistics (Cohen 1992). Consequently, Type II errors (i.e. not rejecting/accepting the null hypotheses when, in fact, they should have been rejected) were minimized.

Table 53 Results of hypotheses testing for gender

Hypotheses	Variable	Outcome	p-value
H_0#1: There is no significant relationship between respondents' gender and loyalty/satisfaction with their mobile service provider.	Current service provider	Accept Ho	.387
	Problems with service provider	Reject Ho; accept Ha	.003*
	Problems with Mobily	Reject Ho; accept Ha	.006*
Ha#1: There is a significant relationship between respondents' gender and loyalty/satisfaction with their mobile service provider.	Problems with STC	Reject Ho; accept Ha	.049*
	Use of other providers.	Reject Ho; accept Ha	.003*
	Name of other provider	Reject Ho; accept Ha	.004*
	Problems with other providers.	Accept Ho	.222
	Intention to change provider.	Reject Ho; accept Ha	.001*
	Name of changed provider	Accept Ho	.191

H_0#2: There is no significant relationship between respondents' gender and the factors affecting their choice of service provider.	Prices, quality, packages, customer services	Reject Ho; accept Ha	.005*
	Voice clarity and data quality	Accept Ho	.410
	Rates of calls	Accept Ho	.482
	Geographical coverage	Accept Ho	.767
Ha#2: There is a significant relationship between respondents' gender and the factors affecting their choice of service provider.	Customer service for query or an issue	Accept Ho	.059
	Package offering the most access to services	Accept Ho	.143
	Minimum cost service package	Accept Ho	.172
	Package offering the most free services	Accept Ho	.143
	Providers brand name and status	Accept Ho	.314
	Accessing live assistance for asking	Accept Ho	.127
	Using free allowances for social calls	Accept Ho	.248
	Using the website to browse for plans	Accept Ho	.422
	Contract flexibility and allowances	Accept Ho	.283
	Change type of device without penalty	Accept Ho	.580
	Cost of terminating contract	Accept Ho	.477
	Cost of upgrading or buying	Accept Ho	.598

	extra time/data		
	Risk in mobile shopping	Accept Ho	.320
H_0#3: There is no significant relationship between respondents' gender and their mobile usage characteristics.	Type of service contract	Accept Ho	.178
	Phone bill payment	Reject Ho; accept Ha	.001*
	Purposes of using mobile phone	Reject Ho; accept Ha	.049*
Ha#3: There is a significant relationship between respondents' gender and their mobile usage characteristics.	Time since first obtained mobile phone	Reject Ho; accept Ha	.001*
	Age of current mobile phone contract	Accept Ho	.439
	Calling time usage	Accept Ho	.276
	Expenditure	Accept Ho	.198
	Frequency		
	-WAP	Accept Ho	.183
	-Data transmission	Accept Ho	.318
	-SMS	Accept Ho	.138
	-Mobile internet	Accept Ho	.294
	-SMS (Information service)	Accept Ho	.103
	-MMS	Accept Ho	.491
	-Voice call (Information service)	Accept Ho	.794
	-Video call	Accept Ho	.294

Note: * Significant association between the variable and gender at $\alpha = .05$

Table 54 Results of hypotheses testing for location

Null Hypothesis	Variable	Outcome	p-value
H_0#4: There is no significant relationship between respondents' location and customer loyalty/satisfaction.	Current service provider	Reject Ho; accept Ha	.019*
	Problems with service provider.	Reject Ho; accept Ha	.033*
	Use of other providers.	Accept Ho	.886
Ha#4: There is a significant relationship between respondents' location and customer loyalty/satisfaction.	Name of other provider	Reject Ho; accept Ha	.008*
	Problems with other providers.	Reject Ho; accept Ha	.045*
	Intention to change provider.	Accept Ho	.651
	Name of changed provider	Accept Ho	.210
H_0#5: There is no significant relationship between respondents' location and the factors affecting choice of service provider.	Prices, quality, packages, customer services	Reject Ho; accept Ha	.001*
	Voice clarity and data quality	Reject Ho; accept Ha	.014*
	Rates of calls	Reject Ho; accept Ha	.043*
Ha#5: There is a significant relationship between respondents' location and the factors affecting choice of service provider.	Geographical coverage	Reject Ho; accept Ha	.015*
	Customer service for query or an issue	Reject Ho; accept Ha	.040*
	Package offering the most access to services	Accept Ho	.286
	Minimum cost service package	Accept Ho	.421

	Package offering the most free services	Accept Ho	.286
	Providers brand name and status	Accept Ho	.609
	Accessing live assistance for asking	Accept Ho	.156
	Using free allowances for social calls	Accept Ho	.383
	Using the website to browse for plans	Accept Ho	.809
	Contract flexibility and allowances	Accept Ho	.223
	Change type of device without penalty	Accept Ho	.143
	Cost of terminating contract	Accept Ho	.227
	Cost of upgrading or buying extra time/data	Accept Ho	.095
	Risk in mobile shopping	Accept Ho	.569
H_0#6: There is no significant relationship between respondents' location and their mobile usage characteristics.	Type of service contract	Accept Ho	.070
	Phone bill payment	Reject Ho; accept Ha	.003*
	Purposes of using mobile phone	Reject Ho; accept Ha	.002*
Ha#6: There is a significant relationship between respondents' location and their mobile usage characteristics.	Time since first obtained mobile phone	Accept Ho	.175
	Age of current mobile phone contract	Accept Ho	.431

	Calling time usage	Accept Ho	.097
	Expenditure	Accept Ho	.401
	Frequency		
	-WAP	Accept Ho	
	-Data transmission	Accept Ho	.797
	-SMS	Accept Ho	.914
	-Mobile internet	Accept Ho	.471
	-SMS (Information service)	Accept Ho	.758
	-MMS	Accept Ho	.341
	-Voice call (Information service)	Accept Ho	.393
	-Video call	Accept Ho	.745
			.378

Note: *Significant association between the variable and location at $\alpha = .05$

4.9 Summary

This chapter presented the data obtained by the study from a sample of mobile phone users drawn mainly from students of six universities in Jeddah, Dammam, Riyadh and other cities. In all, 328 students (160 male and 168 female) volunteered to answer the questionnaire, but as five of them did not own a mobile phone they were excluded in the analysis. The remaining 323 respondents considered in the study were found to be an appropriate sample size for the purposes of the study. And the response rate after checking for missing values was 99.9% which shows that the data is highly representative of the sample and usable.

Evidence was provided to address the four main research questions guiding this study. The first two questions were mainly concerned with investigating whether gender and location are related to usage characteristics, satisfaction, and choice of mobile phone providers. As these two questions sought to establish predictive relationships between these variables, they were confirmatory in nature. So the questions were interpreted into the form of hypotheses for a clearer picture. The other two questions were exploratory in nature and gathered information about the factors determining choice of mobile phone and sources of information used by respondents. Analysis was conducted using a number of statistical tests (Chi-Square, Kruskal Wallis test, cluster analysis, and binary logistic regression analysis) and presented in cross-tabulations, graphs, and statistical tests. The next chapter, Chapter 5, provides an in-depth analysis of the key results in relation to previous findings cited in the literature and provide insights into the implications of this study for research on mobile phone usage in Saudi Arabia. It will put forward recommendations that are relevant to policy and practice, and review the strengths and limitations of the study along with avenues for further research in this area.

Chapter 5 DISCUSSION AND IMPLICATIONS

5.1 Introduction

Having elaborated the various tests and their results in Chapter 4, this chapter focuses on an in-depth discussion of how these results relate to mobile phone usage among university students in KSA. The first part of the chapter examines the results obtained for each research question and elaborates the finding in relation to the context of mobile phone usage in KSA and previous findings in related literature. The second part of the chapter highlights the implications of the study for academic research on mobile phone usage in KSA and the Saudi mobile service provider industry with some recommendations to further deepen research on the topic and improve practice and policy in the mobile service sector.

5.2 Discussion

This research investigated the relationship of gender and location to variables of customer satisfaction/loyalty, choice of service provider and usage characteristics among young Saudi mobile phone users. It has also examined the factors affecting the choice of service provider and the sources from which mobile phone users gather information about their service provider. The following provides an in-depth analysis of the results in relation to findings in the existing literature.

5.2.1 Influence of Gender

As summarised in the findings above, gender was found to exert influence on Loyalty/satisfaction (Problems with service provider including Mobily and STC, Use and name of other provider, Intention to change provider) and Usage Characteristics (Phone bill payment, purposes of using mobile phone and time since respondents first owned a mobile phone). This means that there is a significant amount of evidence to support H1 and H3, but H2 relating to the influence of gender on choice of mobile service provider is rejected.

i. Satisfaction/Loyalty with Mobile Service Provider

Customer loyalty/satisfaction was measured through question numbers 5 to 12 of the questionnaire. The test of hypotheses for this question revealed that gender was significantly related to: (1) problems with service provider; (2) problems with Mobily; (3) problems with STC; (4) use of other providers; (5) name of other provider; and (6) intention to change provider.

A higher proportion of male than female intended to change providers. It has been widely reported in studies based in the United States and Europe that male mobile phone users are more likely to change their providers than females (Dass and Jain 2011). The present study conducted in Saudi Arabia also revealed that the proportion of male respondents intending to change service provider was higher than female. In this respect, the Saudi male respondents in this study appear to reflect male populations in other regions of the world. Previous studies conducted outside Saudi Arabia have revealed that age of customers had an impact on loyalty as older male customers are less likely to change providers than younger male customers (Dass and Jain 2011). This study, however, was limited to younger users of mobile phones, between ages 18 and 22,

and therefore a relationship between age and loyalty, was not warranted. Intention to change provider was significantly associated with gender, but reasons why respondents would change provider were not found to be related to either gender or location as revealed by the cluster analysis.

It was further found that more male than female respondents had used other providers. The participants were asked to rate the extent to which they felt that five factors (Price is better, Quality is better, Package offering of services available, Customer service is better) influenced their intention to change providers. The reasons given by the respondents for changing providers in this study differed between male and female respondents. The male respondents appeared to be more dissatisfied than the female respondents. A higher proportion of male respondents reported their intention to change providers due to better price. Complaints about handling customers were more frequent among male than female respondents. These results are consistent with a survey of mobile phone users in another Muslim country, Pakistan (Hanif et al. 2010), where fair pricing and good customer services were found to be associated with customer satisfaction and provider retention, mainly among male users.

The finding that male and female have different levels of loyalty and satisfaction with respect to their mobile phone providers may be a reflection of Wajcman's (1991) controversial contention that men are typically expected to be more technologically competent and assertive and competitive, so they tend to demand greater service quality. Although this statement is based on a contentious gender stereotype, nevertheless, the result of the study shows that Saudi male

mobile users may be more likely to complain, demand higher quality services, and competitive pricing.

ii. Choice of Mobile Service Provider

In this section respondents were asked to rate sixteen items (Voice clarity and data quality, Rates of calls, Geographical coverage, Customer service for query or an issue, Package offering the most access to services, Minimum cost service package, Package offering the most free services, Providers brand name and status, Accessing live assistance for asking, Using free allowances for social calls, Using the website to browse for plans, Contract flexibility and allowances, Ability to change type of device without penalty, Cost of terminating contract, Cost of upgrading or buying extra time/data and Risk in mobile shopping) with respect to how these factors affected their choice of mobile phone service provider. While gender was found to be significantly related to customers' intention to change provider, the reasons for such intention were found not related at all to either gender or location. This intention to shift was found to be related to their individual problems on pricing, service quality, credibility and customer handling. The sixteen factors affecting choice of provider explored in this study did not vary significantly with respect to the gender of the participants. Consequently, judgment on the question of whether there is a relationship between gender and the factors affecting choice of provider among young Saudi mobile phone could not be established until further data is available.

iii. Mobile Usage Characteristics

This study also found gender differences in the motivations for using mobile phones. A higher proportion of male than female respondents reported using their phone more for private use than

for business/education. The tests conducted on data obtained for these variables revealed significant relationship between gender and phone bill payment, purposes of using mobile phone, and time since respondents first owned a mobile phone. Female users tended to use their phone more for business/education than male. The majority of the male had owned a mobile phone for over five years, whereas fewer female respondents owned their first mobile phone more than five years ago. Male respondents tended to use their phones more for social calls and were more likely to pay their own bills.

Gender differences with respect to usage characteristics have been identified in other studies done outside Saudi Arabia. For example, it has been shown that women in high-income groups in Europe tend to use mobile phones more than men for social calls, whereas men tend to use mobile phones more as an instrument for doing business (Lung and Wei 2000, Horst and Miller 2006). It has also been shown that women in the USA use more mobile phone minutes per month on average than men (Blackburn 2010, Cotton et al. 2009, Ling 2001). In contrast, a study by Iqbal (2010) reported that men tended to make more private voice calls than women. Similarly, Burrell (2010), Blumenstock and Eagle (2012) and Scott et al. (2004) studied mobile phone users in Africa and found that male mobile phone users who were wealthier and better educated than the female members of the population, frequently used their mobile phones more than female users. The results of this study also go against the trends reported in Western countries and are more aligned with these other studies, as young Saudi women surveyed here tended to use their mobile phone use for business/education than private purpose. This may be due to the fact that there are significant moral curbs on the social interaction of females in a conservative Islamic

society like Saudi Arabia, so the level of mobile phone use for private purposes for female respondents was lower than their male counterparts. This may explain why Saudi women reported that they were less likely to use a mobile phone for social calls, or just to gossip with their friends for relaxation.

The female students in this study were more concerned with pricing and package offerings than customer services. A higher proportion of females than males reported problems with price and service quality. Problems with credibility and handling customers were more frequent among males. The reason for this could be that mobile phone use involves financial constraints, and given the high gender disparity in economic matters in Muslim societies, women are more restricted than men in their ability to pay to use mobile phones (Iqbal 2010). A high proportion of the female respondents also reported that they did not pay the bills for the use of their mobile phones. In contrast, most male mobile phone users in this study paid their own mobile phone bills, even if they were university students. This means that young men perhaps have a source of income or a significant amount of allowance from their families to take care of such expenses independently. On the other hand, a significantly higher proportion of female respondents in this study depended on their parents, relatives or even employers to pay their bills.

WAP, data transmission, mobile internet, and SMS (text messaging) were the most frequently used services, whilst voice- based information services and video calls were the least used. There was no significant difference between the responses of male and female young mobile users with respect to their reported frequency of use of the eight types of mobile phone services. Consequently, no conclusive statement yet may be forwarded on the question of whether there is

a relationship between gender and frequency of service use among young Saudi mobile phone users. This area is therefore recommended for further study. This means that the results of this study were not so consistent with other studies indicating that women use SMS, particularly text messaging, more than men. A survey conducted in Europe revealed that young women tended to make more SMS calls than male users (Peters et al., 2003, cited by Iqbal 2010). In the USA, women also tended to use SMS more, sending 154 more text messages per month than the average American man (Blackburn 2010). In contrast, Iqbal (2010) who did a study in Pakistan, found that young male adults between the ages of 21 to 23 tended to make more voice calls and text messages than women.

5.2.2 Influence of Location

The findings show that location only has a significant relationship with two items under Loyalty/satisfaction: Problems with service providers (current and other providers), and Name of other provider. This means that the results show partial support H4, but are rejected for H5 and H6.

i. Loyalty/Satisfaction

A significant association was found between location and respondents' problems/ complaints with their current mobile providers. The major problem cited by respondents was the price of mobile phone services. Price was the first problem cited by respondents in Riyadh and Jeddah but was less problematic to mobile phone users in Dammam and other cities. In fact, the highest proportion of respondents from Dammam and other cities actually selected "none" as their option shoing that they were relatively satisfied with their service provider. Respondents from

Dammam were also more conscious about quality as quality of services was a frequent problem reported in Dammam but less frequent in Riyadh, Jeddah, and other cities. Dealing with customers was a very variable problem, ranging from no complaint in Dammam to highest frequency of complaints on customer services in other locations outside Jeddah and Riyadh.

Nevertheless, there was no significant association between location and intention of respondents to change providers. The proportion of those who intended to change providers was almost equally distributed across all locations. The findings for these variables indicated that satisfaction, which is measured in terms of the proportion of complaints, may vary from one region to another in Saudi Arabia. But loyalty, inferred from the proportion of customers who intend to change providers, may be relatively constant across different regions of the country.

There are no comparable studies in the literature that would provide a basis for comparative analysis of the findings of this study. A lack of correlation between regional differences in the quality of mobile phone services and customer loyalty may explain why Dass and Jain (2010) did not include geographical factors in their model to explain why customers change their service providers.

ii. Choice of Service Provider

The influence of prices, quality, packages, and customer services on the choice of provider varied across locations. The median scores for four factors voice clarity and data quality, rates of calls, geographical coverage, and customer service for query on an issue) affecting choice of provider were found significantly different across locations. Voice clarity and data quality, rates

of call, and geographical coverage scored higher in Riyadh and Jeddah than in Dammam and other cities. Meanwhile, customer service for a query or an issue scored lower in Dammam and other locations than in Riyadh and Jeddah.

The responses of the participants in this study were consistent with the conceptual models proposed by Dass and Jain (2011) and Zhang and Feng (2009) which list perceived value and service quality as primary factors that directly influence the intention of customers to change providers in the mobile phone sector. These factors were particularly important for the respondents in Riyadh and Jeddah than elsewhere. Among the students in Saudi Arabia, however, technological issues, such as voice clarity, data quality, geographical coverage, were perceived to be important issues that influenced their choice of providers.

iii. Mobile Usage Characteristics

The relationships between location and usage characteristics observed in this study followed the same pattern as the relationships between gender and usage characteristics. More private than business/education use was most frequent in Riyadh and Dammam where the respondents were dominated by male respondents. In Jeddah, where majority of the female respondents came from, showed a lower proportion of respondents who used the phone more for private than business/education. Moreover, there were lesser respondents using the phone more for private than business/education. In Jeddah too, a lower proportion of the respondents paid their bills, but a higher proportion of parents/relatives paid the bill compared to in Riyadh, Dammam, and other locations. The employer of the respondent was also more likely to pay the bill in Jeddah than in Riyadh, Dammam and other locations. Because gender exerted a significant influence on both

these aspects of usage characteristics, the results here may have been affected by the gender concentration in these locations. So it is not possible to provide a definite answer as to whether location is independently related to usage characteristics of young Saudi mobile phone users or if the results here are merely a flow-on effect from the type of gender ratio in each location. There was also no significant difference obtained between location and frequency of using eight types of mobile phone services. The cluster analysis indicated that the grouping of participants according to frequency of service use was not related to location. Consequently, judgment on the question of whether there is a relationship between location and the factors affecting choice of provider among young Saudi mobile phone users may not be established for lack of a more generalized data. More complex factors than location appear to affect the frequency of service use, and therefore, this must be subjected to further study.

The study revealed that demographic factors did not determine why respondents would choose another provider. When the respondents were clustered according to the 16 items concerned with choosing a provider, the clusters did not correspond with either gender or location. The responses of the participants were consistent with the conceptual models in the literature which propose that perceived value and service quality are the primary factors that directly influence customers' intention to change providers in the mobile phone sector (Dass and Jain 2011, Zhang and Feng 2009). The responses were also consistent with the findings of Talet et al. (2011) whose survey among mobile phone users in Saudi Arabia revealed that quality of customer service significantly affects customer satisfaction and thus customer loyalty. The evidence for this consistency was supported by (a) the high level of reporting of pricing and service quality

problems with current providers, of which issues related to prices dominated; and (b) the formulation of two binary logistic regression models predicting that three pricing factors determined whether or not a participant intended to change his/her provider, specifically in terms of minimum cost service package, lower rates of call, and free allowances on the contract for social calls. The predictions of the binary logistic regression model are consistent with the conceptual model of Ravald and Groonros (1996) positing that customer retention is positively stimulated by offering deals that increase customer perceived benefits, and hence satisfaction, without increasing their monetary costs.

5.2.3 Factors Affecting Choice of Mobile Phone Service Provider

The logistic regression models constructed from the data collected in this study indicated that pricing issues (specifically minimum cost service packages, lower rates of call, and free allowances on the contract for social calls) significantly predicted the intention of the students to change their providers after their current contract expired. Foremost of this is the revelation that majority of this market segment are dissatisfied with their current mobile phone service providers and intend to shift to another provider. It was evident that the majority of the respondents in this study were not satisfied with their current service providers. Almost one-third of the respondents intended to change providers, after their contract expired.

A key finding of the study which seems to be in contrast with results found in other studies in western countries was that price matters the most for young mobile phone users in Saudi Arabia. Pricing issues (rates of call, minimum cost service packages, and free allowances on the contract for social calls) were found to be the most important predictors of whether or not respondents

would change providers. Thus, if mobile phone service providers seek to succeed in Saudi Arabia, ensuring low prices on their services would be the best way to capture new customers and stay ahead of their competitors.

Pricing is a critical determinant that often influences customer buying decisions (Kotler and Armstrong 2010). Pricing of ICT services is a significant factor in the adoption of a service provider (Alshurideh 2010) and customers frequently select their mobile phone service provider on the basis of the rates for calls (Dass and Jain 2011). Ranked 37th out of 161 countries for affordability in 2009 (ITU 2010), Saudi Arabia's mobile phone services are not the cheapest in the world, so it is justifiable that the students in this study should be concerned about competitive pricing.

The least important item affecting choice of provider was the brand name and status of the provider. Brand image was excluded from Dass and Jain's model to explain customer loyalty, implying that it is not important. In contrast, other researchers such as Zhan and Feng (2009), suggest that brand image is an important factor linked to the choice of providers in competitive mobile communications service markets. Kim and Lee (2010) Srinuan et al. (2011) and Griffin and Babin (2009) also suggested that brand image influenced customer loyalty. The results of this study, however, were not consistent with the argument that brand image is important to predict loyalty. Brand image was perceived to be important by only about one third of the respondents.

5.2.4 Sources of Information about Mobile Phone Service Providers

The most frequent way in which the participants heard about service providers was through colleagues followed by the internet. Fewer had heard about service providers through print media or electronic media like TV/Radio. These findings support Salko's (2010) claim that potential customers may be more likely to believe their colleagues than they would do with advertising material and promotions devised by providers in the media. Obviously, the mobile phone users in KSA value their colleagues' recommendations. Although it was not known whether their colleagues influenced their decision to choose a service provider, to a certain extent, mobile phone users' colleagues may play a major role and could be instrumental for choosing a service provider. This may be linked to the collectivist nature of the Saudi population, where loyalty and conformity to opinions of in-groups are highly valued (Hofstede 2009).

5.3 Implications

The fact that majority of the students were dissatisfied with mobile service providers due to factors of pricing, service quality, credibility and customer handling, is a significant sign of consumer dissatisfaction with mobile phone service providers in Saudi Arabia. Almost one-third of the students in this study registered their intention to change their service providers. This high figure is an indication of the deficiencies in the quality of service given by mobile providers. It also indicates that young mobile users in KSA are discerning and proactive customers who are sensitive to these the quality/pricing of their mobile service and will consider changing their provider if it doesn't meet their expectations. This section explores the implications of this

research for academic research to help understand the Saudi mobile phone service market and practical context of Saudi mobile phone industry to raise their standards of service.

5.3.1 Academic Research on Saudi Mobile Phone Services Market

As stated earlier, the present research is the first comprehensive study of consumer behaviour in the Saudi mobile phone market and as such the empirical results as well as the theoretical approach used here can be used by future studies on Saudi Arabia in the field. The theoretical foundation of this study is primarily based on the approach used by Musial et al. (2008) and Helbing (2010) in their studies. The main feature of the theoretical approach used in this study is its emphasis on the importance of demographic factors, particularly gender and location, in predicting the relationships between perceived value, service quality, and loyalty. None of the conceptual models produced so far, such as those described by Dass and Jain (2011) and Zhang and Feng (2009), have a focus on demographic factors. The generic theoretical models proposed by them, while valuable for this field, are incognizant of the role of demographic factors, so they are unable to provide an accurate profile of the specific context under investigation. The theoretical model in this study incorporates the role of demographic factors in the relationship between perceived value, service quality, and customer loyalty in the mobile phone sector. The approach used in this study can be used to further elaborate models of consumer usage and satisfaction with service provider in the mobile phone and other services in the ICT industry in Saudi Arabia.

Previous studies have indicated that men and women differ in their choice of products and services, as there are significant differences between the two genders, be they functional,

emotional or symbolic, leading to the view that products and services should be differentially segmented between men and women (Dittmar et al. 1995, Popcorn and Marigold 2000). It has generally been found that more male than female intend to change providers after the expiration of their contract, and more male mobile phone users plan to change their providers due to price. Seo et al. (2008) found that customer demographics including gender and location lead to differences in customer retention. They recommend that service providers should segment their customers to distinguish behaviour patterns relating to customer retention. This is particularly critical in a gender-differenced society like Saudi Arabia, where societal gender norms will play a significant role in dictating behavioural intention of men and women.

This study has shown the significance of gender as a demographic factor in many key aspects of mobile phone usage in Saudi Arabia. Research on segmentation of the mobile phone sector, with an aim of providing services targeted separately for men and women, is however limited. Even though gender difference in usage and subscription patterns have been noted across the world, the market segmentation research has not capitalised on these differences to provide some guidelines for the industry. The concept of a well-defined mobile phone service with attributes and values targeted differentially for males and females is difficult to grasp, and there is no previous theory or practice that embraces the complexity of issues related to such a concept. Differentiated marketing is based on the premise that one-measure-fits-all approach to marketing will not be able to satisfy the needs of different consumers. This enables a company to better serve different types of consumers who may respond in different ways to certain products and services (Ingram 2011). Consequently, many products are thoroughly researched from a design

and marketing point of view with the idea of specific segments in mind (Dexter 2002). This is the first research to highlight characteristics of gender-based market segmentation in the mobile phone sector in Saudi Arabia. It has shown that male customers are more prone to changing their service provider, less satisfied with customer service, more likely to pay their own bills in contrast to female customers.

This research question was posed in light of previous studies that have recorded gender differences with respect to customer loyalty and satisfaction (Dass and Jain, 2011). The results of this study are more inclined towards previous findings in gender-differentiated Muslim society in Pakistan such as those reported by Hanif, rather than in USA and Europe. In contrast, in other countries in Asia like India, Sri-Lanka, Philippines, and Thailand, revealed no significant differences in mobile phone usage between the male and female population (Samarajiva 2008). It is evident that there are distinct geographical, ethnic, and cultural differences associated with gender differences in the use of mobile phones around the world. But there were signs of gender difference in the use of mobile phone services in the context of the young student users of mobile phones in Saudi Arabia. More research needs to be done to understand the full ramifications of the effect of gender difference and how they perpetrate disparity in terms of mobile phone access and ownership. Mobile phones are not only personal communication devices but have been shown to be capable of creating greater autonomy for users and generating economic development. As the findings of the Grace Project in Kenya revealed, cell phones could be a big help for women's economic activities (Munyua and Mureithi 2008).

Many researchers have proposed that customer satisfaction and trust are the most important factors that makes customers loyal to one telecommunications service provider, so it is critical for a provider to build a long and profitable relationship with loyal customers (Blery et al. 2009, Deng et al. 2009, Eshgi et al. 2007, Zhang and Feng 2009). High levels of satisfaction and trust are overriding factors that enhance the quality of the relationship between customers and service providers, decreasing the likelihood of switching behaviour; however, it has also been said that satisfaction and trust do not always lead to loyalty (Aurier and N'Goala 2009). This study did not directly measure the satisfaction, trust, or loyalty of the respondents, but they were implied from the answers to questions concerning the problems experienced with service providers and the intentions to change providers. Such proposals are consistent with the views of Que et al. (2004) who proposed innovations are needed in the provision of new services in the telecommunications sector in Saudi Arabia. They also are consistent with the conceptual model proposed by Ravald and Groonros (1996) that customer retention is positively stimulated by offering customers deals which increase their perceived benefits and hence satisfaction, without necessarily increasing their monetary costs.

Many reasons have been proposed to explain why customers change their mobile phone service providers, of which pricing issues were highlighted by Bitner et al. (1991), Keaveney (1995), Selnes (1993) and N'Goala (2007). Customers may change their service because the price is

perceived to be too high, or because the provider's pricing practices appear to be deceptive (Peng and Wang 2006). In a survey of mobile phone users in Pakistan, Hanif et al. (2010) found that fair pricing[1] and customer service were significant predictors of customer satisfaction and service provider retention. All customers of telecommunications services, however, are not automatically sensitive to pricing. Some customers may remain loyal to a certain brand irrespective of the price (Lommeruda and Sorgard 2003). The overriding result of this study is that among young mobile phone users in Saudi Arabia, price matters most. This is in stark opposition to the recent findings contained in the September 2012 Foresee Mobile Satisfaction Index in the United States which claimed that, "price matters less than many retailers think" (p. 14). It is a known fact that the price of mobile phone services is comparatively higher in Saudi Arabia than in other countries and it is ranked 37th in affordability out of 161 countries (ITU 2010).

The results of this study provided evidence to indicate that many respondents were dissatisfied with the services they received, and possibly because of these problems, they intended to change providers when their contract expired. The majority (72.1%) reported problems, of which issues related to prices and service quality predominated. This means that there needs to be a sustained focus on improving the service delivery and customer management in the Saudi mobile phone services industry. This research has sought to understand customer expectations from their

[1] For the purposes of this research, fair pricing is defined as the modal pricing for a standard contract.

service providers and pinpoint the deficiencies in service provision that leads to dissatisfaction. The focus on customer experience and expectations can be improved with co-creation and relationship marketing as guiding principles. Co-creation is manifested by satisfying the preferences and expectations of customers in various ways. Relationship marketing is based on the premise that service quality promotes customer retention, and good communication between service providers and customers is paramount (Talit et al. 2011).

5.3.2 Practical Context of Saudi Mobile Service Market

This section turns to the practical implications of the study and makes some recommendations that can be taken on board by the Saudi mobile phone service sector to improve service delivery and customer satisfaction. Since this study focuses on consumption behaviour of mobile phone users, the study provides insights about customer preferences and behaviour that will be useful for the industry because customers have always been considered the backbone of any business.

Saudi service providers need to position themselves to benefit from the demographic trend of increasing demand from young (15-24 year old) users. The mobile service industry needs to tap into this growing youth market. This is consistent with the argument of Que et al. (2004) who proposed that the factors shaping the growth opportunities for the mobile phone sector in Saudi Arabia include meeting the needs of the expanding youth generation, including the provision of high quality devices as integral lifestyle choices, and innovations in the provision of new applications and services. Products and services need to be developed on the basis of analysis of customer usage and behavioural data (Que et al. 2010). They should think of packages that are tailor-made to provide for the needs of this unique market segment which offers the most

promising business case as they comprise the majority of this Kingdom's population. So far, it appears that this trend has not yet been fully exploited, providing a rationale for the focus on the mobile phone use of young university students in Saudi Arabia as well as theories of market segmentation and relationship marketing to better understand the marketing needs of mobile phone services. In contrast, several mobile phone providers outside Saudi Arabia have attempted to target the youth sector by introducing specific offerings, such as "free talk at university", "mobile internet bundles", "free SMS lines", and "youth packages" offering off-peak rates and targeted content services (Que et al. 2010).

Mass-market mobile phones are no longer adequate. Devices with enhanced user experience and superior technical capabilities, such as iPhones and smart phones, are more attractive, particularly to younger users, not only because of their utility, but also because they are perceived to promote status and recognition (Raento et al. 2009). The sale of such devices is expected to double in Saudi Arabia in the next two years and consequently Saudi mobile phone operators need a clear strategy to support such devices, with respect to content and applications (Que et al. 2010). This has led to the decision of telecommunications companies in Saudi Arabia to develop a new operating model to improve customer experience and retention and make heavy investment in new IT systems to improve service quality (Al-Aklabi and Al-Allack 2011).

In the face of stiff competition from their rivals, it is essential that all Saudi providers consider the marketing of their products from the customer's perspective. To compete in a competitive marketplace, mobile phone service providers such as STC, Mobily, and Zain in Saudi Arabia need to look beyond traditional marketing strategies which are no longer sufficient to achieve

competitive advantage (Gronroos 2004, Tseng 2007). This is key to expanding their customer base to increase their relative market share, specifically Mobily and Zain, who have a much lower market share than STC. STC already has a competitive advantage due to their strategic planning. STC has recently realigned its operations by developing a new operating model to improve customer experience and retention, including heavy investment in new IT systems to improve service quality (Al-Aklabi and Al-Allack 2011). In a dynamic and competitive environment like the mobile phone sector, providers must continually upgrade their business strategy for the provision of excellent quality services, based on modern business models, including the client-centred view of the firm and relationship marketing.

Co-creation means that the managers of Mobily, STC, and Zain must learn to implement these new consumer-interactive business models. According to the GLOBE survey (House et al 2004), traditional managers of companies in the Arab region typically do not like to take risks, and they do not believe that their power should be devolved, decentralized, shared, or distributed. Consequently, the use of modern business concepts, such as the client-centred view of the firm, and relationship marketing, which reduces the power of managers to make decisions in favour of the needs and expectations of their customers, may be foreign to many Arab businessmen. The results of the GLOBE survey may not have specifically focussed on managers in the Saudi telecommunications sector, but the general lesson to be taken there is the fact that the development of innovative business practices to improve customer retention may be constrained. Might there be a specific course on management of customer satisfaction in the field of mobile

phone service or ICT for that matter? Perhaps this should be carefully studied, just as there has been research into customizing courses for the petroleum and minerals industry.

A major contextual recommendation for action based on the results of this study is to develop and design a business strategy to exploit the culture of gender differentiation that prevails in Saudi Arabia. This study has shown the significance of gender as a demographic factor in many key aspects of mobile phone usage in Saudi Arabia. Marketing relationship managers may be able improve their market share by developing targeted strategies that are better suited for the specific needs of males or females. The findings of this study indicated that among the target population of student mobile phone users in Saudi Arabia (a) significantly more males changed or intended to change their service providers than females; (b) more males than females were significantly more active in complaining about issues of credibility, customer service, and pricing; (c) females tended not to complain about problems with their providers as much as males. The findings suggest that relationship marketing tactics targeted towards males rather than females may be effective, because males tend to be more concerned about the quality of their partnership relationships with a service provider. Managers who take charge of relationship marketing tactics and co-creation in the Saudi Arabian mobile phone sector should aim to concentrate more on the male segment of the market in order to develop more trust, satisfaction, and loyalty among the male student population. This finding also has implications with respect to relationship marketing, not only for other providers in Arab and Islamic countries, but for global companies seeking to enter the Islamic and Arabic markets.

The implementation of an efficient customer complaint resolution system is crucial for all service providers. Improving the quality and variety of services could aid the corporate image of the three service providers in Saudi Arabia order to give them a competitive advantage in a rapidly expanding market, especially for the male users, who are more likely to change providers than females. It is suggested that Saudi customer service representatives should pay more respect when dealing with male customers, and be more careful when explaining something to them. The Saudi providers might potentially attract more male users by initiating value-added promotional activities involving reduced pricing without reducing technological or service quality. Customer relationship managers working for Saudi mobile phone service providers could conduct evaluations to determine why male users may be more dissatisfied than female users, and to consider the use of value offers that may improve the satisfaction and loyalty of men.

About one third of the respondents in all of the locations confirmed that they intended to change providers when their current contract expired. The evidence suggests that the telecommunications sector needs to address the low levels of satisfaction and trust which prevails in a high proportion of male and female students across the whole of Saudi Arabia. This study revealed that many customers intended to switch their providers due to their issues with the pricing of their subscribed services. It is essential for the telecommunications sector in Saudi Arabia to actively manage their customers' price perceptions in order to improve customer retention. Mobile phone service providers should look into offering certain types of incentives such as reduced prices and flexible payment condition. They must implement attractive pricing policies, and offer attractive value offers, or deals involving lower pricing without decreasing

quality (Paeg and Wang 2006). Apart from initiatives taken by the industry, it is recommended that KSA's CITC look deeply into the issue of pricing. CITC should exert effort to stabilize and standardize prices for various charges to attain justifiable costing for services rendered by the different mobile service providers.

Credibility and customer handling were also cited as the reason behind the decision to change. Currently, the majority of customers prefer to use call centres for customer services rather than going to the actual service centre (Talet et al. 2011). This may be because the office customer services are unable to answer correct answers when quizzed on conditions and charges (Lambert, 2007). Customer services staff should ideally be the ambassadors for their networks and should be fully equipped to help customers. Although customer satisfaction should take priority, the mobile companies, even the ones with the largest market share, such as STC, appear to have neglected the basics and dismissed the importance of good customer services. The education sector perhaps might consider offering intensive short courses for customer care representatives so that their credibility at handling customer issues may be improved. CITC should also come up with a well-designed customer complaint service to address the pricing problem as well as other problems such as service quality and customer handling.

This study found that that colleagues and the internet formed the most significant source of information for students to find out about service providers. This supports the view that social networking may be an appropriate channel for mobile phone service providers in the KSA to communicate with their customers, as it makes use of the internet as a medium and the personal networks of the consumer. Social media is a rapidly expanding channel or tool that can be used

by mobile phone service providers to endorse relationship marketing and satisfy the preferences and expectations of their customers in various ways. On Blanchard's (2011) view, social media is becoming a powerful tool for people to get connected and companies who are updated in the socio-technical evolution of this media stand to benefit more than companies "that choose to ignore it" (p. 6). To be successful and credible in social media, service providers should be transparent and genuine with their customers, provide accurate and reliable information, and cultivate an active customer community through blogs and online conversations (Salko 2010). Thus, online social networking is therefore an important strategy for mobile service providers to support co-creation. It is suggested that the functions of the customer complaints personnel might be profitably replaced by the formation of online communities in social media channels such as Facebook, a company website with blogging ability, and/or Twitter, as implemented elsewhere in the world (Safko 2010). To be successful and credible in social networking, companies must be transparent and genuine with their customers, provide accurate and reliable information, and cultivate a community through blogs and online conversations (Holbrook 2006, Vargo and Lusch 2008). An efficient marketing and customer complaint resolution system is crucial to achieve effective co-creation and improve loyalty to service providers in the KSA.

5.4 Summary

This chapter has conducted a cohesive discussion, highlighting both the empirical statitistics on mobile phone usage on KSA and normative implications for academic research and policy and practice in the Saudi mobile phone industry. The chapter has highlighted that mobile phone usage in KSA is characterised by some unique trends owing to its specific cultural context. It

was shown that there is a high rate of customer dissatisfaction among users and over one-third of them intend to change their provider after expiration of their contract, primarily due to the issue of price as well as service quality. Concurrently, it was suggested that the mobile phone services industry needs to seriously consider the price issue while maintaining their profit margins and also institute new forms of customer management based on relationship marketing. Gender was shown to be a significant determinant of mobile phone usage, where men were more demanding and dissatisfied with their providers and significant differences in usage patterns and characteristics between men and women were also found. Market segmentation based on gender is suggested as means to better tailor services that can capture the needs of men and women. It is also suggested that customer service and relationship marketing pay more attention to male customers to alleviate the high levels of dissatisfaction with service providers displayed by most male customers.

Chapter 6 CONCLUSION

6.1 Introduction

As the conclusion to the present study, this chapter will summarize the findings of this study and reflect on their contribution as well as limitations. The chapter will begin with a brief summary of the research process involved in this study and list the findings on the main issues examined by the study. The chapter will end with some notes on the strengths and limitations of the study and make suggestions for future research in this area.

6.2 Research Summary

The main significance of this research is derived from the fact that it is a pioneering work in Saudi Arabia on consumer behaviour in mobile phone use in Saudi Arabia. The study examined the influence of two important and relevant demographic variables of gender and location on the following aspects of mobile phone usage among Saudi university students:

i. Loyalty/satisfaction with mobile service provider;
ii. Choice of mobile service provider;
iii. Mobile usage characteristics.

The study also explored two more questions relating to:

i. Factors affecting choice of mobile phone providers and aspects of service that influence intention to change providers; and
ii. Sources of information about mobile phone service providers in KSA

To attain the above objectives, a descriptive correlational design was adopted. Primary data were collected using a quantitative survey questionnaire designed specifically for a cross-sectional survey. The survey was administered online via surveymonkey.com. Data collected from

respondents on these different constructs were quantified and statistical analyses were conducted to measure and describe the relationships (associations and correlations) between the independent and dependent variables.

As the study was focused on patterns of mobile phone use by young adults, the study targeted students who are 18 years and above and use mobile phones. The sample of respondents was mainly drawn from students studying in universities in Jeddah, Dammam, Riyadh and some other cities. The universities participating in this study were: Princess Nora bint Abdul Rahman University, King Saud University, Alfaisal University, King Abdulaziz University, King Abdullah University of Science and Technology, and King Fahd University of Petroleum and Minerals. Prior to the administration of the online survey, permission was obtained from the administrators and professors of the selected universities. A total of 328 students responded to the questionnaire, and only .1% of the responses were missing, making an excellent usable response rate of 99.9%. The responses appeared to be in a random pattern, so there was no reason to suspect any bias in the results. Out of the 328 students who responded, 5 were excluded from the study because they did not own a mobile phone, thereby reducing the respondents to 323.

For the statistical analysis and tests of hypotheses, the study used the Chi-Square test, Kruskal-Wallis test, cluster analysis, and binary logistic regression analysis. These tests enabled the researcher to derive interesting insights/findings related to the topic. The results obtained from these analyses were presented using graphical and cross-tabulated presentations. Some interesting points emerged from the findings which help illustrate the profile of mobile phone

using university students surveyed in this study. STC was the most popular provider followed by Mobily and Zain. The majority of the students (72.1%) were dissatisfied with their current service provider and reported having problems related to pricing, service quality, credibility and customer handling. Almost one-third of the respondents (30%) intended to change their mobile service providers after contract expiration. The study gathered that majority of the respondents were either from Riyadh or Jeddah, whose ages ranged from 18 to 22 years, and were mostly serviced by STC (57%).

The first question on the influence of gender showed that gender was correlated with loyalty/satisfaction where men displayed higher levels of dissatisfaction with their service providers and demanded higher quality of service. There were some differences in patterns of mobile phone usage as more women relied on their relatives/ parents to pay the bill and tended to use their phone more for business/education that private purpose in contrast to men. But choice of service provider didn't show any significant correlation with gender on any of its aspects.

For the second question, location was not to be a significant demographic variable. Jeddah was shown to have a lower dissatisfaction rate, with more users opting for business/education use than private purpose. But this could be due to the gender skew in Jeddah which has a higher female population. So location was only indirectly related to differences in these parameters, and is not shown to be as significant as gender in terms of its effect as a demographic factor.

In relation to the third question, the survey showed that factors of prices, quality, packages and customer services, voice clarity and data quality, rates of calls, geographical coverage, customer

service for query on an issue, were relevant to customer decision to retain or switch their provider. The results for the fourth question showed that the main sources of information for respondents were colleagues followed by the internet.

6.3 Strengths and Limitations

The major strength of this research lies in the fact that it used a quantitative method of data collection and analysis. The use of quantitative method allowed meaningful comparison of responses collected from the sample and enabled an objective measurement of the variables under study. Differences and relationships were identified and measured with the statistical analyses, which would have been difficult to determine if a qualitative approach was adopted.

Data derived from this study as well as analysis used here are highly reliable and valid as a number of steps were taken to ensure that the sample is representative of the population and the measures used to collect and interpret responses were rigorously tested. As the data in this study is collected in a highly structured form of a multiple-option survey questionnaire, human error that can occur in recording and interpreting the exact responses in methods like interviews is highly minimized if not totally avoided. Data collection was also made easy as it was primarily done via online surveys. The research survey was easily executed with the required sample of the population and collection of responses was relatively quick and inexpensive. It can be confidently asserted that the use of a large random sample of respondents from different cities across the country reduced any possibility of bias in the results. The sample of the study was not focussed on one location but drawn from universities across major cities in the country, making the results representative of young mobile phone users in Saudi Arabia.

Apart from the strengths, it is also important to discuss the limitations of a study. Oftentimes, the same features that serve as its strengths will also be accompanied by some limitations. The strong justification for this research as a pioneering work in Saudi Arabia can also prove to be a weakness. This is because there was a lack of literature and academic research in Saudi Arabia that could serve as basis for a strong critical review and comparative analysis to strengthen the results of this study. As this is the first study to examine consumer behaviour of mobile phone users in Saudi Arabia, it needs to establish some crude generalisations to establish an approximate profile of this market. Due to this it couldn't adopt a nuanced approach explaining the subjective perceptions driving the motivations of consumers in detail.

Similarly, the strengths of the quantitative design may also pose some limitations for the study. For instance, because responses were structured and data gathering was distant (not face-to-face), the respondent's choice of answers were constrained to those listed in the survey. There was no way for them to expound their answers or provide other answers, which could have been possible in a qualitative method. Another shortcoming of this research is related to the method of online survey used in this study. Although this method proved to be easy and inexpensive, there is a possibility that respondents in this survey were not totally honest in rendering answers to the questions. As the survey was done online, they may be influenced by peers during the process of answering the survey questionnaire, making their responses not fully representative of their actual characteristics and behaviour as consumers of mobile phones.

The final limitation of this study can be attributed to the very nature of the subject it addresses. As we do not expect the entire samples to have the same type of mobile phones, some of the

described services may not be available in some of the respondents' mobile phones. Moreover, features of mobile phones are changing at a relatively fast-pace and the usage characteristics described here may turn out to be obsolete or irrelevant. So, a similar study conducted in the near future may not reveal the same findings, extending only a short life span of validity to the findings of this study.

6.4 Future Research

This study has laid the foundation for further research on the choice, usage, and retention of mobile phone service providers in Saudi Arabia. Based on the findings of this study, recommendations are made to (a) replicate the results of this study, including an evaluation of response bias; (b) extend the topic of this research across international and intercultural boundaries; and (c) conduct more qualitative rather than quantitative studies. These recommendations for future research are explained below in greater detail as a concluding note to this study.

The results of this study do not provide any justification whatsoever for predicting the probability that repeating the same analysis on another set of data will again result in the same findings (Ioannidis 2005). It is possible that the observed relationships between demographic factors and customer choices found in this study were only accidents of sampling. Only by measuring and demonstrating a phenomenon repeatedly can a researcher guarantee that it is a valid and reliable finding. The analysis of one set of data collected in one cross-sectional survey does not provide sufficient evidence to prove or disprove a phenomenon definitively. Therefore, to test the conclusions of this study, it would be necessary to repeat the survey using a different

instrument with different respondents. Ideally, the survey should be repeated with a stratified random sample (i.e. one in which equal numbers of males and females are randomly selected from colleges and universities in the major cities). If similar conclusions were obtained after the survey was repeated using a random sample rather than a purposive sample, then this would provide more convincing support for the existence of relationships between demographic variables, customer choice, satisfaction, and loyalty in the purchase of mobile phone services in Saudi Arabia.

It is recommended that if this research continues in the future, then the instrument should be interspersed with items which are designed specifically to measure and eliminate response bias. The standard solution to test for response bias is to include conflicting items, i.e. some items should have negated counterparts. For example, an item such as "I am very satisfied with my current service provider (Yes or No)" could be conflicted by an item aiming to elicit the opposite response, such as "I am not happy with my current service provider (Yes or No)". If some respondents consistently give "Yes" answers to such pairs of conflicting questions, then they are clearly recalcitrant and are responsible for response bias. All such ambiguous responses should be eliminated from the survey. Various other methods of testing and correcting for response bias are discussed by Paulhus (1991).

The results of this study were derived mainly from students representing the young mobile phone users in Saudi Arabia. However, since samples came from six targeted universities in Riyadh, Jeddah, and Dammam, young users in other parts were not accounted for. Hence, results may still be lacking in terms of representativeness of studying relationship between location and the

dependent variables. It is therefore recommended that this study be replicated using a different methodology in other parts of Saudi Arabia to make representativeness more accurate and validate the findings of this study.

This study was not cross-cultural, in that it did not specifically aim to compare the results obtained from the current Saudi student population with similar studies among student populations in other places and at other times. It would be a valuable contribution to our cross-cultural understanding of global technological change if more research was conducted to compare the relationships between demographic variables, loyalty, satisfaction, choice of service provider, use of services, and mobile phone usage characteristics across different cultures and national boundaries. The findings would indicate whether or not the findings obtained from this study conducted in Saudi Arabia are, in fact, unique, or part of a much wider international trend in the Arab world (e.g. with respect to the differences between male and female users). It would also be useful to determine the extent to which conceptual models such as that conceptualized by Dass and Jain's (2011) to explain the multiple factors and processes which influence customer churn in the mobile phone sector vary across international and/or cultural boundaries. For example, the relative importance of brand image, and how its importance varies in different cultures, needs to be evaluated.

This study was based on the statistical analysis of quantitative data, and could by definition only address hypothetical questions about what variables were different to, or associated with, what other variables, and about the existence of comparative relationships, with respect to "who", "what", "when" and "where". The statistics could not, however, provide answers to more

penetrating and rigorous questions beginning with "why" and "how" (Creswell 2009). It is suggested that the answers to such research questions are critical to provide a deeper understanding of the dynamics of social and technological changes in the Saudi Arabian mobile phone sector. The present study could only provide crude summary statistics based on measures of the relationships between gender, location, loyalty, satisfaction, choice of service provider, use of services, and mobile phone usage characteristics in a non-random sample. These statistics could only describe but could not explain the reasons for the observed relationships. It was not possible using statistics alone to understand why different groups of participants varied in their responses to the questionnaire. In addition, how the findings of this study were related to marketing theory with respect to the mobile phone sector could only be posited in very general term, in order to support certain concepts relating to customer retention (Dass and Jain 2011).

Qualitative research methodologies based on the social constructivist paradigm, including case studies and stakeholder analysis, are however, able to address the limitations of inferential statistics by interpreting a phenomenon through the myriads perceptions, behaviours, and experiences of each unique individual and by generalizing to theory rather than to populations (Yin 2009). The social constructivist principle states that knowledge is constructed from the unique perceptions of each individual rather than the summarized perceptions of a population, so a thematic content analysis of each of the participants' qualitative responses would reveal subtleties and nuances that could not be inferred from the statistical analysis of numerical responses to questionnaires (Krippendorf 2005). For these reasons, it is suggested that the relationships between demographic characteristics, loyalty, satisfaction, choice of service

provider, churn, use of services, and mobile phone usage characteristics should be explored by qualitative research.

It is recommended that qualitative data should be collected by interviewing a sample of the stakeholders with interests in mobile phone service usage and provision for young Saudi users. A content analysis of the interview transcripts would enable the researcher to extract emergent themes relating to the perceptions, behaviours, and experiences of each individual stakeholder, that could potentially provide more useful information than the statistical analysis of numerically coded questionnaire items (Merriam, 2009). The effect of in-groups (family, extended family, colleagues and friends) on choice of and customer loyalty towards mobile phone service providers should also be conducted to gather insights on the degree of influence these groups have in consumer decision-making process of young mobile phone users in Saudi Arabia.

A stakeholder analysis of the qualitative data should be conducted to provide more detailed answers to penetrating research questions starting with "Why" and "How" that cannot be easily addressed by statistical analysis of quantitative data (Sharma and Starik, 2004). Examples of such questions are (a) why do demographic factors significantly influence customer usage characteristics and intention to change providers among young Saudi users? (b) why is STC the most highly subscribed provider in comparison to Mobily and Zain? (c) why are pricing issues the most important factors predicting the intention of young Saudi users to change their mobile phone service providers; and (d) how can the services of the mobile phone providers be improved and differentiated to increase the levels of customer satisfaction and loyalty among young male and female Saudi users?

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Appendix A- Information

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

INFORMATION

TO PARTICIPANTS INVOLVED IN RESEARCH

You are invited to participate in a research project entitled Mobile Phone Service Providers in Saudi Arabia: Student Customer Satisfaction

Project brief

Privatisation of the telecommunications sector in Saudi Arabia provided three companies competing for a percentage of the mobile phone market. The mobile phone environment in Saudi Arabia has not yet been investigated to understand the subscribers' interests when making their choices. This study aims to identify and rate factors that influence customer satisfaction in mobile phone services in Saudi Arabia

What will I be asked to do?

There is an online survey at http.... which I am requesting that you complete. It is easily accessible and should take no more than 10 minutes.

What will I gain from participating?

This information will be used to inform the government and the mobile service providers of the views and experiences of young Saudi citizens, as the large influx of pilgrims and expatriates may obscure Saudi views and preferences.

How will the information I give be used?

Your views will be used for information and recommendations, and the thesis will be available on the internet

What are the potential risks of participating in this project?

The risk is slight, as it is an online anonymous survey.

How will this project be conducted?

There are models of consumer mobile phone preferences emerging regarding service providers. The survey results will form part of a quantitative study to understand Saudi consumer preferences in the mobile phone service market.

Who is conducting the study?

The Principal Researcher is, A/Prof James Doughney who can be contacted by Phone on +61-3-99194223 or by e-mail Jamie.doughney@vu.edu.au

The Student Researcher is Badr Alharbi, can be contacted by phone on +61-4-23655903 or by e-mail Badr.alharbi@live.vu.edu.au

If you have any queries or complaints about the way you have been treated, you may contact the Research Ethics and Biosafety Manager, Victoria University Human Research Ethics Committee, Victoria University, PO Box 14428, Melbourne, VIC, 8001 or phone +0613 9919 4148.

Appendix B-Questionnaire

QUESTIONNAIRE

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

Mobile Phone Service Providers in the Kingdom of Saudi Arabia

This short survey, about ten minutes, is a research study designed to find out what factors prompt you to stay with a mobile phone service provider, and those that may cause you to move to another provider. If you do not use a phone, or you are not the decision maker in selecting a mobile phone service provider, please do not continue with this survey. However, if you intend selecting a mobile service provider in the next three months, whether or not you pay the provider, please continue.

Thank you for agreeing to participate. This survey is entirely voluntary and no personal details will be available. However, if you wish to contact the researcher, please email the following address.

The Principal Researcher is, A/Prof James Doughney: Jamie.doughney@vu.edu.au

The Student Researcher is Badr Alharbi: Badr.alharbi@live.vu.edu.au

1. What city do you live in?

Riyadh ☐ Jeddah ☐ Damamm☐ Other place ☐

2. What is your age?

18-22 years ☐ 23-27 years ☐ over 27 years

3. What is your gender?

Male ☐ Female ☐

4. What is the monthly gross income of your household? If you are an adolescent and don't have your own income, how much allowance do you receive per month?

☐ 0 – 1000 SAR

☐ 1001 - 2000 SAR

☐ 2001 - 3300 SAR

☐ 3301 - 5000 SAR

5. Who is your current mobile phone service provider?

○ Mobily

○ STC

○ Zain

○ No Mobile

6. Have you had problems with this provider? If so please select which problems you are facing.

- [ ] Nothing
- [ ] Problems relating to prices
- [ ] Problems relating to quality of services
- [ ] Problems relating to credibility
- [ ] Problems relating to dealing with customers

7. Have you used another provider?

- (•) Yes
- ( ) No

8. What is the name of the other provider?

- [ ] Mobily
- [ ] STC
- [ ] Zain

9. Did you have problems with this provider? If so, please are these problems.

- [ ] Nothing
- [ ] High cost

- [ ] Quality of service not enough
- [ ] Credibility is weak
- [ ] customer service is weak

10. Do you intend to change providers after your contract runs out?

- ( ) Yes
- ( ) No

11. Please indicate which you would select.

- ( ) Mobily
- ( ) STC
- ( ) Zain

12. Please indicate why you would select

- [ ] Nothing
- [ ] The price more better than others
- [ ] Quality is better
- [ ] Package offering of services are available
- [ ] Customer service is better

13. What type of service contract do you have?

- Pre-paid
- Contract with low monthly fee and higher call rate
- Contract with high monthly fee and lower call rate.

14. To what extent do you think the following items affect your choice of mobile phone supplier?

Item	Definitely not important	Not important	Neutral	Important	Very important
1. Mobile provider's brand name and status					
2. Geographical coverage of the mobile network					
3. Voice clarity and data quality					
4. Customer service for query or an issue					
5. Minimum cost service package					
6. Package offering the most access to services					
7. Package offering the most free services					
8. Rates of calls					

15. How often do you use the following services per week?

Services	I don't know the service	I never used it	Sometimes	Up to 5 times per week	6-20 times per week	More than 20 times per week
1. SMS (text messaging						
2. SMS for information or other services (banking, weather etc.)						
3. MMS						
4. WAP – connection to a wired network						
5. Data transmission						
6. Voice based information services (traffic, sports, entertainment)						
7. video calls						
8. Mobile Internet						

16. Who pays the phone bills? (choose all that apply)

☐ Myself

☐ My employer

- [ ] My parents or relatives
- [ ] Other

17. For what purposes do you use your mobile phone?

- [ ] Exclusively for private purposes
- [ ] More for private than for business/education purposes
- [ ] About 50/50 private and business/education
- [ ] More for business/education than for private purposes
- [ ] Exclusively for business/education purposes

18. How long ago did you get your first mobile phone service?

- ( ) Less than a year
- ( ) 1 to 2 years
- ( ) 2 to 5 years
- ( ) More than 5 years

19. How old is your current mobile phone contract

- □ Less than 6 months
- □ 6 months to 1 year

□ 1 to 2 years

□ More than 2 years

20. How long is your total mobile calling time (initiated and received) on an average day?

□ 0 - 5 minutes

□ 5 - 15 minutes

□ 15 - 30 minutes

□ 30 - 60 minutes

□ More than 60 minutes

21. What is your average monthly mobile phone expenditure?

○ 0 - 100 SAR

○ 101 – 300 SAR

○ 301 - 500 SAR

◉ More than 500 SAR

22. How did you hear of the mobile and Internet services you use? (choose all that apply)

☐ Parents

☐ Friends

☐ Colleagues

- ☐ TV, Radio
- ☐ Print Media
- ☐ Provider
- ☐ Internet
- ☐ Other

23. If you wish to renew your contract with your current mobile service provider, what aspects of the service would influence you the most to do so?

Item	Definitely not important	Not important	Neutral	Important	Very important
1.Using free allowances on the contract for social calls					
2. Using the website to browse for plans					
3. Accessing live assistance to asking					
4. Ability to change type of device without penalty					
5. Contract flexibility and allowances					
6. Cost of terminating contract					
7. Cost of upgrading					

contract or buying extra time/data.					
8. Risk in mobile shopping.					

24. What are your reasons for avoiding using a mobile phone?

- ☐ High prices
- ☐ Low quality of services
- ☐ Lack of credibility
- ☐ I am not satisfied with the way of treatment

Thank you for taking the time to answer these questions.