

**THE USE OF MOBILE PHONES BY GENERATION Y
STUDENTS AT TWO UNIVERSITIES IN THE CITY OF
JOHANNESBURG**

by

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I declare that “ The use of mobile phones by Generation Y students at two universities in the city of Johannesburg” is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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Date

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SUMMARY

THE USE OF MOBILE PHONES BY GENERATION Y STUDENTS AT TWO UNIVERSITIES IN THE CITY OF JOHANNESBURG

The main purpose of this study was to examine the use of mobile phones by Generation Y students in the city of Johannesburg in order to increase understanding of this segment's consumer behaviour. Generation Y is an important market segment in that it is making more independent purchase-related decisions and has a large amount of disposable income. The primary data for this study is based on focus group interviews and a quantitative study of a sample of 200 Generation Y tertiary students. Some of the findings are as follows:

- Generation Y's use of mobile phones: Generation Y respondents have owned a mobile phone for between three to five years; the majority own Nokia mobile phones, are on prepaid packages and are not big spenders on airtime; furthermore, SMS is seen as the most cost-effective way to communicate.
- Competition in the mobile phone market: The perceptions of this segment are that Vodacom is the "cool" operator, MTN is the most "expensive" network operator and Cell C is "cheap and youthful".
- Mobile phone brand awareness: Nokia was the most cited brand of mobile phone and was found to be the first choice of many of the respondents. Samsung was reported as the second most cited brand with Motorola, Siemens and Sony Ericsson following.

The results have implications for network providers, handset manufacturers and marketers alike as they will ultimately improve these stakeholder's chances of marketing effectively to this dynamic youth market.

KEY TERMS

Generation Y; consumer behaviour; mobile phones; marketing; university students;
young people; mobile phone usage

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CHAPTER 1

BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Over the last few years the use of mobile phones has increased dramatically throughout the world, especially in South Africa, where mobile phones and services are already a multi-billion rand industry. A new survey on mobile phone usage in Africa, conducted by the Geneva-based International Telecommunications Union, has found that the continent is now the fastest growing mobile phone market in the world, and the first continent to have more mobile phone users than land-line subscribers (Ryu, 2004). It has also been found that South Africa is the leader in telecommunications on the African continent, with a third of all main lines and three quarters of all mobile subscribers (African Cellular Statistics, 2004). The telecommunications environment in South Africa has experienced immense changes and has grown substantially over the last decade. Wireless telecommunications were introduced in South Africa in 1994 when South Africa's first democratic government granted mobile phone licences to two operators, Vodacom and MTN. The third mobile network, Cell C, was introduced in December 2001 (African Cellular Statistics, 2004).

According to Taylor (2004) the evolution of the South African wireless industry will depend not only on engineering innovation but, more importantly, on understanding what the consumers want, what will fit their particular lifestyles, and what will enhance their lives in the future. Besides the obvious need to keep in touch, mobile communication has transcended simple voice communication, especially in the case of the South African youth market. In this market owning a mobile phone is also influenced by self-expression and additional factors such as status and peer pressure (Taylor, 2004). As a result of the mobile youth generation's preoccupation with mobile phones and the fact that the South African mobile market is reaching saturation point, service providers will need to reinforce their image by developing appropriate products and services that will appeal to the youth generation.

Teenagers are more knowledgeable than ever before and authentic and creative market strategies are needed in order to reach them (Reuters, 2005). Many studies have found that Generation Y consumers (also known as 'Echo Boomers' and the Millenium generation) are technology-wise and have more disposable income than past generations (Cant & Machado, 2005). For the purpose of the study Generation Y is defined as "the children of the Boomers who are probably going to be, or are already, the most sophisticated and seasoned customers yet (Cant, Brink & Brijball, 2005:106)." Generation Y can be further divided into three subcategories: adults (aged between 19 and 24), teenagers (aged between 13 and 18) and children (aged between 8 and 12) (Cant et al., 2005:106).

Generation Y consumers influence spending of between R6 billion and R7 billion a year, and their pocket money amounts to R5 billion a year (Cant & Machado, 2005). According to the Wireless World Forum, a UK-based telecommunications market research company (Lowman, 2005), it was estimated that Generation Y would spend 10 percent of their disposable income on mobile services in 2005. It was also predicted in 2005 that spending on mobile services by this target audience would amount to over \$100 billion by 2005 with messaging applications being the largest contributor behind voice (Lowman, 2005).

The youth market is a unique segment that needs its own tailored marketing approach. Service providers wishing to connect with this youth audience and tap this market need to understand that the youth culture is far from homogeneous; hence, marketers need to try new approaches or risk losing the attention and money of this fickle audience (Reuters, 2005). An important aspect of selling to this market segment is that customers will carry brand loyalties through into adulthood (Cant et al., 2005:107). Therefore, the acquisition and retention of customers in their youth is crucial to maximising customer lifetime value (Detecon, 2005).

All the above findings highlight the value Generation Y is able to offer and the importance of the mobile phone in the lives of Generation Y consumers. This study aims to uncover the factors underlying the consumer behaviour of South African Generation Y'ers and, more specifically, that of Generation Y'ers in the city of Johannesburg.

This chapter presents a basic background sketch in which the problem statement and research objectives of the study are outlined. Furthermore, it discusses certain limitations regarding this particular study, a description of the methodology, and the chapter layout.

1.2 BACKGROUND SKETCH

A brief overview of the mobile phone industry and a preliminary literature review will be presented as part of the background sketch.

1.2.1 A brief overview of the mobile phone industry in South Africa

The mobile phone market in South Africa has undergone immense changes and may be described as a vibrant market that has seen a rapid adoption of GSM (Global System for Mobile Communications) in the past few years. According to the Census (2001) it was estimated that about 2.7 million households have access to a telephone within their dwellings and 3.6 million households have access to a mobile phone.

Table 1.1 provides an overview of the South African mobile phone market as at the end of June 2004. As illustrated in Table 1.1 the size of the South African mobile market size was 18.7 million users in June 2004, of which 80 percent were active users. Experts predict that this figure will reach 19 million potential users by 2006 (South African Cellular Statistics, 2004).

Furthermore, the mobile phone industry is rather unique and, as a result of its phenomenal growth over the past several years, provides interesting research material- sources indicate that the South African market is currently worth R23 billion and will grow to around R54 billion by 2007 (African Cellular Statistics, 2004). (See Table 1.1)

TABLE 1.1: SOUTH AFRICAN MOBILE PHONE MARKET AS AT THE END OF JUNE 2004

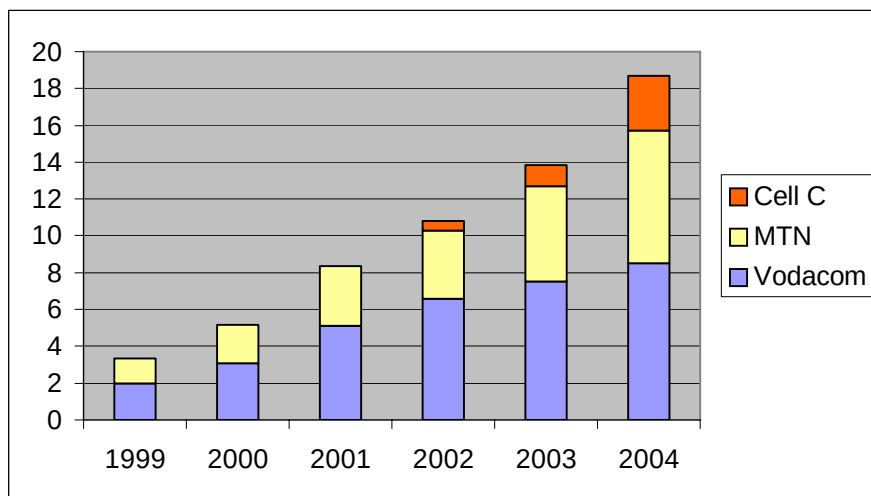
- Market size as of **June 2004**
18.7 million users (*Note: only 80% of these are active users*)
- **Potential by 2006:** 19 million users
- Dominated by Vodacom and MTN which operate at GSM 900 Mhz.
- A licence was awarded to the Cell C Consortium in June 2001. Cell C operates at GSM 900 and 1800 Mhz, and has 3 million users of which 1.9 million are active users
Approximately 84 percent, or 1.6 million, of its subscribers were prepaid users and 16 percent were contract users. Average revenue per user (ARPU) for prepaid was R62 and R409 for contract users, with a blended ARPU of R110.
- Vodacom 60% (9.7 million), MTN (5.22 million) 40% market share; Cell C (3 million) - **as of June 2004**
- More than 90% of all new connections were prepaid customers.
- Vodago is Vodacom's prepaid package and was launched in November 1996. It now accounts for more than 90% of all new connections to the Vodacom network.
- Over 9000 users sign up per day (mostly prepaid)
- The South African market is currently worth **R23 billion** and will grow to around **R54 billion** by 2007. This presupposes an exchange rate of:

US\$1 = R 6.52
€1 = R 7.44
- More than 5 500 Vodacom base stations are in place to provide coverage to 60% of the geographical area of the country.
- Together the three GSM networks cover **more than 71%** of the population. People in previously under serviced areas are making over 35 million calls (65 million minutes) per month from Vodacom's 2 135 community phone shops.

Source: Adapted from South African Cellular Statistics (2005)

The rapid growth of the mobile phone industry can further be attributed to the increase in the number of mobile phone users. According to Figure 1.1 the number of mobile phone users increased from 10.8 million in March 2002 to just over 23 million users in March 2005. At that stage, Vodacom had an estimated 12.8 million subscribers in South Africa, MTN 5.22 million subscribers and Cell C had reached the 3 million-user mark (South African Cellular Statistics, 2005).

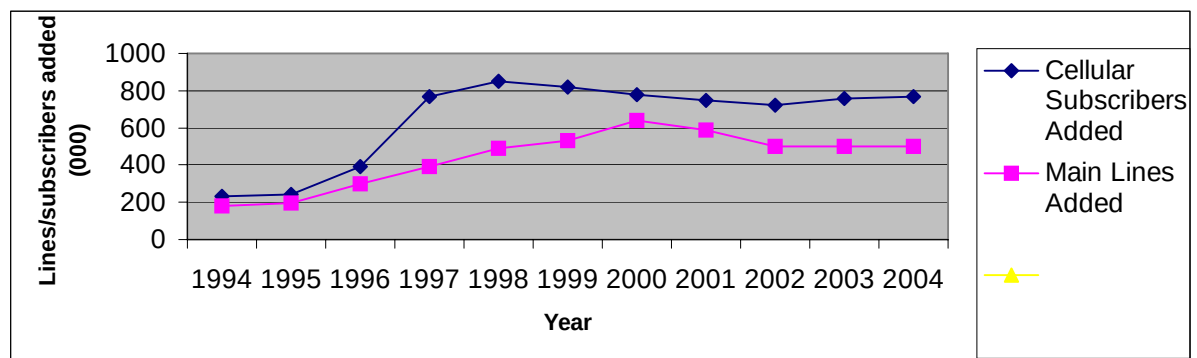
FIGURE 1.1: TOTAL SOUTH AFRICAN MOBILE MARKET (MILLIONS OF CUSTOMERS)



Source: Adapted from Vodacom Group Annual Results and reported Customers-MTN Results, Estimates for Cell C 2003 Estimates for Cell C and MTN

The annual growth in subscribers is shown in Figure 1.2, which reflects that there were zero users in 1994, 2 million users in 1999, and 8.5 million users in 2001. Sources indicate that fixed-line penetration was 10.1 percent while mobile penetration had risen to 49.5 percent (African Cellular Statistics, 2004; Telkom Highlights, 2005).

FIGURE 1.2: MOBILE PHONE SUBSCRIBERS ADDED VERSUS FIXED-LINE SUBSCRIBERS ADDED, 1994-2004

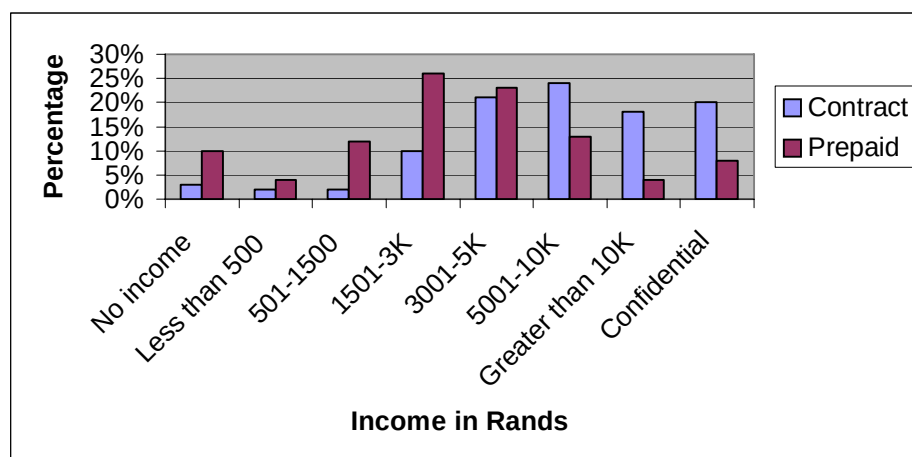


Source: Adapted from Marine et al. (2001:12)

There is thus no doubt that the South African mobile communications market has experienced a rapid growth cycle and is entering new phases. The chief impetus behind this phenomenal growth has been the explosion of the prepaid sector. Prepaid users are more prevalent in developing countries and emerging markets, and it is likely that the trend towards prepaid users will continue. In South Africa, for example, although the overall use of prepaid users is 66 percent, more than 90 percent of new mobile connections are now prepaid users (South African Cellular Statistics, 2004).

As stated, there are two types of mobile customers; prepaid subscribers and contract subscribers. Contract subscribers are, in general, wealthier than prepaid subscribers, as is shown in Figure 1.3 (Marine, Michehl, Nettesheim, Panahi & Sellers, 2001:12).

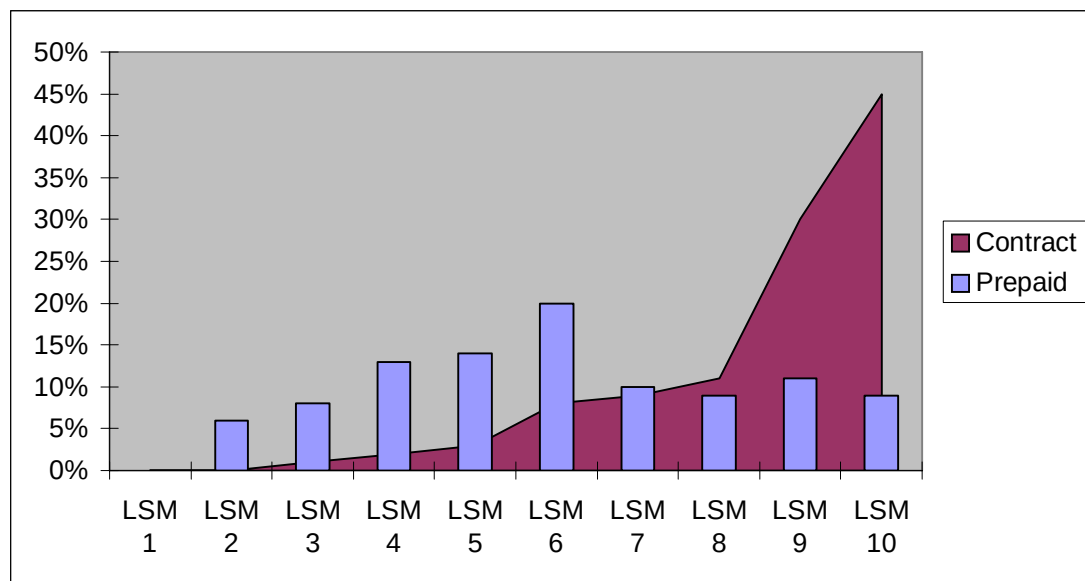
FIGURE 1.3: INCOME OF CONTRACT AND PREPAID MOBILE PHONE SUBSCRIBERS IN SOUTH AFRICA



Source: Adapted from Marine et al. (2001:13)

In South Africa, as stated earlier, the growth in the prepaid market has far outstripped growth in the contract market. The figure below (Figure 1.4) reveals that the poorer mobile phone users are more likely to choose prepaid plans, while people in the higher income groups (LSM 6-10) are more likely to choose contract plans. There might be a rationale for dividing the market between prepaid and contract, but the distinction will depend on the facts of each scenario (Theron, 2005:35).

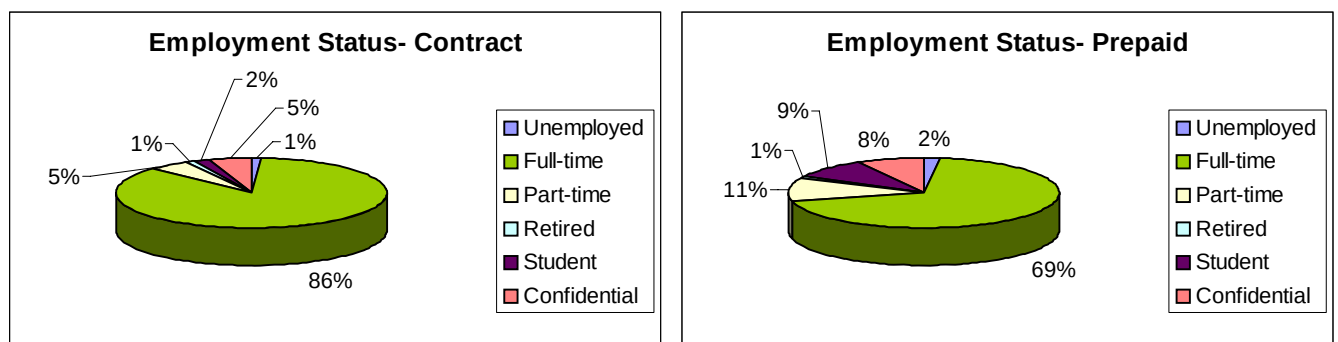
FIGURE 1.4: MOBILE MARKET BASE PROFILE- AMPS



Source: Adapted from Theron (2005:35); All Media Products Survey (AMPS)

The assumption that contract users are wealthier than prepaid users is borne out in Figure 1.5, which shows a greater tendency on the part of contract users to be employed full- time. It can be seen that a substantial portion of prepaid subscribers are either unemployed or only work part- time, as opposed to 86 percent of contract subscribers who are employed full-time. About 9 percent of prepaid users are students and this number is increasing (See Figure 1.5).

FIGURE 1.5: EMPLOYMENT STATUS OF MOBILE PHONE USERS IN SOUTH AFRICA



Source: Adapted from Marine et al. (2001:14)

Affordability is one of the main reasons why low-income users tend to choose prepaid mobile services. Other reasons why prepaid services are chosen include the ease of use afforded by prepaid services; such as “the ability to control expenditure, being able to switch to just receiving calls in times of economic difficulty and hassle free sign-up amongst others” (Oestmann, 2003).

South African service providers have thus proved that they are able to use innovative ways of caring for their customers, in this case Generation Y consumers, as the youth market is a powerful consumer group that has yet to be fully exploited.

1.2.2 Preliminary literature review

Out of a population of approximately 44 million in 2001 about 43 percent of South Africa’s population, or 19 million, were under the age of 19, while 14 million were between 5-18 years old (Statistics South Africa, 2001). South Africa’s population is thus relatively youthful, a distinctive feature of the population of many developing countries. Furthermore it was estimated that 47.8 percent of South Africa’s youth under the age of 19 fell into LSM 5-10 households’ category (Milazi, 2004). The Living Standards Measurement (LSM) measures social class, or living standards, regardless of race and without using income as a variable to segment the market (Cant et al., 2005:90).

Known as Generation Y, The Millenials, or the Echo Boomers as they sometimes called, these young consumers are described as pragmatic, knowledgeable, socially and environmentally aware and open to new experiences (Cant et al., 2005:106). They are one of the largest markets to which mobile phone operators sell their products.

It is not only the sheer size of the market that makes Generation Y an attractive target for mobile phone operators, but the fact that this generation of consumers appears to be the most brand-crazy of generations and are very aware of world trends (MacGregor, 2004). Today’s youth have more disposable income than past generations (both Generation X (age 25-34) and Baby Boomers (age 35-54)).

In the USA Generation Y averages a disposable income of about R600 a week, spending R900 billion a year and influencing another R300 billion in family purchases with a \$ to rand rate of R6.40 (Krotz, 2004).

According to the UCT Unilever Institute of Strategic Marketing, South African youngsters aged 7 to 17 are economically influential and spend more than R4 billion a year, whilst their parents spend an additional R20 billion on them (MacGregor, 2004). It has also been found that young South Africans are far more self-confident than their parents as they have grown up in a free and fair society, a society that was previously subjected to vigorous suppression. This fact will obviously also be reflected in their buying behaviour (MacGregor, 2004).

It is also important to note that Generation Y has grown up using computers and are classified as the most digitally sophisticated consumer group as they are most likely to adopt new technologies in their lifestyles readily: “Mobiles and the Internet are an integral part of their world- a necessity, not a luxury” (Ligerakis, 2004).

According to Trend Youth 2., 43 percent of all teens (13 to 17 year olds) are today computer literates compared to 27 percent just three years ago, while Tweens’ (7 to 12 year olds) use of computers has nearly doubled to a third of all tweens (MacGregor, 2004). Furthermore, the Unilever institute conducted an in-depth study that showed that the use of mobile phones by South African children has grown significantly over a short period of time. In the 7-12 age group, 33 percent have access to mobile phones, compared to 1 percent in 2002.

In the 12-17 group 44 percent have access to mobile phones compared to 21 percent in 2002 (MacGregor, 2004). The average monthly spend per Generation Y prepaid user is only about R100. According to an iTouch survey, over half of the sample of scholars and students spend less than R100 on mobile phone usage (Mattheus, 2004).

With four million Generation Y’ers aged between 16-24 in the middle to upper LSM brackets, this group is clearly the mobile phone market’s biggest opportunity for growth with R400 million in potential revenue (Taylor, 2004).

According to marketing directors, mobile operators have yet to break through the 21 percent penetration barrier in the 16-24 market (Taylor, 2004).

This study will focus on two age groups, and specifically on two age groups in the medium and upper income age group as this is where the spending power lies- this consumer group has reached adulthood and many of them are making consumption and purchase-related decisions on their own. The assumption here is that it is mostly the medium to higher income groups in South Africa that are able to afford to enrol students for tertiary education.

The above statistics alone justify the importance of the buying behaviour of Generation Y consumers especially where wireless services are concerned. Previous research has been done into the consumer behaviour of South Africa's Generation Y'ers and this target market tends to exhibit ever changing behavioural attitudes that need to be monitored constantly. This study will gain insight into how this generation is utilising technology and will focus more specifically on mobile phone usage by this group.

1.3 PROBLEM STATEMENT

From the above discussion it is clear that there should be great interest in researching the consumer behaviour in connection with mobile phone usage on the part of Generation Y students in the city of Johannesburg. Generation Y needs to be sufficiently researched so as to increase the understanding of the attitudes and behaviour of the youth towards mobile phones. This is necessary in order to devise an effective way to market to this group. It is important to investigate this group because Generation Y, as opposed to the general population of South Africa, exhibits different attitudes and behaviours towards, and an acceptance of, the wireless device such as the mobile phone. To summarise the problem statement is to determine the behaviour patterns of Generation Y consumers as they are a growth market, and not enough is known about their consumer behaviour patterns regarding the use of mobile phones in South Africa.

1.4 OBJECTIVES OF THE STUDY

1.4.1 Main objective

The main objective of this study is to gain primary information regarding the use of mobile phones by Generation Y students in the city of Johannesburg.

1.4.2 Secondary objectives

The following secondary objectives were identified, namely to determine

- The demographics of Generation Y students in the city of Johannesburg
- The perceptions of Generation Y regarding the competitive situation in the mobile phone market
- The mobile phone brand awareness of Generation Y
- Further areas of study in this dynamic youth market

1.5 LIMITATIONS OF THE STUDY

There are several limitations regarding this particular research. The results are limited as the target group was restricted to young people who owned mobile phones and who attended universities for tertiary studies. This causes a certain degree of bias, and thus any general inferences regarding the total population of South Africa would be prone to bias. The inferences drawn from the study will enable the reader to distinguish the underlying trends, but the study does not provide conclusive evidence regarding social characteristics of the total population of South Africa.

In addition, a larger sample would have yielded results with a higher confidence interval. The sample was chosen from among the overall population of young people in Johannesburg attending residential universities. Furthermore, the study focused on students in the medium and upper income groups, and there are bound to be major differences between them and the youth in lower income groups. Narrowing the research down to Generation Y students is not representative of all the Generation Y consumers in Johannesburg. In view of the fact that the survey was conducted amongst a sample rather than the whole population, it is not directly proportionate to

the total youth population, and the data may be subject to a margin of error- the total population might therefore manifest different characteristics. As a result of the findings being based upon the research conducted in Johannesburg, these findings may not be applicable to other cities or provinces in South Africa in respect of contextual factors.

Finally it should be mentioned that surveys such as this one need to be undertaken periodically in order to predict changing consumer perceptions over time correctly. At best this study provides an indication of what is happening in the Generation Y market at tertiary education level in Johannesburg- this is better than not knowing anything about this growing market.

1.6 RESEARCH METHODOLOGY

A combination of research methods was used in order to address the research objectives. A body of literature relevant to the objectives of the study was consulted so as to identify key trends in the mobile phone market. Secondary research was collected from fairly recent publications such as marketing journals, magazines and the Internet. Secondary sources consulted are mentioned in the bibliography.

Furthermore, a discussion forum in the form of a focus group was held so as to generate ideas about and gain insights into issues of interest to the researcher. This type of primary research was best suited to this study as it uncovers the attitudes and perceptions of respondents without limiting their choice of answers, and allows them to express themselves freely in a relaxed environment.

A survey questionnaire was developed within the focus group and handed out to 200 young people aged between 18 and 24 chosen from amongst the overall population of young people in Johannesburg who are students at the universities of the Witwatersrand and Johannesburg (see Appendix A and Chapter 4 for more detail regarding the research methodology and the research instrument used). This survey is not directly proportionate to the total youth population as it is a sample of the mobile phone-owning youth sector, and the population might therefore manifest different characteristics as was previously mentioned in section 1.5.

For the purpose of this study, a combination of both probability sampling and non-probability sampling was undertaken in the form of quota sampling and systematic sampling.

1.7 CHAPTER LAYOUT

The chapters were structured as follows:

Chapter 1: Background to the study

This chapter included the background to the study, problem definition and objectives.

Chapter 2: The South African mobile phone business environment

Chapter 2 covered the South African mobile phone business environment. The micro, macro and market environments, and the major industry players such as the mobile phone operators were among the topics discussed.

Chapter 3: The consumer behaviour and mobile phone usage of Generation Y students in the city of Johannesburg

This chapter dealt with the consumer behaviour patterns of Generation Y students. The consumer decision-making process and an overview of the determinants influencing consumer behaviour formed part of this chapter.

Chapter 4: Research methodology

Chapter 4 describes the research methodology used leading up to the development of the survey questionnaire.

Chapter 5: Results of research

Chapter 5 presented the findings of the study and the results were discussed on a question-to-question basis.

Chapter 6: Conclusions and recommendations

Chapter 6 concluded the study and contains recommendations for future research.

CHAPTER 2

THE BUSINESS ENVIRONMENT OF THE MOBILE PHONE INDUSTRY IN SOUTH AFRICA

2.1 INTRODUCTION

Technological advances, such as wireless applications, have had a profound impact on communications all over the world resulting in the development of new technologies to transcend distance and time. The mobile phone industry has impacted on the social behaviour of consumers in terms of purchasing behaviour and lifestyles. A priority of this industry is to keep abreast of changes in the business environment, to identify new market opportunities and threats (for example competitors) , and to ultimately increase profitability. “Coping with the constantly changing environment is probably the most important determinant of a company’s success or failure in a free enterprise (Rowe, Mason and Dickel quoted in Kuratko and Hodgetts 1998:193).” The environment has an enormous impact on the mobile market as far as the technological, economic, social, politico-governmental and international environments are concerned. This chapter discusses the composition of the business environment and the influence this has on the South African mobile phone industry.

2.2 THE BUSINESS ENVIRONMENT

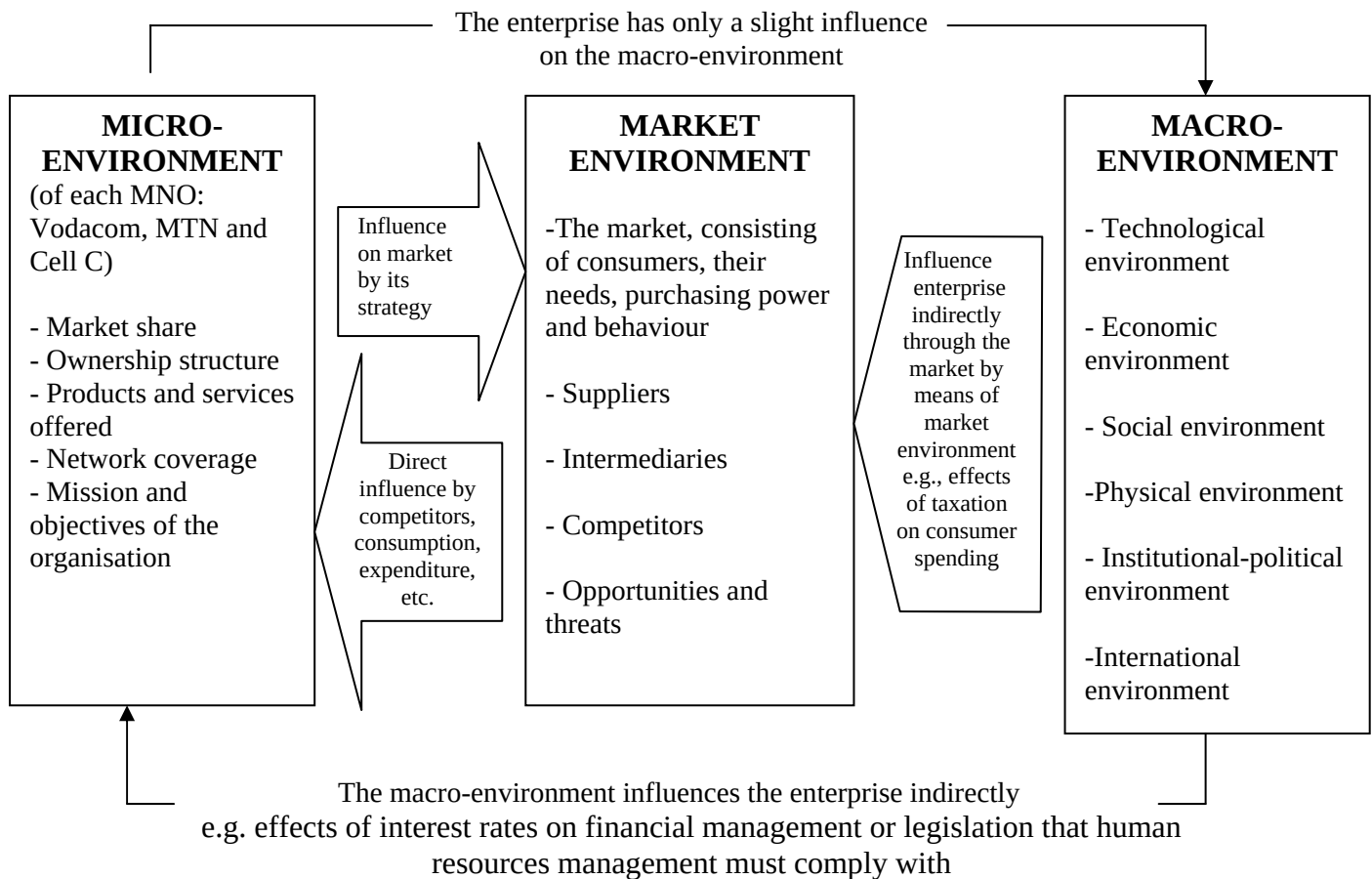
The business environment has many definitions in existing literature. Marx, Van Rooyen, Bosch and Reynders (1998:38) quoted in Ali (2003:31) define the business environment as “ the sum of all the variables or forces that have a positive or negative effect on the establishment, survival, growth and goal achievement of the enterprise.” The definition of the business environment by Cronje, Du Toit, Marais and Motlatla (2004:85) is given as “all those factors or variables, both inside as well as outside the business organisation, which may influence the continued and successful existence of the business organisation.”

Figure 2.1 can act as a visual model that depicts the composition of the business environment of the mobile phone industry. It is clear from the figure that the business environment of any given organisation comprises: the micro or internal environment (variables within an organisation), the market or task environment and the macro or external environment (variables outside an organisation). The business environment as applied to the mobile phone industry includes:

- *The micro-environment* of each mobile network operator (MNO) which consists of the business itself over which management has control. The key variables in this environment are the goals and objectives of the mobile network operator (MNO), the ownership structure, market share, products and services offered and the network coverage of the MNO.
- *The market environment* is encountered immediately outside the business organisation. The key variables in this environment are: consumers, competitors, intermediaries and suppliers.
- *The macro- environment* is external to both the organisation and the market environment and consists of the technological, economic, social, physical, institutional-political and international environments.

The three sub-environments (the micro-environment, the market environment and the macro-environment) and the interactions between them will be discussed thoroughly throughout this chapter and each sub-environment will in turn be discussed further. Cronje, Du Toit, Marais and Motlatla (2004) were deemed to have defined the most suitable theoretical framework for the evaluation of the business environment of the mobile phone industry in South Africa and this framework was used for the purpose of this study.

FIGURE 2.1: THE COMPOSITION OF THE BUSINESS ENVIRONMENT OF THE MOBILE PHONE INDUSTRY IN SOUTH AFRICA



Source: Adapted from Cronje, Du Toit, Marais & Motlatla (2004: 86)

2.3 MICRO-ENVIRONMENT OF THE SOUTH AFRICAN MOBILE NETWORK OPERATORS

The micro-environment, also known as the internal environment, consists of variables within the organisation and over which management has complete control.

As depicted in Figure 2.1, these include the objectives and goals of an organisation, the various functions of management (such as the ownership structure) and the resources of the business (such as products and services offered and network coverage) (Cronje et al., 2004:85). Each of these variables is linked to the external environment in some way, be its influence on the market by the strategy it employs to increase or maintain market share or through the goals, culture, structure and resources that have certain interfaces with the external environment. The internal environment of each of the mobile network operators (MNO's), namely Vodacom, MTN and Cell C will be explored next.

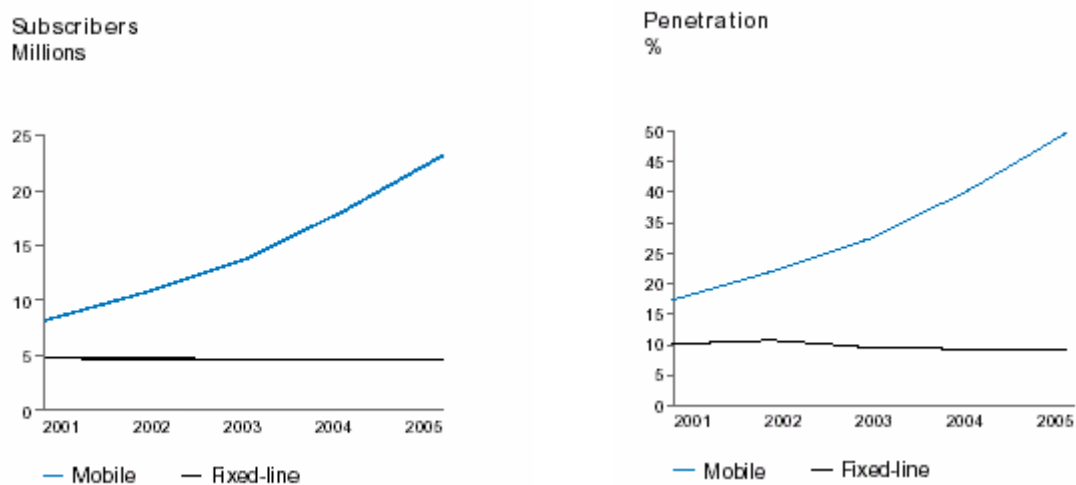
2.3.1 South Africa's mobile network operators

The mobile phone industry in South Africa, with the mobile network operators Vodacom, MTN and Cell C, is one of the fastest developing in the world and plays an important role in the development of the South African economy. It will be argued that the South African mobile market can be classified as an oligopoly, or even a duopoly, with two organisations, namely Vodacom and MTN of more or less the same size dominating the market (Theron, 2005:28). On the one hand, Theron (2005:28) argues that both Vodacom and MTN have market shares that exceed 35 percent, have similar cost and pricing strategies and control the market resulting in a duopoly. On the other hand, Cant and Machado (2005:4) describe the competitive mobile situation in South Africa as an oligopoly. An oligopoly is described as a competitive situation where there are few suppliers of the service and the strategies of the suppliers are based on what the competitors are doing.

2.3.1.1 Growth of mobile phone penetration

Unlike its fixed-line telecommunications market, South Africa boasts a vibrant and competitive mobile phone market that is growing quickly (see Figure 2.2). As illustrated in Figure 2.2, this market has experienced rapid growth in the number of mobile users increasing from 10.8 million users in March 2002, to just over 23 million users in March 2005, resulting in mobile penetration increasing from 24.2 percent to 49.5 percent during the same period. Mobile phone penetration is defined as the number of mobile phone added per 100 inhabitants (otherwise known as mobile phone ownership). Furthermore, one of the reasons for the remarkable success of mobile in South Africa has been the stagnation of the fixed line-market. Mobile phones have proven a far more efficient technology in providing access to communications especially in the lower income population of South Africa (Cant & Machado, 2005:7). Profitability of the mobile network operators results from this growth in mobile phone penetration and will be discussed in the next section.

FIGURE 2.2: NUMBER OF SUBSCRIBERS AND PENETRATION IN SOUTH AFRICA: MOBILE VESUS FIXED-LINE COMMUNICATIONS



Source: Adapted from Telkom Highlights (2005:13)

2.3.1.2 Profitability of the South African mobile network operators

The growth in mobile penetration, as discussed above, in turn leads to profitability. As a result of a first-mover advantage, both Vodacom and MTN have become very profitable. The growth in revenue for Vodacom and MTN in 2003 and 2004 was between 18.5 percent and 22.7 percent as illustrated in Table 2.1 (Theron, 2005:32). Cell C also performed better over the past few months compared to previous years, with expectation of becoming cash positive in the third quarter of 2005 (Theron, 2005:32).

TABLE 2.1: MOBILE NETWORK OPERATORS GROWTH REVENUE

	Vodacom		MTN		
	2003	2004	2003	2004	2005
Operating Revenue	21 981	18 544	12 298	15 098	17 673
Operating Profit (Loss)	5 466	4 476	2 336	2 339	N/A
Operating Profit Margin	24.87	24.14	18.99	15.49	N/A

Source: Adapted from ICASA & MTN Annual Report 2005 (Theron: 2005:32)

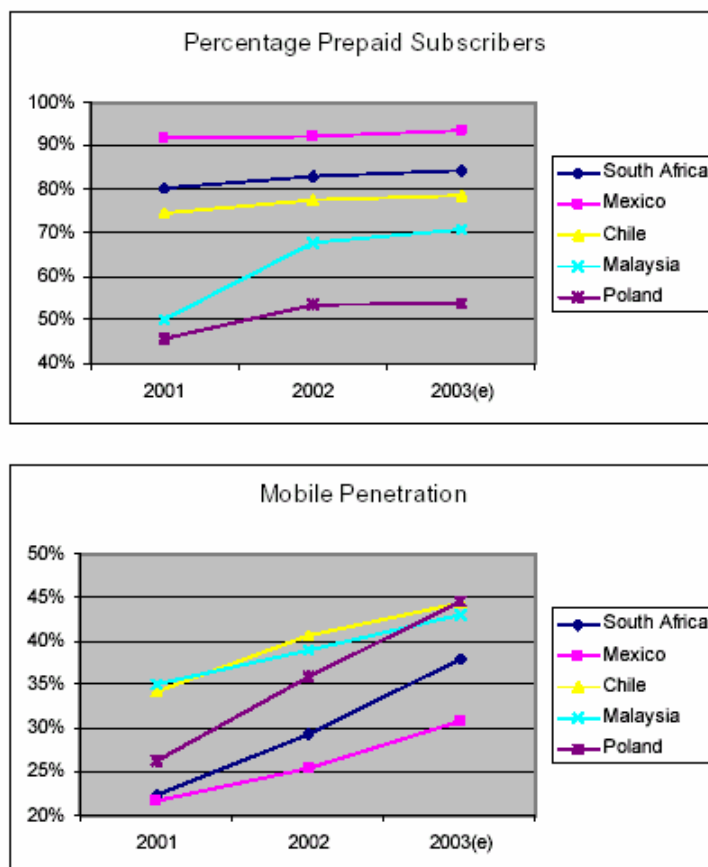
Having discussed growth and profitability above, it is also important to benchmark South Africa with the world and the rest of Africa to see how the South African

mobile phone industry and mobile phone network operators' performance compares against other similar markets.

2.3.1.3 Benchmarking

The South African mobile phone industry, and the performance of the mobile network operators, compares favourably when benchmarked against many other comparable markets such as Mexico, Chile and Malaysia (See Figure 2.3). As shown in Figure 2.3, 85 percent of South African customers are prepaid subscribers in 2003 and mobile penetration has experienced dramatic growth (38 percent in 2003). Comparing trends, South Africa outpaces the other countries both in the percentage of prepaid subscribers and level of mobile penetration. South Africa showed the highest mobile penetration, in terms of mobile ownership, while Poland seemed to lag behind. In Mexico, the percentage of respondents who were prepaid subscribers was the highest at 93 percent. South Africa's proportion of prepaid customers is as typical as is the penetration rate (See Figure 2.3).

FIGURE 2.3: BENCHMARKING: PREPAID SUBSCRIBERS AND MARKET PENETRATION



Furthermore, South Africa seems once again to outperform in mobile penetration when benchmarked against the rest of Africa. Mobile penetration rates in Africa according to the most recent International Telecommunications Union (ITU) figures are shown in Table 2.2.

TABLE 2.2: MOBILE PENETRATION RATES IN AFRICA 2004

Country	Population (millions)	Mobiles (thousands)	Mobile Penetration (Mobiles/100)
Algeria	31.8	1447	4.6
Egypt	70.2	5731	8.2
Lybia	5.5	100	1.8
Morocco	30.1	7333	24.3
Tunisia	9.9	1844	18.6
South Africa	46.4	16 860	36.4
Angola	14.4	250	1.7
Benin	7.0	236	3.4
Botswana	1.8	493	28.0
Burkina Faso	12.3	227	1.9
Burundi	7.1	64	0.9
Cameroon	16.3	1077	6.6
Chad	8.1	65	0.8
Comoros	0.8	2	0.3
Congo	3.5	330	9.4
Cote D' Ivoire	16.6	1236	7.4
DR Congo	52.8	1000	1.9
Djibouti	0.7	23	3.4
Equatorial Guinea	0.5	42	7.6
Ethiopia	69.4	98	0.1
Gabon	1.3	300	22.4
Gambia	1.4	130	9.5
Ghana	22.4	800	3.6
Guinea	7.8	112	1.4
Guinea-Bissau	1.3	1	0.1
Kenya	31.7	1591	5.0
Lesotho	2.2	165	7.6
Liberia	3.4	2	0.1
Madagascar	16.3	280	1.7
Malawi	10.5	135	1.3
Mali	10.9	250	2.3
Mauritania	2.8	300	10.9
Mauritius	1.2	463	37.9
Mozambique	18.8	429	2.3
Namibia	1.9	190	9.9
Niger	12.3	24	0.2
Nigeria	123.3	3149	2.6
Reunion	0.8	565	74.7
Rwanda	8.4	134	1.6
Senegal	10.4	783	7.6
Seychelles	0.1	55	68.4
Sierra Leone	5.0	100	2.0
Somalia	10.3	40	0.4
Sudan	33.3	650	2.0
Swaziland	1.0	88	8.4
Tanzania	35.3	891	2.5
Togo	5.0	200	4.0
Uganda	25.6	776	3.0
Zambia	11.2	150	1.3
Zimbabwe	11.8	363	3.1

Source: ITU database, Sarin (2005)

Mobile penetration rates in Africa ranged from 0.1 per 100 in Guinea-Bissau and 0.14 in Ethiopia to 68.18 percent in Seychelles and 74.14 percent in Reunion according to Table 2.2 (Sarin, 2005). Penetration rates lie in the 20-40 % range in most of the continent's biggest economies, except for Egypt (8.26%) and Nigeria (2.55%) (Sarin, 2005:6).

South Africa has one of the highest mobile penetration rates in Africa at 32 percent according to the ITU 2005 figures, which is followed closely by Botswana (23%), Zambia (18%) and Namibia (12%) as illustrated in Table 2.3. Botswana has the highest fixed-line household penetration at 22.4%, followed by South Africa at 22.1%. Zambia is next with 18.6%, with Namibia at 14% and Tanzania at 6.1%. Uganda trails far behind the rest with penetration under 1% (Gilwald & Esselaar, 2005).

TABLE 2.3: COMPARATIVE NATIONAL ICT INDICATORS FOR 2005

Country	Mobile Penetration Prepaid (%)	Email Penetration (Subscribers)	Fixed-line Penetration (%)
Botswana	23	2.8	22.4
Ethiopia	0.3	0.1	5.1
Namibia	12	1.6	14.0
Rwanda	6.8	5.3	4.4
South Africa	32	5.2	22.1
Tanzania	9.0	2.4	6.1
Uganda	2.3	0.3	0.7
Zambia	18	5.6	18.5

Source: ITU World Telecommunications Indicators (2005) (Gilwald & Esselaar, 2005)

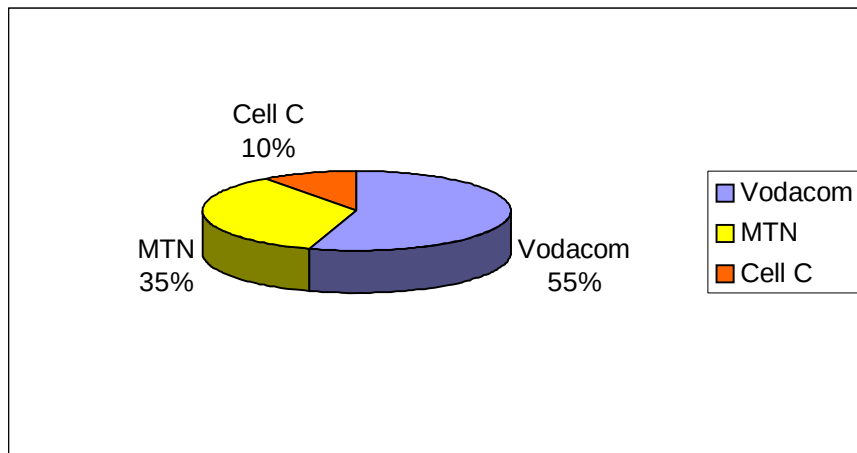
2.3.1.4 Market share

In March 31, 2005, there were an estimated 23 million mobile communications customers in South Africa, which represents an estimated penetration rate of 49.5 percent of the population (Telkom Highlights, 2005:88).

Data from MTN's latest published figure show that they have 8 million subscribers in South Africa. The comparable figure for Vodacom is 12.8 million and subscriber figures for Cell C are estimated at 2.3 million (Theron 2005:36). In this case, these figures yield the following market share figures as illustrated in Figure 2.4.

Vodacom had approximately 55 percent market share of total reported customers in the South African mobile market, MTN had approximately 35 percent market share while Cell C had an estimated 10 percent (Telkom Highlights, 2005:14).

FIGURE 2.4 MARKET SHARE ACCORDING TO TOTAL SUBSCRIBERS (2005)



The three mobile network operators have adopted different market strategies to accomplish the market share given above. The market strategies according to Kotler's (2003) product/market expansion grid will be discussed in the next section.

2.3.1.5 Market strategies

Kotler's (2003) product/market expansion grid is used to position each operator and assess its performance in relation to the overall South African market. This grid has two marketing positioning dimensions, mainly markets and products, and the operator positions itself in the market accordingly depending on the products and services it offers, and when it chose to enter the market.

There are four positioning choices (Kotler, 2003):

- *Market Development Strategy*: identifying and developing new markets for current products/services
- *Market Penetration Strategy*: more sales to current customers with unchanged products/services
- *Diversification Strategy*: new products/services in ‘new’ markets
- *Product Development Strategy*: offering modified or new products/services to current markets

Figure 2.5 illustrates Kotler (2003)’s product/market expansion grid.

FIGURE 2.5: PRODUCT/MARKET EXPANSION GRID

		Markets	
		New	Existing
Products	Existing	Market Development Strategy	Market Penetration Strategy
	New	Diversification Strategy	Product Development Strategy

Source: Adapted from Kotler (2003)

The micro-environment of the three licensed mobile network operators Vodacom, MTN and Cell C will be discussed in more detail below (see Figure 2.1): including the market share, ownership structure, products and services (prepaid and contract tariffs), network coverage, mission and objectives and market strategy of each.

2.3.2 Vodacom Mobile Network Operator

Vodacom has experienced substantial growth in its mobile customer base since its inception in 1994 increasing its market share from 54 percent in 2004 to an estimated 55 percent in 2005. Vodacom is the leading mobile network provider in South Africa based on the total estimated customers. (Telkom Highlights, 2005:88).

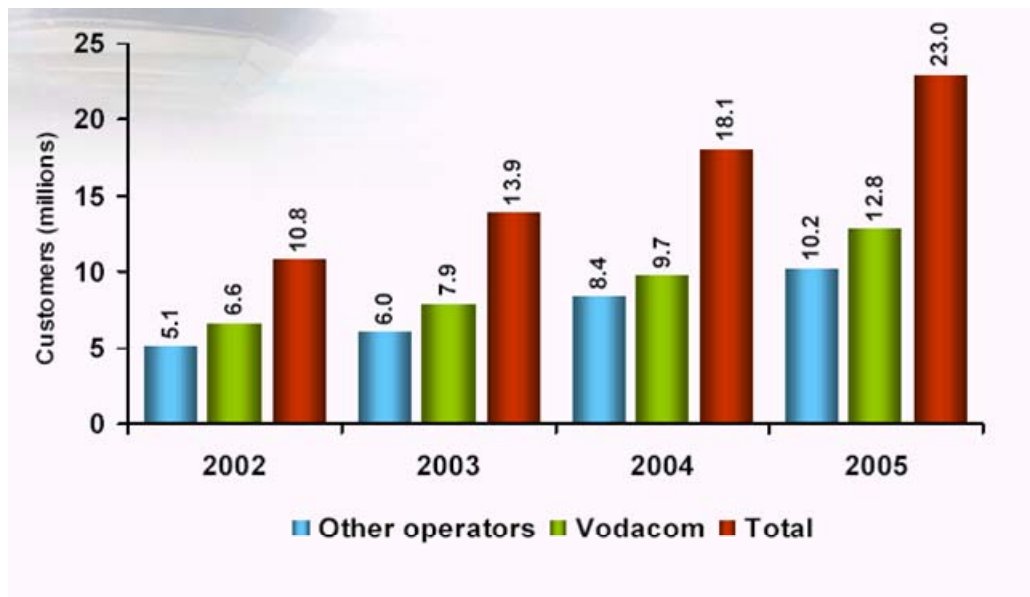
Vodacom has grown fast in terms of revenues, profits, and subscribers and this is largely attributed to the first-mover advantage it had when commencing with mobile services on 1 June 1994 (Cant & Machado, 2005:4). Its early access to large amounts of capital and its main shareholder, Telkom, are two of Vodacom's key advantages when it captured the market.

Furthermore, a number of innovative new products, services and technologies were introduced during last year, such as Third Generation technology (Vodacom was the first operator to introduce 3G to its customers in South Africa), Vodafone live!, the GPRS (General Packet Radio Service- Internet connection that is always switched on) Blackberry and prepaid product offerings, which included fully itemised billing, prepaid passport, a new 4U Super Six starter pack, enhanced Vodago Super Six starter pack and airtime transfer (Telkom Highlights, 2005).

2.3.2.1 Vodacom's market share

As depicted in Figure 2.1 market share is the first component of an MNO's micro-environment. Vodacom has retained its leadership in the highly competitive South African market but although Vodacom has been highly successful in retaining its market share, the strong competition in the market and the sheer volume of gross connections have inevitably resulted in a margin squeeze (Vodacom, 2004). However, despite this margin squeeze, Vodacom has recorded a strong growth which is illustrated in Figure 2.6. Vodacom's customer base grew from 9.7 million customers in 2004 to 12.8 million customers in 2005 (See Figure 2.6).

FIGURE 2.6: VODACOM'S MARKET SHARE



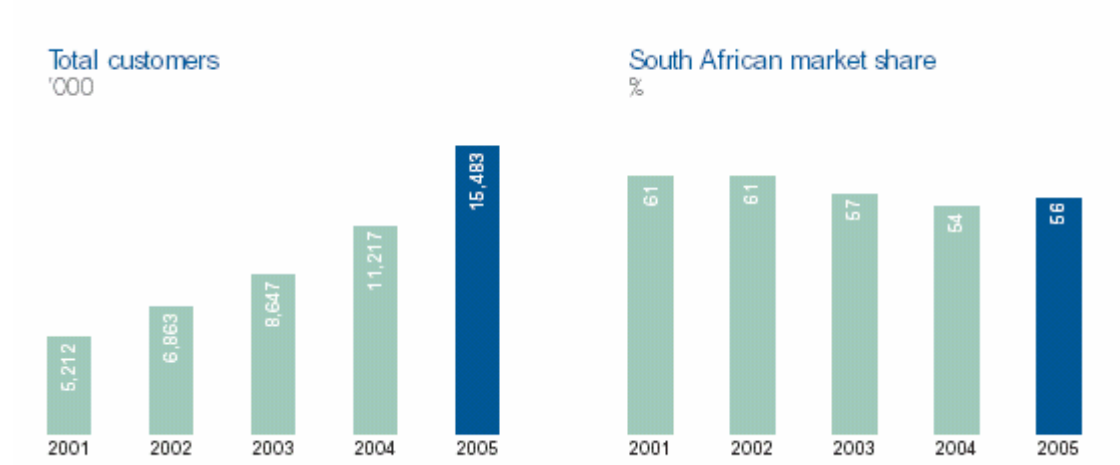
Source: Vodacom Group (Proprietary) Limited For the year ended 31 March 2005 (2005:10)

Although Vodacom has been highly successful in extending its market, it has experienced mounting competitive pressure, especially from the third placed operator Cell C, which has grown its market share largely at Vodacom's expense.

As Figure 2.7 shows, Vodacom's total subscribers grew from 29.7 percent to 11.2 million subscribers in the year 2004 (Cant & Machado, 2005:5). At this stage, Vodacom has 15.5 million customers in South Africa alone, an increase of 38 percent for the year (Vodacom Group Annual Results, 2005).

Vodacom ended March 2005 with 56 percent market share as illustrated by Figure 2.7 (Vodacom Group Annual Results, 2005).

FIGURE 2.7: VODACOM'S TOTAL CUSTOMERS AND SOUTH AFRICAN MARKET SHARE



Source: Adapted from Vodacom Group Annual Results (2005:3)

2.3.2.2 Vodacom's ownership structure

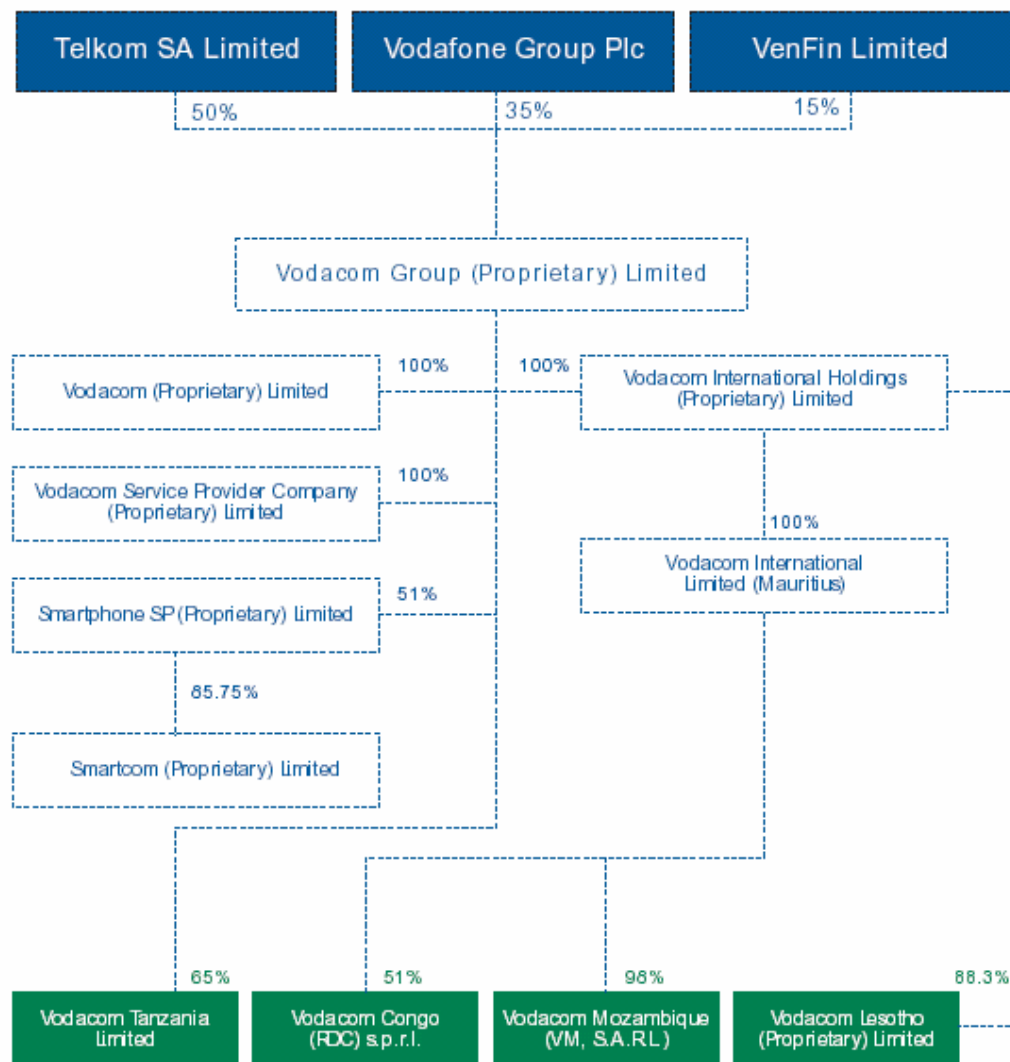
As depicted in Figure 2.1 the second component of an MNO's micro-environment in is the ownership structure. Vodacom Group's shareholders include (See Figure 2.8):

- Telkom SA Ltd (50%)
- Vodafone Group Plc (35%)
- Venfin Ltd (15%) of which Vodafone now owns 99.8 percent, making Vodafone a 50 percent shareholder in Vodacom

In November 2005, Vodafone agreed to acquire Venfin Ltd for approximately R16 billion. It would then shed Venfin's other assets but retain the 15 percent Vodacom stake, making it a 50 percent joint owner with Telkom (Wikipedia, 2005).

Subsidiaries of the Vodacom Group that are helping South Africa's leading mobile communication group remain on top include Vodacom (Pty) Ltd, Vodacom Service Provider (Pty) Ltd, Smartphone SP (Pty) Ltd, Smartcall (Pty) Ltd and Vodacom International Holdings (Vodacom, 2005).

FIGURE 2.8: VODACOM'S OWNERSHIP STRUCTURE



Source: Vodacom Group Annual results (2005:13)

2.3.2.3 Vodacom's products and services

Product and service offerings form part of the third component of an MNO's micro-environment (See Figure 2.1). The success of Vodacom can further be attributed to the introduction of prepaid packages marketed under the Vodago brand name (Cant & Machado, 2005:5). When Vodacom and MTN first launched their services in 1994, they only offered contracts. However, when Vodacom introduced Vodago (a prepaid package) in November 1996, the industry had seen a segmentation approach of the market where lower income users were now targeted.

This in turn fuelled spectacular growth in the mobile phone industry as the introduction of a prepaid package option was seen as a solution to unexpected mobile phone bills and the problem of the poor credit history of some potential customers. Subscribers on Vodacom's Vodago program could thus purchase prepaid packages that provide for unlimited incoming phone calls during a limited time period that usually ranges from two weeks to six months (African Cellular Statistics, 2004).

In 2001, Vodacom's Vodago and 4U prepaid packages accounted for 78 percent of all new connections. The majority of Vodacom's customers are prepaid customers and at the end of March 2005, prepaid customers comprised 85.2 percent of the customer base (Vodacom, 2005). Vodacom offers a number of packages to users: there are three prepaid options in Vodacom's prepaid rates (See Table 2.4) and six contract options (See Table 2.5). *The choice of packages and mobile calling plans formed part of the survey.*

On the one hand, Vodacom offers prepaid packages with no monthly subscription tariff for those users who believe that a monthly subscription tariff is a barrier to entry (Telkom Highlights, 2005:89). Vodacom has three prepaid packages namely (See Table 2.4):

- *Vodago Standard*: For customers who make calls during peak and off-peak periods
- *Vodago Smartstep*: For customers who make calls which are longer than one minute mainly during peak periods
- *4U*: For customers who make calls mostly during off-peak periods. This option has per second billing from the first second and is primarily aimed at the youth market. In March 2005, 70.7 percent of Vodacom's prepaid customers comprised 4U customers proving that the 4U package is highly successful (Vodacom, 2005). SMS charges are the same (80 cents during peak period and 35 cents during off-peak period) for each prepaid option with only the voice calls varying according to the package (See Table 2.4).

TABLE 2.4: VODACOM'S PREPAID PACKAGES

	Vodago Standard	Vodago SmartStep	4U
Vodacom to Vodacom Peak	R 2.55	R2.70 for first minute, R1.55 per minute thereafter	R 2.99
Vodacom to Vodacom Off-Peak	R 1.40	R2.70 for first minute, R1.55 per minute thereafter	R 1.05
Happy Hours 5pm to 8pm	R 1.49	R 1.49	R 1.49
Vodacom to MTN/Cell C Peak	R 2.85	R2.70 for first minute, R1.55 per minute thereafter	R 2.99
Vodacom to MTN/Cell C Off-Peak	R 1.65	R2.70 for first minute, R1.55 per minute thereafter	R 1.30
Vodacom to Telkom Peak	R2.55	R2.70 for first minute, R1.55 per minute thereafter	R 2.99
Vodacom to Telkom Off-Peak	R 1.40	R2.70 for first minute, R1.55 per minute thereafter	R 1.05
SMS Peak	80 cents	80 cents	80 cents
SMS Off-Peak	35 cents	35 cents	35 cents
SMS sent to international number	R 1.74	R 1.74	R 1.74

Source: Vodacom (2005)

On the other hand, the contract tariff packages are designed to appeal to leisure and business customers (Telkom Highlights, 2005:89). Vodacom sets its contract subscription package tariffs utilising a balanced mix of access and usage. For those tariff packages where voice usage is high, the per-minute rate is lowered and the monthly subscription tariff is raised. For those packages where the voice usage is low, the per-minute tariff rate is increased and the monthly subscription tariff is lowered (Telkom Highlights, 2005:89). Vodacom offers contract customers a range of mobile service packages designed to cater for the unique needs of consumer segments. Contract packages range from Business packages (for business customers) and Leisure packages such as Weekend Everyday (for consumer customers). In March 2005, 14.6 percent of Vodacom's customers were contract customers (Vodacom, 2005). There are six Vodacom contract options (See Table 2.5):

- Talk Packages (Talk 100, Talk 120, Talk 200, Talk 240, Talk 500, Talk 1000)
- Leisure Packages (Weekend Everyday)
- Family Packages (Family Call S)
- Messenger Packages
- Corporate Packages (Corporate 500S)
- Business Packages

TABLE 2.5: SUMMARY OF VODACOM CONTRACT PACKAGES

NAME OF TARIFF PLAN	TARGET MARKET FOR THE RELEVANT TARIFF PLAN	EXPLANATION (reason given why this tariff is suited to the specific target market)
BUSINESS PACKAGES		
Business Call 	Business call is mostly aimed at the business market.	A monthly subscription fee is charged and no free minutes are included. The call rates are relatively cheap. This plan is suited for customers who do not use their mobile phones excessively, and who make a lot of off-peak calls. They therefore don't require a package with Talktime minutes.
Business Call S 	Per second version of above.	As above.
Frequent Call 	Frequent call is aimed at the business market who have a higher mobile phone usage than the Business call customers.	A higher monthly subscription fee is charged than for business call, and the call rates are cheaper than business call. This package would suit customers who call more than the business call customer as the cheaper rates make the package more attractive for frequent users.
Frequent Call S 	Per second version of Frequent Call.	As above.
FAMILY PACKAGES		
Family Call S 	Family call S is aimed at the leisure user. It is a legacy package with a small monthly subscription fee, and average call rates.	Newer competitive offers are substituting this plan.
TALK PACKAGES		
Talk 100 S 	Talk 100 S is aimed at the leisure or business customers who call anytime. This package includes 100 bundled minutes.	This package has the lowest bundle of Talktime minutes available, and is designed for customers who don't call often and therefore only require a small bundle of talktime minutes.
Talk 120 	Unitised version of Talk 100 S.	As above.
Talk 200 S 	Talk 200 S is aimed at the medium mobile phone users, not heavy mobile phone users.	This package includes medium sized bundle of minutes, for regular mobile phone users.

Talk 240 	Unitised version of T200	Unitised version of T200S, for customers who prefer not to be billed per second, as the rates are slightly cheaper 60/30
Talk 500 	Talk 500 is designed for heavy business users who need to call anytime and who rely heavily on their phones. Billing is only per second.	This is one of the most popular packages for the business market as the in-bundle rates are competitive and 100 SMS' s are also included in the subscription.
Talk 1000 	Talk 1000S is aimed at users who have a requirement for more than 500 minutes per month. This package features only per second billing.	This package is well suited for a customer who spends a lot of time making calls. A bundle of 200 SMS' s is included in this package and the minutes apply to anytime.
CORPORATE PACKAGES		
Corporate 500 	Corporate 500 is designed for heavy business users who mainly call Vodacom numbers and Telkom numbers.	The in-bundle rate is cheaper than that of the T500, as it only applies to on-net calls.
LEISURE PACKAGES		
Weekend Everyday 	Leisure packages are aimed at leisure, non-business users who make most of their calls in cheaper off-peak time periods.	The bundle of 120 minutes is only applicable for off-peak calls, thereby catering for cheaper calling rates when these customers make most of their calls.
Weekend Everyday S 	Same as Weekender, but the per second option.	See above.
Messenger 	Messenger is designed for users who mainly use data applications such as telemetry.	A very low monthly subscription fee with SMS at 22c, and high voice rates (R4.00) are included in this package.
Data Package 	Data package is aimed at users who have a requirement for data only, e.g. telemetry applications.	The Data package was launched on 1 August 2005. This was done as a result of customer demand for a package similar to Messenger but without the voice capabilities.
4U Contract 	The 4u package is aimed at the youth market – Up to the age of 26 although the tariff plan has been taken up by all ages.	This package offers customers who are high off-peak users an extremely low tariff rate.
Corporate Direct Connect	Corporate Direct Connect is designed for the young and up and coming target market (18-25 years old).	This is a unique tariff plan in the market that does not have a monthly subscription. Customers do not have a minimum payment. 4U is a single tariff plan and customers can choose whether they want to pre-pay or post-pay.

Source: Adapted from Indepen (2005:50); Vodacom (2005)

Vodacom's prepaid and contract tariffs are further summarised in the table below (See Table 2.4). Contract users pay a connection fee and a monthly fee as illustrated in Table 2.6 (Weekender Everyday and Business Call users pay R97.00 connection fee and a monthly charge of R135.00 and R185.00 respectively). Unlike contract users, prepaid subscribers do not pay any connection or subscription fees. Prepaid tariffs regarding peak and off-peak calls cost on average more than the contract tariffs (See Table 2.6).

TABLE 2.6: VODACOM TARIFFS: PREPAID VERSUS CONTRACT

Vodacom tariffs			
(ZAR, including value-added tax)	Leisure ¹	Year ended March 31, Contract ²	Prepaid ³
■ Connection fee	97.00	97.00	-
Monthly charge/ subscription	135.00	185.00	-
National calls (per minute)			
Mobile-to-fixed peak calls	2.75	1.76	2.55
Mobile-to-fixed off-peak calls	0.95	0.95	1.40
Mobile-to-mobile peak calls – own network	1.80	1.76	2.55
Mobile-to-mobile off-peak calls – own network	0.90	0.95	1.40
Mobile-to-mobile peak calls – other networks	2.75	2.30	2.55
Mobile-to-mobile off-peak calls – other networks	0.95	1.15	1.65
International calls (per minute)			
Peak	1.76	1.76+	5.50, 7.50,
	Telkom	Telkom	10.00, 12.50,
	Peak	Peak	15.00 or 17.50
			depending on
			zone
Off-peak	0.95+	0.95+	5.50, 7.50,
	Telkom	Telkom	10.00, 12.50,
	off-peak	off-peak	15.00 or 17.50
			depending on
			zone
SMS per message			
Peak	0.80	0.80	0.80
Off-peak	0.35	0.35	0.35

¹ Tariff for 'Weekend Everyday,' Vodacom's contract leisure package. Vodacom's 'Weekend Everyday' contract includes 120 free off-peak minutes per month. Calls are charged for the first 60 second increment and 30 second increments thereafter. As of March 31, 2005, 'Weekend Everyday' customers accounted for 82.7% of Vodacom's total contract customers.

² Tariff for 'Business Call,' Vodacom's contract business package. Vodacom's 'Business Call' contract includes no free minutes per month. Calls are charged for the first 60 second increment and 30 second increments thereafter. As of March 31, 2005, 'Business Call' customers accounted for 16.8% of Vodacom's total contract customers.

³ Tariff for 'Vodago,' Vodacom's standard prepaid package. Calls are charged for the first 60 second increment and 30 second increments thereafter.

Source: Telkom Highlights (2005:90)

Telecommunications companies in South Africa had recently come under fire for charging uncompetitive high prices for their services, placing a burden on individuals and businesses, and hampering economic growth (South African Good News, 2005). The mobile operators were accused of raking in enormous profits at the expense of the consumer and the country as a whole. In response, Vodacom started offering the cheapest peak-time call tariff in the world on the 29 August 2005. Vodacom cut prepaid tariffs twice in a week, arguing the new rates would attract more customers from the lower end of the market. The first cut prompted a drop in the share price of MTN and Vodacom's majority shareholder Telkom.

The new tariff, which unfortunately only applies to Vodacom-to-Vodacom calls, saw a standard on-network call rate of R1.49 per minute (including VAT) for prepaid and contract customers (South African Good News, 2005).

The new rate also meant that Vodacom offered its customers the cheapest peak time video call tariff in the world. The new tariff was effective immediately for all prepaid customers with no special subscription, starter pack or mobile phone number required and from 1 October for all contract subscribers, subject to ICASA's approval (South African Good News, 2005).

Having discussed the prepaid and contract rates, it is also important to understand the services the mobile network operators offer. New emerging mobile applications have been developed and some in particular may appeal to the youth market such as: enhanced text messaging (SMS), multi media messaging (MMS), wireless application protocol (WAP), mobile gaming, enhanced ringtones and sending pictures. All of these will be discussed in more detail below.

2.3.2.4 Mobile applications

- **Text messaging (SMS)**

Text messaging, or short messaging system (SMS) as it is more commonly known, is the most widely used application. Available sources have found that Generation Y consumers love to text as text messaging is an extremely user-friendly medium and relatively cheap compared with a mobile phone call (Spero & Stone, 2004:157). Taylor and Harper (2002:4) found that “the use of SMS was ubiquitous and that young people’s motivations for texting seemed normative, complex and deeply rooted in their perceptions of social relations.” The authors showed how mobile phones provided young people with a means of gift-giving in the form of SMS messages that embody shared meanings thus providing them with new ways of sustaining their relationships and reaffirming friendships. According to Spero and Stone (2004:157) these rituals have always been played out, but immediate access, flexibility, and privacy are newfound considerations associated with the increased use of text messaging.

According to Cheskin (2001:19) mobile phones that combine voice communications and text messaging seem to be more successful in satisfying the behavioural needs of the youth market. Predictive text and new keypad interfaces makes text messaging easier. Cheskin (2001:19) defines predictive text as “a technology embedded in the mobile phone that uses a built-in dictionary to predict the word you are trying to spell as you are typing it. You can write by pressing one key per letter, instead of two or three as an ordinary phone keypad.” Furthermore, code language in text messaging has been embraced by the youth- for example the use of smiley face icons and words such as “Great” is spelled “Gr8” (Cheskin, 2001:20).

Furthermore, Cheskin (2001:10) discusses four reasons why text messaging is so compelling to young people:

- 1) information can be broadcasted immediately and simultaneously to a large group of people
- 2) does not disrupt current interactions the same way as a phone call does
- 3) allows for anonymity and convenience of message delivery
- 4) allows the youth to adopt multiple personalities with different friends.

- **Wireless Application Protocol (WAP)**

Wireless Application Protocol (WAP) allows users to browse the Internet using their mobile phones. WAP has never really taken off in South Africa as a result of cost, yet it appears that very few are willing to buy a phone without that particular feature.

- **Wireless mobile gaming**

Mobile gaming has become a regular activity for mobile phone users especially among young people. Games like Snake, Memory, and Sports have been taken to a whole new level. According to Cheskin (2001) most wireless games are designed for short play sessions of about three to five minutes to alleviate boredom.

“Since teens and adults are used to a high level of stimulus, this “gap-filling” quality of wireless games takes advantage of a timeless behavioural pattern of young people” (Cheskin, 2001:21).

- **Music downloads**

Downloading music into mobile phones has not taken off yet here in South Africa as a result of limited bandwidth of the current 2G wireless infrastructure. Third generation applications (3G) will allow faster downloads of music hence making it a more viable feature in mobile phones. Downloading ringtones is another opportunity for music in mobile phones. Many websites offer this service where ringtones can be emailed directly into phones (Cheskin, 2001:24).

- **Sending pictures and photos**

The capabilities of sending images and audio will become more prominent with third generation applications (3G). The introduction of Multimedia Message Service (MMS) or Enhanced Messaging Service (EMS) has enhanced the Short Messaging System (SMS) to allow for the transmission of audio (sound) and images (pictures, graphics and animation) along with text. Combining a digital camera with a mobile phone has been one of the features given interest by the young market according to Cheskin (2001). This will not only help young people in personalising their communication but will also allow them to be more socially expressive. In the next section, Vodacom's network and coverage will be discussed.

2.3.2.5 Vodacom's network

Vodacom's coverage, the fourth component of an MNO's micro-environment (See Figure 2.1), is achieved using a GSM 900 technology network. Some of the services offered are voice, mobile data and fax, voicemail message and callback. The major equipment suppliers are Siemens, Alcatel and Motorola. On the African continent, Vodacom operates in South Africa, Tanzania, Lesotho, Mozambique and the Democratic Republic of Congo (refer to Figure 2.8).

Vodacom Tanzania has further consolidated its position as market leader in that country with a 57 percent market share at year-end. The Tanzanian market remains highly competitive but it still promises further potential (Vodacom, 2005).

Vodacom Congo has significantly grown its market share since the re-launch of the operation under the Vodacom brand in May 2002 and has increased its market share from 9 percent at that time to 47 percent at year-end. Vodacom Congo has the lowest estimated mobile penetration of all of Vodacom's African operations (Vodacom, 2005).

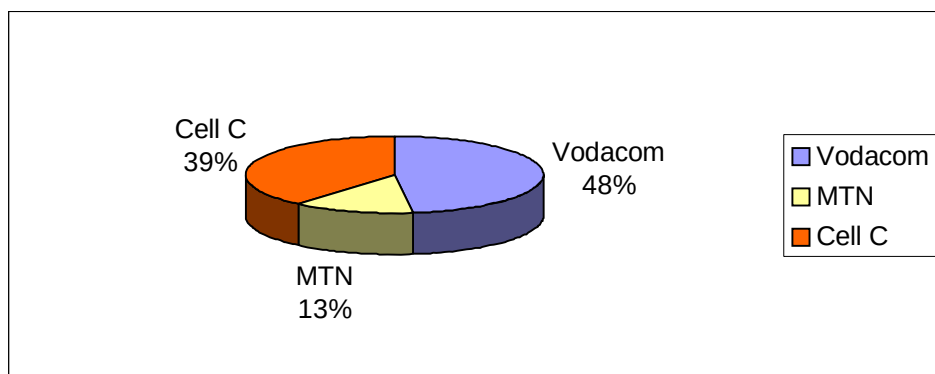
Vodacom Lesotho has positioned itself to capitalise on any future market growth and minimise the impact of competitive activity. It has positioned itself well to minimise the impact of competitive activity and has maintained 80 percent market share.

All the African operations, except the new Mozambican operation, were profitable at the profit from operations level for the year (Vodacom, 2005).

Vodacom Mozambique launched commercial operations on 15 December 2003. The number of connections experienced to date was ahead of expectations. Market share is estimated at 24 percent and mobile penetration at 3.8 percent. Strong growth is expected from this market in future (Vodacom, 2005).

Vodacom's commitment to roll-out subsidised community telephones (CST's) in South Africa's under-serviced areas has significantly boosted the company's coverage in rural areas. In June 2005, Vodacom had deployed more community services telephones in previously under-serviced areas compared to the licence obligations and its competitors (See Figure 2.9).

FIGURE 2.9: CST'S MARKET SHARE IN JUNE 2005



Source: Adapted from Laham (2005)

Vodacom recognises that the future of South Africa is, to a great extent, intertwined with that of the African continent as a whole. In this respect, Vodacom's construction of mobile networks throughout Africa is seen as helping to realise the ideal of an African Renaissance (Vodacom, 2005).

2.3.2.6 Vodacom's market strategy

Vodacom, as discussed above, is the dominant mobile leader in the mobile communications industry and tries to position itself as the 'biggest and the best' (Finnie, Lewis, Lonergan, Mendler & Northfield, 2003:145). Vodacom has used traditional incumbent tactics, exploiting its advantage in terms of distribution channels to attract mass-market prepaid customers, and using its established relationship with business customers to attract high-end postpaid users. Vodacom has an estimated 70 percent of business postpaid customers, compared to 53 percent of the total market. The result is that Vodacom has a higher postpaid average return per unit (ARPU) than MTN, but a lower prepaid ARPU than MTN. In order to achieve continued growth, Vodacom continues to focus on expansion on the African continent and is consistently evaluating new investment opportunities (Vodacom Group Annual results, 2005:8).

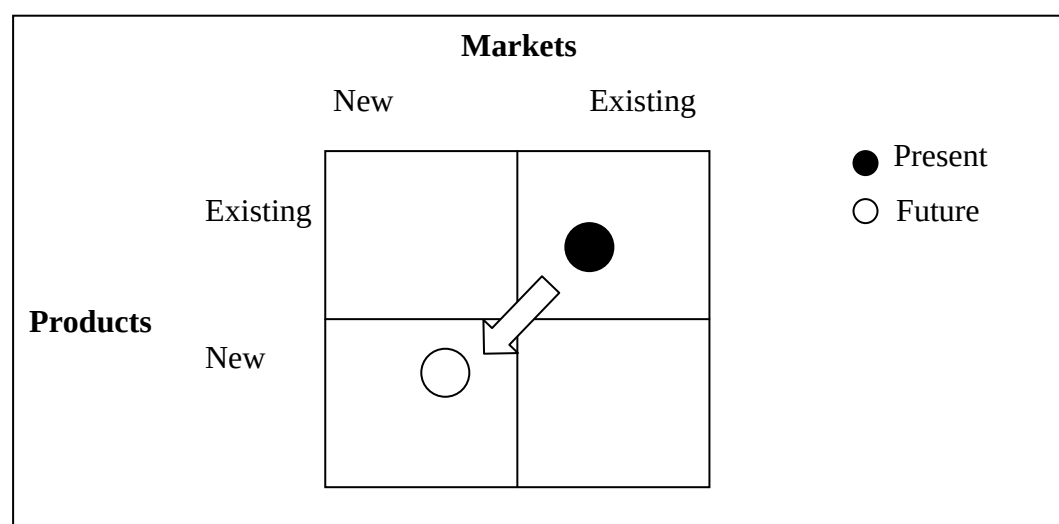
Vodacom currently targets four market segments, namely (Telkom Highlights, 2005):

- *Corporate Market*: services to corporations and enterprises
- *Developed Market*: services to customers in the higher income groups
- *Developing Market*: services to customers in under-served areas and lower income groups, who increasingly participate in the economy; and
- *Youth Market*: services specifically designed for the needs of the youth.

As with most leaders in a particular market, Vodacom has lost market share to a new entrant, but has focused on delivering higher value to customers by introducing new services that lead the way in product development. This is a diversification strategy (see Figure 2.4 for Kotler's Product/Market Expansion Grid).

Vodacom is thus prospecting and developing new markets for its products and services (See Figure 2.10).

FIGURE 2.10 VODACOM'S MARKET STRATEGY



Vodacom's mission and objective (see Figure 2.1) in the short to medium term is to retain market share and attract new customers through attractive products. Loyalty and retention programmes played an integral role in achieving this objective. Vodacom also sought to increase its contract customer base by migrating appropriate high-end prepaid customers to contracts in the 2005 financial year (Telkom Highlights, 2005). According to Cant and Machado (2005:5) Vodacom has redirected its strategy by pursuing technological advances in its quest to maintain growth rates of the past. Vodacom is working closely with Telkom in the areas of wireless Internet and also testing the next generation of mobile technology known as 3G. The micro-environment of the second mobile network operator, MTN, will be discussed in the next section.

2.3.3 MTN Mobile Network Operator

Launched in 1994, MTN (formerly M-Cell) was the second service provider in South Africa but the first service provider in the world to have a mobile coverage of 60 000km², obtain a mobile licence in Africa and launch prepaid packages. MTN's GSM network coverage in South Africa -exclusively provided by Ericsson- embraces almost 90 000km² of land, consists of 4000 base-stations, and has now around 9 million subscribers (African Cellular Statistics, 2005).

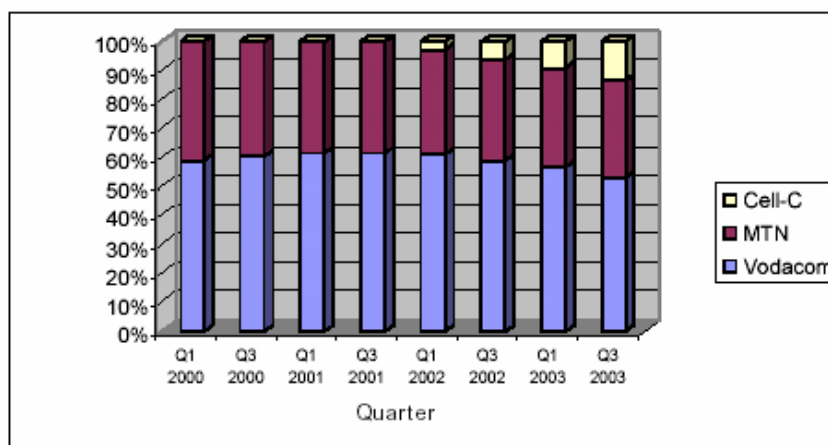
In October 2000, MTN was the first operator to launch HSCSD (High Speed Circuit-Switched Data: switched wireless data transmission for mobile users at data rates up to 38.4 Kbps) in South Africa. It followed this in July 2002 by beating rival Vodacom by three months in introducing GPRS. By the end of March 2003 MTN had approximately 30.000 active GPRS users. MTN has been a leader in the development of advanced data services and has developed a number of web-based portals. MTN's MTNICE (MTN Information, Commerce and Entertainment) portal for WAP (Wireless Activated Protocol) and SMSbased entertainment boasts a community of around one million users (Finnie et al., 2003:130).

2.3.3.1 MTN's market share

MTN has gradually seen its market share decrease since the beginning of 2000 from 41 percent to 33 percent despite of its consistently increasing customer base. As illustrated by Figure 2.11, the decline in MTN's market share is even more apparent in the fourth quarter of 2001 when Cell C was first launched.

Whilst Vodacom lost eight percentage points of market share when Cell C entered the market, MTN also suffered disproportionately at the hands of this newcomer, losing six percentage points of market share to date (Finnie et al., 2003:131). In 2005, MTN had approximately 35 percent of the market share (Telkom Highlights, 2005:14).

FIGURE 2.11 MOBILE MARKET SHARE DEVELOPMENT



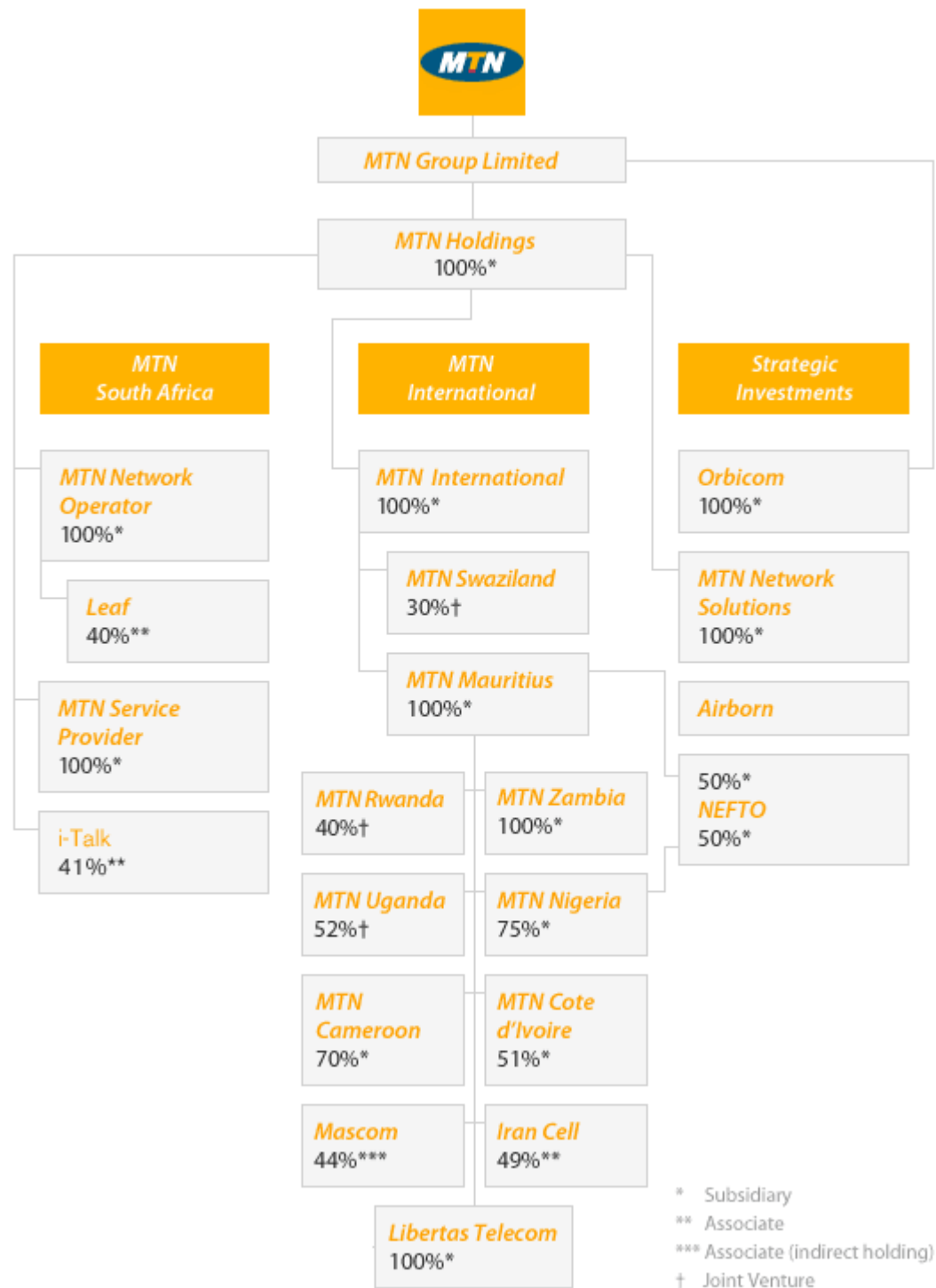
Source: Adapted from Finnie et al. (2003)

2.3.3.2 MTN's ownership structure

As shown in Figure 2.12, MTN is 100 percent owned by holding company MTN Group. MTN has followed Vodacom in attracting foreign investment- MCell owns a 72 percent stake of MTN, Transnet (the public transport utility) owns 23 percent, a variety of empowerment groups own 3.5 percent and the National Empowerment fund owns a 1.5 percent share (Marine et al., 2001). In addition to its domestic operations, MTN Group - through its MTN International subsidiary - has wireless subsidiaries in Cameroon, Lesotho, Nigeria, Rwanda, Uganda and Swaziland whereas Vodacom has wireless subsidiaries in Tanzania, Congo, Lesotho and Mozambique (see section 2.3.2.5).

As illustrated in Figure 2.12, MTN also holds stakes in two service providers MTN Service Provider (100 %) and iTalk Cellular (41 %), both of which are exclusively MTN providers.

FIGURE 2.12 MTN'S OWNERSHIP STRUCTURE



Source: MTN (2005)

2.3.3.3 MTN's products and services

MTN was quick to follow Vodacom in the prepaid market with its competing prepaid packages. It has implemented three prepaid packages as shown in Table 2.7:

- *Pay as you Go Classic* (PAYG Classic): ideal for consumers who receive more calls than they make and who make most of their calls in the evening or on weekends
- *Pay as you Go Call Per Second* (PAYG Call per Second): charges consumers only what airtime they've used up
- *Pay as you Go Call Per Second Plus* (PAYG Call per Second Plus): Cheaper peak time call rates and cheaper SMS rates during peak and off-peak times.

TABLE 2.7: MTN'S PREPAID PACKAGES

	PAYG Classic	PAYG Call Per Second	PAYG Call Per Second Plus
MTN to MTN Peak	R 2.50	R 3.20	R 3.30
MTN to MTN Off-Peak	R 1.40	R 1.05	R 1.00
MTN to Other Peak	R 2.85	R 3.50	R 3.60
MTN to Other Off-Peak	R 1.60	R 1.30	R 1.30
MTN to Telkom Peak	R2.55	R 3.20	R 3.30
MTN to Telkom Off-Peak	R 1.40	R1.05	R 1.00
SMS Peak	75 cents	75 cents	MTN to MTN 45 cents MTN to Other 65 cents
SMS Off-Peak	75 cents	35 cents	
SMS sent to international number	R 1.60	R 1.60	R 1.60

Source: Adapted from MTN (2005)

Presumably according to Marine et al. (2001), the per-minute cost of MTN's service is comparable to that of Vodago. However, the per-minute cost for prepaid tariffs compared to that of contract tariffs is not comparable. It has been found that the per-minute cost to the contract subscriber is about half that of the prepaid subscriber. "Vodacom contract users usually pay R1.60 per minute whereas Vodacom prepaid subscribers pay R2.85 per minute" (Marine et al., 2001:16).

The way in which one can further calculate the cost of a contract deal is by looking in the marketplace. Contract fees can be calculated by adding one-off connection and sim card fees and dividing these by 24 (most contracts last 24 months). To this amount, the monthly subscription fee for the various deals is added (Sunday Times, 1999). MTN's new contract tariffs are examples of bundled billing where the calls are prepaid on a monthly basis and with a resultant discount on call costs. As illustrated in Table 2.8, they are called ProCall and MyChoice and can be compared to the Vodacom contract alternatives. Once again, the connection fees, monthly charge, number of free minutes and cost of voice calls (both peak and off-peak) are all given (See Table 2.8). ProCall tariff options have been designed with the serious talkers in mind and MyChoice tariff options give the consumer the choice of how to use the inclusive value from calls, messaging and data to downloading ringtones (MTN, 2005).

Like Vodacom, MTN also planned a tariff overhaul but did not engage in a price war with Vodacom who cut its rates at the end of August 2005. MTN will aim at attracting more customers by providing better value bundles, including free banking and SMS messages rather than simply cutting prices (Business Day, 2005d).

TABLE 2.8: MTN'S CONTRACT TARIFF STRUCTURES

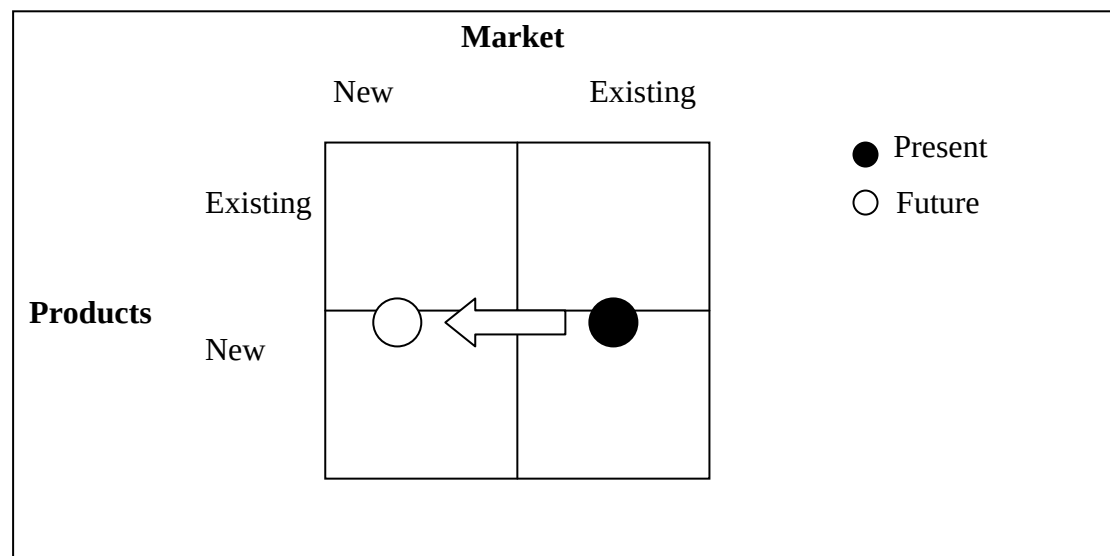
	Pro Call 120	Pro Call 150	Pro Call 220	Pro Call 300	Pro Call 600	Pro Call 1000	My Choice 75	My Choice 150	My Choice 300	My Choice 705
Monthly fee	R 285	R 360	R 389	R 949	R 250	R 1499	R 75	R 190	R 329	R 705
Connection fee	R 99	R 99	R 99	R 99	R 99	R 99	R 99	R 99	R 99	R 99
Free Minutes	120 Anytime minutes	120 Anytime minutes	220 Anytime minutes	300 Anytime minutes	600 Anytime minutes	1000 Anytime minutes	R 75 value	R 150 value	R 300 value	R 705 value
MTN to MTN Peak	R1.65	R 2.05	R 1.65	R 1.70	R 1.55	R 1.46	R 2.10	R 1.85	R 1.70	R 1.46
MTN to MTN Off-Peak	R 0.90	R 0.95	R 0.90	R 0.95	R 0.90	R 0.90	R 0.95	R 0.90	R 0.90	R 0.95
MTN to Other Peak	R2.35	R2.80	R 2.35	R 2.35	R 1.90	R 1.85	R 2.75	R 2.70	R 2.55	R 2.45
MTN to Other Off-Peak	R 1.15	R 1.30	R 1.15	R 1.30	R 1.15	R 1.15	R 1.15	R 1.15	R 1.15	R 1.15
MTN to Telkom Peak	R 1.65	R2.05	R 1.65	R 1.70	R 1.15	R 1.00	R 2.10	R 1.85	R 1.70	R 1.46
MTN to Telkom Off-Peak	R 0.95	R 0.95	R 0.95	R 0.99	R 0.90	R 0.90	R 0.95	R 0.95	R 0.95	R 0.95
Local SMS Peak	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents
Local SMS Off-Peak	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents	75 cents

Source: Adapted from MTN (2005)

2.3.3.4 MTN's market strategy

When MTN commenced its services a few months after Vodacom, it initially followed a classic follower strategy (Cant & Machado, 2005:5). MTN is now following a different growth strategy and focusing more on an international growth strategy. Whereas Vodacom strives to be the 'biggest and the best', MTN's strategy revolves around attracting high-value consumer users. As illustrated in Figure 2.1, MTN's main focus and objective is on the higher-end prepaid and contract section of the market. Its success in targeting these sections of the market is illustrated by its disproportionately high-contract market share, and the fact that its prepaid ARPU is 20 percent higher than main rival Vodacom. As shown in Figure 2.13, MTN's market position strategy is a combination of market penetration and product development and innovation.

FIGURE 2.13: MTN'S MARKET STRATEGY



MTN has placed a lot of emphasis on ongoing reward schemes as a customer retention tool. With “eBucks” users receive reward points for incoming and outgoing calls and sending text messages. Further points are also awarded based on subscriber longevity.

These can be exchanged for airtime or non-mobile goods and services. There are even more loyalty schemes available for prepaid customers- the “Big Bonus” plan is an example of such a loyalty scheme and consists of two main parts (Finnie et al., 2003:135):

- *Daily Free SMS Bonus*: users receive one free SMS for every chargeable call of over one minute, although the SMS must be used on that day;
- *High Usage Bonus rewards*: users with airtime for spending over R500 or R1000 per month will see their rewards ramping up the longer the subscriber stays with MTN.

MTN has had some success in adopting a “services not technologies” approach to non-voice applications. In promotional literature there is no mention of GPRS or HSCSD, instead being substituted for brands such as MTNdataFAST and MTNdataLIVE. The terms SMS (Short Message Service) and MMS (Multimedia Message Service) are used, but these have already entered common parlance to a significant degree (Finnie et al., 2003:136).

The third mobile network provider, Cell C, will be discussed in the next section.

2.3.4 Cell C Mobile Network Operator

The country's third cellular licence, Cell C, was issued in June 2001. Cell C was awarded a dual-band GSM-900/1800 MHz license in February 2001 and launched in November 2001 with a 084 prefix number range (See Table 2.9). Initially Cell C provided services via a 15-year commercially negotiated roaming agreement with Vodacom as it rolled out a network of base-stations. It has the intention to solely rely on its own access network in the future and this will reduce Cell C's interconnection fees to Vodacom. The company is making extensive use of local organisations and contractors to ensure that funds are injected in the South African economy. Revenue increased by R357 million (38.8%) in 2005 compared to 2004 (Laham, 2005:16).

TABLE 2.9: CELL C: A SHORT HISTORY WITH SIGNIFICANT GROWTH

November/December 2001: Launch
June/August 2001: License Issued
January 2003: 1 million active subscribers
July 2003: Community Service Telephones (CST) rollout begins
May 2004: Cell C EBITDA positive
November 2004: 2 million active subscribers
January 2005: Half a million contract subscribers
May 2005: 20 000 CST's deployed
June 2005: 2.5 million active subscribers

Source: Adapted from Laham (2005:2)

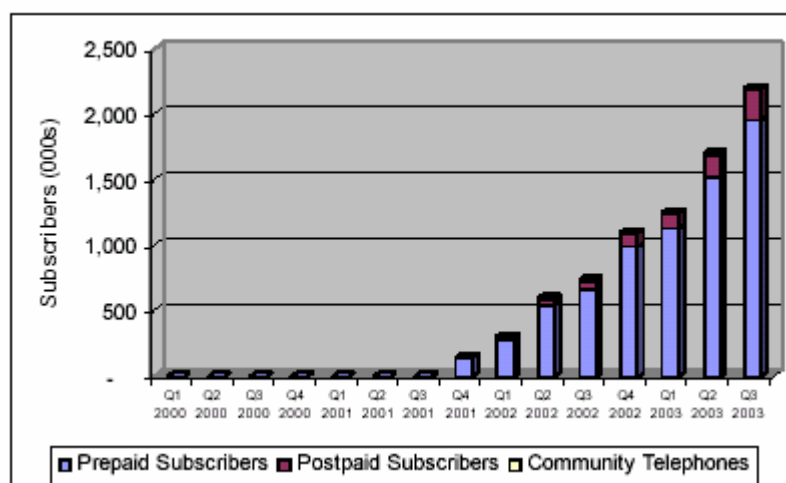
Cell C has generated real price competition, and forced Vodacom and MTN to focus more on best-value pricing and customer service. "For the South African market, Cell C has been an important step towards creating a mobile communications sector that is as competitive as any in the world, and creating real choice and value for consumers" (Finnie et al., 2003:129).

2.3.4.1 Cell C's market share

Cell C has achieved a good level of success since it first entered the mobile phone market and it now has approximately a 10 percent share of the South African market (Telkom highlights, 2005:14). This growth has been fuelled by some enhancements to its media advertising campaigns and an increase in its distribution channels (See Figure 2.14).

By April 2004, in the *Business Report* section of *The Star*, Cell C was estimated to have reached the 3 million subscriber-mark of which 1.9 million were active and aims to achieve a 15-25 percent of the market share by 2006 (African Cellular Statistics, 2004). At present, Cell C has just over 2.5 million active subscribers (Cell C, 2005). However, it is important to note that Cell C did enter the market at a time when mobile service penetration was relatively low, and new customers were being added very quickly. It should also be stressed that Cell C does carry a significant number of inactive customers in its reported customer base numbers. It has been estimated that the inactive proportion may be as high as 22 percent of the total. This is based on the definition that a customer is considered inactive if they have not used the service for three months or more (Finnie et al., 2003:126).

FIGURE 2.14: CELL C SHOWS HEALTHY SUBSCRIBER GROWTH

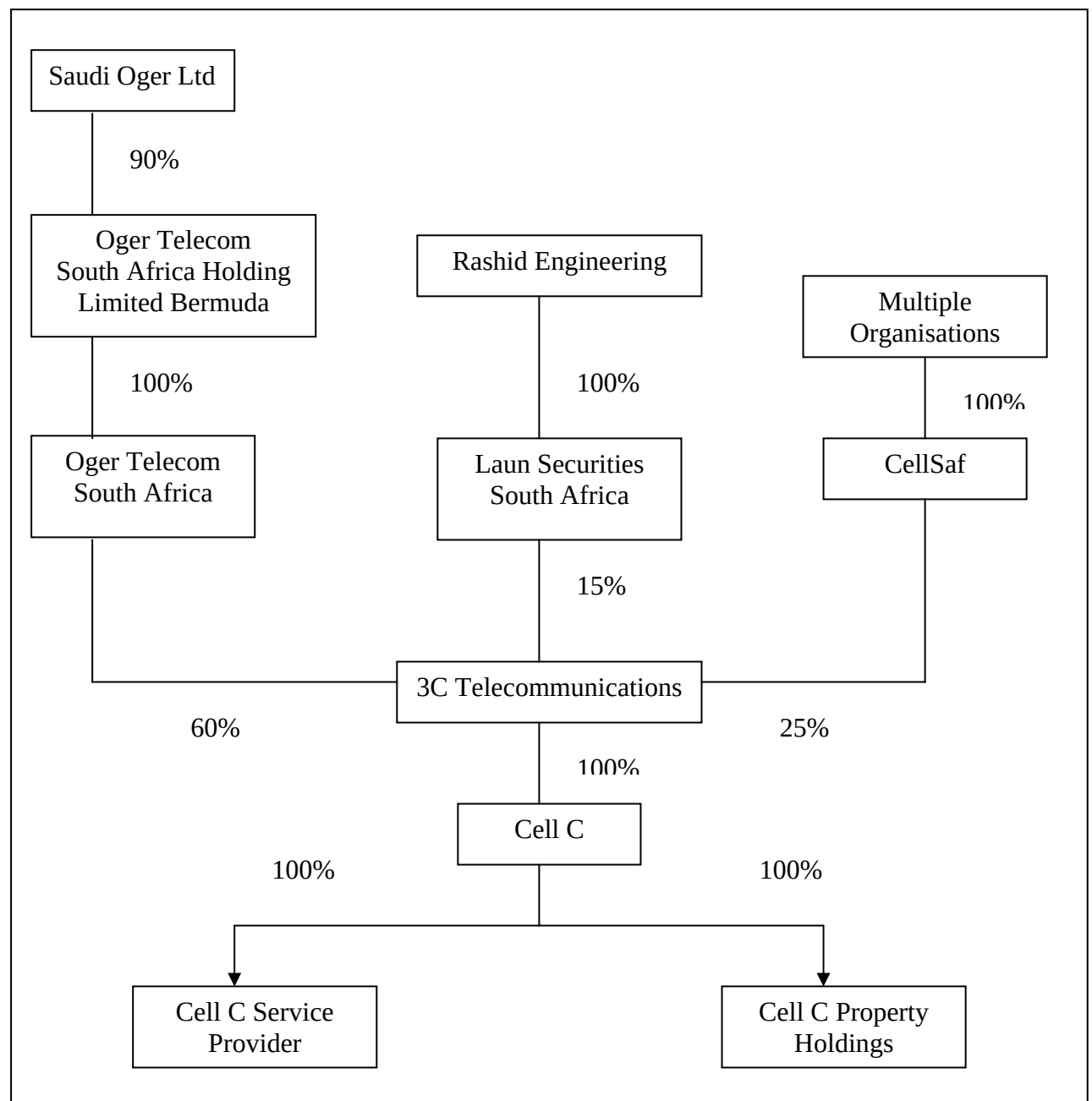


Source: Adapted from Finnie et al. (2003)

2.3.4.2 Cell C's ownership structure

As illustrated in Figure 2.15, Cell C (Pty) Ltd is 100 percent owned by 3C Telecommunications (Pty) Ltd (which in turn is 60 percent owned by Saudi Oger), 25 percent by CellSaf unencumbered (CellSaf represents over 30 black empowerment companies and trusts), and 15 percent by Lanum Securities. Furthermore, the network operator and the service provider have different functions (See Figure 2.15).

FIGURE 2.15 CELL C'S OWNERSHIP STRUCTURE



Source: Adapted from Laham (2005:8)

2.3.4.3 Cell C's products and services

Cell C, like its rivals Vodacom and MTN, offers two groups of products namely prepaid and contract to corporate, business, consumer and youth markets. Cell C offers three pricing options for Easy Chat Prepaid: All Day, Standard and Per Second, allowing the consumer to choose between a flat rate for all calls or variable billing based on peak and off-peak periods respectively. Incoming calls are unlimited, and discount call rates to regularly dialled numbers are two of the features that Cell C Easy Chat Prepaid offers (See Table 2.10).

TABLE 2.10: CELL C'S PREPAID TARIFFS

	Easy Chat Standard	Easy Chat All Day	Easy Chat per Second
Cell C to Cell C Peak (Friends & Family)	R 1.50	R 1.50	R 1.50
Cell C to Cell C Off-Peak (Friends & Family)	R 0.75	R 0.75	R 0.75
Cell C to Cell Peak	R 2.50	R 2.00	R 3.20
Cell C to Cell Off-Peak	R 1.40	R 2.00	R 1.05
Cell C to Other Peak	R 2.85	R 2.00	R 3.50
Cell C to Other Off-Peak	R 1.60	R 2.00	R 1.30
Cell C to Telkom Peak	R2.50	R 2.00	R 3.20
Cell C to Telkom Off-Peak	R 1.40	R 2.00	R 1.05
SMS Peak	80 cents	60 cents	80 cents
SMS Off-Peak	34 cents	60 cents	34 cents

Source: Adapted from Cell C (2005)

Cell C also created a youth brand, known as CY, which increased the overall market share within the targeted higher ARPU segment. CY, as shown in Table 2.10 and Table 2.11, is targeted at the 18-24 market (Generation Y users) of all races, male and female. The brand value of CY is that it is “young, cool and different”. CY's initial offering is a uniquely branded starter pack, additional lifetime value (10 SMS' s per month for free forever), R20 worth of airtime, free logos and ringtones, and two movie vouchers (See Table 2.11).

TABLE 2.11: CELL C'S YOUTH BRAND: CY

Starting point	Solution	Results
- Developed market for mobile communication (40 % penetration) - Cell C: 3rd mobile operator in RSA: 11/2001: Initial Launch 05/2003: 12 % market share, 2m subscribers, 90 % prepaid - General brand perception: - Competitive, young and fresh - Strong corporate + prepaid brand - Competitive environment: - Vodacom: incumbent (since 1995) and still market leader - MTN: close to market leader, tried to tap into Cell C's youth segment early 2003 - Intensive market intelligence revealed - a high ARPU youth segment that can afford a high price for starter packs - the right features of the initial offering - the pre-qualification of campaign	- CY = "brand" platform of Cell C - Target audience of CY: 18 – 24 - All races, male and female - Metropolitans, students, employed - Brand values of CY: - Young, cool and different - Full of secrets and surprises - Initial offering - Uniquely branded prepaid starter pack - additional lifetime value (10 SMS per month for free forever) - Included ring tones and logos for free 2 movie vouchers - Separate website SMS + VAS - Supporting co-operations - YFM (radio), Smirnoff (planned), Woolworth (Fashion) - Customer service - Same telephone number - Sales and distribution - Selective distribution	- Segment generates ARPU that is 4 times higher than average prepaid ARPU - High brand equity of CY and increased corporate brand equity (life style approach) - Positive impact on sales of standard prepaid offering - Page impressions of www.c-v.co.za above average - Outperformed MTN's youth offering

Source: Adapted from Detecon (2004:12)

In the contract market, Cell C offers four variations of the contract product and targets the business or the youth segments (See Table 2.12).

TABLE 2.12: CELL C CONTRACT PACKAGES

Product	Market Segment
Club Chat	Youth
Casual Chat	Youth
Active Chat	Business
Business Chat	Business

Adapted from: Ali (2003)

As illustrated in Table 2.13, the monthly fee, number of free SMS' s, free minutes, and voice call tariffs are given for each contract tariff namely:

- Control Chat (16 Options of Control Chat: 50, 75, 100, 125, 150, 175, 200, 225, 250, 300, 350, 400, 450, 500, 600, 700)
- Casual Chat (Casual Chat SMS, Casual Chat Anytime, Casual Chat 100)
- Active Chat (Active Chat 100 and Active Chat 220)
- Business Chat (Business Chat Standard, Business Chat 400, Business Chat 100 and Business Chat 1000)
- Value Chat

TABLE 2.13: CELL C CONTRACT TARIFFS

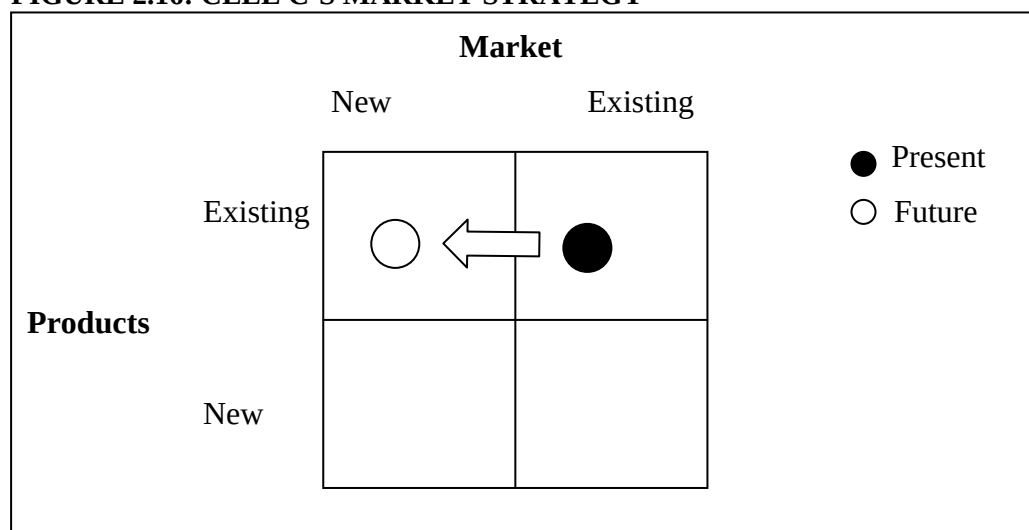
	Value Chat	Casual Chat SMS	Casual Chat Anytime	Casual Chat 100	Active Chat 100	Active Chat 220	Business Chat Standard	Business Chat 400	Business Chat 700	Business Chat 1000
Monthly fee	R 50	R 115	R 130	R 115	R 250	R 410	R 185	R 650	R 1100	R 1500
Connection fee							R 99	R 99	R 99	R 99
Free Minutes	None					None	None	400 anytime	700 anytime	1000 anytime
Cell C to Cell C Peak	R 1.60	R1.80	R 1.80	R 1.80	R 1.70	R 1.70	R1.65	R 1.43	R 1.43	R 1.43
Cell C to Cell C Off-Peak	R 0.95	R 0.90	R 0.90	R 0.90	R 0.95	R 0.95	R 0.95	R 0.90	R 0.90	R 0.90
Cell C to Other Peak	R 1.75	R2.70	R 2.70	R 2.70	R 2.35	R 2.35	R 2.00	R 1.79	R 1.75	R 1.70
Cell C to Other Off-Peak	R 1.10	R 1.00	R 1.00	R 1.00	R 1.15	R 1.15	R 1.10	R 1.10	R 1.10	R 1.10
Cell C to Telkom Peak	R 1.60	R2.30	R 2.30	R 2.30	R 1.70	R 1.70	R1.15	R 1.15	R 1.15	R 0.99
Cell C to Telkom Off-Peak	R 0.95	R 0.95	R 0.95	R 0.95	R 0.95	R 0.95	R 0.95	R 0.90	R 0.90	R 0.90
SMS Peak	80 cents	80 cents	80 cents	80 cents	80 cents	80 cents	80 cents	80 cents	80 cents	80 cents
SMS Off-Peak	34 cents	36 cents	36 cents	36 cents	36 cents	36 cents	36 cents	36 cents	36 cents	36 cents

Source Adapted from Cell C (2005)

2.3.4.5 Cell C's market strategy

Cell C adopted a traditional new-entrant approach by competed on price when it first entered the mobile phone market undercutting its established rivals in order to win market share quickly. While it claims to be targeting low value postpaid and high-value prepaid, evidence suggests that it has been more successful in attracting new low-end prepaid customers. Cell C has achieved this by trying to keep prices at 10-15 percent below those of its rivals. It is difficult for a new operator like Cell C to compete on service differentiation hence the reason why Cell C persuaded customers to adopt its operator by giving them benefits in the form of cheaper calls. Cell C has adopted a market development strategy as is highlighted in Figure 2.16 below.

FIGURE 2.16: CELL C'S MARKET STRATEGY



There are both advantages and disadvantages with this market strategy.

The advantage of initially competing on price, as stated above, is capturing and building market share as a strong market share indicates good value.

The clear disadvantage however is that Cell C secures a largely low-spending prepaid customer base (Finnie et al., 2003:127).

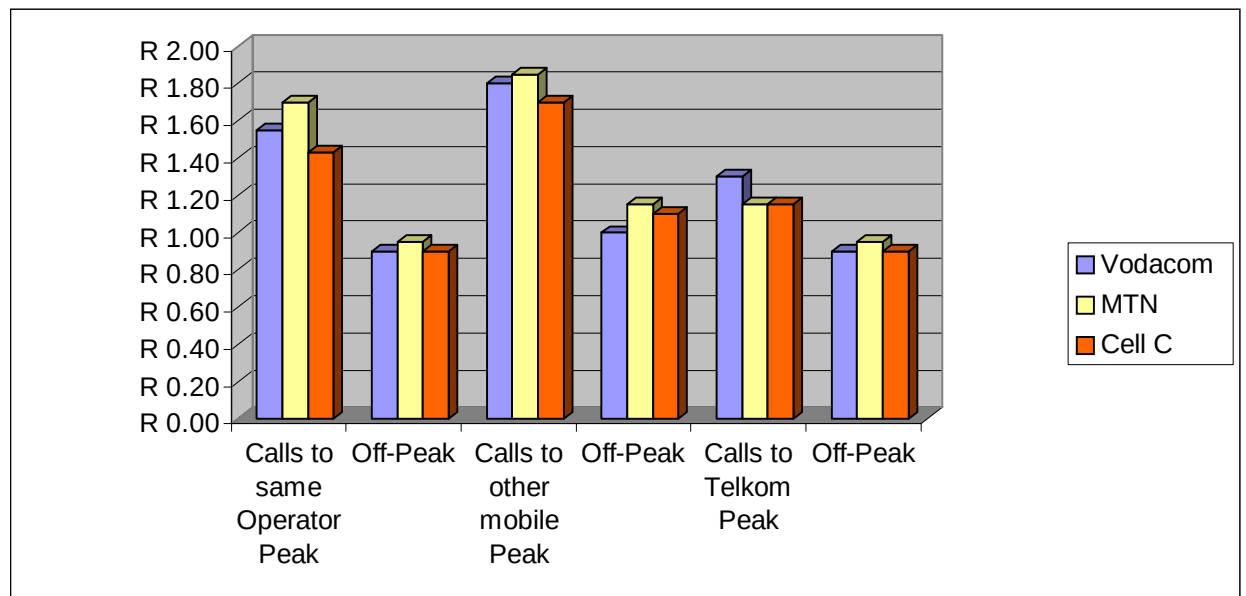
Overall, Cell C's strategy is based on positioning itself in the market as an innovative company that provides simple, value-for-money services. It is the one operator that targets the youth market strongly. For example, it offers text-only service packages that are clearly targeted at younger customers, especially Generation Y customers. Furthermore, Cell C was the first South African operator to introduce per-second billing for voice calls. Soon afterwards its rivals followed suit and introduced per-second billing. According to Finnie et al. (2003:128) Cell C's mission and objectives (See Figure 2.1) are:

- Having a fairly basic service portfolio
- Reflecting its status as the company targeting relatively low-spending customers, with simple, value-for-money services

In summary, the three mobile network operators have adopted different market strategies in order to position themselves successfully. Vodacom focuses on a diversification strategy by retaining market share and attracting new customers through new attractive products, MTN focuses on a combination of market penetration and product development and innovation, and Cell C focuses in market development by providing simple, value-for-money services. Products and services offered by the three mobile network operators were also compared and it was found that (See Figure 2.7):

- Vodacom and MTN often have the same prices especially in the category 'calls made to other mobiles'
- Vodacom and MTN's prices are very similar for contracts
- Cell C is always priced below Vodacom and MTN

FIGURE 2.17: PRODUCTS AND SERVICES OF THE THREE MNO'S: CONTRACTS



2.3.5 SWOT analysis of mobile network operators

It is also important to conduct a SWOT analysis in order to understand the market positioning of Vodacom, MTN and Cell C according to their strengths, weaknesses, opportunities and threats. According to some authors (Du Plessis, Jooste & Strydom, 2001; Cronje, Du Toit, Marais & Motlatla, 2004) a SWOT analysis is a widely used approach that provides a structured framework for evaluating the strategic positioning of a business organisation by identifying its strengths, weaknesses, opportunities and threats. The three MNO's, namely Vodacom, MTN and Cell C, and their main strengths, weaknesses, opportunities and threats will be highlighted in the table below (Table 2.14).

TABLE 2.14: SWOT ANALYSIS FOR VODACOM, MTN AND CELL C

POTENTIAL STRENGTHS	POTENTIAL OPPORTUNITIES
VODACOM • Likely to retain 50% of the market share • Retains largest share of high-end postpaid and business users • Best placed to extract further value from existing customers through advanced data services and convergent fixed-mobile services • Dominant and powerful brand • Extensive distribution channels • Benefits from its relationship with Telkom and Vodafone	VODACOM • As the South African market matures, Vodacom's operations in other African countries will become increasingly important • Will capture 30 percent of revenues outside South Africa in the future • Will introduce more targeted low-end packages • Develop a sub-brand aimed at the prepaid market in order to stem the loss of users, traffic and revenues to Cell C
MTN • Well defined position in South Africa • Maintained a market share of 43 percent of postpaid customers with launch of Cell C • High ARPU- targets high-end users and focuses on new innovative services	MTN • MTN has 40 percent of new postpaid customers in 2003 • If it can maintain its strong showing among low-spending contract customers then it can expect to pick up a high percentage of future prepaid customers • Increasing presence in other African countries (37% of revenues came from outside South Africa in 2003) • If a second fixed line operator enters the telecommunications market, this would benefit MTN in the following ways: 1) MTN will carry its on backhaul traffic rather than rely on Telkom 2) Lower interconnection fees 3) Decreasing operating costs: MTN would be in a position to pass these savings onto customers in the form of reduced tariffs resulting in a higher market penetration
CELL C • When Cell C entered the market, it built market share quickly as mobile penetration was rising • Differentiation from its rivals • Well positioned as the low-price network operator • Roaming agreement with Vodacom allowed Cell C to deploy its own network	CELL C • Cell C can capitalize on development within the South African mobile phone market • 45 percent of Cell C's customers have been captured from Vodacom and MTN and 55 percent are first-time users • By differentiating on price, Cell C can continue to grow market share at current rates • Cell C is now targeting 25 percent market share • As it builds its own network, it will rely less on Vodacom and it will reduce its interconnection fees • Cell C will continue to benefit from the faster than expected growth in the mobile phone market

POTENTIAL WEAKNESSES	POTENTIAL THREATS
VODACOM • Lost some market share with launch of Cell C (Vodacom is thus sensitive to entrance of price competitive competitors) • Postpaid market share decreased from 56 percent to 47 percent • Overall ARPU is lower than MTN • 15-year roaming agreement with Cell C will expire in some regions, and Cell C will aggressively build out its own network	VODACOM • Will face greater competition outside South Africa (particularly from MTN) • Political, regulatory and currency risk • If a second fixed line operator enters the telecommunications market, this will place pressure on Telkom which in turn will impact Vodacom: 1) Lower interconnection rates offered to Vodacom's competitors will result in mobile price competition 2) Less investment by Telkom as it will focus on defending its fixed market share 3) Competitive fixed/mobile blended service introduction • Loss of Vodafone as an international partner would be severely detrimental to Vodacom if Telkom and South African government relinquish majority control
MTN • Lost six percentage points of market share when Cell C was launched	MTN • Price war sparked by Cell C • Aggressive price tactics could significantly reduce MTN's ARPU • MTN would go into defensive price reduction if Cell C decided to target MTN's core demographics
CELL C • ARPU low (90% prepaid customers) • Smallest market share • Roaming agreement with Vodacom could also be a weakness. Cell C is unhappy with interconnection terms negotiated and would prefer more regulatory intervention to set lower interconnection rates that are based on Vodacom's costs	CELL C • Greatest challenge faced by Cell C: achieving long-term financial viability based on improved ARPU, lower churn rates, and lower operating expenses • Cell C must therefore play a long-term game, by building market share aggressively in the short term and improving ARPU, and churn rates in the medium to long term • The introduction of limited mobility services targeting less affluent regions and individuals will clearly pose a competitive threat to Cell C. • Cell C must therefore promote the main, unrivalled differentiator that its service provide and that is full mobility

Source: Adapted from Finnie et al. (2003)

As illustrated in Table 2.14 above, each mobile network operator has its own strengths and weaknesses, opportunities and threats. Vodacom's strength lies in the fact that it has a dominant and powerful brand, MTN has high ARPU whereas Cell C is well positioned in the market as the low price network operator. Vodacom's main weakness lies in the fact that its overall ARPU is lower than that of MTN's, MTN lost market share when Cell C entered the market, and Cell C has the smallest market share. Potential opportunities faced by all three operators are operations in other African countries, and introduction of innovative product and service offerings. A summary of the three mobile network operators discussed above is given in Table 2.15. *In the empirical research phase, Generation Y respondents were asked about their perceptions of the mobile network operators and how each fares on a number of attributes such as choice of packages, cost of calls, geographic coverage, ability to make calls without getting cut off, quality of customer services, and choice of services available.*

TABLE 2.15: SOUTH AFRICA: SUMMARY OF THE THREE MOBILE NETWORK OPERATORS (VODACOM, MTN AND CELL C)

	Vodacom	MTN	Cell C
License issued	Late 1993	1993/1994	June 2001
Network coverage	GSM 900, GPRS&MMS	GSM 900Mhz	GSM 900& 1800Mhz
Prefix	082/072	083/073	084
Number of subscribers	12.8 million by March 2005 (South African) and 15.5 million including Africa	8 million	2.3 million active users
Market share	55%	35%	10%
Annual growth	20%	22%	317%
Percent prepaid	85%	79%	90%
Shareholders	Telkom SA Ltd, Vodafone Group Plc Venfin Ltd (of which Vodafone now owns 99.8%)	MCell, Transnet, Empowerment groups	3C Communications (Saudi Oger& CellSaf)

2.4 MARKET ENVIRONMENT

Figure 2.1 (column 2) shows that the market environment, also known as the task environment, is the second component of the business environment and is found just outside the business organisation. All the variables depicted in Figure 2.1 are important for every organisation in a particular industry as they determine both the strength and nature of the competition. The key variables in the market environment are (Strydom, Jooste & Cant, 2000:43):

- *Consumers* with a particular buying power and behaviour (to be discussed in Chapter 3). Consumers determine the number of entrants to the market
- *Suppliers* who supply products, raw materials, services and even financing the business
- *Intermediaries* who compete against each other to handle the business' products
- *Competitors* including existing, new and potential competitors who are either established in the market or wish to maintain and improve their position.

All these variables in turn create particular opportunities or threats and it is within the market environment that management finds its most important tasks of identifying and taking advantage of opportunities in the market to meet competition (Cronje et al., 2004:87). In order to understand this interaction between the business organisation and its market environment, it is important to look at each of the variables in the market environment more closely. Although management has no control over the variables in the market environment, it can influence the variables through its strategy.

2.4.1 Market and consumers

The South African business organisation operates in a complex market environment where the needs of customers need to be satisfied. According to Strydom, Jooste and Cant (2000:44) the market “consists of people with specific needs that need to be satisfied and who have the financial ability to satisfy them.”

As a result, these consumers manifest certain purchasing behaviours (refer to Chapter 3) in order to satisfy those needs. In studying the consumer market, management thus needs to be informed on all aspects of consumer needs, consumer behaviour, and disposable income by examining demographic trends, economic factors such as the effect of interest rates on consumer spending power and cultural values that may influence purchase behaviour (Cronje et al., 2004:90).

For the purpose of this study, Generation Y consumers at the retail level will be the main focus, as they are the ones that purchase the products and services in small quantities. Generation Y customers (more particularly students) need to interact with family and friends and they use communications products such as mobile phones as a communication medium. Therefore, in order to assess the sheer size of the market, the demographics of Generation Y consumers will be discussed in more detail below.

2.4.1.1 South African population

Table 2.16 shows the mid-year estimates for 2005 by population group and gender. Statistics South Africa has estimated the mid-2005 population to be approximately around 46.9 million up from the Census 2001 count of 44.8 million. Africans are in the majority (nearly 37.2 million) and constitute 79.4 percent of the total South African population. The White population is estimated to be 4.4 million (9.3%), the Coloured population 4.1 million (8.8%) and the Indian population 1.1 million (2.5%). Fifty one per cent of the population is female (approximately 23.8 million). The implied rate of growth of the population has been declining steadily. The overall growth rate for 2004-2005 is estimated at 0.9% with the rate of females slightly lower than that of males (Stats SA, 2005).

TABLE 2.16: SOUTH AFRICA'S POPULATION BY PROVINCE, POPULATION GROUP AND GENDER

Population Group	Male		Female		Total	
	Number	% of total population	Number	% of total population	Number	% of total population
African	18 320 400	79.4	18 885 300	79.3	37 205 700	79.4
Coloured	2 036 700	8.8	2 112 100	8.3	4 148 800	8.8
Indian/Asian	5 65 100	2.4	588 800	2.5	1 153 900	2.5
White	2 148 100	9.3	2 231 700	9.4	4 379 800	9.3
Total	23 070 300	100.0	23 817 900	100.0	46 888 200	100.0

Source: Adapted from Stats SA (2005:5)

The mid-2005 population estimates for the six provinces according to Stats SA (2005) are shown in Table 2.17. The provincial estimates show that Kwazulu-Natal has the largest share of the population (20.6%), followed by Gauteng (19.2%) and Eastern Cape (15%).

TABLE 2.17 SOUTH AFRICA'S POPULATION BY PROVINCE (2005)

Province	Number (in millions)	% of total population
Western Cape	4.6	9.9
Eastern Cape	7	15
Northern Cape	1	1.9
Free State	2.9	6.3
Kwazulu-Natal	10	20.6
North West	3.8	8.2
Gauteng	9	19.2
Mpumalanga	3.2	6.9
Limpopo	5.6	12

Adapted from: Stats SA (2005)

2.4.1.2 Disposable income of South African consumers

The South African consumer market is not represented only by the number of inhabitants, but also by the buying power of consumers specifically by consumers' disposable income. Personal disposable income is that portion of income that remains after deducting taxes plus credit repayments that can be used to purchase consumer products and services (Strydom et al., 2001:45). According to Cant and Machado (2005:5) a large amount of the disposable income of consumers is spent on mobile phones, the lottery (Lotto), and gambling. Furthermore, increasing mobile phone bills, higher medical and education costs, gambling expenditures and higher fuel prices have reduced the disposable income of the average South African consumer (Cant & Machado, 2005:7).

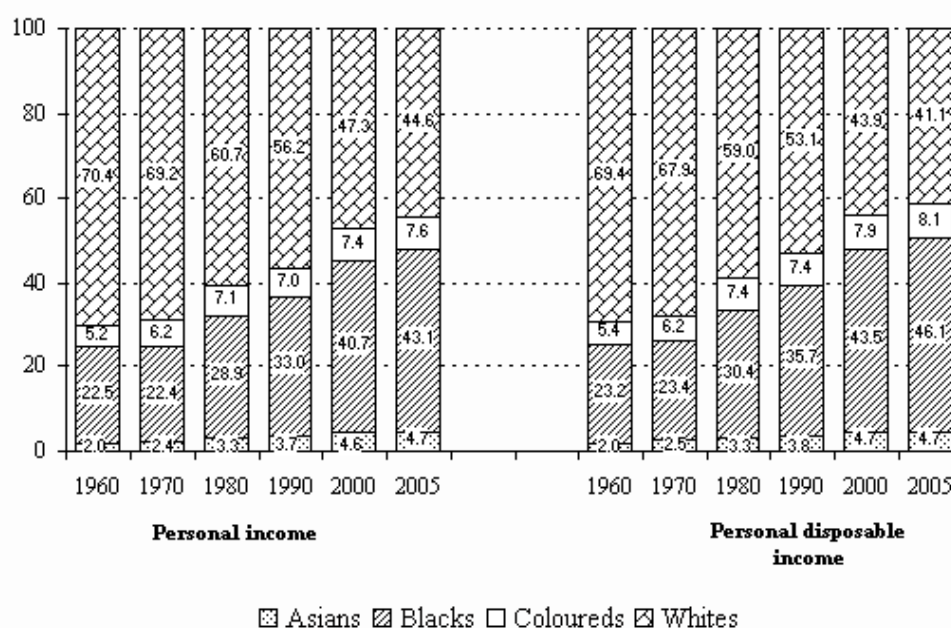
Some interesting findings by Van Wyk from BMR (2005) regarding disposable income reveal the following (See Figure 2.18):

- The total buying power of blacks (as measured in terms of personal disposable income) will be just more than 46 percent of the buying power of the total population of South Africa in 2005 as opposed to the 41.4 percent of that of whites (Van Wyk, 2005).

- The per capita disposable income of blacks will still only amount to 15.8 percent of that of the average white in 2005.
- In 2005 the average Asian's disposable income will be 52.4 percent of that of the average white and that of the average coloured 25.9 percent.
- The share of whites in personal income (i.e. income before income tax is deducted to arrive at personal disposable income) is expected to decline from 70.4 percent to 44.6 percent between 1960 and 2005 while that of blacks will increase by 22.5 percent to 43.1 percent.
- The growth in the per capita disposable income of blacks and Asians remained positive throughout the nine five-year periods between 1960 and 2005, although growth amounted to only 0.1 percent per annum for blacks between 1985 and 1990.
- Whites' personal income per capita is expected to amount to R86 884 in 2005 as opposed to the R11 862 per capita projected for blacks.

Figure 2.18 illustrates the share of the respective population groups in personal and personal disposable income in South Africa.

FIGURE 2.18: SHARE OF THE RESPECTIVE POPULATION GROUPS IN PERSONAL AND PERSONAL DISPOSABLE INCOME IN SOUTH AFRICA, 1960-2005



Source: Van Wyk (2005)

2.4.1.3 Life stages and life planes of South African consumers

Cant and Machado (2005:52) go beyond disposable income and determine the household expenditure of South African households by using life stage and life planes determinants. On the one hand the life stage determinant divides the population into five-year age brackets as seen in Table 2.18.

TABLE 2.18: LIFE STAGES OF SOUTH AFRICAN HOUSEHOLDS

Life Stage	Age Group of Household Head
1	Less than 26 years
2	26 to 35 years
3	36 to 45 years
4	46 to 55 years
5	56 years and plus

Source: Adapted from Cant & Machado (2004:52)

On the other hand, the life plane determinant divides the population into six segments according to the level of education of the consumers as indicated in Table 2.19 below. Education is an important factor when looking at household expenditure as the level of education not only influences attitudes but there is also a direct correlation between level of education and income (Cant & Machado, 2005:52).

TABLE 2.19: LIFE PLANES OF SOUTH AFRICAN CONSUMERS

Life Plane	Level of Education of Household Head
A	Degree, Postgraduate degree or diploma
B	Diploma, certificate with Grade 12
C	Grade 12
D	Grade 10, Grade 11, National Technical Certificate
E	Grade 9, Grade 8
F	Below Grade 8

Source: Adapted from Cant & Machado (2005:52)

Cant and Machado (2005:53) then combined the life stage and life plane information gathered, and the following table was developed (see Table 2.20).

TABLE 2.20: SOUTH AFRICAN ANNUAL HOUSEHOLD EXPENDITURE BY LIFE PLANE AND STAGE (IN R'000)

Life Plane	1	2	3	4	5	Total
A	3 733 787	37 823 859	48 456 646	37 829 122	26 137 391	153 980 624
B	4 785 391	27 986 735	32 606 799	17 508 578	13 565 478	96 452 984
C	10 312 978	40 355 400	40 786 731	30 390 723	20 105 509	141 951 342
D	4 646 804	26 221 910	37 658 690	25 106 230	19 923 554	113 557 190
E	2 899 843	10 978 942	19 965 399	18 917 187	18 871 810	71 633 182
F	2 699 605	15 921 870	31 887 739	32 607 365	54 669 186	137 785 767
Total	29 078 410	149 288 718	211 361 825	162 359 208	153 272 929	715 361 092

Source: Adapted from Cant & Machado (2005:53)

From Table 2.19 above, Cant and Machado (2005:53) make the following interesting observations:

- Households with a tertiary qualification have the highest household expenditure of the six groups reinforcing the fact that there is a direct correlation between level of education and income.
- The Baby Boom generation (life stage 3 and life stage 4) are the households with the highest level of expenditure.
- Generation X (life stage 2) has a higher household expenditure than that of the Pre-Depression and Depression generation together (life stage 5)
- Generation Y (Life stage 1) has the lowest household expenditure of the life stages. This makes sense as this generation is still entering in the job market. It is also the segment of the market that has the highest unemployment rate.

The importance of disposable income and how much of it is spent on mobile phones by Generation Y consumers was investigated in the empirical research phase.

2.4.1.4 Unemployment

The unemployment rate is another factor that should be taken into account as it will also most likely affect a consumer's purchasing behaviour. South Africa is in an unenviable position of having both high unemployment rates and severe skills shortages (Cant & Machado, 2005:22).

In September 2004, 11.6 million people were employed as compared to 11.4 million people in March 2004 (See Table 2.21). The number of unemployed people at 4.1 million in September 2004, based on the official definition, slightly declined compared with 4.4 million in March 2004. Black women continue to be the most affected by unemployment, more than seven times than white males (Stats SA, 2005). The unemployment rate decreased from 31.2% in March 2003 to 27.8% in March 2004 and 26.5% in March 2005 (Telkom Highlights, 2005:10). The decrease is statistically significant, and the outlook for the employment rate is positive and should benefit from specific government interventions such as the Expanded Public Works Programme (Telkom Highlights, 2005:10).

It should further be stressed that unemployment rates have dropped during the past few years as South Africa has enjoyed significant growth in the construction, trade and financial services industries (Cant & Machado, 2004:22).

TABLE 2.21: SOUTH AFRICA'S UNEMPLOYMENT FIGURES FOR 2004

			Lower limit (^{'000})	Estimate (^{'000})	Upper limit (^{'000})	Precision of difference (^{'000})	Actual difference (^{'000})
a	Total employed	Mar 2004	11 033	11 392	11 751	465	251
		Sep 2004	11 348	11 643	11 938		
b	Total unemployed (official definition)	Mar 2004	4 211	4 415	4 620	290	-280
		Sep 2004	3 930	4 135	4 341		
c	Total economically active	Mar 2004	15 371	15 807	16 243	552	-29
		Sep 2004	15 439	15 778	16 117		
d	Total not economically active	Mar 2004	12 913	13 324	13 735	559	203
		Sep 2004	13 147	13 527	13 906		
e	Total aged 15-65 years = c + d = e	Mar 2004	28 443	29 131	29 819	876	174
		Sep 2004	28 763	29 305	29 846		
f	Official unemployment rate b/c*100 = f		%	%	%	Percentage points	
		Mar 2004	26,9%	27,9%	29,0%	1,5	-1,7*
		Sep 2004	25,1%	26,2%	27,3%		
g	Labour force participation rate = c/e*100 = g	Mar 2004	53,4%	54,3%	55,1%	1,2	-0,5
		Sep 2004	53,0%	53,8%	54,7%		
h	Labour absorption rate = a/e*100 = h	Mar 2004	38,2%	39,1%	40,0%	1,2	0,6
		Sep 2004	38,9%	39,7%	40,6%		

* Statistically significant at 95% level of confidence

Adapted from: Statistics South Africa (2004)

More specifically, youth unemployment rates for September 2000 to September 2004 are indicated in Table 2.22. Young people entering the labour market form a relatively large proportion of the unemployed overall, and particularly unemployed young women. Unemployment among youth is related to the highest level of education and the age at which the young person becomes economically active.

Studies found that those with 12 years of schooling or higher qualifications showed a lower unemployment rate than those who did not complete 12 years of schooling (South Africa: Millenium Development Goals Country Report, 2005).

People dropping out of education and entering the labour market between the ages of 15-19 years are more likely to be unemployed than those who enter the labour market at an older age (South Africa: millenium development goals country report, 2005:68).

TABLE 2.22: SUMMARY OF INDICATORS REGARDING UNEMPLOYMENT AMONG YOUTH IN SOUTH AFRICA

Indicators	Sep 00	Sep 01	Sep 02	Sep 03	Sep 04
Youth unemployment rate, aged 15-24, total	47.4%	54.2%	56.6%	56.8%	51.8%
Youth unemployment rate, aged 15-24, males	44.1%	50.1%	51.8%	54.2%	44.8%
Youth unemployment rate, aged 15-24, females	51.2%	58.7%	61.9%	59.7%	58.4%
Ratio of youth unemployment (15-24): adult (25-65) unemployment, total	44:100	44:100	45:100	50:100	50:100
Ratio of youth unemployment: adult unemployment, males	47:100	45:100	48:100	53:100	48:100
Ratio of youth unemployment: adult unemployment, females	42:100	42:100	43:100	48:100	52:100
Share of youth unemployed to total unemployed, total	30.8%	30.3%	31.2%	33.5%	33.4%
Share of youth unemployed to total unemployed, male	32.1%	31.0%	32.6%	34.8%	32.6%
Share of youth unemployed to total unemployed, female	29.6%	29.7%	30.0%	32.3%	34.1%
Share of youth unemployed to youth population, total	14.3%	15.4%	16.8%	15.6%	14.2%
Share of youth unemployed to youth population, males	14.4%	15.0%	16.3%	15.8%	13.6%
Share of youth unemployed to youth population, females	14.3%	15.9%	17.2%	15.4%	14.7%

Source: Adapted from South Africa: Millenium Development Goals Country Report (2005:68)

2.4.1.5 Fixed-line phone and mobile phone ownership

It is also interesting to note the total number households that have access to a telephone or a mobile phone within their dwellings. A total of 22 percent of South African adults were reported to have a fixed-line phone at home, and 41 percent have access to a mobile phone. In 1996 the corresponding figures were 30 percent and 2.4 percent (AMPS 2005; AMPS 1996). A little over 70 percent of mobile phone users do not have a fixed-line phone at home, up from 65 percent in 2003. (AMPS 2005)

The census conducted by Stats SA in 2001 showed that 32.3 percent of all South African households owned a mobile phone (Cant & Machado, 2005:6). Furthermore 31.1 percent of Black African housing units have a telephone and/or mobile phone within their dwelling, 57.2 percent have access to a phone nearby, and 11.7 percent have access that is not nearby or no access. A total of 95.4 percent of White housing units have a telephone and/or mobile phone in the dwelling, 4.4 percent have access to a phone nearby, and 0.2 percent have access that is not nearby or no access (Stats SA, 2005). A total of 24.6 percent of Black African households own a mobile phone and 74.6 percent of White households own a mobile phone (Stats SA, 2005). Fixed-line penetration has fallen from 13 percent in 2000 to 10 percent in 2004, and mobile penetration increased from 12 percent in 2000 to 39 percent of the population in 2004.

Table 2.23 gives an indication of the distribution and access to a fixed/mobile phone in South African households according to population group and gender of the household head. According to the figures illustrated in Table 2.23, a total of 5.5 million people have a telephone and/or a mobile phone for regular use in their homes. While South Africa has nowhere near the 80-90 percent penetration seen in European markets, its level of economic development and dispersed population means that penetration is likely to top out at a much lower level, probably around 50 percent (Finnie et al., 2003).

TABLE 2.23: SOUTH AFRICAN HOUSEHOLDS BY WHETHER THEY HAVE A TELEPHONE IN THE DWELLING OR REGULAR USE OF A MOBILE PHONE, AND POPULATION GROUP AND GENDER OF THE HOUSEHOLD HEAD

Population Group and Gender of Household Head	Telephone in dwelling and/or mobile phone for regular use N (1000)		
	Yes	No	Total
All Population Groups			
Total	5881	6665	12546
Male	3877	3711	7648
Female	1998	2888	4887
Black African			
Total	3611	6070	9681
Male	2134	3377	5511
Female	1476	2693	4189
Coloured			
Total	565	428	993
Male	394	279	673
Female	171	149	319
Indian/Asian			
Total	260	57	317
Male	214	39	253
Female	46	18	64
White			
Total	1430	102	1533
Male	1129	74	1293
Female	301	29	330

Source: Adapted from Statistics South Africa (2005)

2.4.2 Intermediaries

Apart from consumers and suppliers, intermediaries such as wholesalers, retailers, agents and brokers, also play a vital role in bridging the gap between the manufacturer and the consumer (Strydom et al., 2001). Applied to the mobile phone industry, service providers act as intermediaries between the network operator and the consumer. With all South African mobile network operators, customer acquisition, billing and care is handled by service providers (See Figure 2.16). There are also a number of independent players in addition to the service provider operated by each of the carriers. Some of these independent players resell the services of all carriers (e.g. Nashua Mobile, Autopage), some for one or two networks, and others include mobile services as part of larger corporate accounts.

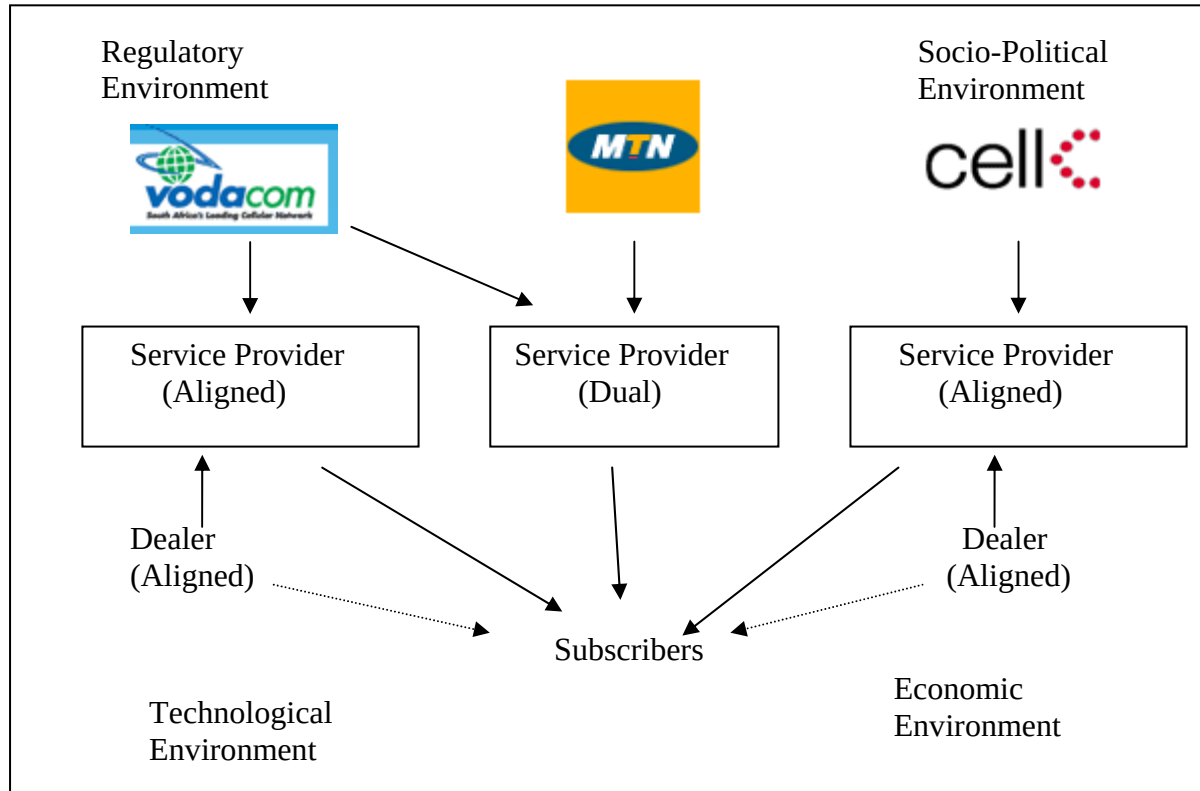
Vodacom Service Provider Company (Pty) Ltd is South Africa's largest mobile service provider. Teljoy Holdings Ltd, GSM Cellular (Pty) Ltd, and Vodac (Pty) Ltd were consolidated into Vodacom Service Provider Company (Pty) Ltd in March 2001. This reorganising was due to global mobile trends and the emergence of prepaid technology- this resulted in rationalisation and less dependence on the service provider model as the industry matured. Service providers, in particular Vodacom Service Provider Company (Pty) Ltd, are also responsible for sourcing mobile handsets from service manufacturers worldwide, on behalf of its dealer and distribution network thus ensuring bulk discounts which are passed on to the end user. Vodacom's distribution network consisted of (Vodacom, 2005):

- *Vodaworld* – A unique one-stop mobile telecommunications mall, showcasing the latest technology in mobile hardware;
- *Dealers and franchises* – 1.497 company and independently owned mobile dealer and franchise outlets, which include Vodashops, Vodacares and Vodacom 4U stores;
- *National chains* – 5.173 retail outlets;
- *Vodacom Direct* – Vodacom's call centre based selling division;
- *Corporate solutions* – An extensive direct sales division within Vodacom which concentrates on the sale of contracts, data products and value-added services to businesses; and
- *Wholesale* – A significant channel representing under-serviced areas and street vendors.

MTN subsidiaries, MTN SP and iTalk Cellular, both exclusively sell MTN mobile services, as does independent corporate service provider Orion Cellular (Finnie et al., 2003:135). Three other service providers sell MTN services as part of a multiple operator portfolio: Nashua Mobile, Autopage Cellular and Supercall Cellular. Cell C also works with three service providers- Cell C Service Provider as well as Autopage and Nashua Mobile which both also sell the services of MTN and Vodacom. Cell C uses a diverse range of channels, in keeping with its competitors, and its distribution footprint is not comparable to those of MTN and Vodacom (Finnie et al., 2003).

Besides the important role the service provider plays, there is also a wide range of different types of outlets for mobile phones as seen in Figure 2.19. These include specialist retailers who are independent of the major networks, retailers that are linked to a particular network provider (e.g. Vodacom shop), and non- specialist outlets (Woolworths and supermarket chains).

FIGURE 2.19: ANALYSING THE INTERMEDIARIES IN THE SOUTH AFRICAN MOBILE MARKET



Source: Adapted from Du Toit (1996:28)

2.4.3 Suppliers

A business organisation also requires inputs from the environment so that it can convert them into outputs for sale in the market environment. Suppliers form part of the market environment as illustrated in Figure 2.1. The inputs provided by suppliers are mainly material (raw materials), equipment energy, capital and labour (Cronje et al., 2004:91). The interaction that exists between a business organisation and its supplier is critical for it to achieve any success in the competitive market place.

2.4.3.1 Telecommunications equipment vendors

The South African telecommunications equipment-manufacturing sector is small in global standards but is yet the largest and most advanced sector in Africa. South Africa will need a strong telecommunications supply industry in order to attract more investment, generate economic activity and employment to fulfill the development needs of the country. The telecommunications sector provides employment for thirteen thousand people and has an annual turnover of R3 billion (Ali, 2003:92).

This industry is dominated by a number of manufacturing organisations such as Siemens SA, Ericsson SA, Telephone Manufacturers SA (Pty) Ltd (TEMSA), Alcatel Altech Telecoms (AAT), and Grintek Telekom (Grinaker). Altech was South Africa's first exclusive supplier of transmission equipment whilst Siemens, Altech, and Temsa provided switches. Siemens also supplied telex, teletex equipment, and telephone exchange power supply equipment. Temsa, originally set up by the local Plessey and GEC companies, was the sole manufacturer of standard telephones (Alcatel, 2005).

Each of these leading telecommunications equipment players will be discussed in more detail below:

(1) Siemens SA. Siemens has been operating in South Africa since 1860 and in that time has been a driving force in the development of the country's telecommunication infrastructure both fixed and mobile. Siemens Southern Africa plans to double turnover to more than R10 billion (\$1.3 billion) by 2005. Dr Klaus Döring, Chief Executive Officer of Siemens South Africa Ltd, stated that the company achieved sales of R5.3 billion in its last financial year, generating pre-tax profit of R431

million. This compared to turnover and profits of R4.9 billion and R276 million respectively in the previous year (Siemens, 2005).

(2) Ericsson SA. Ericsson has been operating in South Africa since 1993. In 1995, it first established its local company Ericsson SA and acquired Automatic Systems Manufacturing (ASM) that deals with the manufacture of telephone power supply equipment. Ericsson has been a key supplier of transmission links to Telkom and was awarded a contract with MTN to expand their GSM network in South Africa and throughout the African continent.

(3) Telephone Manufacturers SA (TEMSA). TEMSA is the largest manufacturer of telephones, key systems and payphones, and is a key producer of transmission and access solutions on the African continent (Ali, 2003:95).

(4) Alcatel Altech Telecoms (AAT). AAT is a telecommunications systems company - a joint venture between French based Alcatel, South African electronics giant Altech and Rethabile, a black empowerment group. Alcatel's historic relationship with South Africa dates back to the early eighties. Recently Alcatel has broadened its ownership base in South Africa as part of the government's Black Economic Empowerment programme. AAT manufactures a large range of telecommunications equipment some of which are: synchronous digital hierarchy (SDH), global services mobile (GSM), wave division multiplexing (WDM), network transport technology, intelligent network (IN), and digital enhanced cordless telephony (DECT) (Alcatel, 2005).

It is also important to explore the competitive telecommunications vendors on a global level in both international and domestic markets. Table 2.24 ranks the global telecommunications vendors from 1 to 20 with Lucent, Ericsson, Alcatel and Motorola leading the charts. Headquarter location and telecommunications equipment revenue in US \$ billion and as a percent change from 1997 to 1998 is also shown below. As depicted in Table 2.24, global telecommunications vendors are controlled by the major developed economies of USA, France, Germany, Japan and the UK and the flow of funds for telecommunication infrastructure investments is moving towards those developed economies (Ali, 2003:38)

TABLE 2.24: TOP 20 GLOBAL TELECOMMUNICATIONS EQUIPMENT VENDORS

Rank 1998	Company	Headquarters	Telecom equipment revenue		
			US\$ billion	% change 1997-98	As % of total sales
1	<u>Lucent a)</u>	USA	26.8	16.5%	89%
2	<u>Ericsson</u>	Sweden	21.5	10.0%	95%
3	<u>Alcatel</u>	France	20.9	14.2%	84%
4	<u>Motorola</u>	USA	20.5	-0.7%	70%
5	<u>Nortel</u>	Canada	17.3	11.7%	98%
6	<u>Siemens a)</u>	Germany	16.8	10.7%	25%
7	<u>Nokia</u>	Finland	14.7	59.4%	94%
8	<u>NEC b)</u>	Japan	12.6	-13.1%	31%
9	<u>Cisco c)</u>	USA	8.4	31.2%	100%
10	<u>Hughes</u>	USA	5.7	19.7%	96%
11	<u>Fujitsu b)</u>	Japan	5.7	-14.8%	13%
12	<u>Samsung Elec.</u>	Korea (Rep.)	5.5	8.8%	33%
13	<u>3Com d)</u>	USA	5.4	-3.3%	100%
14	<u>IBM</u>	USA	5.1	4.0%	6%
15	<u>Matsushita Comm. b)</u>	Japan	4.3	4.0%	58%
16	<u>HP e)</u>	USA	3.2	9.7%	7%
17	<u>GEC b)</u>	UK	3.1	8.3%	24%
18	<u>Qualcomm a)</u>	USA	2.9	65.2%	86%
19	<u>Bosch</u>	Germany	2.8	0.0%	10%
20	<u>Italtel</u>	Italy	2.2	-12.8%	95%
	Top 20		205	10.3%	40%

Note: a) Year ending 30 September. b) Year beginning 1 April. c) Year ending July 25. d) Year ending 31 May. e) Year ending 31 October.

Source: International Telecommunications Union (2004)

The three companies, Lucent, Ericsson and Alcatel were cited as the top three telecommunication equipment vendors followed closely by Motorola, Nortel and Siemens. Bosh and Italtel are ranked 19th and 20th respectively with the former amounting revenues of \$2.8 billion and the latter \$2.2 billion (See Table 2.24).

Competitors in the market environment (refer to Figure 2.1) will be discussed in the next section.

2.4.4 Competitors

Competitors within the market environment, as illustrated in Figure 2.1, determine how much of a given product can be sold and at what price can be asked for it.

Cronje, Du Toit, Marais and Motlatla (2004:93) define competition as “a situation in the market environment in which several businesses, offering more or less the same kind of product or service, compete for the support of the same customers”

The current state of the mobile phone industry in South Africa can be assessed using Porter’s five forces model (Porter, 1992). This is a widely used and proven model that identifies five potential competitive forces.

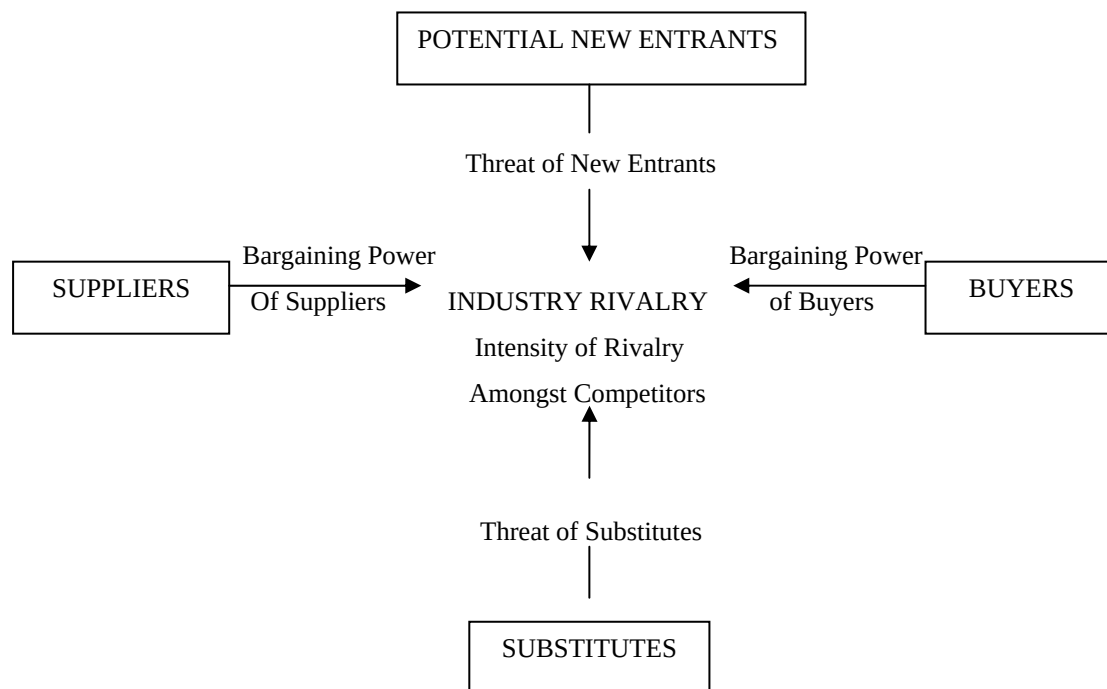
2.4.4.1 Porter’s 5 forces model

According to Porter (1980, 1985) and Porter and Millar (1985) an organisation develops its business strategies in order to obtain competitive advantage (i.e., increase profits) over its competitors. It does this by responding to five primary forces (Shin, 2001). These forces will help identify the presence of potential returns. If Porter’s five forces are weak, the greater the potential exists for organisations to experience higher profitability and thus the better the chances for success. Since the mobile phone industry dramatically affects these competitive forces, mobile network operators should take these forces into account when formulating their strategies (Shin, 2001).

In his recent study, Porter (2001) reemphasized the importance of analysing the five competitive forces in developing strategies for competitive advantage. “Although some have argued that today’s rapid pace of technological change makes industry analysis less valuable, the opposite is true. Analysing the forces illuminates an industry’s fundamental attractiveness, exposes the underlying drivers of average industry profitability, and provides insight into how profitability will evolve in the future. The five competitive forces still determine profitability even if suppliers, channels, substitutes, or competitors change” (Porter, 2001:66).

Figure 2.20 illustrates the five forces responsible for competition in a particular industry. The competitive forces are strong in most areas when applied to the mobile phone industry; there is a constant threat of new entrants as government controls the number of licenses in a particular country. Both the bargaining power of suppliers and buyers are strong in that the network operator has a strong influence over the service provider and the service provider and retailers in turn have a strong influence over the consumers. There are a couple of substitutes for mobile phones such as the Telkom fixed lines and rivalry within the mobile phone industry between the service providers is very strong resulting in price wars.

FIGURE 2.20 PORTER'S FIVE COMPETITIVE FORCES MODEL



Source: Adapted from Porter (1990)

2.4.4.1.1 Threat of new entrants

As illustrated in Figure 2.20, potential new entrants are organisations that identify the opportunities for making excess returns to enter the respective market. New entrants are likely to increase competition subject to the entry barriers. High barriers exist in the mobile phone industry due to government policy but the threat of new entrants is always real. This threat became real when the Independent Commission Authority of South Africa (ICASA) awarded Cell C the third mobile network licence. The South African mobile market has become more competitive as a result of the third license and each company must thus consolidate and retain its position in the market place. There is fierce competition between Vodacom and MTN for market share but with Cell C entering the market, market share was redistributed amongst the three networks. At the moment, it seems that the threat of potential entrants is quite low when looking at the overview of the mobile phone industry. High set up costs and government regulations regarding the operation of a licence are the main reasons for a low threat of potential entrants (Van der Wal, Pampallis & Bond, 2002).

Recently however, the Ministry of Communications announced in September 2004 new policy directives aimed at opening up the mobile phone market and said it has completed a feasibility study for the allocation of a fourth licence. A fourth licence would have to battle two firmly entrenched players in Vodacom and MTN and a relative newcomer in Cell C. The attitude of Vodacom towards new entrants has baffled many. Vodacom welcomed the entry of Cell C in 2001 saying greater competition would stimulate the market and that it would even be content if there were five operators in the country (Sewsunker, 2004).

Furthermore, one of the potential benefits of introducing competition in the fixed-line telecommunications market would be for operators to be able to build out their own links to base-stations, or to secure those services from an alternative provider and to create competition for Telkom. The introduction of competition should in turn drive down network operating costs (Finnie et al., 2003:67).

2.4.4.1.2 Threat of substitutes

Substitute products in Figure 2.20 are products that offer similar utility to customers according to their needs. The threat of substitute products depends on (Du Plessis, Jooste & Strydom, 2001:46):

- Buyers' willingness to substitute (landline phones for mobile phones)
- The relative price and performance of substitutes
- The advantages that substitutes offer over traditional products
- The cost of switching to substitutes
- The image/identity of substitutes

The most important option for consumers in terms of product substitution in the mobile phone industry is Telkom's fixed lines. Both Telkom fixed line phones and mobile phones satisfy the user's need for communication. However, mobile connections in South Africa far exceed those of fixed line connections. Furthermore, Telkom's fixed line monopoly expired in February 2005 and new role players are likely to enter the market and offer new services they were never allowed to be launched before. Telkom's monopoly has long prevented other players from flourishing and bringing with them better and more innovative services to the public (Business Day, 2005b). Findings further reveal that the number of mobile phones being used in Africa outstripped the number of fixed-line phones and many analysts agree that fixed-line phones are in a declining stage. Furthermore, the lack of fixed line facilities and Telkom's history of poor service delivery has been a major cause of customer dissatisfaction. Telkom is aiming to prove everyone wrong by operating in other African countries. With its streamlined organisation, cash flows of R9 billion in financial 2004, years of technical experience, Telkom is eager to embrace cheaper modern technologies such as the amalgamation of fixed-line services with mobile services- for example, introducing mobile services that allows individuals to send SMS' s over a fixed line phone. This will be priced competitively, possibly at 10 percent cheaper than the mobile equivalent, enabling Telkom to compete with the mobile operators on cost, as its fixed-line traffic is connected on its own network (Business Day, 2005b).

Furthermore as a result of Telkom being a major shareholder in Vodacom, Telkom is receiving income from a competitor making it less vulnerable to competition from substitute products.

Another substitute for mobile phone services is the emergence of wireless satellite telephony. This refers to telecommunication networks that use radio and satellite equipment as the chief component of their infrastructure, in order to provide telecommunication services (Ali, 2003:99). As a result of the convergence of telecommunication and information technology industries, voice and data traffic will be carried on new worldwide-integrated technology platforms. The convergence of voice and data into a next generation industry is creating new challenges for the telecommunication industries as well as for cable and Internet providers (Van der Wal et al., 2002).

2.4.4.1.3 Bargaining power of buyers and suppliers

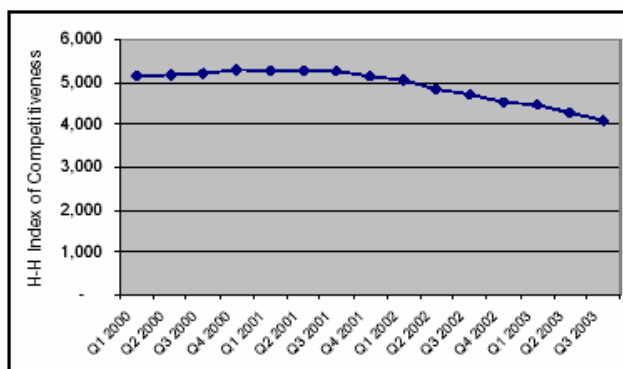
Whereas competitors have the ability to influence an industry by either demanding increased quality, forcing prices down or ultimately engage competitors against each other, suppliers and buyers can use their bargaining power to affect the profit margin of the organisation (See Figure 2.20). The profit margin of the organisation would be reduced if suppliers demand high prices for their supply and buyers ask for a relatively low price for the final product. Buyers can enjoy a position of strength over the firm from which they purchase products by superior bargaining power. Suppliers have the ability to influence an industry by either reducing the quality of their offerings, raising their prices or withholding access to key technologies such as in the case of the mobile phone industry. Currently, South African mobile consumers are price-takers, in other words, they do exert not much influence on the determination of price for products and services.

2.4.4.1.4 Degree of rivalry amongst existing competitors

Industry rivalry in Figure 2.20 refers to the industry players that are competing for market share. Degree of rivalry refers to the competition within the industry. The battle for market share has been fought head to head by Vodacom and MTN and by a relative newcomer Cell C in an attempt to attract subscribers and roll out networks. The Independent Commission Authority of South Africa (ICASA) has drafted new regulations to support a more relaxed regime after the communication department announced a liberalisation of the market where competition can benefit all (Business Day, 2005a).

The pace at which Cell C achieved its market share indicates that before its launch, the South African mobile market lacked sufficiently high degree of competition. The introduction of further competition has clearly had a positive impact, driving the Herfindahl- Hirschmann Index down from 5.262 in September 2001 to 4.106 two years later (see Figure 2.21).

FIGURE 2.21: H-H INDEX OF COMPETITIVENESS-ARRIVAL OF CELL C SPURS COMPETITION



Source: Adapted from Finnie et al. (2003)

The Herfindahl-Hirschmann (H-H) Index measures the competitiveness of a market on a scale from 0 to 10,000. It is calculated from the sum of the squares of the percentage market shares of all the players in the market. A monopolistic market scores 10,000 and a perfectly competitive market scores zero (Finnie et al., 2003).

2.4.5 Opportunities and threats

An interaction between a business organisation and its customers, suppliers and competitors can result in opportunities and threats to a business within the market environment. According to Kotler (2003) an environmental threat “is a challenge posed by an unfavourable trend or development that would lead, in the absence of defensive marketing action, a deterioration in sales or profit.” He further defines an opportunity as “an area of buyer need in which a company can perform profitably” (Kotler, 2003).

South Africa has a strong mobile phone industry that includes the largest and most sophisticated mobile network operators in Africa. However, like any industry in the world, it faces opportunities like the liberalisation of the telecommunications market, the convergence of ICT products and services (superior technology available through 3G) and the penetration into new markets in Africa. In the spirit of convergence, new partnerships will emerge between different sectors of the market creating opportunities emerging between these players. Potential threats could come in the form of competitors, environmental risks (e.g. disposable phones), health effects (e.g. radiation), telecommunication regulations and global economic changes. A fresh wave of competition into the market, like any change, could pose a threat to the existing organisation but could simultaneously bring opportunities to those can successfully exploit them (Ali, 2003).

2.5 MACRO-ENVIRONMENT

The third and last component of the business environment as highlighted in Figure 2.1 (column 3) is the macro-environment. The macro-environment includes more general forces and consists of six distinct sub-environments: the technological, economic, social, physical, institutional, and international or global environments which impact on the mobile phone industry in various ways (Cronje et al., 2004:87). Although these forces do not directly affect the activities of an organisation, they do influence its long-run decisions:

- The *technological environment* includes the technology responsible for innovation and introducing change
- The *economic environment* includes interest rates, inflation rates, exchange rates and trade and budget deficits that influence the prosperity of the business organisation
- The *social environment* includes people's lifestyles, values and lifestyles that make demands on the business organisations
- The *physical environment* comprises natural resources such as mineral wealth, flora and fauna and man-made improvements such as roads and bridges
- The *institutional environment* includes governmental rules and regulations
- The *international or global environment* includes all the world market trends where local and foreign political trends and events affect the business organisation's micro-environment as well as the market environment

For decades, South Africa has been isolated politically, economically and socially from the rest of the continent (South Africa's business presence occasional paper, 2004). In the early 1990's, South Africa reintegrated itself at a time when the global environment boomed with the explosion of ICT. This caused an increase in flow of information and a new ease of global communications between people and countries. Each of these macro-environment forces will be discussed in detail in the next sections.

2.5.1 Technological environment

Technology is one of the variables in the macro-environment that has the most direct effect on the mobile phone industry as this industry relies on technology for its survival. Technology is the driving force behind the developments of the mobile phone as mobile phones can be used not only for voice communication but also as multimedia devices. The technological environment is responsible for innovation and change, and technological innovation is occurring at different speeds and with different benefits and risks in both the developed and developing economies. Furthermore, technology has always been a driving force in community development and plays a critical role in the success of an organisation; it allows for access to information flows and is the bridge for the digital divide between people, organisations and countries. South Africa needs to know where the technological trends are going and harness these technological forces if it is to stay ahead of the game.

In understanding globalisation and the effect this has on the mobile phone industry, it is important to sort out the different effects of exploitation of technology. This implies changes in perceptions of time and place where technological developments drive globalisation and globalisation stimulates the need and adoption of technologies. There is widespread agreement that convergence occurs at the technological level. Convergence will change how one conducts business, interacts within society and this can be seen to be a viable commercial success that is changing the way people behave. As technology convergence proceeds, this allows both traditional and new communications to be combined- whether between broadcasting and telecommunications, fixed and wireless and voice and data. The mobile phone industry is already converging at different levels with several other industries like entertainment, news, imaging and Internet services. It is this convergence that industry players and regulators should focus on if they are to benefit from the full range of opportunities that will be presented by the mobile phone industry over the next five years (Finnie et al., 2003:35).

Furthermore, it should be taken into account that Generation Y consumers are valuable early adopters. New technologies are picked up quickly, provided that they observe the basic rules of economy, adaptability, technical pervasiveness, and market pervasiveness (Spero & Stone, 2004:155). Generation Y wants the freshest in digital development and want to try out the latest trend-setting capabilities, sounds and graphics a mobile phone can offer (Mattheus, 2004). This generation has embraced technological advances and the convergence of the mobile phone industry with the entertainment industry will satisfy this technology-obsession and build image extending the fascination of Generation Y consumers (Mattheus, 2004).

There are three important types of convergence, as mentioned above, in technological markets (Finnie et al., 2003:35):

- Convergence between broadcasting and telecommunications (e.g. data services over digital broadcasting platforms);
- Convergence between fixed and wireless networks (e.g. email access on mobile phones);
- Convergence between voice and data networks (e.g. voice on the Internet).

In principle convergence can have one or (usually) more of the following effects. It can (Finnie et al., 2003):

- reduce the cost of existing applications
- allow development of converged applications that have a greater functionality
- enable wider access to existing applications and content
- enable entry by competitors into previously closed markets
- disrupt the business models of existing service providers, especially well-established service providers
- disrupt or obsolete existing regulation and regulatory concepts

2.5.1.1 Convergence between broadcasting and telecommunications

Convergence between broadcasting and telecommunications has been driven by technology and by the broadcast industry. This type of convergence will impact the way people consume content. There have been a variety of new technologies that have made it easier to deliver digital entertainment (video, audio and games) via the Internet. These technologies include new digital compression schemes, video and audio streaming, and broadband access networks. South Africa is not a market leader in terms of broadcast services, thus, it is not likely to be at the forefront of the convergence of wireless and broadcast services (Finnie et al., 2003).

2.5.1.2 Convergence between fixed and wireless networks

Convergence between fixed and wireless communications is also being driven predominantly by technology and has already started taking off in South Africa. However, it will take several years for fixed and wireless networks to be fully integrated. Substitution of voice traffic from fixed to mobile networks will be a more likely scenario at this point in time. There is also more cause for optimism surrounding convergence of fixed and mobile content services.

With the help of Third Generation Mobile (3G) as a technological revolution of Second Generation Mobile (2G), this type of convergence seeks to cost effectively bridge the advantages of mobile to that of high-speed wireless data. Together with mobile's easy to use traits, 3G will allow wireless data to make its mark faster than the Internet has been able to do (Murray & Chitamu, 2003).

The convergence of mobile and fixed Internet services will thus increase Internet usage and this is achieved through WAP-based applications on mobile phones, or via mobile data cards connected to laptop computers. There is an opportunity to use the high mobile penetration rates to promote "mobile Internet" access to existing consumers. For rural consumers, this can be through WAP services. For technology-knowledgeable and business users, access to the "fixed Internet" can be delivered by the network operators via general packet radio services (GPRS) data cards, or using existing GPRS networks as modems for laptop computers.

The Vodacom launch of a third-generation (3G) technology product, the Vodafone Mobile Connect card (retailing for R599 a month), and the intention of MTN and Cell C to launch 3G technology services in 2005 could solve some of the internet problems faced by the country (Masango, 2005).

Furthermore, the introduction of devices such as the BlackBerry mobile are a perfect example for the convergence of mobile and fixed Internet services; the BlackBerry mobile device has combined mobile phone, office and Internet technologies. The always-on connection of this gadget delivers email directly to the Blackberry without the user needing to dial-up. Users can receive, reply and forward emails as well as view attachments, including Microsoft Word, Excel and Powerpoint. BlackBerry users in Europe and the US said it had increased their productivity dramatically whilst they were simultaneously spending less on dial-up fees and laptop computers (Businessday, 2005c).

Convergence of fixed and mobile Internet in South Africa should be a low priority as a result of its very low rates of residential Internet access. One of the reasons for this is that convergence of fixed and mobile services in South Africa is far behind most European countries and the high cost of mobile platform bandwidth is still likely to militate against widespread usage of such 3G products (Masango, 2005). This view is based on the simple fact that the fixed telecommunications infrastructure cannot be compared to that of Europe's. South Africa should therefore focus more on the competition within the mobile phone industry rather than the convergence between the fixed and mobile sectors (Finnie et al., 2003:36).

Furthermore, only a handful of businesses and tech-savvy consumers will be attracted to 3G unless operators offer services that are easy to understand. According to Mark Taylor, MD of Nashua Mobile who refers to a recent poll commissioned by Netonomy in the UK, he found that 71 percent of South African respondents believe mobile phone services are getting more complicated to understand and configure. Only 41 percent of them were confident that they would find 3G phones and services easy to use and a smaller number (4%) plan to upgrade to 3G.

To ensure that 3G is a success, devices should be delivered to users that are pre-configured to take advantage of their services as well as be tied to 3G to “killer” applications such as messaging for the mobile workforce and “cool” applications like games, music, rich media news, and multimedia services for consumers.

2.5.1.3 Convergence between voice and data

Convergence between voice and data networks is perhaps the major driver for change in the mobile phone market as a result of its operational efficiency and customer demand. “The rationale for convergence within the operator is coupled with customer demand for new services reliant on next-generation infrastructure. In the consumer market, uptake of interactive content depends on a transport infrastructure that supports differentiated, high-fidelity delivery” (Finnie et al., 2003:5).

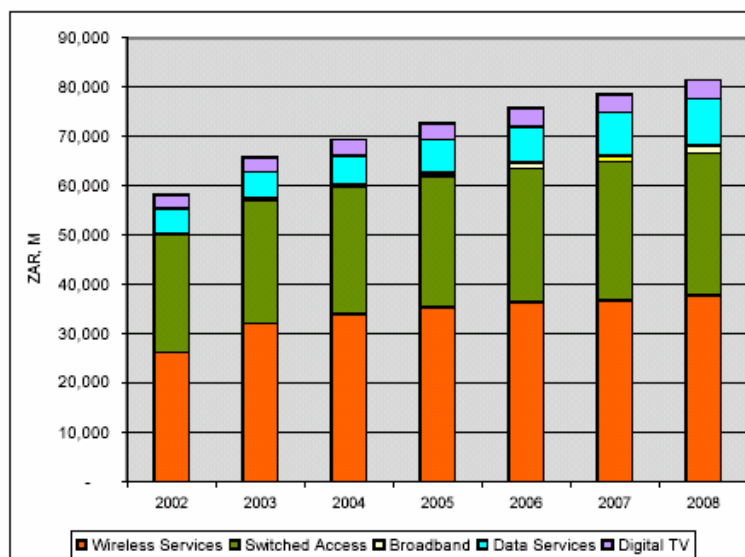
Convergence of voice and data networks is happening in two groups in South Africa—the business sector and the telecommunications operator sector. These two groups will focus internally on infrastructure convergence but will not be able to enjoy the synergies provided by converged infrastructure because a regulatory boundary exists between their network environments. For example, a South African business may use an IP-based PBX to route international calls but it won’t be able to employ voice over IP consistently for off-net calls.

From the perspective of IT and telecommunications convergence, South Africa is already home to two global players in this area, Dimension Data and Datatec. These network and systems integration companies are leaders in their field, and operate on a global level to provide a range of IT and network-related services not only to enterprises, but also to network operators across the globe. However, due to the high cost of bandwidth of telecommunications, companies like Dimension Data cannot host their own business information and applications locally.

Efforts are underway to stimulate the off-shore outsourcing of call and contact centers to South Africa, led in part by the Department of Trade and Industry.

On the surface, South Africa's proximity to Europe and North America, its low-cost, literate and English-speaking labour force would be a major attraction for foreign businesses. However, two factors directly related to the present regulatory environment will prevent the development of this industry: The high cost of connectivity within and from South Africa, and the lack of regulation allowing convergence. This is because call centers are fast transforming into contact centers where network traffic is converging from simply voice to information-rich data, as the following exhibit illustrates. As a result, the conclusion is that South Africa possesses many of the fundamental building blocks to deliver converged services, but lacks the regulatory 'mortar' to make these stand together (Finnie et al., 2003:47). Forecasts for the revenues of the South African communications market are given in Figure 2.22.

FIGURE 2.22: THE SOUTH AFRICAN COMMUNICATIONS MARKET 2003-2008



Source: Finnie et al. (2003)

2.5.2 Economic environment

The second variable after technology is the economy (See Figure 2.1). The economic environment plays a vital role in a particular industry and determines the success or failure of an organisation. The South African economy has undergone rapid structural change in the last ten years as a result of the dramatic change in the political environment which brought about the end of economic and political isolation.

In 2005, South Africa's economy appears to be experiencing one of its best periods in many years; it was characterised by rising GDP growth, increased investment, robust local business confidence, low inflation and interest rates, and signs of improvement in formal employment levels (Telkom Highlights, 2005:10). The recovery in the pace of the South African economic growth (measured quarter on quarter) has continued throughout 2005 and relatively strong growth is expected throughout the forecast period, until 2007 (Absa, 2006).

2.5.2.1 GDP growth

Gross domestic product (GDP) is defined as "the economic well being of a country and is measured as the total value of all goods and services finally produced within the borders of a country in a particular period (Cronje et al., 2004:99)." A high economic growth rate suggests an increase in standards of living whilst a low economic growth rate suggests just the opposite. South Africa should strive for a growth rate of over 7 percent per year in real terms to provide employment and alleviate poverty.

The South African economy has averaged a growth of over 3 percent per annum since 2000 and posted growth of 3 percent in 2003, 4.1 percent in 2004 and 4.1 percent in 2005 as can be seen from Table 2.24. Following a relatively modest real growth rate of 3.5 percent in the first quarter of 2005, the South African economy picked up steam in the second quarter with a real growth rate of 4.8 percent (Botha, 2005). This overall real economic growth was as a result stronger exports in the second quarter in 2005, improved agricultural conditions and inventory accumulation (Absa, 2006).

TABLE 2.25: SOUTH AFRICAN NATIONAL ACCOUNTS (2002-2006)

South African expenditure on real GDP (% change)	2002	2003	2004	2005	2006
Final Consumption by Households	3.2	3.5	6.5	5.2	4.8
Final Consumption by Government	4.6	6.5	6.9	5.6	5.8
Fixed Capital Formation	3.7	8.3	8.8	6.3	5.6
Change in Inventories (R bill)	6.8	9.2	14.5	6.1	7.4
Gross Domestic Expenditure	4.9	5.2	7.5	5.0	5.3
Exports	0.5	0.3	2.5	7.0	1.4
Imports	5.1	8.8	14.1	9.9	4.5
Gross Domestic Product (GDP)	3.7	3.0	4.1	4.1	4.4

Adapted from: Absa (2006)

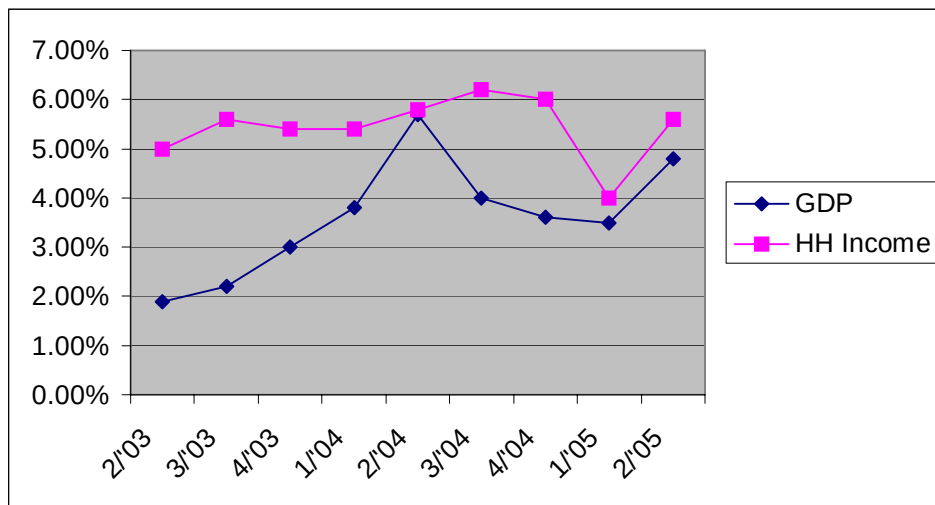
National Treasury estimates GDP growth of 4.4 percent in 2006 (See Table 2.25).

This growth is attributed to a more expansionary household spending behaviour and solid fixed capital formation growth. Furthermore, the fixed investment activity announced by government, including the expansion planned by infrastructure spending for the 2010 FIFA World Cup, is expected to support higher growth going forward (Telkom Highlights, 2005:10).

Due in part to a tremendous upswing in the economy over the past decade in South Africa, Generation Y consumers now possess a tremendous amount of disposable income. As a result of this high level of spending power, Generation Y consumers are now more aware of their ability to purchase and spend. Figure 2.23 illustrates the strong growth in disposable income level of households, which has been made possible by a combination of the following (Botha, 2005):

- Consistent income tax relief
- An increase in formal sector employment
- Positive labour productivity trends
- Low nominal interest rates
- High levels of consumer confidence

FIGURE 2.23: GROWTH IN REAL HOUSEHOLD INCOME AND GDP (ANNUALISED)



Source: Adapted from Botha (2005)

This trend is expected to continue and will inevitably become manifested in relatively strong increases in private sector consumption expenditure in 2005 and 2006 as shown in Figure 2.23 (Botha, 2005).

Furthermore, this GDP increase is also attributed to the higher the penetration of telephony; research suggests that regulation and interference by governments should thus be at a minimum so that competition should be allowed to flourish freely (Mcleod, 2005). It is important to note that when the economy is in recession, the demand for ICT decreases and vice versa. High telecommunication prices have a negative effect in economic activity. High levels of use mean mobile is making a substantial contribution to the South African economy (Indepen, 2005:2).

Reports conducted by Vodafone, Vodacom's UK-based shareholder, find that (Mcleod, 2005):

- The mobile industry has a positive and significant impact on economic growth, and this impact may be twice as large in developing countries as it is in developed ones;
- A developing country that had an average of 10 or more mobile phones per 100 people between 1996 and 2003 enjoyed a 0.59 percent higher GDP growth than otherwise identical country;

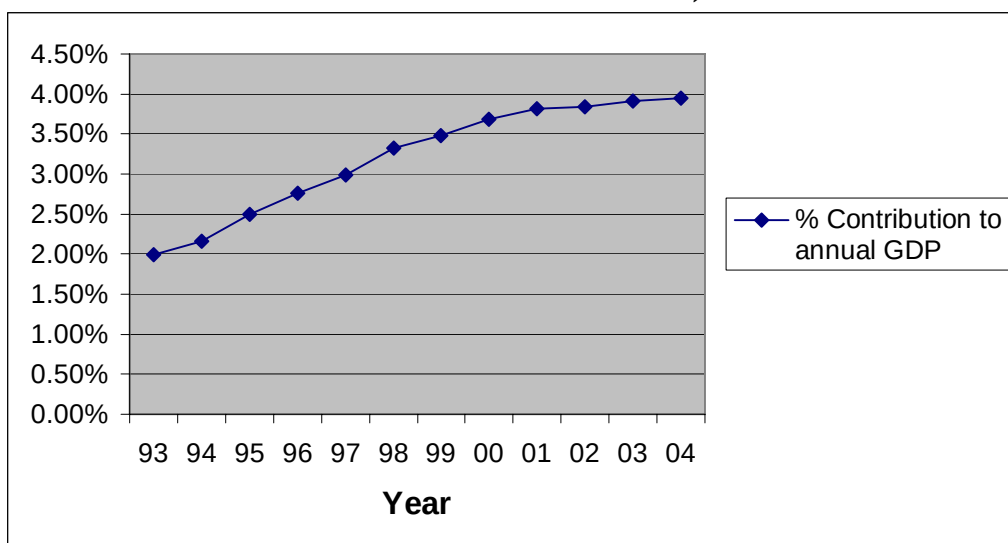
- The dominance of many network operators is counter-productive, inhibiting the rapid spread of mobile communication networks.

Mobile phones are, therefore, becoming increasingly important to African countries (Scott, Batchelor, Ridley & Jorgensen, 2004:14):

- as an infrastructure service - improving efficiency of markets, promoting investment, reducing risk from disasters, and contributing to empowerment;
- as an economic sector – mobile operators can make big profits, and pay taxes;
- as a development tool – case studies present innovative applications where mobile phones have increased the efficiency of service delivery to the poor (e.g. weather information, market prices), or opened opportunities for new services e.g. tracking of diseases
- as a household expenditure that maintains social capital and contributes to economic management

The telecommunications sector directly contributes approximately 4 percent of South Africa's GDP. Indirectly telecommunications are used as an input by the remaining 96 percent of the economy and so, if telecommunications are high, this acts as a tax on production across the economy (Indepen, 2005:1). Figure 2.24 below shows the percentage contribution of communication to GDP.

FIGURE 2.24: PERCENTAGE CONTRIBUTION TO GDP BY INDUSTRY AT CURRENT PRICES: TRANSPORT AND COMMUNICATION (UNIT: PERCENTAGE CONTRIBUTION TO ANNUAL GDP)



Source: Adapted from Stats SA (2005)

Table 2.26 highlights the forecast sectoral growth performance as well as the outlook for 2006. The growth in the transport and communication sector is apparent throughout the years and was driven by the expansion of taxi industry as well as the development of mobile communication in South Africa (Absa, 2004b).

**TABLE 2.26 SOUTH AFRICAN REAL GDP GROWTH OUTLOOK (SECTORS)
2004-2006**

	2003 (%)	2004 (%)	2005	2006
Agriculture	-6.0	2.6	3.0	2.0
Mining	4.3	4.4	4.0	-1.0
Manufacturing	-0.9	2.7	4.0	4.3
Electricity & Water	0.4	2.0	2.0	1.5
Construction	5.2	6.5	6.5	4.2
Internal trade and Catering	6.7	6.5	5.4	4.2
Transport & Communication	5.2	5.5	6.2	6.0
Financial & Business Services	4.1	3.7	4.9	5.1
CSP Services	4.9	3.9	3.9	3.6
Government	1.0	1.2	1.6	1.7
Total GDP	2.8	3.8	4.1	3.6

Source: Adapted from BER (2005)

In summary, telecommunications is playing an increasingly important role in the South African economy, demonstrated by the industry's 5.8 percent contribution to last year's GDP according to the research organisation BMI-TechKnowledge (Breitenbach, 2003). The impact of wireless services will have a tremendous impact on business organisations such as flatter organisational structures, and vertical integration in the different sectors of the economy. Mobile technology is set to play a more significant role in economic empowerment in third world economies than first world economies (McKay, 2005).

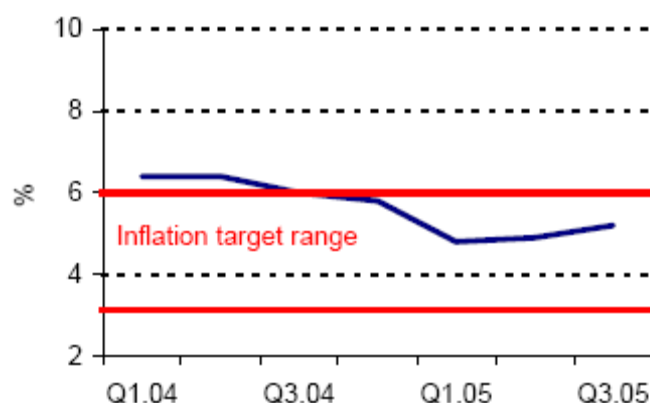
2.5.2.2 Inflation rate

Inflation is another economic variable that management should take into account. Inflation increases costs for exporting industries and also local industries competing against imported goods.

In the year ended March 31, 2005, the average CPIX (Consumer Price Index excluding interest costs and mortgage bonds) remained within the South African Reserve Bank's inflation target range of 3 percent to 6 percent to 4.1 percent (Telkom Highlights, 2005:10). National Treasury recently forecast that CPIX inflation would remain within the inflation target range until the end of 2008 (Investec Group Economic Division, 2005).

Inflation expectations for 2005 and 2006 were on a downward trend until second quarter of 2004. Higher petrol prices and actual inflation contributed to the higher inflation in the third quarter 2005 (Investec Group Economic Division, 2005). Whilst inflation expectations currently still remain under 6 percent, those for 2006 are moving towards the upper limit of the target range as illustrated in Figure 2.25 below.

FIGURE 2.25: SOUTH AFRICA'S INFLATION EXPECTATIONS FOR 2006



Source: Investec Group Economic Division (2005)

Monetary policy can also influence the money supply, interest rates (high interest rates result in a decrease in consumer spending and fixed investment) and the strength of the currency whereas government fiscal policy affects consumers through taxation- all these have important implications for management (Cronje et al., 2004:100).

2.5.2 Social environment

The social environment is likely to be the environmental variable that is the greatest influenced by technology and the economy. The reason is that communities shape people's behaviours and ways of life through language, values, expectations and customs. Social change is unavoidable and this affects management indirectly in the form of consumers and directly in the form of employees (Cronje et al., 2004:102). Rapid technological changes in South Africa make it difficult to quantify social change yet it is essential for marketers to understand the social environment and the effect this has on consumer behaviour.

2.5.2.1 Changing role of women

Marketers have always been interested in women because women buy most of the household products. This interest is now intensifying as the role of women is changing. Women's role in society has changed from the 'traditional women', portrayed as housewives running the household and looking after the children to a more modern perception of women running their own careers (Cant, Brink, Brijball, 2005:96). It has been found that the female population is growing faster than the male population in South Africa and the rest of the world making women play a prominent part in buying decisions. Furthermore, South African women in particular are a powerful economic force according to the statistics below (Cant et al., 2006:97):

- Women made up 34% of employees in 1990, 40% in 1999 and 50% in 2001
- Women made up 39% of graduates in 2001 and this figure is expected to increase
- There were 100 000 more female students than male students in 2002
- Women made up 19% of management in 1990 and 28% in 1999
- Women in business in South Africa in 2001: 35% had small-businesses, 40% had medium-sized businesses, 32% had large businesses and 25% had corporations.

2.5.2.2 Impact of mobile phone industry on social environment

According to Cant and Machado (2005:21) South Africa is a culturally diverse society with divisions along language, race, culture and religion and there is a drive to build a sense of nationalism of different people in one country. This is the social mix in which mobile operators currently operate and they need to be sympathetic to cultural and regional differences (Cant & Machado, 2004:21). The mobile phone industry has not only helped shaping business and economics but has had a major impact in shaping society and culture. In an age of information and globalisation, new communications technologies have allowed a virtual world to emerge which are shrinking distance and reducing traditional borders and time; and the advantages of greater knowledge and superior ability to learn are becoming even greater. The remotest village has the possibility of tapping a global store of knowledge far beyond what one would have imagined a century ago, faster and more cheaply than anyone imagined only a few decades ago (The World Bank Group Knowledge Bank).

“The extension of affordable and accessible universal service will enhance social and economic activities in historically disadvantaged communities by providing the necessary infrastructure as well as by generating employment in the telecom sector itself. In addition specific measures to promote economic empowerment will be taken which include broadening equity ownership, employee share ownership schemes, creating opportunities for meaningful employment and management, the effective promotion of entrepreneurship, licensing opportunities and procurement and set aside-policies” (Jordan, 1996).

However, it is important to note that converging technologies and disappearing income differences across countries will not necessarily lead to homogenisation of consumer behaviours. On the contrary, cultural differences may result in more heterogeneous consumer behaviours (Cant et al., 2006:69).

Furthermore the digital divide- the gap between rich and poor nations in advanced information communication technology (ICT)- in Africa is growing. There are various definitions for the digital divide. The American Library Association (ALA), Office for Information Technology Policy (OITP) defines the digital divide as (Chisenga, 2001):

Disparities/differences based on economic status, gender, race, physical abilities, and geographic location between those who have or do not have:

- access to information, the Internet, and other information technologies and services, and
- the skills, knowledge and abilities to use information, the Internet, and other technologies. (ALA 2000).

From the above two definitions/descriptions, it is clear that the digital divide describes the gap, caused by various factors, between those who have access and those who do not have access to the following (Chisenga, 2000):

- Computer facilities
- Internet facilities
- Telecommunications facilities (phone, fax, etc)
- Information literacy and use skills
- Computer literacy skills
- Appropriate information content

All the issues mentioned above make it increasingly important for marketers to understand the social environment and the impact it has on consumer values and behaviour.

2.5.4 Physical environment

The physical environment in Figure 2.1, refers to the physical resources that businesses need to support life and development. The environment is affected by the operations of businesses as businesses obtain its physical resources and discharges its waste in the environment (Cronje et al., 2004:109). The mobile phone industry is constantly changing with new high-tech mobile phones and leaves old mobile phones for waste. Mobile phone waste has been found to have harmful effects on the environment and collecting old phones and recycling them is an option that needs to be taken into account. There has also been widespread concern around the health effects of long-term human exposure to radiation and magnetic fields from mobile phones. Concerns have been raised about the normal mobile phone, which has the antenna in the handset. In this case, the antenna is very close to the user's head whilst he/she is on the mobile phone and there is concern about the level of microwave emissions to which the brain is being exposed. These concerns all fall under the physical environment and business organisations respond to the vulnerability of the physical environment by trying to limit any harmful effects on the community by giving a sense of social and environmental responsibility (Cronje et al., 2004:111).

2.5.5 Institutional-Political environment

As a component of the macro environment in Figure 2.1, the government and political pressures also greatly affect the management decisions of a business organisation. The government intervenes on a large scale and influences the macro-environment of a business organisation by means of legislation, annual budget, taxation, price controls, and can further influence the market through government expenditure (Cronje et al., 2004:112). Business organisations need to adhere to certain laws and regulations in order to operate successfully. Telecommunication companies have already expanded speedily into new markets in Africa (Cant & Machado, 2004:23).

Major dramatic changes have occurred in the South African political front. In 1948, the Nationalist Party (NP) introduced a policy of 'apartheid' in terms of which population groups were segregated. Apartheid affected the telecommunications market in South Africa in that Telkom was the sole provider of phone services and

this service was given to predominantly white urban areas, and was very limited in the rural areas.

Political intervention in the mobile phone industry is at a maximum; in February 1990, the government of F. W. de Klerk legalised banned organisations, including the African National Congress (ANC) and began the process of rescinding the formal laws of apartheid. F. W. de Klerk, a then former minister of telecommunications, introduced mobile licenses in order to enable South Africans to communicate. South Africa's first democratic election in 1994 brought to power the ANC and saw the birth of the mobile phone industry when the government granted mobile phone licenses to two operators: Vodacom and MTN.

The industry is regulated by ICASA, a regulatory body for the telecommunications and broadcasting industries. ICASA currently serves as the primary regulatory and licensing authority for the South African communications industry, except with respect to those specific licences that can only be granted by the Minister of Communications (Telkom Highlights, 2005:14).

“Driven by a need to provide citizens with access to telecommunications services and lacking financial resources to accomplish this goal, The Independent Communications Authority of South Africa (ICASA) awarded two mobile phone licenses to private companies in 1994. ICASA stated three reasons for why it decided that two licenses was the appropriate number at the time. First, the agency did not want to issue only one license and create a monopoly. Second, the government did not want to open the market to full competition. Third, it was not known if the market would support more than two players” (Marine et al., 2001:6). The South African Telecommunications Policy has undergone major reforms between 1994 and 2001 and these policies are shown in Table 2.26 below.

TABLE 2.26 THE EVOLUTION OF THE SOUTH AFRICAN TELECOMMUNICATIONS POLICY

Apartheid: Government Telecommunication Policies

1991: SAPT corporatised- Telkom

1993: 2 mobile operators licensed

7 July 1995: Green Paper on Telecommunications Policy

1996: The Telecommunications Act, 1996 brought about the licensing of a limited category of telecommunications service providers whilst providing for the retention of certain exclusive rights by Telkom SA Limited ("Telkom"), the State owned monopoly telecommunications provider. The Telecommunications Act was amended in November 2001 to clear the way for the managed liberalisation of the telecommunications sector.

March 1996: White Paper Telecommunication Policy

2000: In May 2000, the Independent Communications Authority of South Africa Act, 2000 was passed to establish a single regulatory authority, the Independent Communications Authority of South Africa ("ICASA") for the purposes of regulating both broadcasting and telecommunications. Previously, the Independent Broadcasting Authority ("IBA") had regulated broadcasting. The merger of SATRA and the IBA was undertaken in recognition of the rapid convergence of the broadcasting and telecommunications sectors. Like its predecessor, ICASA is tasked with the management of the radio frequency spectrum, licensing, the monitoring and enforcement of universal service obligations, the monitoring and enforcement of standards, the regulation of interconnection and facilities leasing agreements and the administration and enforcement of the provisions of the Telecommunications Act.

2001: During June 2001, a license was issued to Cell C (Proprietary) Limited ("Cell C") to provide mobile cellular telecommunications services for a period of 15 years.

September 2004: Liberalisation of South African Telecommunications Market

In September 2004, the Minister of Communications issued determinations aimed at furthering deregulation of the market. The rationale for the acceleration of competition in certain segments was to stimulate growth in the ICT sector and reduce the cost of telecommunications. The key policy announcements, declaring February 1, 2005 as the date from when they will be applicable, are:

- Mobile Cellular Operators have been permitted to obtain fixed telecommunication links from parties other than Telkom

According to Siochru (1996), political pressures resulting from the recent changes in South Africa are twofold. On the one hand, there is an urgent need to remedy the imbalances of the past in all domains, including telecommunications. On the other hand, there is a need to ensure that traditional industrial sectors do not slip behind international competitors; the availability of low-cost, high-quality advanced services may play a part in ensuring this. This new political dispensation in South Africa, with its new form and philosophy of government will undoubtedly result in new power bases, with far-reaching consequences for the South African business environment (Cronje et al., 2004:112).

2.5.6 International environment

Adding an international dimension to the business environment renders a more complex environment with its own opportunities and threats. Whilst each of the other factors in Figure 2.1 have some or less influence on the business environment, a business that operates internationally has to deal with the economy, technology, laws and markets of the country with whom they are doing business with. Increased globalisation and the trend towards a world with no borders will continually affect business organisations and management must always assess the possible global opportunities and threats they face for the survival of their products and services (Cronje et al., 2004:112).

2.5.6.1 The international economy

Telecommunications relies heavily on the global economy for its growth. The ABSA Bank quarterly economic indicators report (2004a) uses Gross Domestic Product (GDP), Consumer Price Index (CPI) and the price of Brent crude oil to measure the health of the international economy.

From Table 2.28, US Real GDP had grown at a quarter-on-quarter (q/q) annualised rate of 4.5 percent in the first quarter of 2004, and by June the Conference Board's Consumer Confidence Index had risen to its highest level (102.8) since June 2002 before rising still higher in July 2004(105.7). Between the first quarter and the fourth quarter 2004, real GDP increased from 2.2 percent to 3.8 percent.

The US CPI also showed an increase from 1.9 percent to 2.3 percent between the first and fourth quarter 2004 indicating an increase in consumer demand in the US. The European and Japanese economies also follow a similar trend as the US economy. The Japanese economy recorded a positive growth of 0.2 percent to 0.9 percent between the first and fourth quarter 2004.

A general growth in the global economy will impact the mobile phone industry in South Africa in a positive way especially for any new product developments. A positive growth in the global economy implies that business activity will increase and in turn there will be an increase in telecommunication spending.

Furthermore, the demand for telecommunications will increase leading to increased profits and more players entering the mobile phone industry (Ali, 2003:47).

TABLE 2.28: QUARTERLY INTERNATIONAL INDICATORS (2003-2004)

International Indicators	2003 Q1	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3	2004 Q4
US Real GDP (q/q% annum)	0.9	1.1	1.4	1.8	2.2	2.2	3.6	3.8
UK Real GDP (q/q% annum)	1.2	1.0	1.8	2.2	2.0	2.2	3.0	2.6
Japan Real GDP (q/q% annum)	-1.6	-1.0	-0.6	-0.4	0.2	0.2	0.8	0.9
US CPI (y/y% change)	2.7	2.4	2.2	2.1	1.9	1.9	2.1	2.3
UK CPI (y/y% change)	2.7	2.8	2.6	2.4	2.3	2.3	2.3	2.3
Japan CPI (y/y% change)	1.2	1.3	1.4	1.5	1.2	1.3	1.4	1.5

Source: Adapted from Absa Group (2004a)

2.5.6.1.1 The international economy key variables and projections

Table 2.29 represents the key variables and projections of the four main international economies: US, Japan, Germany and the UK.

TABLE 2.29: THE INTERNATIONAL ECONOMY KEY VARIABLES AND PROJECTIONS (2001-2006)

International Real Output (GDP % Change)	2001	2002	2003	2004	2005	2006
USA	0.8	1.6	2.7	4.2	3.5	3.1
Japan	0.5	-0.5	2.6	3.7	2.2	2.2
Germany	1.0	0.1	-0.2	1.1	1.0	1.5
UK	2.3	2.0	2.5	3.2	2.0	2.1
International Inflation (CPI % Change)						
USA	2.8	1.6	2.3	2.7	3.2	3.1
Japan	-0.7	-0.9	-0.3	0.0	0.0	0.4
Germany	2.0	1.1	1.0	1.7	1.9	1.8
UK	1.8	1.6	2.9	3.0	2.8	2.0
Commodity Prices						
Oil Price (\$/barrel)	24.41	25.03	28.50	38.04	54.94	56.63
Gold Price (\$/oz)	271	310	364	409	446	518

Source: Adapted from Absa (2006)

Oil prices are the key global economic concern at present. Brent crude oil was trading at around \$55/barrel at the end of 2005, representing a year-on-year (y/y) inflation rate of about 65 percent. The latest surge in oil prices comes at a time when key global interest rates have already been rising for some time as inflationary pressures mount. The current levels of oil prices are expected to have a negative impact on global economic growth.

There are several factors that have affected the future supply of the oil market (Absa, 2004d):

- The Iraqi crisis and the sabotage of oil-related infrastructure in the Middle East
- The availability of spare output capacity in the oil producing nations
- Recent ethnic conflict in Nigeria and nationwide industrial action in this oil producing country has further raised fears of supply shortages.
- Hurricane Ivan in the Caribbean disrupted US oil supplies.
- Russian oil giant Yukos has experienced financial difficulties and is under pressure from the Russian authorities because of its tax arrears.

Besides oil, the direction of the following factors is key to the fortunes of the global and South African economy (especially to the Rand): the US economy, interest rates, and the dollar. The US Federal Reserve began to raise its Fed Funds target rate from a low of 1 percent, reaching 1.75 percent by September 2004.

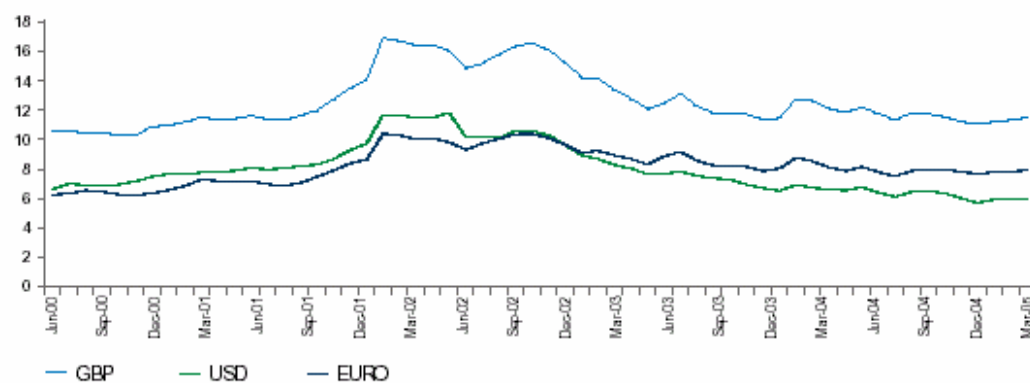
Table 2.29 further indicates that there will be a general slowdown in the global economy as of 2005 resulting in a slower business activity and a decrease in telecommunications spending (Absa, 2004b). This decrease in demand could consequently lead to decrease in profits. Such a situation affects any new products introduced in the market as a slowdown of the economy could result in the failure of a product-any product developments are unlikely to be recovered in a short time (Ali, 2003:47). Furthermore, as a result of a decrease in business activity, most organisations will try to scale down on their expenses. A global slowdown will in turn affect South African mobile operators in the same way.

2.5.6.1.2 Exchange rates

The rand appreciated by 15 percent against the US dollar in 2004 as a result of the generalised depreciation of the US dollar and favourable international prices for South African export commodities. However, the rand has since depreciated by 18 percent against the US dollar from January 3, 2005 to June 30, 2005 as illustrated in Figure 2.26.

FIGURE 2.26: THE RAND'S PERFORMANCE AGAINST THE US DOLLAR, EURO, GBP

The Rand's performance against the US Dollar, Euro, GBP



Source: Telkom Highlights (2005:10)

2.5.6.2 Global regulation bodies

The global regulation of the mobile phone industry occurs at three levels: global, regional and national. The global mobile phone regulatory environment affects the regional mobile phone regulatory environment which in turn affects the national regulatory environment (Ali, 2003:38).

There are a number of international bodies that govern mobile policies and regulations at the global level. Two of the main global telecommunications regulatory bodies are the International Telecommunications Union (ITU) and the European Commission.

In addition to the ITU and the European Commission, there are various standards bodies (for example, Institute of Electrical and Electronics Engineers [IEEE], European Telecommunications Standards Institute [ETSI], American National Standards Institute [ANSI], the Telecommunication Technology Committee [TTC]), and industry associations (for example, the European Competitive Telecommunications Association [ECTA], the Telecommunications Industry Association [TIA]) (Golenjewsky, 2001).

These standardisation groups are continuously developing network specifications, which are adopted and implemented by the regulatory bodies. Together they are emphasising quality issues that increase competitiveness among operators to benefit end users. As a result of changing market and technological conditions, it is important to note that the regulatory environment will also change making regulatory change another of the variables that the telecommunications industry needs to take into account when scanning the environment.

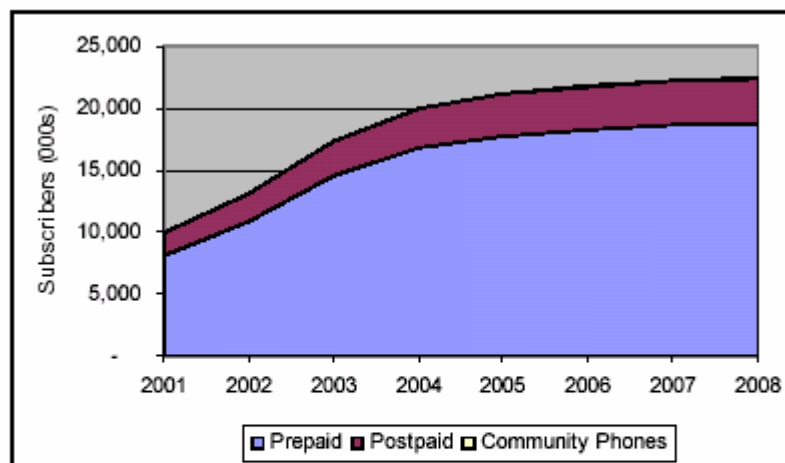
At the regional level, the main organisations involved in the telecommunications industry throughout Africa are: the ITU; the Pan African Telecommunications Union (PATU); the Organisation of African Unity (OAU); the African Advanced Level Telecommunications Institute; the Economic Commission for Africa (ECA), and the Common Market for Eastern and Southern Africa (COMESA) (Ali, 2001: 43).

At the national level, several parts of central government are generally involved, and there can sometimes be more than one regulatory body for a nation. Some of these organisations are major players; others play less prominent, but nevertheless influential, roles. In South Africa, The South African Development Commission (SADC) is the national regulatory body that sets the standards whereby South African Telecommunication policies must adhere to. The Southern African Telecommunications Association (SATA), the Telecommunications Regulators Association of Southern Africa (TRASA), and the Economic Organisation of West African States (ECOWAS) are the other three regulatory associations that have an impact on the South African Telecommunications regulatory environment on a national basis.

2.6 FUTURE TRENDS OF THE SOUTH AFRICAN MOBILE MARKET

South Africa's mobile phone market will continue to flourish over the next two years (2006 to 2008) with the right degree of regulatory intervention to stimulate competition and consumer choice. If it can maintain its position, the mobile phone market will further attract outside investment in the industry. According to Figure 2.27, growth is forecasted at 2 percent for 2007 and 2008 with a total subscriber base of 22.5 million by the end of the projection period. Between 2003 and 2008 prepaid subscribers will increase by 29 percent to 18.8 million and postpaid subscriptions will rise by 28 percent to 3.6 million. Prepaid will account for 84 percent of all new subscriber additions. A total of 90000 community phones are forecasted by 2008 (Finnie et al., 2003:160).

FIGURE 2.27: FORECAST: SOUTH AFRICAN MOBILE SUBSCRIBERS 2001-2008

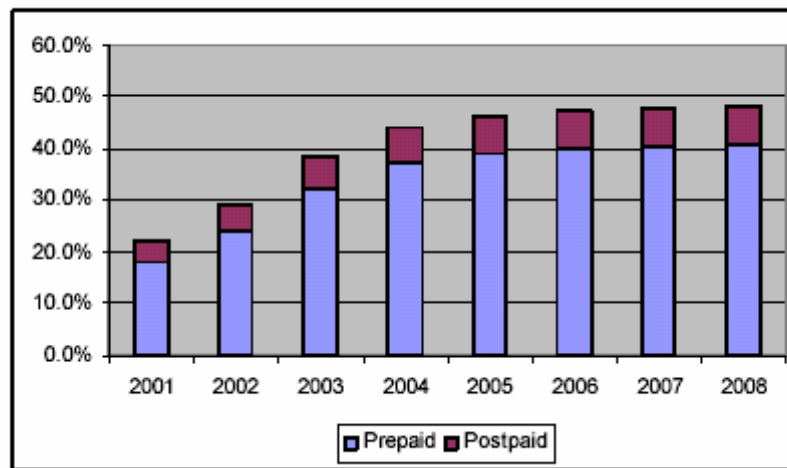


'000s	2001	2002	2003	2004	2005	2006	2007	2008
Prepaid	8,004	10,870	14,537	16,765	17,760	18,281	18,634	18,812
Postpaid	1,916	2,191	2,786	3,161	3,350	3,454	3,527	3,564
Community	33	42	45	48	63	73	83	90
Total	9,952	13,104	17,369	19,974	21,172	21,807	22,244	22,466

Source: Finnie et al. (2003)

Figure 2.28 illustrates that penetration of the South African mobile market is set to continue growing during 2005 although at a slightly reduced rate. One spur to this continued growth over the next five years will be the planned requirement for Vodacom and MTN to issue four million free SIM cards in exchange for 1800 MHz spectrum. By 2008 market penetration will have stabilized at just above 48 percent, with further increases being in fractions of percentage points.

FIGURE 2.28: FORECAST: SOUTH AFRICAN MOBILE PENETRATION 2001-2008



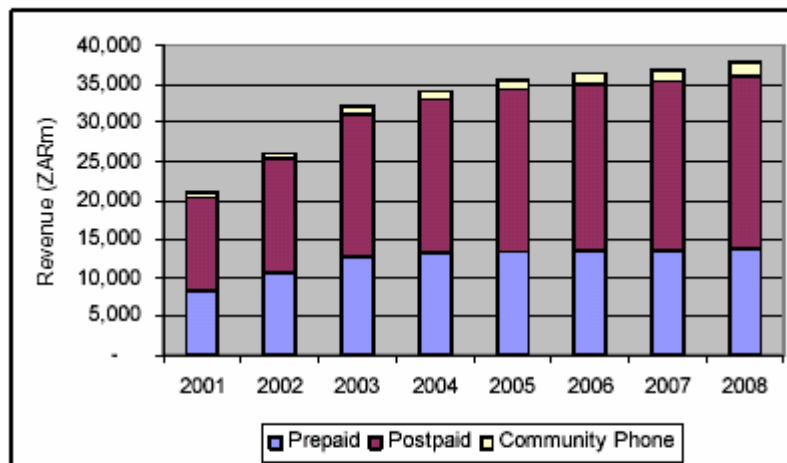
Penetration	2001	2002	2003	2004	2005	2006	2007	2008
Prepaid	17.9 percent	24.3 percent	32.3 percent	37.0 percent	39.0 percent	39.9 percent	40.4 percent	40.6 percent
Postpaid	4.3 percent	4.9 percent	6.2 percent	7.0 percent	7.4 percent	7.5 percent	7.7 percent	7.7 percent
Total	22.2 percent	29.3 percent	38.6 percent	44.1 percent	46.5 percent	47.6 percent	48.3 percent	48.4 percent

Source: Finnie et al. (2003)

In 2004 the South African mobile market was worth R34 billion and projected growth rates until 2008 will be more modest as a result of falling ARPU and slowing growth in the subscriber base as shown in Figure 2.29. By 2008 the market will be worth R38 billion, an increase of only 18 percent. The prepaid market will be first to stagnate. Growth during 2006-2008 will be less than 1 percent per annum. The majority of growth will therefore come from the post-paid market, which will see 2 to 3 percent growth during those three years.

There is a noticeable increase in revenues during 2008, which can be accounted for by the reverse in the prevailing ARPU decline. For both prepaid and post-paid revenues, growth is higher in 2008 than 2007 (Finnie et al., 2003:162).

FIGURE 2.29: FORECAST: SOUTH AFRICAN MOBILE SERVICE REVENUE 2001-2008



ZAR million	2001	2002	2003	2004	2005	2006	2007	2008
Prepaid	8,275	10,535	12,653	13,072	13,423	13,524	13,534	13,661
Postpaid	12,043	14,826	18,514	19,894	20,788	21,392	21,777	22,395
Community	596	820	1002	1,080	1,289	1,439	1,596	1,740
Total	20,914	26,180	32,169	34,046	35,500	36,356	36,907	37,796

Source: Finnie et al. (2003)

2.7 CONCLUSION

In this chapter, the South African mobile phone business environment and its composition was discussed. This chapter gathered information on each of the environments, the micro, market and macro environments, and discussed each of its sub-environments and components. There is no doubt that the business environment is made up of key variables that have a direct influence on the participants in an industry. It is crucial for management to adapt to changes in the environment in order to steer their business organisation in the right path to prosperity and be success. The information gathered in Chapter 2 will be used as background information for the discussion in Chapter 3. Chapter 3 will contain a discussion on the consumer behaviour and mobile phone usage of Generation Y students in the city of Johannesburg.

CHAPTER 3

THE CONSUMER BEHAVIOUR AND MOBILE PHONE USAGE OF GENERATION Y STUDENTS IN THE CITY OF JOHANNESBURG

3.1 INTRODUCTION

This chapter will detail the consumer behaviour of Generation Y consumers. It appears that the mobile phone is, like any other technological innovation, well embedded into society especially where Generation Y is concerned. There is a strong correlation between Generation Y consumers and their mobile phones as a result of high ownership and usage of such a device. Generation Y has adopted the mobile phone after this device had been commercially available yet it now appears that this generation is hooked on mobility making it one of the most important social changes to have occurred in the last decade. The consumer decision-process model by Cronje, Du Toit, Marais and Motlatla (2004) together with Cant, Brink and Brijball (2006), and Schiffman and Kanuk (2000) will form the basis of the discussion of Generation Y consumers and their consumer behaviour where mobile phone choice and usage are concerned.

3.2 THE GENERATION Y CONSUMER

“Generation Y is the largest generation to hit global markets since the Baby Boomers. In the United States, it’s already 60 million strong and more than three times the size of Generation X. It accounts for almost a quarter of the population and, when fully developed, will double the size of the local Boomer Generation, accounting for a hefty 35 percent of the population by 2010” (Generation Y; *Marketing Mix*, January 2000:10).

In South Africa, the impact of Generation Y is even more important than in the United States. Generation Y makes up about 64 percent of the local population and spend R2 billion a year. Their profile according to Cant, Brink and Brijball (2006:108) is described as follows:

- Nguni language speakers- 45%
- Majority are female- 52%
- Live in Gauteng, Kwazulu-Natal, Western and Eastern Cape- 65%
- Have matric 20%

3.2.1 Generation Y and attitudes towards branding

According to Cant and Machado (2004), brand awareness at children can start as early as age three. Marketing campaigns for products are thus beginning to target younger and younger audiences making Generation Y the ideal target market because they have a basic desire for anything new and fresh and they are increasingly able to influence their parents' spending habits (Cant & Machado, 2004:50).

The UCT Unilever Institute of Strategic Marketing conducted an in-depth study of this market in 2003 and found the youth of today to be "influential, colour blind, extremely materialistic and highly techno-literate." Furthermore, they were seen as understanding brands better than adults and even having the confidence to reject them (Business Day, 2004).

Brands targeting young adults need to understand emerging behaviour to get closer to their target audience in order to establish more relevant and credible relationships with them (Spero & Stone, 2004:154). According to Spero and Stone (2004:154) a brand will only be successful if young people connect with it emotionally and allow them to feel independent, empowered, and free of moral judgements.

Looking at brands, Strydom (2004) finds that the favourite brand being mentioned by Generation Y teenagers in South Africa was Billabong, followed by Levi's, Diesel, Roxy, Quicksilver and Addidas. Just more than 60 percent of Generation Y'ers say they follow the fashion trends and buy accordingly.

The major sources of information for this generation's decisions regarding brands and what to buy are friends, magazines and television in that order indicating the importance of word-of-mouth communication. With regard to the preferred mass media types, these youngsters prefer television, followed by magazines, and radio to gather information (Cant & Machado, 2004:51).

3.2.2 Generation Y and coming of age technology

Furthermore, Generation Y consumers are an attractive market segment as most have grown up using computers and other technologies. According to the authors Robinson and Codrington (2002), Generation Y play video games, listen to music on digital compact discs, and they help their families program the computerized controls of videocassette players. They have on their desks and at their fingertips access to more information of every sort than any human beings have ever had in the whole of history. They have in their homes more raw data processing power than most nations have ever had.

This access to knowledge and level of data processing power have given children a different way of interacting with information compared with previous generations: mosaic rather than linear, skills-focussed rather than content-fixated, with a passion for lifelong experiential learning (Robinson & Codrington, 2002).

3.2.3 Generation Y and disposable income

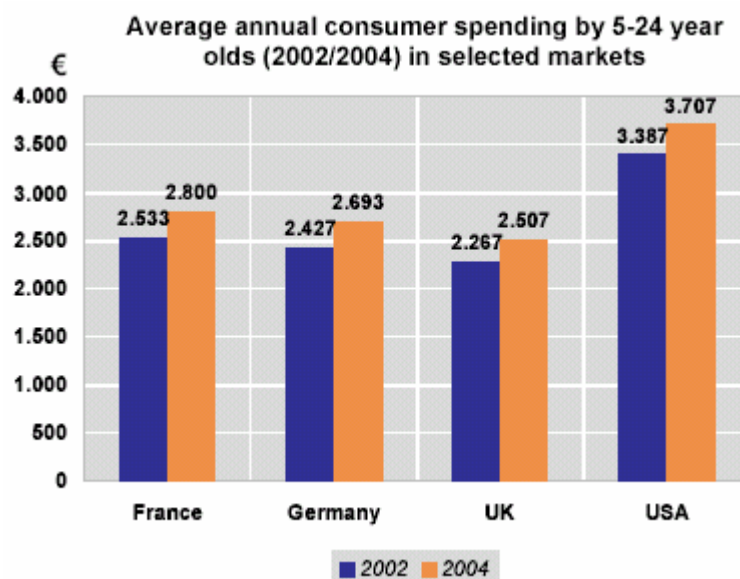
In addition of having grown up immersed in a world of computers, this generation tends to have more disposable income than past generations. The spending power exerted by Generation Y consumers is overtaking that of their parents and it is important to note the power of young money and the influence young people have over their parents' buying behaviour. Surveys show that they are deeply involved in family purchases (Spero & Stone, 2004; UCT Unilever Institute, 2003).

In the UK, 12 to 16 year olds spend on average £3 billion a year (Spero & Stone, 2004). In South Africa, according to the UCT Unilever Institute of Strategic Marketing, youngsters aged 7 to 17 spend over R4 billion a year on brands, their parents spend an additional R20 billion on them (Macgregor, 2004).

It is estimated that the pocket money of the youth market in South Africa amounts to R5 billion per annum (Cant & Machado, 2004:50). The presence of such disposable income is crucial for many marketers as the youth has now a greater ability to experiment with a wider range of products. It is also interesting to note that the young generation's spending money is increasing above GDP growth rates (Detecon, 2004:1).

The purchasing power of the young generation is rising despite the fact that the growth in the population is falling. Figure 3.1 illustrates the average annual consumer spending by 5-24 year olds in four selected markets in 2002 and 2004. In all four markets there has been an increase in average annual consumer spending from 2002 to 2004 (See Figure 3.1).

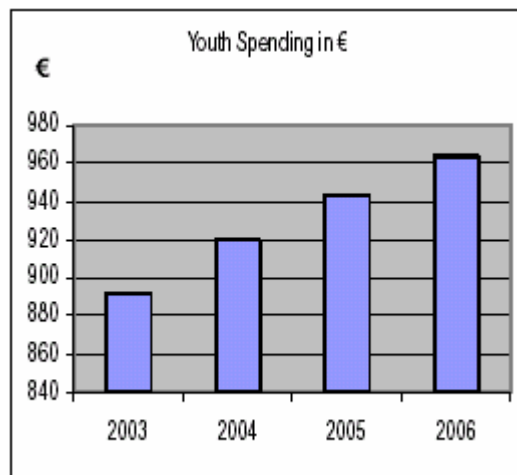
FIGURE 3.1: AVERAGE ANNUAL CONSUMER SPENDING BY 5-24 YEAR OLDS (2002/2004) IN SELECTED MARKETS



Source: Detecon (2004)

This trend will continue with youth spending projected to grow to over 960 Euros in 2006 (See Figure 3.2). Generation Y are very likely to spend their cash as quickly as they acquire it. Mobile products are competing with a broad range of trendy services and goods for their share of wallet.

FIGURE 3.2: YOUTH SPENDING (2003/2006) IN 38 SELECTED MARKETS



Source: Detecon (2004)

3.2.4 Generation Y and mobile phone usage

Given the attractiveness of this market, it is important to look at the rest of the world in trying to understand the mobile phone use of Generation Y'ers. South African Generation Y consumers will most probably exhibit different mobile phone usage patterns as opposed to their European or Asian counterparts. This is in view with the fact that they are influenced by different factors but they are similar to one another as a result of globalisation. Few empirical research studies have been conducted about mobile phone usage in Africa (more specifically South Africa) and how Generation Y consumers have integrated the mobile phone into their everyday lives. However, there have been many studies in Europe, such as in Scandinavian countries, and Asia, such as in Japan, more specifically with regard to young people. It is important to note that in Europe and Japan, the price of landline is not significantly cheaper than wireless service, making wireless a more attractive choice over landline. So it is no surprise that in both Europe and Japan, teens lead the rest of the population in mobile phone use (Yu, Loudoen & Sacher, 2002).

Scandinavian countries were the first early adopters of mobile phones (Yu et al., 2002:3) and tended to have high growth rates in mobile phone penetration. Wireless carriers in Finland claim that almost 90 percent of children aged between 13 and 18 own mobile phones.

The growing number of studies in Norway (Ling 2000, 2001, 2003) and Sweden (Weilenmann & Larsson, 2002) find cross-cultural similarities in mobile phone use by the youth among Scandinavian countries and other countries. In Norway, Ling and some of his colleagues have done many surveys and interviews of a quantitative and qualitative nature with teenagers and their families to get a picture of use, ownership, diffusion, and conception of mobile phones (Ling, 2000, 2001, 2003).

In Sweden, Andersson and Heinonen (2002) conducted studies regarding young people's perspectives on mobile services in order to establish the acceptance of mobile services within this market. Furthermore, Weilenmann and Larsson (2002) focus on the local interaction of mobile phones amongst the youth in Sweden; the ways in which phones are used and shared between friends, in different ways and purposes.

At the same time, mobile phones became common in Japan, South Korea, and China. Studies in Asia have been conducted on a bigger scale. In Japan, 59 percent of high school juniors have mobile phones and spend up to \$175 a month (Yu et al., 2002). Furthermore, mobile phones in Japan do not only provide the obvious enhancement of mobility (like in most Scandinavian countries) but are also used for purposes other than calling. Teenagers in Japan now use mobile phones to send emails as a result of the introduction of Wireless Internet Access (WAP). All these studies show that mobile phones are an important integration in a teenager's life.

Hulme and Peters (2001:2) find that "the mobile acts on many levels, as a fashion statement, as a communicator, as a badge of identity and as a decoder." Furthermore according to Leps (2003) the "mobile me" ethos has become so established amongst youngsters that regularly updating their mobile phone profiles has become second nature; from the look and feel of the handset (bright colours and funky patterns) to how the mobile phone sounds, the graphics it displays and how it helps users organise their lives on the move are just a few of the profiles used by the youth.

3.2.5 Mobile phone usage in South Africa

In South Africa, a number of studies have been undertaken by independent research organisations regarding South African consumers' mobile habits. World Wide Worx, with the backing of First National Bank, Cell C, and Sentech undertook the year-long mobility 2005 research project and released "The Impact of Mobile Technologies on the South African Consumer". This study uses a nationally representative sample of 2400 South Africans who took part in telephonic interviews over a three-month period in 2005 (Mobility, 2005).

The research unveils fascinating patterns in mobile phone usage and a detailed picture of a very satisfied market (Mobility, 2005). Some of the findings are highlighted below:

- South Africans love their mobile phones
- South Africans were highly satisfied with the impact of their mobile phones on their lives rated across half a dozen dimensions. The highest satisfaction rating was the impact of mobile phones on family (94.8% of the respondents gave a positive rating). Satisfaction with the mobile phone's performance and the impact on the user's own sense of security were tied at a 94.3% positive rating, followed by impact on personal life at 93.6%, satisfaction with network service 93.2% and impact on working life 92.1% positive
- More than half of the respondents said they obtained a new handset in the past year. 44% of the respondents passed their old mobile phone onto family members, 18% kept it as spare, 14% sold it, 10% gave it to a friend and 5% simply threw it away
- Nokia is far and away the first choice of mobile phone brand for South African users, with Motorola and Samsung in distant second and third place. Almost two thirds of all mobile phone owners use a Nokia handset. The next most popular make of handset is Motorola, at 14%.
- Age was found to be the major differentiator in the way South Africans use their mobile phones, particularly in the choice of contract versus prepaid accounts.

- The study found that while 33% of all users in this market segment are on contract and 64% on prepaid, only 8% of those in the 16-19 age group are on contracts, with 90% on prepaid. This doubles to 17% on contract in the 20-24 age group, with 78% on prepaid. Contract users rise steadily through the age groups until it peaks in the 46-49 age group, at 40%, and then decreases again. Cell C has the highest proportion of contract subscribers, at 22% of the Cell C base. The corresponding figures for Vodacom and MTN are 14% and 12% respectively.
- Over half of the respondents cited free/cheap mobile phones as the reason for choosing their form of contract
- Contract users' average monthly phone bill amounted to R384 whereas prepaid users spent about R134, again indicating the impact that would be made on the market should there be further shift to prepaid. Expenditure is lowest in the 16-19 age group, rising steadily to a peak in the 35-44 age group and then dropping steadily as age increases. Vodacom subscribers have the highest monthly cell phone bills, compared to both Cell C and MTN. This is true of both their prepaid and contract customers. On average, people spend 3% of their incomes on cell phones (AMPS, 2005).
- Gauteng has the highest penetration of mobile phones, at 48% of adults. Next is the Western Cape with 43%, while the lowest penetration is the Eastern Cape, at 24% (AMPS, 2005)
- An 'age gap' exists between revenue and usage but adoption of non-voice applications like picture messaging and 3G are stronger among younger people. Mobile phone users over the age of 50 spend more on cell phone calls than younger users (average monthly spend R145 vs. R135)

The adoption of mobile phones in South Africa will be investigated in the empirical research phase to determine Generation Y's usage patterns and will be contrasted with the findings above (See Section C of questionnaire in Appendix A).

Scandinavian adoption of mobile phone use is clearly behind Japan while South Africa's adoption of mobile phone use is behind both countries as there is little research exploring the mobile telephony environment especially where the third generation applications (3G) are concerned.

Marketers need to look beyond demographics, numbers and media speak to locate the young market; the digital world is where Generation Y consumers play, work, learn and communicate and it is the arena in which a brand communicates with its young market (Spero & Stone, 2004:154).

3.3 CONSUMER BEHAVIOUR OF GENERATION Y CONSUMERS

The theoretical background of consumer behaviour as it relates to Generation Y will be discussed in this section. It is not surprising that research into consumer behaviour has expanded and has become more significant in the last couple of years. It is important to gain insight into the consumer decision-making process in order to understand the perceptions and expectations of the Generation Y market segment. Consumer behaviour concerns all the activities and influences that occur before, during and after the purchase itself (Cant, et al. 2006:2). Many definitions of consumer behaviour exist, the most useful one being proposed by Schiffmann and Kanuk (2000:5) who define the study of consumer behaviour as “how individuals make decisions to spend their available resources (time, money, effort) on consumption-related items.” This definition implies that consumers weigh the pros and cons when deciding what product to buy.

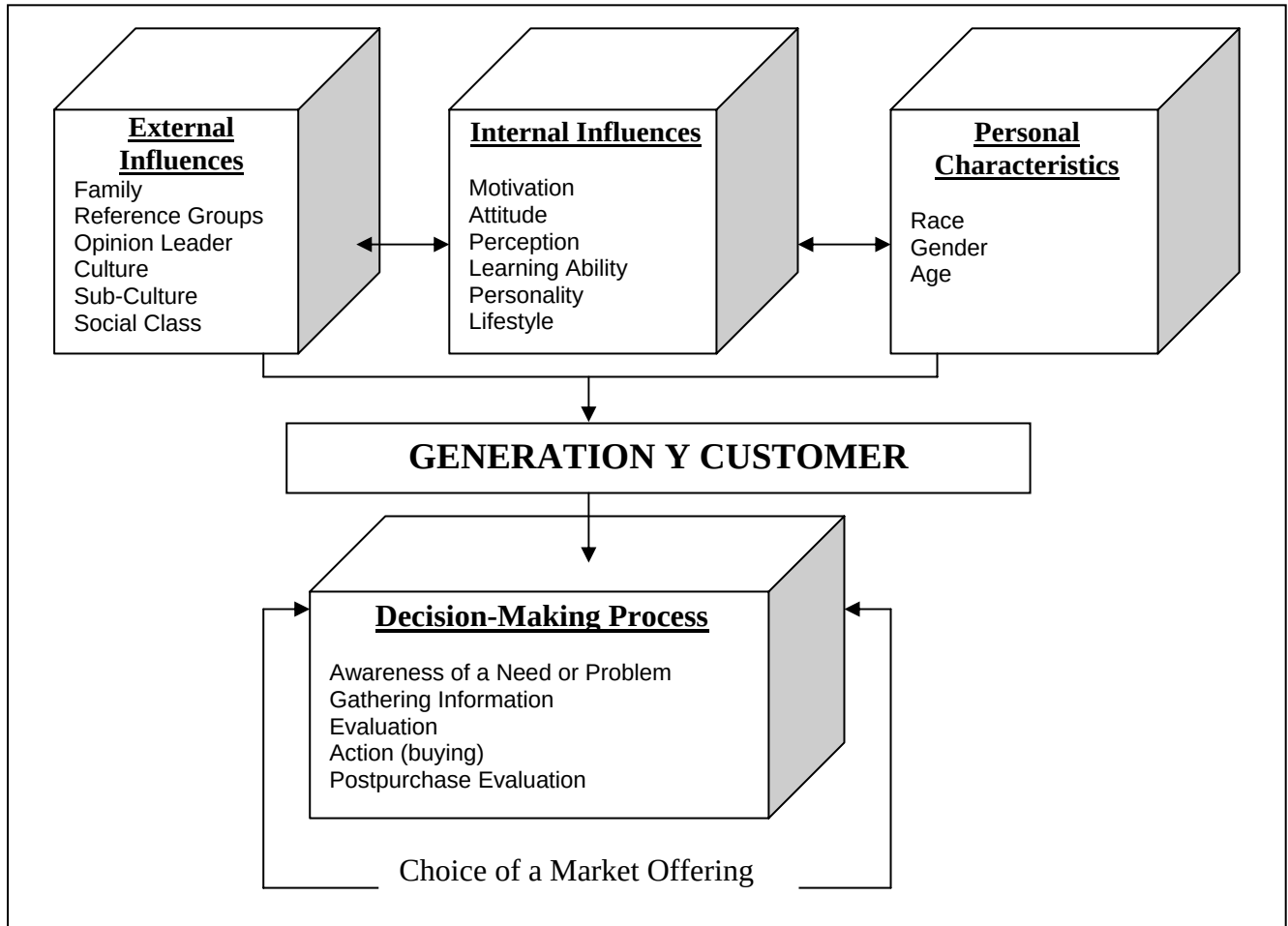
The field of consumer behaviour further studies “how individuals, groups and organisations select, buy, use and dispose of goods, services, ideas or experiences to satisfy their needs and desires and the impacts these processes have on consumer and society (Hawkins, Best & Coney, 1998; Strydom, Jooste & Cant, 2000)” This definition encompasses a variety of influences in the consumer behaviour process where the term ‘consumer’ includes groups and organisations

Consumer behaviour has important implications for marketers because it may be “explained, influenced and predicted (Cronje et al., 2004:292).” Teenagers and young adults are important market segments and the study of their consumer behaviour will enable marketers to understand and predict consumer-purchasing motives.

3.4 DETERMINANTS INFLUENCING CONSUMER BEHAVIOUR

Consumer marketing strategies are based on determinants of consumer behaviour—that is, those factors that explain how and why consumers behave in a certain way when purchasing a product. The consumer decision-making process and the continual changes in the behavioural patterns of consumers are strongly influenced by various factors. The consumer behaviour model below is adapted from Schiffman and Kanuk (2000:443), Cronje, Du Toit, Marais and Motlatla (2004:292) and Cant, Brink and Brijball (2006:23). The model in Figure 3.3 was adapted in such a way so that it is both simple and conceptually sound. The two main groups of factors in Figure 3.3 are internal influences unique to a particular person and external influences. Each of the factors shown in Figure 3.3 will be explored in detail in the sections that follow. These factors in turn may lead to the purchase and/or repurchase of a product or service (Cronje et al., 2004:292). Figure 3.3 has two-directional arrows that indicate that each set of factors interacts with each other

FIGURE 3.3: AN OVERALL MODEL OF CONSUMER BEHAVIOUR



3.4.1 External influences

The first set of factors depicted in Figure 3.3 is external influences. External influences refer to the influence of various groups on consumer purchasing patterns. These influences are also referred to as the ‘social’ and ‘group factors’ influencing consumer behaviour (Cant et al., 2006:23). As can be seen in Figure 3.3, the different groups that can compel a consumer to conform to group norms are the family, reference groups, opinion leaders, culture, and sub-culture groups and social class. The information portrayed in Table 3.1 is based on the 1999 Codrington profile of South African teenagers looking at family life, the future, peers, and technology (Miller, 2003). Each of these groups will then be discussed in more detail below.

TABLE 3.1: FACTORS THAT IMPACT ON THE INTERACTION WITH INFORMATION OF SOUTH AFRICAN TEENAGERS

Factor	Impact
Family Life	-family life is important although there are communication problems -perceived insufficient time for family -both parents work outside home in 72% of households -breakup of family life with divorce experienced by 64%
Future	- negative feeling about the future by 24% -concerned about lack of job opportunities, parents dying, not being a success in life, and Aids - negative feeling towards politics
Peers	- spend a great deal of time with small groups of closely-knit friends -lack of rivalry between groups
Technology	-they are children of the digital age as they have grown up with a burgeoning software industry -more than two hours a day spent watching tv by 51% -dependent on background music in digital format -large percentage living in poverty: Africans 57%, Asian 6%, Coloured 19%, White 2%

Source: Adapted from Codrington 1999 (Miller, 2003:23)

3.4.1.1 Family

The family in Figure 3.3 is a decision-making unit whose members live in close contact to one another and who decide about purchasing products that will provide the greatest satisfaction to the family as a whole. The importance of the family in consumer behaviour is highlighted by the fact that many products are purchased and consumed by a family unit and the buying decisions of members are influenced by other members of the family. So it is no surprise that of all the groups influencing purchasing behaviour, the individual maintains the closest contact with the family (Strydom, Jooste & Cant, 2000:91). The family is thus the most obvious example of a strongly influential primary reference group (Cant et al., 2006:210)

Cant, Brink and Brijball (2006:211) found three types of families that dominate societies:

- 1) The *married couple*, a husband and wife, is the simplest structure
- 2) The *nuclear family* consists of a husband and wife and a child or children
- 3) The *extended family* consists of the nuclear family plus other relatives such as grandparents, uncles and aunts, cousins and parents-in-law.
- 4) The *single-parent family*, consisting of one parents and at least one child, is growing because of divorce, separation and out-of-wedlock births

The extended family seems to dominate in the majority of South Africa's population. These families are however diminishing especially in urban areas making the nuclear family a more attractive alternative (Cant et al., 2006:211).

3.4.1.1.1 Family role behaviour

All the family members have certain roles for a family to function as a cohesive unit making family decision-making highly complex. Role differentiation and the influences exerted by family members on decision-making in the family are depicted in Table 3.2. Families are ever changing in their structure and composition and family roles may vary from family to family, from product to product (Cant et al., 2006:213).

Generation Y'ers serve the role of initiators, influencers, opinion leaders, and even experts in their families in many categories -especially in electronics and technology as illustrated in Table 3.2.

TABLE 3.2: ROLE DIFFERENTIATION IN DECISION-MAKING IN THE FAMILY

Roles	Family members
The initiator is the person who makes the first suggestion regarding products to be purchased	Generation Y consumers often act as initiators. For example, as a result of more single families, a mobile phone could be needed as children's parents are not at home most of the time
The gatekeeper controls the flow of information about the product/service into the family	Once again Generation Y consumers could act as gatekeepers about the mobile phone into the family
The influencer is the person who implicitly or explicitly influences the final decision because this person's suggestions and wishes are reflected in the ultimate decision made by the family	Children's preferences influence family decision-making. Influencers could also be the parents, especially fathers, who would explain the choice of mobile phones in the market, choice of packages (prepaid versus contract), etc.
The decision maker is the person who actually chooses between alternatives and makes the decision of whether to shop for, buy, use, consumer or dispose of a product/service	This is usually the mother or the father, or both jointly, or the Generation Y consumer
The buyer does the actual buying of the product/service	It is usually either the mother or father's responsibility to buy the mobile phone
The user is the person who uses/consumes the product/service	The Generation Y consumer uses the product bought in this case the mobile phone

Source: Adapted from Strydom et al. (2000); Cant et al. (2006); Shiffman & Kanuk (2000)

Due to changes in family structure, many Generation Y'ers are taking more and more responsibility for their families' purchase decisions. In cases where both parents work full-time jobs, Generation Y consumers often make purchasing decisions in order to compensate for the parents' absence from home. In the case of a single-parent family, Generation Y'ers usually have to act on behalf of an absent parent and make product choices. Children and teenagers thus play a vital role in decision-making by increasingly given their input in family consumer decisions- even decisions on products not encountered on a typical shopping trip such as technology, cars, and holiday destinations. By making suggestions about products that their parents have very little insight about and that is why most Generation Y consumers are most often the initiators of purchase decisions within a household as seen in Table 3.2 (Cronje et al., 2004:294).

With regard to the purchase of mobile phones, children and parents have different ideas about the benefits of mobile phones. For parents, the mobile phone is used as a

monitoring device-it is a practical way of keeping in touch with their children. For young adolescents the mobile phone can be a status of symbol and an instant communication medium for their social network.

According to Ling (2003) the mobile phone affects two areas of interaction when considering the relationship of teens to their parents. It not only brings up issues surrounding the emancipation of the teen but also allows for better coordination within the family. The mobile phone allows for contact to be made when needed and coordination of activities with the parents. Along with this coordination is the freedom of the teen by increasing emancipation. “The mobile telephone is a device, and a symbol, with which once can mark their growing emancipation” (Ling, 2000:6). The notion of a mobile phone as a security device is another theme among the youth as mobile phones are usually used in emergencies (Ling, 2000:7).

3.4.1.2 Reference groups

A reference group in Figure 3.3 is “any person or group of people that significantly influences an individual’s behaviour” (Bearden & Etzel, 1982 quoted in Engel et al., 1994:716). A more detailed definition given by Cant, Brink and Brijball (2006:73) is that reference groups: “form part of group dynamics and can be defined as any person or group that serves a point of comparison or referent for an individual consumer in forming certain values, attitudes and behaviour patterns.” Being a member of a certain group implies exhibiting similar habits and purchasing patterns of the group (Cronje et al., 2004:295). The different types of reference groups found in South Africa will be discussed in the next section.

3.4.1.2.1 Types of reference groups

Reference groups fall into four categories. These include:

- 1) Formal and informal reference groups
- 2) Primary and secondary reference groups
- 3) Membership and non-membership groups
- 4) Aspirational and dissociative groups.

Table 3.3 discusses each of these reference groups with examples in more detail below:

TABLE 3.3: TYPES OF REFERENCE GROUPS

Type of Reference Group	Definition	Example
Formal	Clearly defined structure and membership	Soccer club
Informal	Has no formal rules	Families, friends and peer groups
Primary	Has face-to-face interaction	Students in a class
Membership	Members of a certain group and model behaviour on others in the group	Members of a church or a social club
Non-membership	Do not have membership but may still model their behaviour on members of this group	Non-member of church may still be influenced by members' behaviour: helping those in need
Aspirational	Groups that people aspire to belong	Movie stars and famous personalities (Ryk Neethling)
Dissociative	Groups that you avoid or reject	Gangs

Source: Adapted from Cant et al. (2006:74); Strydom, et al. (2000:93)

Furthermore, the personal influence occurs in three ways (Engel et al., 1994:735):

1. utilitarian (pressures to conform to group norms in thinking and behaviour)
2. value-expressive (reflecting a desire for psychological association and a willingness to accept values of others without pressure)
3. informational (beliefs and behaviours of others are accepted as evidence about reality)

Generation Y consumers tend to want to belong to a group whether it be a sports or social club. One's availability and continual access to friends and colleagues is thus one of the main functions a mobile phone has and was cited as the most important attribute by many adolescents interviewed by Ling (2000); it allows them to establish a communication channel over which their parents have little insight. There are two types of communication that were observed: "One is the direct coordination of activities (the mobile phone allows for a type of very precise adjustment of everyday activities) and the other the expressive maintenance of the group" (Ling, 2003:17).

A final motive was the use of the mobile phone as a crystallisation symbol, while many discussed the positive motives of availability, emancipation, safety and micro-coordination, others saw the device in more indeterminate terms such as status and

identification (Ling, 2000:10). Alexander (2000) notes that the symbolic identity of fashion and style is an important factor in social interaction and the identity of the mobile phone is seen by the youth as a dynamic social technology.

3.4.1.3 Opinion leader

Personal influence on purchasing behaviour can also come through word-of-mouth communication initiated by a person known as an opinion leader. The opinion leader, as illustrated under external influences in Figure 3.3, is a credible person who is accepted as a source of information about purchase and use. Opinion leaders act as a go-between in what is known as the two-step flow of communication. The information from mass media is usually channelled by the opinion leader who interprets the information and then relays the acceptance or rejection of the message to the other consumers in the target market (Strydom et al., 2000:94).

Every consumer is a member of different reference group and could be an opinion leader for a certain product whilst being a follower for another. For a product to be accepted within a market segment, marketers must identify a suitable reference group and opinion leader for its product (Cronje et al., 2004:295).

3.4.1.4 Culture groups

According to many authors, culture is one of the important factors that influence customer behaviour (Engel et al., 1994; Strydom, 2004). Culture refers to the “values, ideas, artefacts and other meaningful symbols that help individuals communicate, interpret and evaluate as members of society” (Engel et al., 1994:144). Cultural groups comprises of these values, norms and symbols developed in a society over time in which all its members share.

These cultural norms are transmitted from generation to generation to ensure survival and to facilitate adaptation to circumstances. The cultural group also strongly influences purchasing and consumption patterns. Sub-cultures exist within culture groups and will be elaborated upon in the next section.

3.4.1.5 Sub-culture

Sub-culture (See Figure 3.3) is defined as “a distinct cultural group that exists as an identifiable segment within larger, more complex societies” (Cant et al., 2006:59). Subcultures are often categorised on the basis of demographics. According to Cant and Machado (2004), sub-cultures make up important market segments in South African society, such as language, e.g. Afrikaans speaking sub cultural group with their preferences such as “braaivleis” (barbecue), biltong and rugby, racial groups, e.g. Asians with their unique preferences regarding strong curry dishes and also geographic regions, e.g. rural vs. urban subcultures. Each cultural group comprises of four main sub-cultures: nationality, religion, race, and geographical area. Smaller sub-cultures according to language, age, employment status can also be developed within the main sub-cultures.

Different perspectives on the diversity of South Africa exist. South Africa is a perfect example of a ‘melting pot’ where society is fragmented into many cultural groups and sub-groups. Marketers should thus run integrated promotions aimed at all groups (Cronje et al., 2004:296). The ‘rainbow nation’ metaphor is also used to describe the strength and richness in diversity of the people in South Africa (Cant et al., 2006:59). The age-based sub-culture is most likely to influence Generation Y consumers and this is the reason why it will be discussed in more detail below.

3.4.1.5.1 Age-based sub-culture

The age-based subculture can be described as a generation or a group of people “who have experienced a common social, political, historical and economic environment (Cant & Machado, 2004:48).” Generations, which are roughly sub-divided into 20-year blocks can help explain different consumer behaviours (Cant & Machado, 2004:48).

Cant and Machado (2004) identify five basic generations, namely:

- Pre-Depression Generation – born before 1930 this is a generation that experienced the Great Depression as children and who were adults during World War II. Some of this generation volunteered to fight in World War II, whilst others joined the nationalist organisation called the Ossewa Brandwag that was sympathetic to Nazi Germany. This generation today are the people in old-age homes and living as the matriarch or patriarch of the extended family. They have unique needs, more related to health and trying to cope with an ever-increasing burden of medical costs and trying to make ends meet.
- The Depression Generation – born between 1930 and 1946 this generation grew up in the relative affluent years in the 1950s and 1960s. They experienced Rock n Roll first hand as well as Elvis Presley and are just retired or in the last stage of their career. They are the grand parents of the generation Y children. This generation is called the silent generation – they believe in hard work, are conservative in nature and likes order, rules and a clearly defined hierarchy.
- The Baby Boom generation – born between 1947 and 1964 this is one of the largest generations in South Africa. They experienced the rise of the National Party, the Apartheid years, the Rivonia trial, Sharpeville, racial discrimination, sexual revolution, the Flower Power and Hippy era as represented in the Woodstock music happening, recreational drugs and the effect of divorce creating single parent households, pop groups such as the Beatles, the Rolling Stones and The Who, who took Rock n Roll further than ever expected. They were also the generation that saw the effect of Communism, the Cold War, the Vietnam War and they were adults when the Berlin Wall fell and saw the demise of Communism in Eastern Europe and Russia. They have a live for today attitude.
- Generation X – is the generation born between 1965 and 1978. The term comes from a book written by Douglas Copeland by the same name. In this book the author described the fictional characters in the book as “underemployed, overeducated, intensely private and unpredictable”. The stereotype of Generation X is seen as “cynical, hopeless, frustrated and unmotivated slackers who wear grunge clothing, listen to alternative music and still live at home because they cannot get real jobs.”

In real life Generation X wants options and flexibility and they dislike close supervision in the workplace. They prefer an output driven system where they believe the organisation that they work for has bought their output – the mechanics on how and when they do their work is irrelevant – they want the freedom to do the work in their own time. This is the generation that experienced dual income households with both parents away during working hours. They bore the brunt of single parent households, which left emotional scars and experienced a deteriorating environment and the Aids pandemic. In South Africa they were the first generation influenced by television, which was introduced in 1976. They were young adults when South Africa became a democracy in 1994. These are the parents of the generation under investigation

- Generation Y – this is the generation born between 1979 and 1994 and is the children of the baby boomers and grew up as the first generation that reaped the fruit of democracy in South Africa. They grew up with computers, the Internet and saw their parents losing their jobs in an economic slowdown period. Generation Y exuberate independence and are much more optimistic, confident and social than previous generations. They are also much more street smart and technology minded than the previous generations. The South African Generation Y forms part of the global youth culture that transcends all boundaries in the world – they are truly part of the global village in their needs, attitudes, perceptions and lifestyles.

Generation Y'ers, Generation X'ers and Baby Boomers, as discussed above, differ in their purchasing behaviour, attitudes towards brand, and behaviour towards advertisements. The main differences of these groups are illustrated in Table 3.4 (Cant et al., 2006:108):

TABLE 3.4: COMPARISON OF SELECTED AGE COHORTS ACROSS MARKETING-RELATED ISSUES

Themes	Generation Y	Generation X	Baby Boomers
Purchasing Behaviour	Savvy, pragmatic	Materialistic	Narcissistic
Coming of Age Technology	Computer in every home	Microwave in every home	Television in every home
Price-Quality Attitude	Value oriented (weighing price-quality relationships)	Price oriented (concerned about cost of individual items)	Conspicuous consumption (buying for indulgence)
Attitude towards Brands	Embracing brand	Against branding	Loyal to brand
Behaviour towards advertisements	Rebel against hype	Rebel against hype	Respond to image-building hype

Source: Adapted from Cant et al. (2006:106)

To sum up, Rousseau (1999:340) shares a very interesting view of South Africa and its inherent culture below.

“Cultural values in South Africa are mainly of Eurocentric and afrocentric origin and include issues such as individualism, materialism, work ethic, achievement, status and success, as well as freedom, solidarity, group recognition, acceptance and accountability to the community (ubuntu). Despite the diverse range of cultural values, a process of cultural synergy is also taking place in the country, based on shared values for the nation. These values are developed through the adoption of demonstrated values of others we admire, using experience to evolve a set of values that are functional, and responding to social pressure from people with whom we mix.”

3.4.1.6 Social class

Social class is the last factor of the external influences depicted in Figure 3.3. A social class is “a group of people in a country who are considered equal in status or community esteem who socialise together on a regular basis formally or informally, and who share behaviour patterns (Cant et al., 2006:76).”

Social classes have distinctive behaviour patterns that are a function of occupation, income and education. Every country has a different social class structure. South Africa has a class structure that is triangular-shaped, meaning that a very small part of the population is classified as the upper-class, more in the middle class and the majority in the lower class. This in turn leads to a high Gini coefficient for South Africa. A Gini coefficient represents the gap in income between the richest and the poorest people in the country (Cant et al., 2006:77).

Social class thus strongly influences consumer lifestyles and in general is a good indicator of the type of product that a consumer would be interested in buying. In order to advance social standing in society, consumers of a particular class will buy specific products. Studies found that the following five products were identified as giving status to the respondents: a car, a music centre/radio, a suit/clothing, education, and a television set. Mobile phones were also mentioned as a status symbol (Cant et al., 2006:77). The research results from this investigation included students from universities (i.e. tertiary education), implying that the Generation Y students surveyed might exhibit similar attitudes and behaviours.

3.4.2 Internal influences

The second set of factors depicted in Figure 3.3 is internal influences. Individuals differ in many ways and that in turn affects their purchasing behaviour. Internal influences are also referred to as ‘psychological forces’ that influence consumer behaviour (Cant et al. 2006:24). Motivation, attitudes, perceptions, learning ability, personality, and lifestyle all fall in the “Internal Influences” bracket and determines the type of products a consumer will buy (See Figure 3.3).

3.4.2.1 Motivation

Motivation, or more specifically needs, are the driving force behind all human behaviour patterns (Cronje et al., 2004:293). There have been several theories of classifying needs by many psychologists and marketers and some, like Maslow’s Hierarchy of Needs, is worth discussing.

Maslow's hierarchy of needs is a motivational theory which was put forward in 1943 and is one of the most famous theories of motivation. According to Maslow needs are arranged in a hierarchy where the lowest-level needs need to be satisfied first before progressing to the highest level needs (See Figure 3.4).

FIGURE 3.4: MASLOW'S HIERARCHY OF NEEDS



Source: Adapted from Cronje et al. (2004); Cant et al. (2005:134)

Maslow's hierarchy can be summarised into five categories:

(1) At the bottom of the hierarchy are the *physiological needs*, otherwise known as the basic needs for survival such as food, drink, and air (e.g. purchasing bread to satisfy hunger). These are the most prominent motives of all, and human behaviour will be primarily directed at the satisfaction of these needs for as long as they are not satisfied (Cant et al., 2006:134);

(2) The second level in the hierarchy is *safety and security needs* which includes protection from the physical and emotional harm (e.g. taking out an insurance policy);

(3) *Affiliation needs* include love, friendship and the need to be accepted by peers (e.g. buying and giving gifts). The affiliation need finds expression in the buying of gifts and participating in-group activities such as sports (Cant et al., 2006:135);

- (4) *Esteem needs* include the need for a positive self-image and self-respect and the need for recognition from others (e.g. buying luxury products such as jewellery);
- (5) At the top of the hierarchy are *self-actualisation needs* which involve realising one's potential through growth and development (e.g. hobbies or self-improvement activities such as enrolling for sculpture classes or a competitive sport).

Mobile phones represent an aspirational, perhaps the most aspirational, consumer product youth can readily buy. The mobile phone symbolises growing up and independence but is also seen as a necessity for youth desperate to keep up and achieve social acceptance. Mobile phones further satisfy the safety and affiliation needs (peer relationships).

There are no limits to people's needs and this is why consumers will continue to purchase products as long as there are needs to fulfil. Despite several shortcomings such that needs could be clustered into three categories instead of five, different hierarchy of needs could be different for everyone, Maslow's hierarchy of needs will remain one of the most widely known theories of motivation.

Consumers are not only motivated by psychological needs when buying products as discussed above. They are also concerned about aspects such as economy, quality, performance, suitability, and reliability. These are defined as economic motives and may be satisfied by applying economic criteria as shown in Table 3.5 (Cant et al., 2006:138)

TABLE 3.5: ECONOMIC CRITERIA IN CUSTOMER DECISION-MAKING

COST CRITERIA	PERFORMANCE CRITERIA
Price	Durability
Repairs	Efficiency
Operating Costs	Economy
Installation	Materials
Cost of Extras	Dependability

Adapted from: Cant et al. (2006:138)

A consumer who buys a mobile phone will not readily concede that the underlying motive was their need for recognition (an esteem need). They are more likely to rationalise their decision by saying that the reason for buying the mobile phone is its durability or price (an economic motive) as seen in Table 3.5 (Cant et al., 2006:138)

In addition to psychological and economic needs, Detecon (2005:9) identifies five basic emotional needs of the youth which stem from a long list of sub-needs: Individualism and autonomy; intimacy; identity (self-definition); certainty and escapism (See Table 3.6).

TABLE 3.6 YOUTH'S FIVE BASIC EMOTIONAL NEEDS

Needs		Exemplary Functional Implications
Five Basic Needs	• Individualism and Autonomy	• Fashion gets higher focus and might change frequently • Communication with peers is more important • Items (logos etc.) which differentiate from others become attractive
	• Intimacy	
	• Identity- Self definition	
	• Certainty	
	• Escapism	

Source: Adapted from Detecon (2005:9)

3.4.2.2 Consumer attitudes

Attitudes depicted in Figure 3.3, like motivation, can also determine purchasing patterns. An attitude describes “a person’s relatively consistent evaluations, feelings and tendencies towards an object or an idea” (Cant et al., 2006:147). Attitude in marketing terms can further be defined as “a learned predisposition to behave in a consistently favourable or unfavourable way towards market-related objects, events or situations.” Consumers will therefore typically select the brand that is evaluated more favourably when choosing which brand to buy. A positive attitude towards a certain product will persuade a customer to purchase it whereas a negative attitude towards a product is impossible to change and the product will not be bought. Attitudes can thus be quite useful in understanding why consumers do or do not buy a particular product such as a mobile phone.

It is the marketer's task to prevent the development of negative attitudes towards their particular product by reinforcing existing positive attitudes or to change neutral attitudes to favour their products through the successful use of marketing communication messages (Cronje et al., 2004:293).

This is especially true when attitudes are linked to the knowledge consumers possess about the specific product. Knowledge can facilitate search behaviour. Knowledge or prior purchase experience is often found to have a negative relationship with external search when the consumer relies more heavily on internal search during decision-making. Alternatively, knowledge can enhance search; consumers will acquire more information when they feel more confident about their ability to judge products. Therefore knowledge may also be related positively to external search. These positive and negative influences produce an inverted 'U' relationship between knowledge and external search. There are three types of consumers; consumers with limited knowledge, consumers with moderate knowledge and consumers possessing high levels of knowledge.

Consumers that possess "extremely limited knowledge (such as first time buyers) may feel incompetent to undertake an elaborate search and analysis"(Engel et al., 1994:194). They usually rely on others to solve their consumption problem. Consumers possessing moderate knowledge should have greater pre-purchase search as they will have sufficient knowledge to explore and understand the information environment.

Consumers possessing high levels of knowledge rely heavily on memory as opposed to the other two types of consumers. Knowledgeable consumers need little pre-purchase search as internal search may cover most if not all information needed for decision-making (Engel et al., 1994:194).

3.4.2.2.1 Attitudes and the mobile phone

Applying the concept of knowledge and attitudes to the mobile phone environment, Riqueleme (2001) conducted an experiment to identify how much self-knowledge consumers have about an important purchase: choosing between mobile phones. A total of 94 consumers provided ratings of the importance of six key attributes: telephone features, connection fee, access cost, mobile-to-mobile phone rates, call rates, and free calls and preference for several choices of mobile phone plans that were advertised on the market.

The research shows that consumers have a relatively good predictive power of mobile phone plans they have chosen, however this knowledge is not perfect; when evaluating the mobile phone plans, consumers with prior experience about this product tended to underestimate the importance of a monthly access fee, mobile-to-mobile phone rates and the connection fee whilst they tended to overestimate the importance of telephone features, call rates, and free calls.

In another paper, Liu (2002) tries to find the effects of different activities on consumer choice of mobile phone brands in Asia. It was found that there were two distinct attitudes to brands when choosing a mobile phone: attitudes towards the mobile phone brand and attitudes towards the network. Choosing between mobile phone brands were affected by new technology features such as SMS, memory capacity, radio, and Internet connection. In contrast, price and regularity of service dominate choices between network providers. The focus on size of the phone has dropped off and the trend has moved to larger phones with better capability and larger screens.

In a more recent study, Valor and Sieber (2003) have shown that young people's adoption of technology does not only depend on their technological knowledge but on their overall environment. In Spain, young people seemed to adopt mobile phones regardless of their technology expertise. Nevertheless, mobile phone usage varied depending on the degree of technological knowledge of each teenager; those with higher technology knowledge used their mobile phone as a multi-purpose device (Valor & Sieber, 2003:9).

Young people pride themselves as technologically knowledgeable rather than ignorant. Thus, understanding youth attitudes towards new technologies such as wireless Internet and more specifically the use of mobile phones are important in identifying new business opportunities and new needs of this younger market resulting from the introduction of such new technologies. *Attitudes of Generation Y respondents towards mobile phones will be investigated in the research phase (See Section D of questionnaire in Appendix A).*

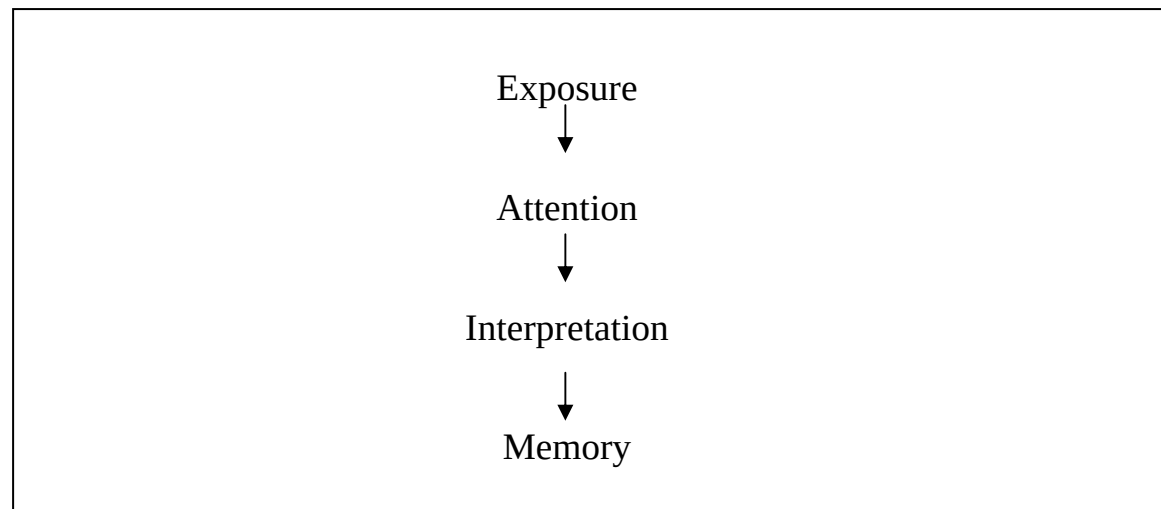
3.4.2.3 Consumer perceptions

Consumer perceptions, the third individual factor in Figure 3.3, is the “process of receiving, organising and assigning meaning to information or stimuli detected by the five senses” (Strydom et al., 2000:84; Kotler, 2000:173; Cant et al., 2006:115). Perceptions of the mobile phone are already changing- mobile phones are not only used for voice communication but are changing into more general communication devices (Weilenman & Larsson, 2002). The mobile phone is taking on a new meaning and has gone beyond voice telephony; it is increasingly perceived as a multi-purpose device as mentioned above (Hulme & Peters, 2001). The mobile phone can be used as a communicator through voice telephony, SMS text messaging, an entertainment device through games, an alarm clock, and an address book.

Leung and Wei (2000) (quoted in Valor & Sieber, 2003:3) found six additional gratifications: fashion/status, affection/ sociability, relaxation, immediate access, instrumentality, and reassurance. In this way, the mobile phone covers the different needs and motivations (Lin, 1996).

Furthermore, perception involves seeing, hearing, feeling, tasting, and smelling as this determines what consumers pay attention to and what captures their interest. The perceptual process consists of four stages, namely, exposure, attention, interpretation, and memory (or recall) as shown in Figure 3.5.

FIGURE 3.5: THE PERCEPTUAL PROCESS



Source: Adapted from Hawkins, Best & Coney (2001); Strydom et al. (2000)

Consumers will choose things they want to hear and block-out any unwanted marketing message as they can protect themselves against any content of communication. Marketers should thus convey messages in such a way that the person receiving it understands it and reacts in the required way.

Information processing is selective and includes the following steps as shown in Figure 3.5:

- *Exposure*: Information and communication must reach consumers where they happen to be and exposure occurs when one or more of the senses are activated (eg. Television advert)
- *Attention*: The next step is to allocate information-processing capacity to the incoming information. Attention is most likely to occur when the message is of relevance and is determined by the individual, the stimulus and the situation
- *Interpretation*: If attention is attracted, the message is further analysed against categories of meaning stored in memory. Acceptance takes place when the incoming message is not screened out as being unacceptable
- *Memory or Recall*: The new information is accepted and stored in memory in such a way that it can be used for future use

An advertisement should be kept simple and have some impact in attracting attention for it to be successful otherwise consumers might choose to ignore it completely.

Gaining the consumer's attention is one of the biggest challenges faced by marketers hence the reason why the success of an advert is based on the likelihood of it gaining consumers' attention.

Generation Y is fast becoming the new target market of advertisers and marketers as a result of their increasing purchasing power. To effectively target this market, many advertisers and marketers will be forced to look for new trends that will influence the consumer preferences of Generation Y consumers.

Furthermore, according to Mattheus (2004) product innovations from mobile companies are making services increasingly affordable and accessible to the younger audience. The three mobile network operators have come up with innovative and youthful campaigns to attract the Generation Y market. Examples of these new targeted products are Vodacom's "4U", MTN's "Me2U" and Cell C's "CY".

Vodacom's advertising consistently achieves high scores, resulting from the humorous "Yebo Gogo" campaigns that have been highly successful in creating an affinity for this character amongst all South Africans (Vodacom Group Annual Results, 2005:41). Vodacom's on screen family has been entertaining South Africa television viewers for nearly ten years, from the early days when Yebo Gogo's bumbling friend locked himself out of his car to the most recent animated characters. The youngest member of the family has also made a mark, getting a 4U tattoo and getting launched into space as part of the campaign's slogan "Make every second count." The launch of the "4U" brand in 2001 is undoubtedly one of the most successful achievements by Vodacom because it was targeted at the youth market (16-24 year olds). The objectives behind the 4U brand was to "turn on South Africa's youngsters to 4Us attitudes and lifestyle vibe, bringing the benefits of per second billing to life in a meaningful way"(Dicey, 2004).

MTN has ran effective ad campaigns such as the Yellow Summer campaign and the "Chicken Messenger" television advert and has gained top-of-mind awareness as the "yuppie" cellular network- cool, trendy, self confident and aspirational.

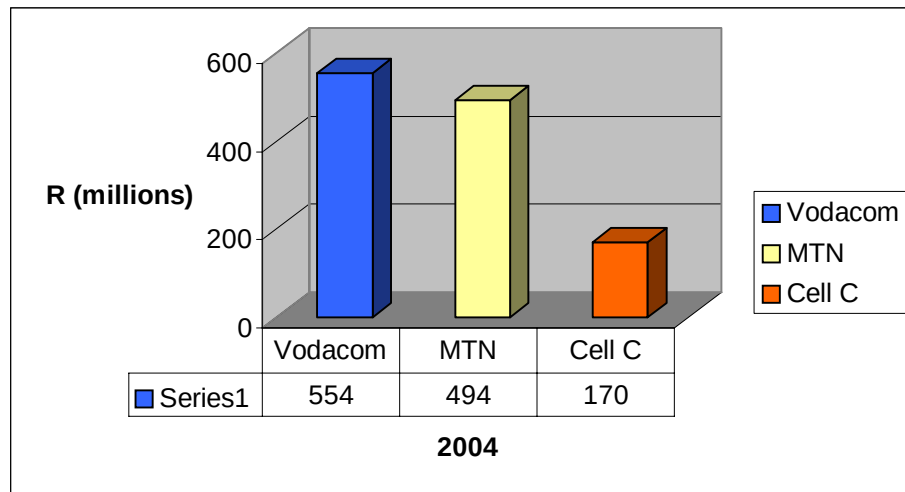
Cell C's ambitious plan for expansion are driven by a belief that it could capture the younger, less moneyed segment of the mobile market with an innovative pricing structure as well as an attractive branding campaign. An example would be the Cell C advertisements, particularly the one which showcases a range of Generation Y South Africans about their business in the city centre. The youngsters are different in terms of home language or family background, race, religious background, and possibly geographical origin and spending capacity. However the advertisement showcases that they share similarities in their style of music, dress, their attitude towards life, way of moving, and of course their use of mobile phones- the target of Cell C's campaign (Cant & Machado, 2004:51). This has also been expressed as "CY", a new product for young consumers. When a young consumer buys a R149 starter pack, they will get ten free SMS' s a month, five ringtones or logos, R20 increased airtime value and as part of a promotional offer, and two free movie tickets. This product reflects the core values of the innovative Cell C offering. As the company puts it "Choice is reflected in the flexibility of the contract options, while product offerings are refreshingly uncomplicated."

In terms of value, all Cell C products come standard with per second billing. Cell C has used a blend of above-the-line and below-the-line marketing in pursuit of simplicity and reassurance in attracting the Generation Y consumer (Williams, 2003).

Furthermore, studies reveal that sponsorship is a more effective communication tool than advertising and is more effective at driving brand affinity in the mobile phone market. Combining sports that consumers love and one's brands has been proved to enhance brand affinity. In ten years of business and sports sponsorships Vodacom has provided the biggest diversity of sponsorships- whether it be Vodacom Soccer Challenge, Super 12 Rugby, or golf, Vodacom has provided a host of sponsorships that have spectators talking. MTN has sponsored a smaller set of events such as cricket, soccerzone and their once famous event Gladiators. Cell C scores low on the sponsorship map compared to its competitors.

The estimated 2004 South African Mobile Marketing and Sponsorship spent by the three mobile network operators was around R22 billion (See Figure 3.6 below):

FIGURE 3.6: ESTIMATED 2004 SOUTH AFRICAN MOBILE MARKETING AND SPONSORSHIP SPEND IN R (MILLIONS)

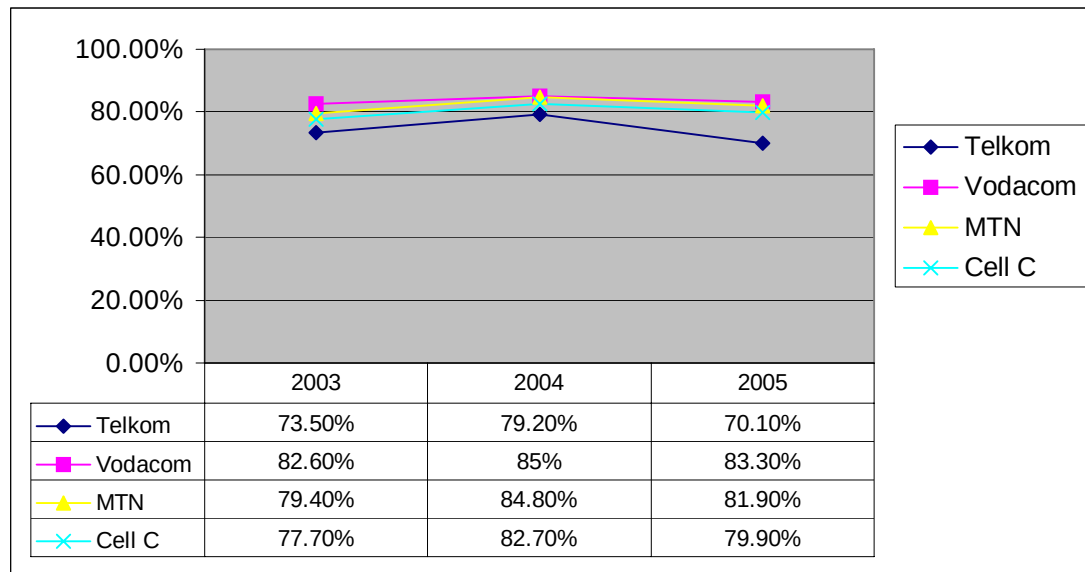


Source: Adapted from Laham (2005:25)

Furthermore, all four participants have dropped from the high satisfaction scores achieved last year. The most notable drop is Telkom as shown in Figure 3.7.

The South African Satisfaction Index telecommunications study was carried out by Synovate. The study measures customer satisfaction levels with MNO's, Vodacom, MTN and Cell C and a fixed-line operator Telkom. This study comprised of 1669 interviews, telephonically conducted nationally in July-August 2005. According to the findings Vodacom has been named number one in service excellence for customers in the telecommunications market. All four of the participants suffered a decrease in their ratings with Telkom's being the most market decline (Barnhoorn, 2005).

FIGURE 3.7: CUSTOMER SATISFACTION LEVELS WITH MNO'S VODACOM, MTN AND CELL C AND FIXED-LINE OPERATOR TELKOM



Source: Adapted from Barhoorn (2005)

Generation Y's perceptions of the three mobile network operators will be investigated in the research phase (See Section C of questionnaire in Appendix A).

3.4.2.4 Learning ability

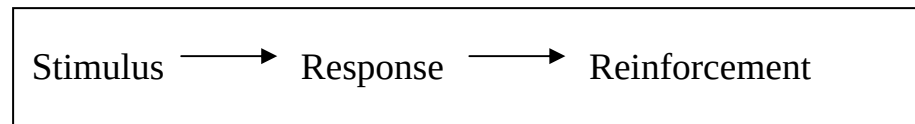
The buyer's ability to learn also influences behaviour. Learning is the term used to explain the procedure by which a consumer's memory changes behaviour are altered as a result of conscious and non-conscious information processing (Kotler, 2000:174). Learning ability in Figure 3.3 can, for example, determine whether consumers are able to understand the benefits provided by a certain product and that this product in turn is good value for money.

Learning according to Strydom, Jooste and Cant (2000:87) can be defined as a result of a "combination of motivation, attention, experience and repetition." Learning is the process by which individuals acquire the buying and consumption knowledge and experience they apply to future-related behaviour (Cant et al., 2006:122).

In order for the consumer to learn, he/she must be motivated, give full attention to the message and there must be some measure of repetition.

A successful learning situation is a product of the effective combination of the three elements given in Figure 3.8.

FIGURE 3.8: ELEMENTS OF LEARNING



Source: Adapted from Cant et al. (2006:123)

According to Cant, Brink and Brijball (2006:123), all individuals learn but not at the same rate or in the same way. The three elements of learning as illustrated in Figure are explained below (Cant et al., 2006:123):

- *Stimulus*: something that stimulates the learner's interest
- *Response*: any action, reaction or state of mind resulting from a particular stimulus
- *Reinforcement*: satisfaction resulting successful behaviour that triggers human memory of how the satisfaction was obtained

3.4.2.5 Personality traits

There are many definitions for personality in consumer studies. Engel, Blackwell and Miniard (1994:433) define personality as the “consistent responses to environmental stimuli and is the particular pattern of organisation that makes one individual unique and different from all others.” Strydom, Jooste and Cant (2000:88) define personality as “those psychological characteristics of people which both determine and reflect their reaction to environment influences.” Research suggests that individual personality traits are not good predictors of behaviour but marketers use personality traits to differentiate and describe individuals.

In consumer research, there are three major theories that study and describe personality so as to attempt to relate behaviour patterns to different personality type consumers: psychoanalytic, socio-psychological, and trait-factor (Engel et al., 1994:434).

3.4.2.5.1 Psychoanalytic theory

Psychoanalytic theory, developed by Sigmund Freud, posits that the structure of personality consists of id, ego, and superego. According to Engel, Miniard and Blackwell (1994:434) the id is the source of psychic energy and seeks immediate gratification for desires, biological and instinctual needs. Applying the id to a generation Y consumer, no matter what the consequences, young people would see a mobile phone and would absolutely have to have it in order to fulfil their wishes. The ego mediates the hedonistic demands of the id and the moralistic prohibitions of the superego. Logical and reasonable arguments would form part of the ego such as: is this particular phone worth the money.

The superego represents societal or personal norms and services as an ethical constraint on behaviour (Engel et al., 1994:434).

3.4.2.5.2 Socio-Psychological theory

Socio-psychological theory posits that the individual and society are mutually dependent where the individual tries to meet the needs of society and society in turn, helps the individual with his needs. One of the few socio-psychological personality theories is that of Horney where individuals are placed in three categories: compliant, aggressive and detached.

Compliant people want to receive love and guidance hence why they usually rely on other people. Aggressive people are motivated by achievement, status and power. Detached people are independent and usually prefer to separate themselves from others.

3.4.2.5.3 Trait-Factor theory

Unlike the other two personality theories discussed above, trait-factor theory is a quantitative approach to personality where each different trait can be considered as an individual difference variable.

There are three assumptions that need to be taken account: it is assumed that traits are common to many individuals and vary among individuals, it is assumed that these particular traits are relatively stable and it is assumed that traits can be inferred from the measurement of behavioural indicators (Engel et al., 1994:437).

3.4.2.6 Lifestyle

The central concept of consumer behaviour is lifestyle. Lifestyle is an expression of personality and has been defined in many ways, but put simply, it is how a person lives and interacts with their environment and is therefore a reflection of a person's way of being and living in the world (Cant et al., 2006:165). Lifestyle refers to the patterns of living of individuals or families as expressed in activities, interests and opinions (Strydom et al., 2000:89; Hawkins, Best & Coney, 2001:436). Personality, attitudes and motivation influence lifestyle which in turn influences behaviour and purchasing patterns.

Between the ages of 16 and 24, young people become more independent as they move from high school to tertiary education, from tertiary education to part-time and full-time work, from dependent living with families to more independent modes of living and for many, the transition to adult relationships. Most are expected to develop a degree of economic self-reliance and this is arguably the first generation of people for whom the mobile phone will be standard technology for their entire adult lives (MacNeill, 1999).

3.4.3.2.6.1 Impact of mobile phones on lifestyle

By using the lifestyle traits young people inhabit such as interests, behaviour, social maturity, location, wealth, ethnicity, upbringing, gender, Spero and Stone (2004:154) believe that marketers can paint individual and accurate pictures of who these young people are.

Young people are increasingly using and adapting mobile phones not only to interact with their own worlds, but to create and structure their worlds (Spero & Stone, 2004:154). The mobile phone has impacted Generation Y in many different ways.

Ling (2003) tries to find the impact the mobile phone has on four established institutions: democracy, bureaucracy, education system and adolescence. For the purpose of this paper, we will only look at the educational system and adolescence.

In the educational system, Ling (2003) argues that communication systems between students have always existed. “Students have always communicated to each other by passing notes, whispering, using hand signals, and the like” (Ling 2003:14).

Furthermore, the use of the mobile phone to send SMS eliminates the physical note, thus allowing for discretion-the message cannot be seen or read by others (Ling, 2003).

The mobile phone has further enabled young people to be connected to their family and to their peers and allows them even more freedom to connect and explore.

Cheskin (2001:9) notes that: “Technology has become a great facilitator of teen and young adults’ social needs, building on their peer fixation and enhancing their ability to communicate with one another.”

Ling (2003) further notices that the mobile phone changes some of the dynamics of adolescence, the emancipation process and can have an impact on the “shaping” of the adolescence. It thus opens a whole new set of possibilities when communicating.

3.4.3 Personal characteristics

Race, gender and age in Figure 3.3 are the three personal characteristics that customers have no control over (Cant et al., 2006:86). Each of these characteristics will be addressed in detail below.

3.4.3.1 Race

Race is a trait that marketers can use to establish sub-cultures and can be defined as “the genetic heritage group into which a person is born” (Cant et al., 2006:88).

Black, White, Indian, Coloured and Asian are some of the most common racial groups in South Africa. Different racial groups have different consumers needs and purchasing behaviours and it is up to the marketers to respond to these differences by targeting each group with unique marketing communications.

3.4.3.2 Gender

Gender, just like race discussed above, will also impact on consumers' values and preferences. Gender will thus most likely affect purchasing patterns. Studies compared loyalty patterns of men and women and found significant differences (Cant et al., 2006:94):

- Men were more loyal to domestic or local retailers than women
- Women were more responsive to international retailers and were a more attractive segment for the retailers entering a country

The South African population statistics by province, population group and gender was given in Chapter 2, Section 2.4.1.1.

There are bound to be differences between men and women with regard to mobile phone usage. These cross-gender comparisons will be investigated in the survey (See Chapter 5)

3.4.3.3 Age

Age is one, if not the most important factor that affects consumer behaviour. As discussed earlier in sub-cultures (Section 3.4.1.5 in Chapter 3), age groups can be divided into age cohorts that will allow a marketer to predict an age group's future attitudes, values and behaviours. Different generations are most likely to exhibit different consumer behaviours from the preceding one (Cant et al., 2006:100). Age was found to be a major differentiator in the way South Africans use their mobile phones, particularly in the choice of prepaid or contract (Mobility, 2005). In the 16-19 age group, it was found that 8% were on contract and 90% were on prepaid. This figure doubles to 17% on contract in the 20-24 age group, with 78% on prepaid. Contract users rise steadily through the age groups until it peaks in the 46-49 age group, at 40%, then declines again (Mobility, 2005). Life stages and life planes of South African consumers was discussed in detail in Chapter 2, Section 2.4.1.3.

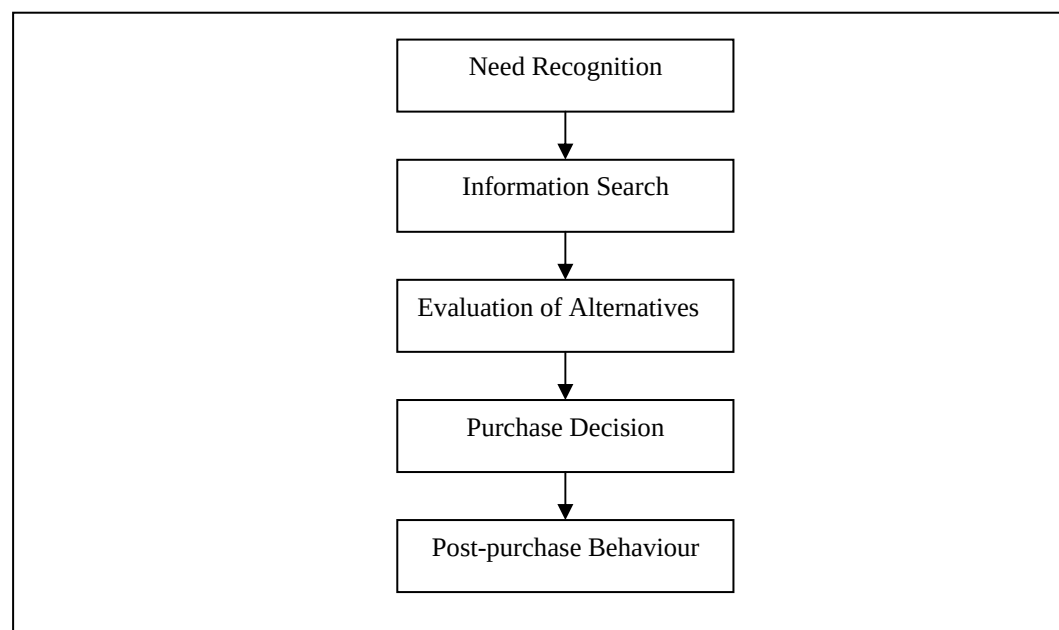
3.5 THE CONSUMER DECISION-MAKING PROCESS

After having taken the personal characteristics, internal and external influences into account, the Generation Y consumer undergoes the decision-making process. There are many factors incorporated in the consumer decision-making process that can be explained by the study of consumer behaviour as illustrated in Figure 3.8. The decision-making process involves a search by the consumer, the comprehension of information obtained, perceptions of product or brand and the implications of attitude. This research relating to Generation Y consumer decision-making will focus on analysing needs, product motives, perceptions and attitudes towards brands and family, peer and cultural influences.

The decision process is especially detailed in the case of a purchase of a mobile phone and thus mobile phone purchases require complex decision-making processes. There are numerous models trying to explain consumer behaviour.

Strydom, Jooste and Cant (2000:74), Kotler (2000:161) and Cant, Brink and Brijball (2006:195) present a simple model of the purchase decision-making that is comprised of the following stages (See Figure 3.9):

FIGURE 3.9: STAGES IN THE PURCHASE DECISION-MAKING PROCESS



Source Adapted from Strydom et al. (2000:74); Kotler (2000:161); Cant et al. (2006:195)

The decision making process consists of a sequence of five steps as illustrated in Figure 3.9 (Kotler, 2000:179). This model implies that consumers pass through all of these five stages in buying a product:

- *Need recognition*: Individuals recognise that a need has to be satisfied
- *Information search*: They look for information about possible solutions in the external environment, or use the information stored in memory
- *Evaluation of alternatives*: They evaluate or assess the various alternatives, using the information they have at hand to come to a decision
- *Purchase decision*: They buy the product they have chosen
- *Post-purchase behaviour*: They use the product and evaluate their satisfaction levels with it

Each stage in the decision-making process should be seen as a whole and not as separate (Kotler, 2000). Each step will be discussed in more detail below.

3.5.1 Step 1: Need recognition

The initial stage in any decision-making process is need recognition, also sometimes called the problem recognition or problem awareness stage (See Figure 3.9). This is where the Generation Y consumer becomes aware of a want that needs to be satisfied. Need recognition can thus be further defined as the perception of difference between the desired state of affairs and the actual situation sufficient to activate the decision process (Strydom et al., 2000:75). The recognition may come from an internal stimulus (such as hunger) or it may come from an external stimuli (such as an advertisement). Either way, marketers need to make consumers aware of unsatisfied or even dormant needs by using appropriate marketing messages (Strydom et al., 2000:75). Three factors that affect need recognition are information stored in memory, individual differences and environmental influences. Need recognition can take place at every stage of the decision-making process as seen in Table 3.7.

TABLE 3.7: STAGES IN THE DECISION-MAKING PROCESS WHEN BUYING A MOBILE PHONE

Need Recognition	Information Search and Evaluation of Alternatives		How should I pay?	Post-Purchase Evaluation
	Package	Brand of Mobile Phone		
Need a mobile phone	Contract or Prepaid	Nokia Samsung Motorola Siemens Sony Ericsson LG	Cash Cheque Book Credit Card	Satisfied or Not Satisfied

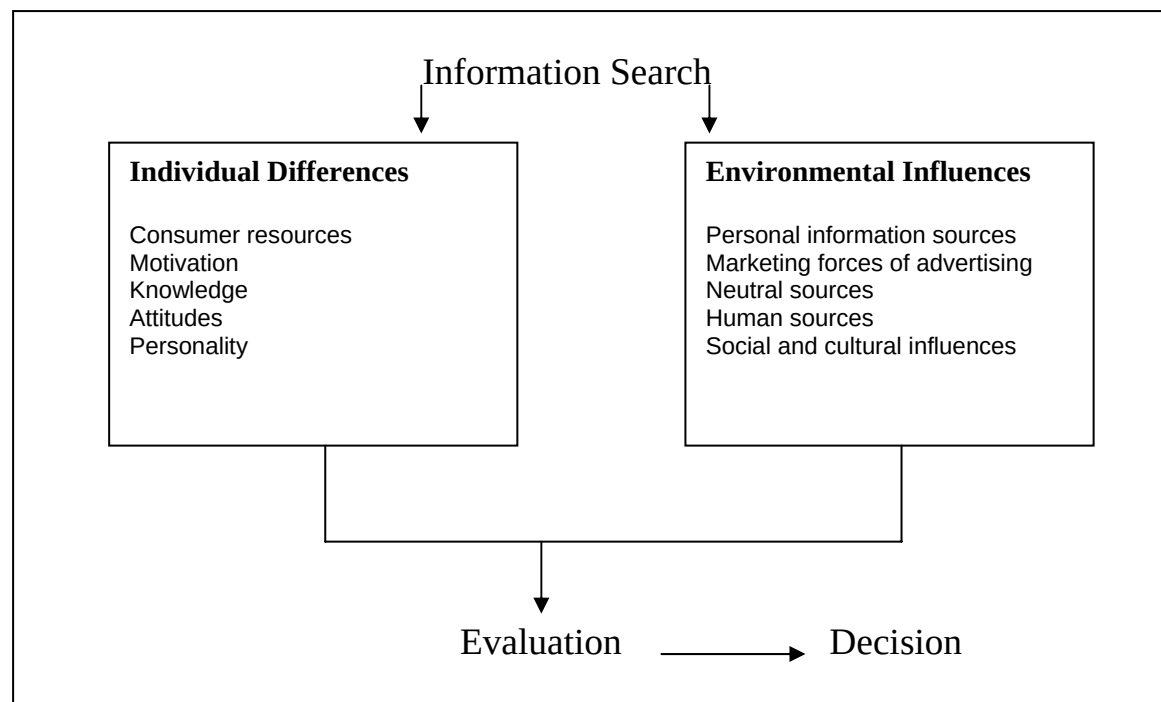
Source: Adapted from Cant et al. (2006:196)

Applying need recognition in this particular study as seen in Table 3.7 above, the potential Generation Y consumer might feel a mobile phone is needed to communicate with parents and friends or as a fashion accessory. As a result of an influx of mobile phone plans and handsets, brand is a major influence at this stage and can be the most important point of differentiation.

3.5.2 Step 2: Search for information

The second step following need recognition as illustrated in Figure 3.9, is the search for information about how best to satisfy that need. Once the consumer has recognised the need, he or she begins to look for information (Cant et al., 2006:197). The search consumers engage in may be internal or external. Information is either stored in memory (internal search) or is acquired through decision-relevant information from the environment (external search) through group sources (family and friends), marketing sources (advertisements), public sources (media reports), and experimental sources (trying out the product). External search is thus affected by individual differences and environmental influences as seen in Figure 3.10 below:

FIGURE 3.10: THE SEARCH FOR AND PROCESSING OF INFORMATION



Source: Adapted from Cant et al. (2006:198)

As seen in Figure 3.10, individual differences include consumer resources, motivation, knowledge, attitudes, and personality. Environmental influences include personal information sources, marketing forces of advertising (in-store promotions), neutral sources (booklets and pamphlets), human sources (financial consultants) and social and cultural influences (Cant et al., 2006:198).

Consumer decisions are generally based on a combination of past experience and relevant information at hand. From all the sources mentioned above, the Generation Y buyer would identify several alternatives to satisfy the need known as the consideration set or evoked set. Consumers can then further evaluate the products in their consideration set (Strydom et al., 2000:75). Detailed information (such as costs and fees involved in mobile phone purchase and use and reviews of alternate phones) is needed when purchasing a mobile phone. This search is affected by individual differences and environmental influences.

3.5.3 Step 3: Evaluation of alternatives

Evaluation entails the appraisal by the Generation Y buyer of options in terms of expected benefits and narrowing the choice down to the preferred alternative and is the third step in the decision-making process (See Figure 3.9). There is a host of criteria that may be used to evaluate products and these can be divided into two categories (Strydom et al., 2000:77):

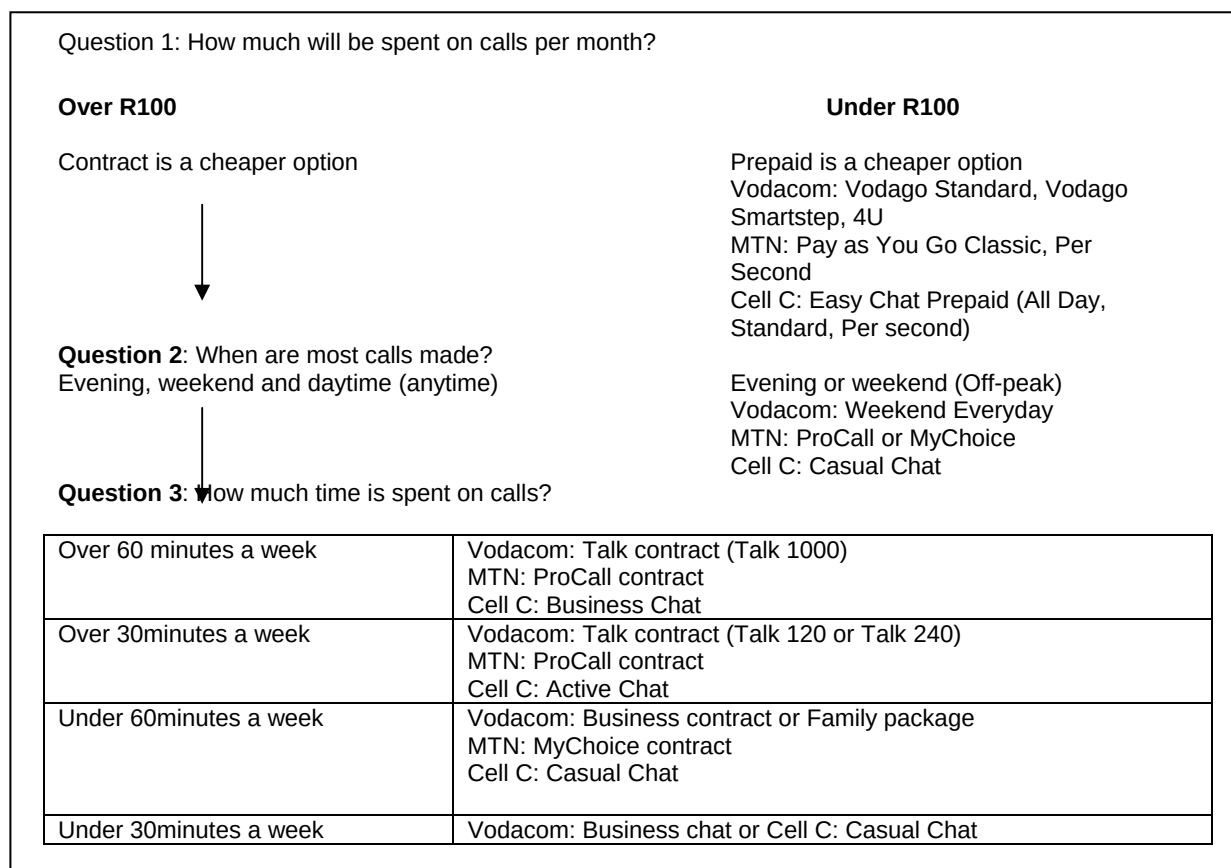
- *Product criteria*: price, quality, performance standards and aesthetic qualities;
- *Psychological criteria*: image of product and contribution of the product to need satisfaction and lifestyle.

Having decided that a mobile phone is what's needed, the second step is to look for the best deal by identifying the choice of operator (Vodacom, MTN or Cell C), phone and mobile plan (contract versus prepaid). In Chapter 2, it was found that Cell C was always priced below Vodacom and MTN whereas Vodacom and MTN's prices were very similar for contracts. Generation Y consumers should also look at which stores are offering the most suitable packages. Consumer purchasing motives (Pakola, Pietila, Svento & Karajaluoto, 2002) concerning the choice of a mobile phone as well as an operator are not well known in theory. There is no commonly accepted knowledge of the factors influencing consumers' decision processes. Studies conducted by Pakola, Pietila, Svento and Karajaluoto (2002) indicated that first, the factors underlying purchase of a mobile phone were found to be the manufacturer, market conditions and influential persons. For the choice of operator, the factors were found to be features and brands, components in pricing, quality and influential persons. Pricing is regarded as the most important motive affecting the decision to buy a mobile phone especially among younger people and there are different tariffs that suit different needs as illustrated in Figure 3.11.

Choosing the right tariff plan consists of three basic points:

- Predicting the average cost of the monthly mobile phone bill: if the mobile phone bill is predicted to amount to more than R100, the contract option should be chosen and if the mobile phone bill is predicted to amount to less than R100, the prepaid option is a cheaper alternative (See Figure 3.11)
- Time of call made: if most of the calls are made during off-peak times (i.e. during evening and on weekends) then Vodacom weekender packages, MTN ProCall or MyChoice and Cell C Casual Chat are viable options (See Figure 3.11).
- Time spent on calls per week: If the Generation Y consumer is a heavy spender of airtime, he will have several packages to choose from (See Figure 3.11)

FIGURE 3.11: HOW TO CHOOSE THE RIGHT TARIFF PLAN TO SUIT DIFFERENT NEEDS



Source: Adapted from Vodaworld (2003)

To sum up, evaluation brings a consumer to the point of making a decision.

3.5.4 Step 4: Purchase decision

After searching and evaluating, the fourth step in Figure 3.9 is the consumer's purchase decision. The acquisition of the preferred alternative at the desired outlet forms part of the purchase decision. Applied to this study, after having chosen a mobile phone, network and mobile plan, the purchase decision involves buying the mobile phone from store. The purchase act itself comprises of sub-decisions such as time and place of purchase, payment methods, and type of product purchased. A summary of the related decisions if the decision is to buy is given in Table 3.8.

TABLE 3.8: WHERE, HOW MUCH, WHEN AND HOW BUYERS PURCHASE

Where?	How much?	When?	How?
Supermarket	Purchases regularly	Time of day	Cash
Discount Store	Purchases now and then	Day of week	Credit
Department Store	Purchases never	Season	Internet
Shopping Centre			Hire purchase

Source: Adapted from Van der Walt et al. (1996)

3.4.5 Step 5: Post-purchase behaviour

Once the product is purchased, the final step of the purchase-decision making model is post-purchase behaviour-in other words, the buyer will experience some level of satisfaction or dissatisfaction once he has used or consumed the purchased alternative. Post-purchase alternative evaluation determines the evaluation of the degree to which the consumption experience produced satisfaction and whether it will lead to repeat buying or disposition of the product. A satisfied consumer will purchase the product again and recommend it to others. Dissatisfied consumers however may stop using the product, return it, or take public action by writing to the media to complain about the product (Strydom et al., 2000:79).

Applied to this study, post-purchase behaviour includes where the users learn how to operate their mobile phone to get the expected result, the mobile phone bill at the end of the month and whether the Generation Y buyer is happy with the mobile plan chosen.

Although post-purchase behaviour is the final stage in the decision-making process, it is not necessarily the end of the process. The post-purchase evaluation is stored in individuals' memories as part of their experience and will be used for future buying decisions (Cant et al., 2006:205).

3.6 ADOPTION OF MOBILE PHONES

After having discussed the youth's attitudes towards new technologies (mobile phones), it is important to see how they adopt such a device in their everyday lives. The speed of adaptation in the case of Generation Y consumers is often fast and leaves suppliers surprised; new technologies are picked up quickly provided that they observe the basic rules of (Spero & Stone, 2004:155):

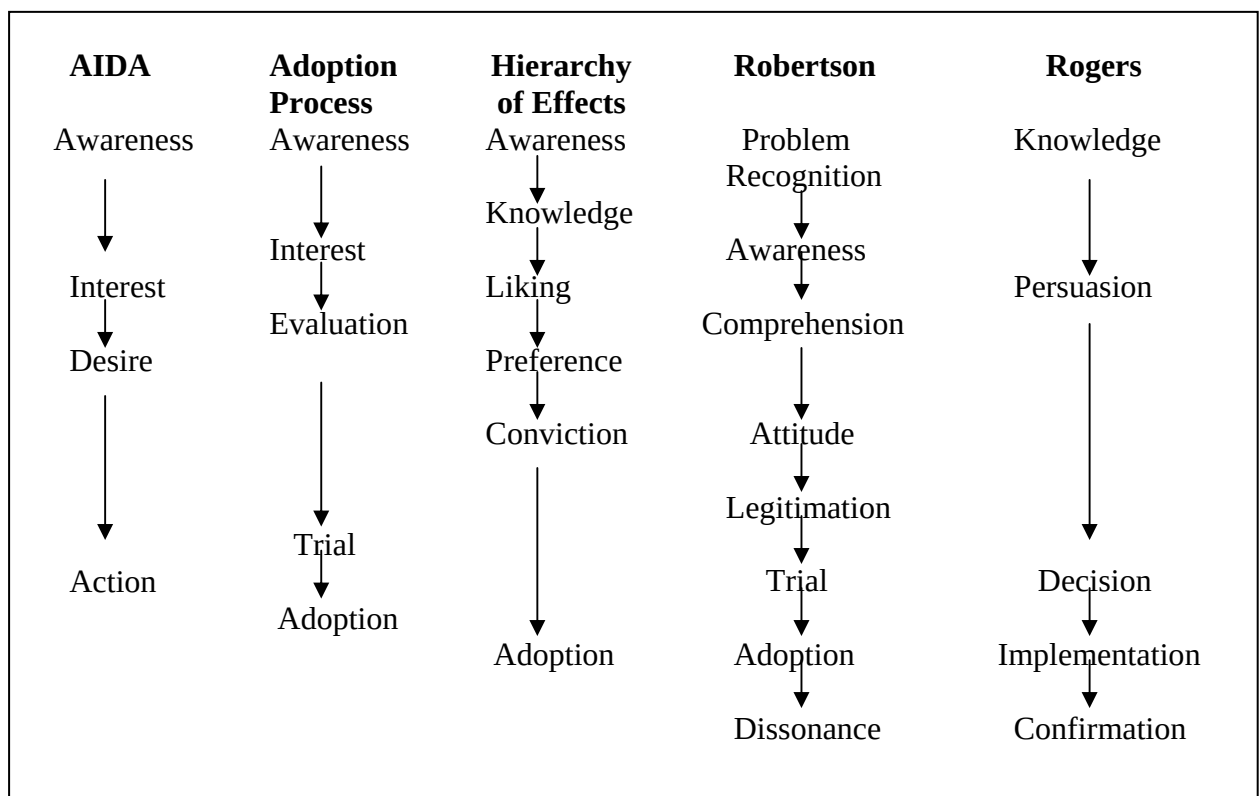
- Economy (not too expensive)
- Adaptability (quick, easy and cheap to adapt to user needs)
- Technical pervasiveness (you can use them anywhere)
- Market pervasiveness (lots of people using them hence it is easy to establish one's own network of connection)

According to Engel, Blackwell and Miniard (1994:891), "marketing analysts have examined the process of both adoption and diffusion of innovations for many years." Models that have been used to depict the process are shown in Figure 3.12:

- The *AIDA model* consisting of the stages awareness, interest, desire and action
- The *Adoption Process* model where awareness, interest, evaluation, trial and adoption are the different steps
- The *Hierarchy of Effects* model has the following stages: awareness, knowledge, liking, preference, conviction and adoption

- The *Robertson model* has the most stages: problem recognition, awareness, comprehension, attitude, legitimation, trial, adoption, dissonance
- The most widely adopted model is that of *Rogers* where knowledge, persuasion, decision, implementation and confirmation are all the different stages (See Figure 3.13).

FIGURE 3.12: MODELS OF ADOPTION/DIFFUSION PROCESS



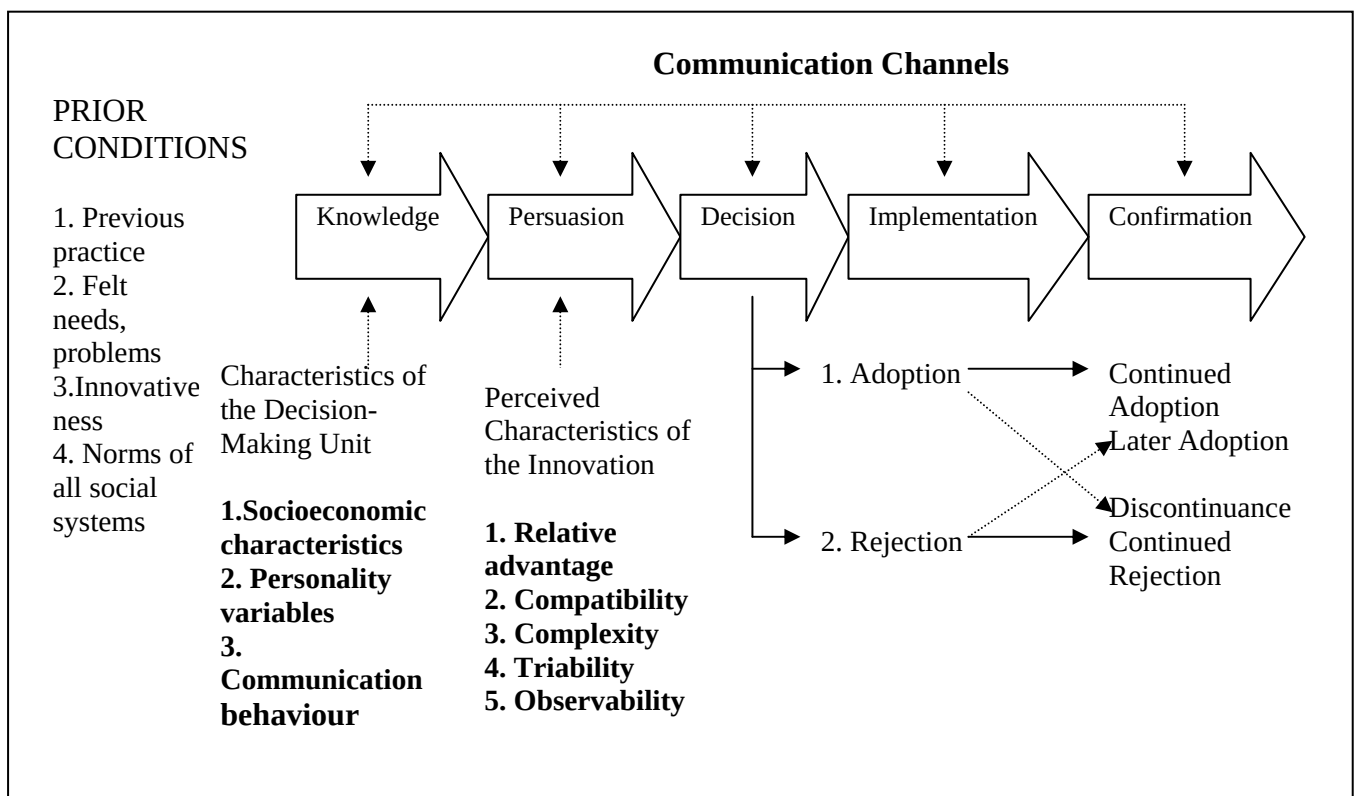
Source: Adapted from Engel et al. (1994:892)

In the marketing literature, young people tend to be early adopters of technological innovations such as adapting a mobile phone into their lifestyles and usually set the trends when it comes to using their mobile phones in innovative ways.

Rogers (1995)'s notion of the social element in adoptions is thus obvious in the diffusion of the mobile phone among the youth (See Figure 3.12).

The adoption of an innovation such as a mobile phone or a new mobile application is making the decision to either accept or reject the innovation depending on relative advantage, compatibility, complexity, trialability, and observability as illustrated in Figure 3.13. According to Andersson and Heinonen (2002:9) first the relative advantage is that the new adoption must lend itself superior than other alternatives.

FIGURE 3.13: ROGERS' MODEL OF THE INNOVATION DECISION PROCESS



Source: Adapted from Engel et al. (1994:893)

The mobile phone was seen according to Rogers' attributes of adoption that the device allowed the youth to coordinate their activities and also provided them with a physical symbol of status. Second the adoption relates to compatibility, where the mobile phone and application of new services must be consistent with the user's present needs, motives, values, beliefs, and behaviours.

Furthermore, complexity refers to the difficulty of understanding the relationship between the benefits of new innovation and the attributes; the mobile phone is not by any means complex. Third, the new adoption must be triable, i.e. the customer must be able to try out an innovation without incurring the risk to valued resources such as time and money. The mobile phone was easily tried especially since parents have been using this device for some time. The innovation needs to be observable in order to enable social visibility for the consumer; the results of the mobile phone are easily seen, both in terms of “one’s ability to coordinate activities and also in the enhancement of one’s status” (Ling, 2001:4).

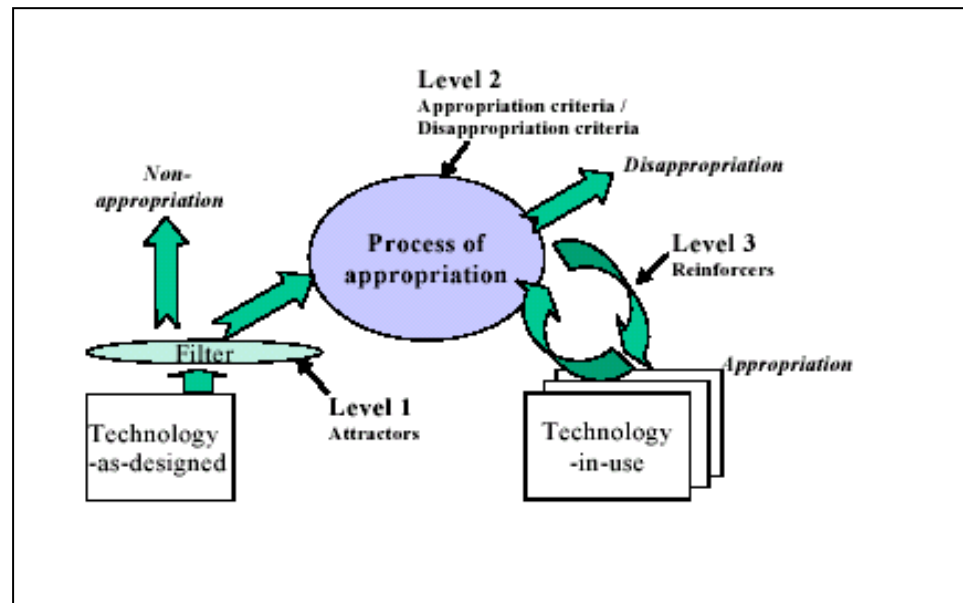
On the downside, Ling (2001) finds that there is no real idea in Rogers’ work that the life situation of the group is of relevance, and the issue that an innovation will be adopted by a group has no real follow up. “In the work of Rogers, there is a sense that if one has the right sales pitch that it is possible to sell ice cubes to Eskimos” (Ling, 2001:4).

It is therefore important to understand both the potential group of innovators and the type of innovation and to notice that the marketing followed the adoption of the mobile phone and not the other way around-something that is in contrast with Rogers’ work.

Other studies conducted by Carroll, Howard, Peck and Murphy (2002) have developed a rich view of young people’s adoption and use of mobile technologies by research methods and collecting data over time. The findings extend on the existing work of young people’s appropriation of mobile technologies and so contribute to Rogers’ work. The authors came up with a model of technology appropriation (Carroll et al., 2002), shown in Figure 3.13, that describes the transformation of a technology as it is envisaged by its designer (technology-as-designed) into technology as it is currently used by young people (technology-in-use). The nature of this transformation is called the process of appropriation, in other words, this is how technology is adopted, shaped and then used by young people.

Non-appropriation in Figure 3.14 is choosing not to discover the capabilities of the technology or failing to explore and evaluate the technology results. Deciding to experiment with the technology initiates the process of appropriation that may result either integration of the technology or disappropriation where the technology is rejected (Carroll et al., 2002).

FIGURE 3.14 THE MODEL OF TECHNOLOGY APPROPRIATION



Source: Carroll et al. (2002)

Users evaluate a technology at three levels, reflecting different degrees of familiarity with the technology at different times in the appropriation process (Carroll et al., 2002:2):

- Level 1 relates to users' first encounter with a new technology, such as in a shop or a training session. Initial judgements are made without any prolonged use of the technology at this level. The most powerful attractor for mobile technologies was found to be convenience and freedom from constraints of time and place.
- Level 2 reflects a deeper evaluation through use. Young people are attracted to a technology, experiment with it and evaluate whether it adds value to their lifestyle. There are two possible outcomes in this level: Appropriation occurs where the users take possession of its capabilities in order to satisfy their needs. Disappropriation occurs when, at some stage during the appropriation process, users choose not to persist with the technology.

- Level 3 captures the longer-term use of a technology. The technology is appropriated and integrated into users' everyday practices. This is not a one-off activity but rather is subject to ongoing reinforcement; changes in users' evaluation of the technology may lead to disappropriation. Disappropriation criteria are defined as a negative perception of mobile technologies. The most powerful negative aspect of mobile phones according to the respondents in the study is cost, poor reception and some features that were perceived as difficult to learn but did not seem to impede adoption (Carroll et al., 2002).

This suggests that technology appropriation involves evaluation by users as they encounter (Level 1), adopt and adapt (Level 2) then integrate (Level 3) a technology into their everyday practices. The concept of appropriation has not been studied in detail but the authors have argued that appropriation describes the way the users not only adopt technology but also shape it to their needs and situations of use. (Carroll *et al.*, 2002)

3.7 CONCLUSION

This chapter detailed the consumer behaviour of Generation Y consumers. The theory of consumer behaviour according to the Cronje, Du Toit, Marais and Motlatla (2004) and Cant, Brink and Brijball (2006) model formed the basis of this chapter. The theory was applied to Generation Y consumers and more importantly focusing on their consumer behaviour when buying a mobile phone. Determinants influencing consumer behaviour in the form of external and internal influences were discussed, followed by the consumer decision-making process. Chapter 4 will provide the research methodology needed to gain a thorough understanding of the consumer behaviour patterns of Generation Y consumers regarding mobile phone usage.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

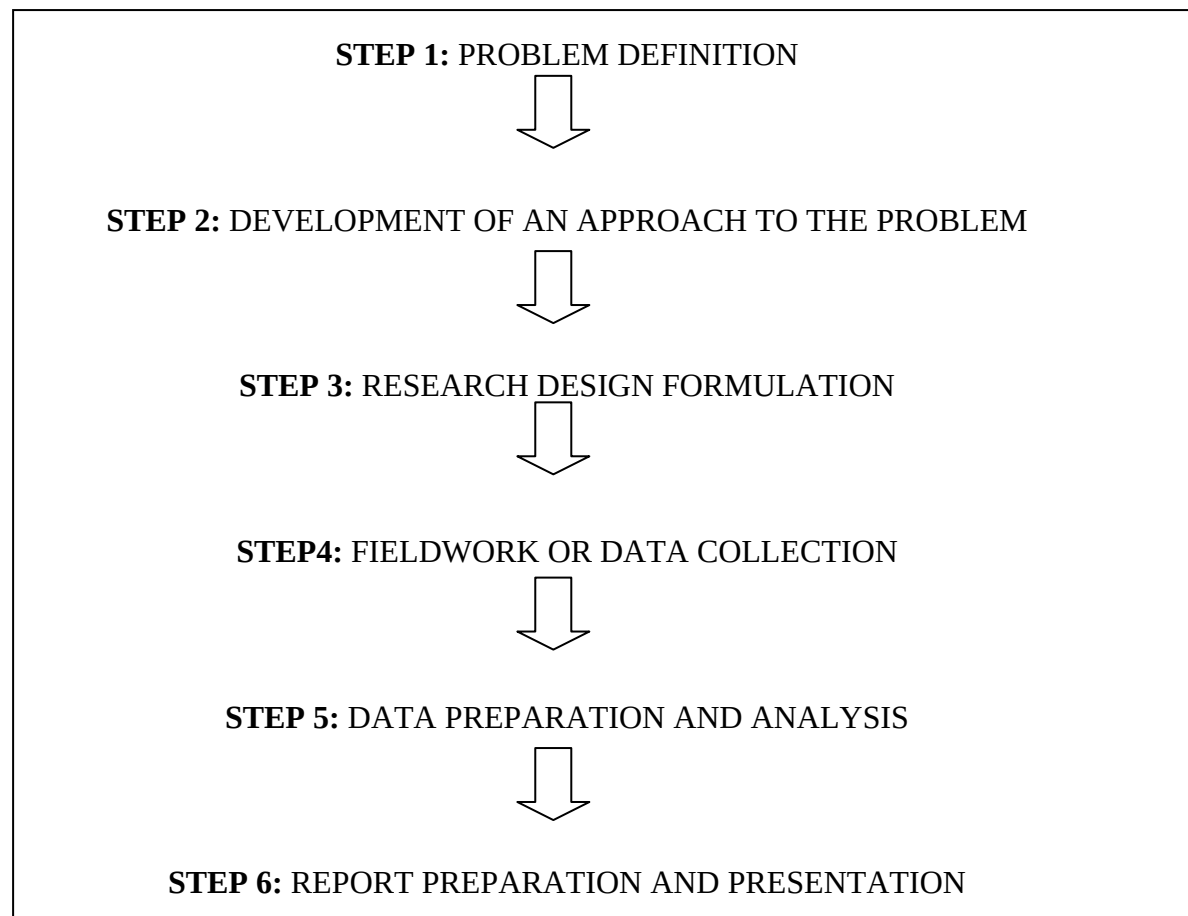
Market research comprises one of the most important facets of marketing. It plays a crucial role in assessing information needs, and designing and implementing successful marketing programmes in order to solve marketing problems (Malhotra, 1996:9). The American Marketing Association's formal definition of marketing research is "research that specifies the information required to address these issues; designs the method for collecting information; manages and implements the data collection process; analyses the results and communicates the findings and their implications". Chapter 4 describes the nature of the research methodology used in this study and describes the practical execution of the research conducted. The methodology and different methods of research are used to gain a thorough understanding of the consumer behaviour patterns regarding mobile phone usage of Generation Y students.

4.2 THE MARKETING RESEARCH PROCESS

The literature review on the marketing research process in this study includes a combination of the following authors: Malhotra (1996); Aaker, Kumar and Day (1998) and Strydom (2000). Malhotra (1996) was deemed to have defined the most suitable framework for the stages of the marketing research problem.

The six steps of the marketing research process, as depicted in Figure 4.1, will be discussed in greater detail in subsequent sections.

FIGURE 4.1: THE MARKETING RESEARCH PROCESS



Source: Adapted from Malhotra (1996:25); Aaker, Kumar & Day (1998)

4.2.1 STEP 1: Problem definition

As depicted in Figure 4.1 defining the problem is the first step in any marketing research project and is also the most important. Problem definition involves stating the research problem and identifying its specific components (Malhotra, 1996:35). The tasks involved in formulating the marketing research problem include discussions with management, including the key decision makers, interviews with industry experts and other knowledgeable individuals, analysis of secondary data, and qualitative research. These tasks help the researcher understand the background to the problem by analysing the environmental context of the problem.

Problem formulation should then result in a set of objectives and research questions. The research objectives consist of the research question, the hypotheses, and the scope of the research. Research questions are refined statements of the specific components of the problem and, essentially, include questions such as What? Why? When? Where? How? While hypotheses are possible answers to the research question, the scope of the research defines the boundaries (Ali, 2003:295). It is only when the marketing research problem or opportunity has been identified clearly that the research may be designed and conducted properly.

The problem definition for this study was formulated in Chapter 1 (section 1.3). This study attempts to explore the consumer behaviour in Gauteng regarding young people's mobile phone usage of the Generation Y consumer in the city of Johannesburg. Adequate research was carried out on Generation Y by gathering secondary information so as to increase the understanding the attitude and behaviour of the youth towards mobile phones. This is necessary in order to come up with an effective way to market to this group. It is important to investigate these issues because Generation Y may, as opposed to the population at large, exhibit different attitudes and behaviours towards, and an acceptance of a wireless device such as a mobile phone.

4.2.2 STEP 2: Development of an approach to the research problem

As depicted in Figure 4.1 the second step in the marketing research process involves developing an approach to the research problem. The components of such an approach consist of objectives/theoretical framework, analytical models, research questions, and characteristics influencing the research design. The main objective of this study was to gain primary information regarding the use of mobile phones by Generation Y students in the city of Johannesburg.

The research also wished to find out more information regarding, the secondary objectives:

- The demographics of Generation Y students in the city of Johannesburg
- The perceptions of Generation Y regarding the competitive situation in the mobile phone market
- The mobile phone brand awareness of Generation Y
- Further areas of study in this dynamic youth market

4.2.3 STEP 3: Research design formulation

Research design is an important step in the marketing research process and provides a framework for conducting the market research (See Figure 4.1). This step details the procedures which are necessary in order to obtain the required information. The purpose of this step is to design a study that will provide answers to the research questions and test the hypotheses. According to Malhotra (1996:25) formulating the research design involves the following steps which will be discussed in more detail throughout the chapter:

- 1) *Secondary data analysis*: Secondary data is data collected for purposes other than for the problem at hand, and may be obtained from marketing journals, magazines, industry reports, etc.
- 2) *Qualitative research*: Qualitative research is an unstructured, exploratory research methodology based on small samples that provide insights into and understanding of the problem setting (Malhotra, 1996:147)
- 3) *Methods of collecting quantitative data*: There are various methods for collecting quantitative data such as telephone interviewing, personal interviewing, and mail and electronic interviewing
- 4) *Measurement and scaling procedures*: There are four primary scales of measurement: nominal, ordinal, interval and ratio
- 5) *Questionnaire design*: This involves designing a questionnaire which consists of a series of questions answered by a respondent for the purpose of data collection

6) *Sampling process and sample size*: A sample is a subgroup of the elements of the population selected for participation in the study (Malhotra, 1996:328)

7) *Plan of the data analysis*: Data analysis involves converting the information collected by means of the questionnaire into relevant knowledge, and thereby giving meaning to the data collected.

4.2.3.1. Secondary data analysis

According to Malhotra the first step in the research design is secondary data analysis. In order to achieve the research objectives outlined in Step 1 of Figure 4.1 the researcher used two kinds of data, namely, primary data and secondary data. Malhotra (1996:112) defines primary data as “data originated by the researcher for the specific purpose of addressing the research problem.”

In order to answer the questions posed by the research problem the researcher made use of a focus group and a survey questionnaire as a primary data-gathering instrument. Obtaining primary data may be expensive and time consuming whereas secondary data may usually be located quickly and inexpensively. Secondary data, according to Malhotra (1996:112), is data that has already been collected for purposes other than for the problem at hand.

In this study sources of secondary data were international and local sources, marketing journals, industry reports, the Internet, magazines and recent publications (see also the bibliography in this regard), whilst primary information was gathered by means of focus groups and survey questionnaires.

4.2.3.2 Qualitative research

As in the case of secondary data analysis mentioned above qualitative research is also an important methodology used by researchers to define the problem and develop an approach to the problem at hand. According to Malhotra (1996:147) the difference between qualitative and quantitative research is that qualitative research provides insights into and an understanding of the problem setting, whereas quantitative

research seeks to quantify the data and almost always uses some form of statistical analysis. Whenever a marketing problem is being addressed qualitative research is undertaken before quantitative research and often makes use of a small sample.

The type of qualitative research procedure used in this study is in the form of focus groups. A focus group is defined as: “an interview conducted by a trained moderator in a non-structured and natural manner with a small group of respondents (Malhotra, 1996:149).” Morgan (1993) and Krueger (1994) both provide instructions on the use of focus groups.

The focus group method was used to obtain input in order to generate the survey questions. Each focus group interview started with a questionnaire containing general questions about age, gender, etc. A more in depth interview then addressed aspects of the usage of, and consumption patterns and behavioural attitudes in respect of mobile phones. Focus groups constitute the most important qualitative research procedure in developing an initial understanding of the prevailing, underlying reasons and motivations.

The main purpose of the focus group in this study was to gain a greater understanding by listening to a group of people from the appropriate target market talking about the marketing issue at hand. The major characteristics of a focus group are summarised in Table 4.1 below:

TABLE 4.1: CHARACTERISTICS OF FOCUS GROUPS

Group Size	8-12
Group Composition	Homogeneous; respondents pre-screened
Physical Setting	Relaxed, informal atmosphere
Time Duration	1-3 hours
Recording	Use of audiocassettes and videotapes
Moderator	Observational, interpersonal and communication skills of the moderator

Source: Adapted from Malhotra (1996:150)

According to Malhotra (1996:150) a focus group should consist of eight to twelve individuals. Groups of fewer or more than that number might not lead to a successful session. In this study ten individuals aged between 19 and 22 took part in the focus

group discussions on the 29 July 2005. Two important criteria regarding focus group interviewing were adhered to (Malhotra, 1996)- not only was the focus group homogeneous in terms of demographics and socio-economic characteristics, but the group also shared sufficient experience of the issue under discussion (all the focus group participants had had adequate exposure to mobile phones). The focus group interview was led by the researcher, and special attention was given to ensuring a relaxed and informal physical setting so as to encourage a free-flowing group discussion. The focus group interview was kept within two hours and was recorded so that it could be analysed.

The researcher had compiled a list of motives based on prior studies, but, as expected, new motives emerged as a result of the focus group research.

Focus groups may be used to address issues such as understanding the perceptions, preferences and behaviour of consumers. According to Aaker, Kumar and Day (1995), focus groups may be classified into three types. Exploratory focus groups as in this study are commonly used for the exploratory phase of the market research process in order to aid in formulating a precise definition of the research problem. They may also be viewed as a form of pilot testing.

The methodological applications of focus groups used in this particular study thus include obtaining information helpful in structuring the questionnaire and in defining the research problem more precisely.

4.2.3.3 Methods of collecting quantitative data

There are various methods for collecting quantitative data such as telephone interviewing, personal interviewing, mail interviewing and electronic interviewing (Malhotra, 1996:179). In this study information was obtained through the use of a survey; in other words, a structured questionnaire was given to a sample of Generation Y students to elicit specific information such as demographics, and perceptions, attitudes and behaviour regarding mobile phones.

There are several advantages to the survey method in that this method is easy to administer, code, analyse and interpret. The survey approach is by far the most common method of primary data collection used in marketing research (Malhotra, 1996:179). The survey is then given to a sample that has been drawn and is being used to represent the population that is of interest to the researcher. The sampling process and sample size chosen for this study will be discussed in more detail in Section 4.2.3.6.

4.2.3.4. Measurement and scaling procedures

Measurement is a process of assigning numbers to objects to represent quantities of attributes (Dillon et al., 1994:302). Measurement may be undertaken at different levels. Nominal measurement is a measurement whereby the numbers assigned allow the researcher to place an object in one and only one of a set of mutually exclusive and collectively exclusive classes with no implied ordering (Dillon et al., 1994:273).

Ordinal measurement is a measurement in which the response alternatively defines an ordered sequence so that the choice listed first, is less (or greater) than the second, the second less (or greater) than the first, and so forth (Dillon et al., 1994:274). Interval measurement allows the researcher to indicate how far apart two or more objects are with respect to the attribute being measured, and, consequently, to compare the differences between the numbers assigned (Dillon et al., 1994:275).

In this questionnaire a number of rating scales were used. The questions were simple category scales, multiple-choice single response, multiple-choice multiple response and, lastly, the Likert scale. The closed end questions were divided into the following categories (as mentioned above):

- *Nominal*- non-numerical scales such as Male and Female
- *Ordinal*- a ranking scale that ranks questions in order. Ordinal scales are usually used to measure relative attitudes.
- *Interval*- equal numerical intervals where differences between objects may be compared (for e.g. age categories may be grouped into categories of equal size)

A simple category scale has only two response choices such as yes or no, male or female. This type of scale is useful for demographic questions or where a dichotomous response is adequate in producing nominal data. The multiple-choice single response scale involves structuring the questions in such a way that the researcher provides several options and the respondents are responsible for selecting one of the alternatives, thus producing nominal data. The multiple-choice multiple response scale is exactly what its name implies- the respondent has the option to select more than one option from the list of choices.

The Likert scale is a summated scale that consists of statements that express either a favourable or unfavourable attitude towards the object of interest, thus producing interval data.

The following table indicates the different measurement levels and scale types used in the various sections of the questionnaire in Appendix A.

TABLE 4.2: MEASUREMENT LEVELS AND SCALE TYPES IN QUESTIONNAIRE

SECTION	QUESTION	MEASUREMENT	SCALE TYPE
A	1	Ordinal	Multiple-Choice, Single Response
	2	Nominal	Dichotomous
	3	Nominal	Multiple-Choice, Single Response
	4	Nominal	Multiple-Choice, Single Response
B	5	N/A	Open-ended question
	6	Nominal	Multiple-Choice, Single Response
	7	N/A	Open-ended question
	8	Nominal	Dichotomous
	9	Nominal	Multiple-Choice, Multiple Response
	10	N/A	Open-ended question
	11	N/A	Open-ended question
	12	Nominal	Dichotomous
	13	Nominal	Multiple-Choice, Single Response
	14	N/A	Open-ended question
	15	N/A	Open-ended question
C	16	Nominal	Multiple-Choice, Single Response
	17	N/A	Open-ended question
	18	N/A	Open-ended question
	19	Nominal	Multiple-Choice, Multiple Response
	20	Nominal	Multiple-Choice, Single Response
	21	Nominal	Multiple-Choice, Multiple Response
	22	Nominal	Multiple-Choice, Single Response
D	23 (1-11)	Ordinal	5-point Likert scale

4.2.3.5 Questionnaire design

It was a relatively easy task to identify the population and to decide to survey part of the population. The structured questionnaire itself was designed so as to make it easy to answer and to cover most of the common research questions. Furthermore, the questionnaire was designed so as to elicit information on both demographic and psychographic aspects of the respondents.

Demographics include age, gender, ethnic background and employment status, and psychographics include mobile phone usage patterns and attitudes towards mobile phones.

4.2.3.5.1 Questionnaire layout

The questionnaire was divided into four distinct sections as may be seen in the final questionnaire in Appendix A: Section A: Demographics; Section B: Mobile Phone Ownership; Section C: Mobile Phone Usage Patterns; Section D: Attitudes towards Mobile Phones. A summary of the questionnaire layout is given in Table 4.3.

Table 4.3: Summary of Questionnaire Layout

SECTION A. Questions in Section A involve establishing sample demographics of the respondents such as age, gender, ethnic background and employment status.

SECTION B. Questions in Section B determined the number of respondents who own mobile phones and will further elicit details about mobile phone ownership such as the time of acquisition of the mobile phone, the choice of operator and mobile calling plan, the brand and model of mobile phone owned, the amount of the mobile phone bill per month and the person responsible for paying the monthly mobile phone bill. Open-ended questions in this section helped generate insights and were also used for top of mind awareness regarding mobile phone brands.

SECTION C. Questions regarding mobile phone usage patterns formed part of Section C. Questions in this section determined the total number of minutes a month the respondents' calling plans allow, the number of mobile phone calls made and received per day, the average length of a mobile phone call, the average number of SMS' s sent per day, whom the respondents contact most regularly on their mobile phones, and how often/when they use their mobile phone the most frequently.

SECTION D. Questions regarding attitudes towards mobile phones were implemented by means of eleven statements which respondents had to rate on a five point Likert scale. A five-point Likert scale was used to capture the information, with 1 representing "Strongly Disagree" and 5 representing "Strongly Agree". A Likert scale was used because it is able to provide more subtle responses than "simply agree" and "simply disagree" answers.

4.2.3.5.2 Wording consistency and appropriate type of questions

The wording of the questions was kept simple and unambiguous in order to avoid non-response and response error on the part of the respondents. Words used in the questionnaire matched the vocabulary level of the respondents, and this in turn helped the researcher to fulfil the objectives of the study.

4.2.3.5.3 Pilot testing of questionnaire

Pre-testing is the final step in improving survey results and refers to the testing of the questionnaire on a small sample of respondents in order to identify and eliminate potential problems. Pre-testing is conducted during the initial phase of the survey in order to test the survey material. In this survey, the questionnaire was pre-tested on a number of respondents who were similar to those who were to be included in the

survey in terms of background characteristics, and attitudes and behaviours of interest, in order to ensure that the instructions and the meanings of the questions were simple, clear, unambiguous and beneficial to the subjects. A total of six students participated in the pilot study. Changes were made accordingly and the input of these students was taken into consideration.

Minor modifications were made as it was discovered that some of the questions were wordy and therefore had to be simplified, and also that the questionnaire was lengthy. Lastly certain questions had to be rearranged and those questions considered to be ambiguous were removed from the later versions of the questionnaire.

4.2.3.6 Sampling process and sample size

Sampling techniques may be broadly classified as probability sampling and non-probability sampling. In probability sampling sampling units are selected by chance. Every potential sample has an equal chance of being selected. Non-probability sampling relies on the personal judgement of the researcher, rather than on chance, to select sample elements. Non-probability samples may yield good estimates for the population characteristics, but are not statistically projectable onto the population. For the purpose of this study, a combination of both non-probability sampling and probability sampling was undertaken in the form of quota sampling and systematic sampling.

Quota sampling is a non-probability sampling technique and may be viewed as a “two-stage restricted judgmental sampling. The first stage consists of developing control categories, or quotas of population elements. In the second stage, sample elements are selected based on convenience or judgment” (Malhotra, 1996:336). In order to develop these quotas the research lists relevant control characteristics and determines the distribution of these characteristics in the target population. The relevant control characteristics in this study include gender and age.

According to Malhotra (1996:337) quota sampling is a less costly data capturing technique than other sampling techniques, and usually attempts to obtain representative samples.

The advantages of quota sampling are the lower costs and greater convenience to the interviewers in selecting elements for each quota. One of the disadvantages of quota sampling is that interviewers often have difficulty in making up their quota, and may ask relatives or friends to masquerade as the desired case- this in turn leads to there being more similar people in the sample than is the case in the general population (Galpin, 1996). Quota sampling can yield good results if carefully done but it's prone to more potential dangers than any other sampling method (Galpin, 1996).

Furthermore, it is tempting to select the friendliest, least threatening-looking person whilst interviewing on university property, and this in turn may lead to selection bias. This is the reason why systematic sampling was also used. In systematic sampling, a probability sampling technique, the sample is chosen by selecting a random starting point then picking every i th element in succession from the sampling frame (Malhotra, 1996:339). In this study, every 7th person leaving a lecture, library or cafeteria was intercepted and included in the study. Systematic sampling ensures that the population element has a known and equal probability of selection. One of the main advantages of this form of sampling is that systematic sampling may be used without the prior knowledge of the composition (elements) of the sampling frame (Malhotra, 1996:340).

Once a sampling technique has been chosen the next step is to calculate the appropriate size of the sample. Sample size refers to the number of elements to be included in the study (Malhotra, 1996:332). Researchers often pose the question: "How big must a sample be?"

Too large a sample creates work and each unit of information is obtained at greater cost. Too small a sample, on the other hand, may make it impossible to detect difference in the sample. The general formula for estimating the minimum sample size for any desired level of precision is (Chakrapani, 2000:159):

$$n = \frac{V}{\frac{A^2}{Z^2} + \frac{V}{N}}$$

Where n = minimum sample size
 N = population size
 V = variance of target variable in the population
 A = accuracy desired expressed in decimal
 Z = number of standard deviation units of the sampling distribution

For this study the significance level is 0.05 with a 95% confidence interval (also known as the level of uncertainty). The maximum variance is therefore 0.25 and the z value for 95% is 1.96. N= 200

A total of 200 young mobile phone users was included in the survey. The sample was chosen from the overall population of young people at universities in Johannesburg. The sample is not directly proportionate to the total youth population as it is a sample of the mobile phone owning youth sector, and therefore the population might manifest different characteristics.

4.2.4 STEP 4: Fieldwork/data collection

Marketing research data is collected either by the person designing the research or by field workers. According to Ali (2003:298) primary data collection may vary between simple observations within one specific area, such as a specific area in a business, to an observation over a large area, such as a corporate with many locations in different parts of the world. Questionnaires and observations are all methods of data collection.

A questionnaire was designed specifically for the unique needs and objectives of this study.

The data was collected by means of 200 closed-structured questionnaires in selected educational institutions in the city of Johannesburg in the week of 16 to 23 August 2005. There were two target groups- the survey respondents were selected from two universities in the city of Johannesburg. The first group comprised first year students in the faculty of Business Sciences and Commerce at the University of Witwatersrand and first year students in the faculty of Commerce at the University of Johannesburg (age span 18-19). The second group included older students labelled as young adults (age span 20-23). The age thus varied from 18 to 23. The respondents were in the same age category as that described for Generation Y (see Chapter 3).

Students at the target universities were approached in person by the researcher of the dissertation in locations on campus such as lecture rooms, libraries and cafeterias.

This in-person delivery technique for the survey may be summarised as follows:

1) Approach a person at the target university and ask whether he/she is a student at the university and whether he/she owns a mobile phone (screening question).

2) If the answer is yes then the person is asked whether he/she would be willing to participate in the survey. The person is also informed that he/she may ask any questions at any time. This ensures that the respondents understand the questions and answer them correctly.

3) If the answer to the question is yes, then a questionnaire is given to the respondent and the author of the dissertation waits for the respondent to complete the questionnaire.

4) The process is completed after the respondent has filled the questionnaire.

The results yielded the following:

- 105 of Generation Y students were in the 18 to 19 age group (52%) and the other 95 (48%) were in the 20-23 age group.
- There were 112 female students (56%) and 88 male students (44%) in the sample.

4.2.5 STEP 5: Data preparation and analysis

Data preparation includes the editing, coding, transcription and verification of data in order to remove errors that may have occurred during the data collection process (Malhotra, 1996:25). The next step is data analysis in terms of which the information contained in the questionnaires has to be converted into relevant knowledge, thereby giving meaning to the data collected. The data from the questionnaire was collated for examination using two computer programs, viz. Microsoft Excel and SPSS.

4.2.5.1 Microsoft Excel

Microsoft Excel is a spreadsheet program with data analysis and descriptive capabilities.

Excel was used to obtain a clear and visually descriptive picture of the demographics of the Generation Y consumers-demographics- such as age, gender, ethnic background and employment status by way of histogram distributions and pie charts.

4.2.5.2 SPSS

SPSS is a statistical program created for data encoding and design. The data from the questionnaires was entered directly into SPSS after each questionnaire had been validated. The program was used for bivariate statistical analysis which was achieved through cross-tabulation programs that were run on a number of associations.

The second quantitative statistical test was the use of factor analysis. Factor analysis is able to identify the structure of a set of variables as well as provide a process for data reduction. This pertained to the testing of the attitudes and perceptions towards mobile phones on the part of Generation Y consumers.

4.2.6 STEP 6: Report preparation and presentation

The entire project must then be documented in a written report which addresses the specific research questions identified, describes the approach, the research design, data collection, data analysis procedures adopted and presents the results and the major findings. The research process closes with recommendations. Step 6 will be discussed in Chapter 5.

4.3 CONCLUSION

In this chapter, the six steps of the marketing research process were discussed in order to outline the methodology used to test the research questions and objectives.

Problem definition, development of an approach to the problem, research design formulation, fieldwork/data collection, data preparation and analysis, report preparation and presentation were all discussed. Chapter 5 will contain a discussion on the results and findings of the research objectives as formulated in Chapter 1.

CHAPTER 5

RESEARCH RESULTS

5.1 INTRODUCTION

In this chapter, the results of the empirical survey are discussed. The main research objective was to gain primary information regarding the use of mobile phones by Generation Y students in the city of Johannesburg. The following secondary objectives were identified, namely to determine:

- The demographics of Generation Y students in the city of Johannesburg
- The perceptions of Generation Y regarding the competitive situation in the mobile phone market
- The mobile phone brand awareness of Generation Y
- Further areas of study in this dynamic youth market

The results were discussed in the sequence as followed in the questionnaire where the data relating to demographics, mobile phone ownership, usage patterns, and attitudes towards mobile phones was statistically analysed. The results are based on a question-by-question basis and are represented graphically in tables and figures such as pie charts, histograms, graphs, and various other charts in order to answer the primary and secondary objectives. Microsoft Excel and SPSS Windows 12.0 were used to do the statistical calculations. An analysis of the demographics of the Generation Y respondents is provided (see Section 5.2.2). The mobile phone ownership was presented in Section 5.2.3. This section also identified the respondent's perceptions regarding the mobile operators. Mobile phone usage patterns are discussed in Section 5.2.4. Finally Section 5.2.5 describes the respondents' attitudes towards mobile phones. A total of 200 respondents completed the questionnaire. A summary of the research findings and testing of the objectives concludes the chapter.

5.2 DESCRIPTIVE STATISTICS AND RESULTS ON A QUESTION-BY-QUESTION BASIS

Descriptive statistics summarise the variables in a dataset. In order to provide the sample demographics of the Generation Y students in Gauteng (Section A of the questionnaire), respondents were asked their age, gender, ethnic background, and employment status. Each individual question of each section will be given with results described by statistical analysis:

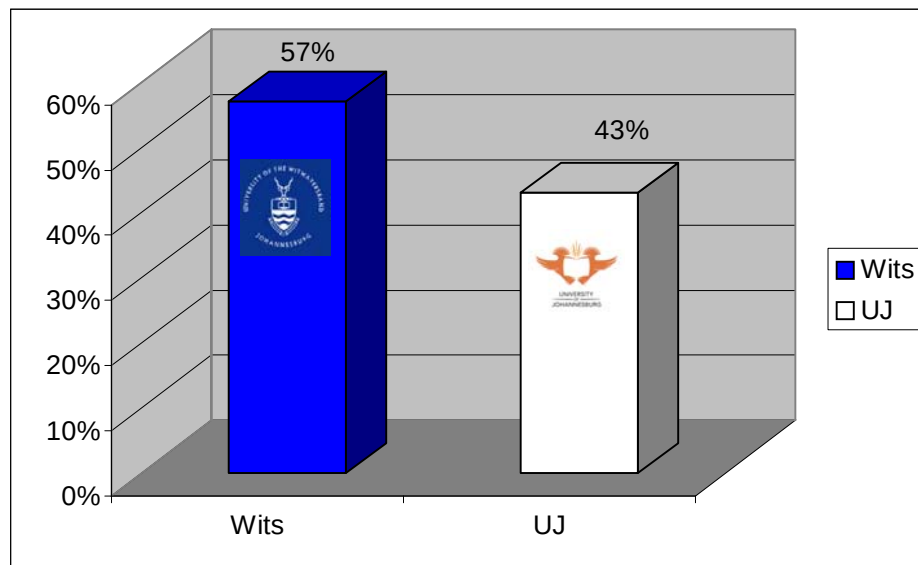
5.2.1 Screening questions

The screening questions, also known as filter questions, feature at the beginning of a questionnaire and screen potential respondents to ensure that they meet the requirements of the sample (Malhotra, 1996: 299). The screening questions in this study were aimed at narrowing down the number of respondents to Generation Y respondents who study at the particular university (University of the Witwatersrand or University of Johannesburg) and who own a mobile phone. Respondents who did not answer yes to both screening questions were omitted from this particular study.

QUESTION 1: *Are you a student on campus?*

Only students studying in the particular campuses completed the questionnaire and therefore all 200 of the respondents were qualified as students and formed part of the population for this study. There were 114 respondents (57%) from the University of the Witwatersrand (Wits) and 86 respondents (43%) from the University of Johannesburg (UJ) as illustrated in Figure 5.1.

**FIGURE 5.1: UNIVERSITY ATTENDED BY GENERATION Y RESPONDENTS:
WITS VS UJ**



From the table below we can see a total of 55 teenagers (17-19 year olds) and 59 young adults (20-23 year olds) studying at the University of the Witwatersrand (Wits). Similarly there were 50 teenagers and 36 young adults surveyed at the University of Johannesburg (UJ). Gender-split at both universities was 45% male and 55% female respondents at the University of the Witwatersrand and 43% male and 57% female respondents at the University of Johannesburg as illustrated in Table 5.1. A majority of white respondents were surveyed on both campuses; 63% were White, 6% were Black, 1% was Coloured, 29% were Indian at the University of the Witwatersrand whereas 55% were White, 16% were Black, 1% was Coloured and 26% were Indian at the University of Johannesburg (See Table 5.1). A total of 171 (86%) of the respondents were full-time students on both campuses as shown in Table 5.1.

TABLE 5.1: AGE, GENDER, ETHNIC BACKGROUND AND EMPLOYMENT STATUS BREAKS VERSUS UNIVERSITY

		Wits		UJ		Total	
Age	17	2	1.75%	0	0.00%	2	1.00%
	18	28	24.56%	21	24.42%	49	24.50%
	19	25	21.93%	29	33.72%	54	27.00%
	20	15	13.16%	22	25.58%	37	18.50%
	21	9	7.89%	8	9.30%	17	8.50%
	22	16	14.04%	4	4.65%	20	10.00%
Gender	23	19	16.67%	2	2.32%	21	10.50%
	Male	51	44.74%	37	43.02%	88	44.00%
	Female	63	55.26%	49	56.98%	112	56.00%
Ethnic	White	72	63.16%	48	55.18%	120	60.00%
Background	Black	7	6.14%	14	16.28%	21	10.50%
	Coloured	1	0.88%	1	1.16%	2	1.00%
	Indian	33	28.95%	22	25.58%	55	27.50%
	Other	1	0.88%	1	1.16%	2	1.00%
Employment	Student (full-time)	91	79.82%	80	93.02%	171	85.50%
Status	Employed (full-time)	4	3.51%	0	0.00%	4	2.00%
	Employed(part-time)	18	15.79%	5	5.81%	23	11.50%
	Confidential	1	0.88%	1	1.16%	2	1.00%
Total		114	100%	86	100%	200	100%

QUESTION 2: *Do you own a mobile phone?*

Furthermore only respondents who owned a mobile phone were allowed to complete the questionnaire. Out of the 200 respondents interviewed, all 200 of them owned a mobile phone. None of the respondents were thus omitted. This means that the students were qualified.

5.2.2 SECTION A: Demographic information

The questions in Section A were aimed at the respondents' demographic details and are summarised in Table 5.2. As indicated in Table 5.2, the total sample consisted of 200 respondents. Of those respondents 105 were labelled as teenagers (17-19 years old) and 95 as young adults (20-23 years old); 114 of the respondents attended the University of the Witwatersrand (Wits) and 86 attended the University of Johannesburg (UJ); 88 (44%) of the respondents were males and 112 (56%) were females; 120 (60%) were White, 21 (11%) were Black, 2 (1%) were Coloured, 55 (28%) were Indian and 2 (1%) were other. Out of the 200 respondents 171 (86%) of them were full-time students, 4 (2%) were employed full-time, 23 (12%) employed part-time and 2 (1%) chose confidential as their answers. Each demographic detail will be discussed below thus yielding the profile of Generation Y consumers.

TABLE 5.2: SAMPLE DEMOGRAPHICS

	Total Sample (N = 200)	17-19 n =105	20-23 n = 95
University:			
University of the Witwatersrand (Wits)	114	55	59
University of Johannesburg (UJ)	86	50	36
Age Breaks	200	105	95
Gender:			
Male	88	38	50
Female	112	67	45
Ethnic Background:			
White	120	44	76
Black	21	9	12
Coloured	2	1	1
Indian	55	49	6
Other	2	2	0
Employment Status:			
Student (full-time)	171	100	70
Employed (full-time)	4	0	4
Employed (part-time)	23	3	21
Unemployed	0	0	0
Confidential	2	2	0

SECTION A

QUESTION 1: *What is your age?*

Figure 5.2a and Figure 5.2b indicate the percentage of respondents according to their age. From Figure 5.2a, it is clear to see that 26% of the respondents were aged 19. The second largest age group (24%) were aged 18 followed by 19% aged 20, 11% aged 23, 10% aged 22, and 9% aged 21. Only two respondents indicated at the time of the handing out of the questionnaire that they were 17 years old. This indicated that the majority of the respondents (as would be expected of university students) were classified as Generation Y'ers.

FIGURE 5.2a: AGE COMPOSITION OF RESPONDENTS (IN YEARS)

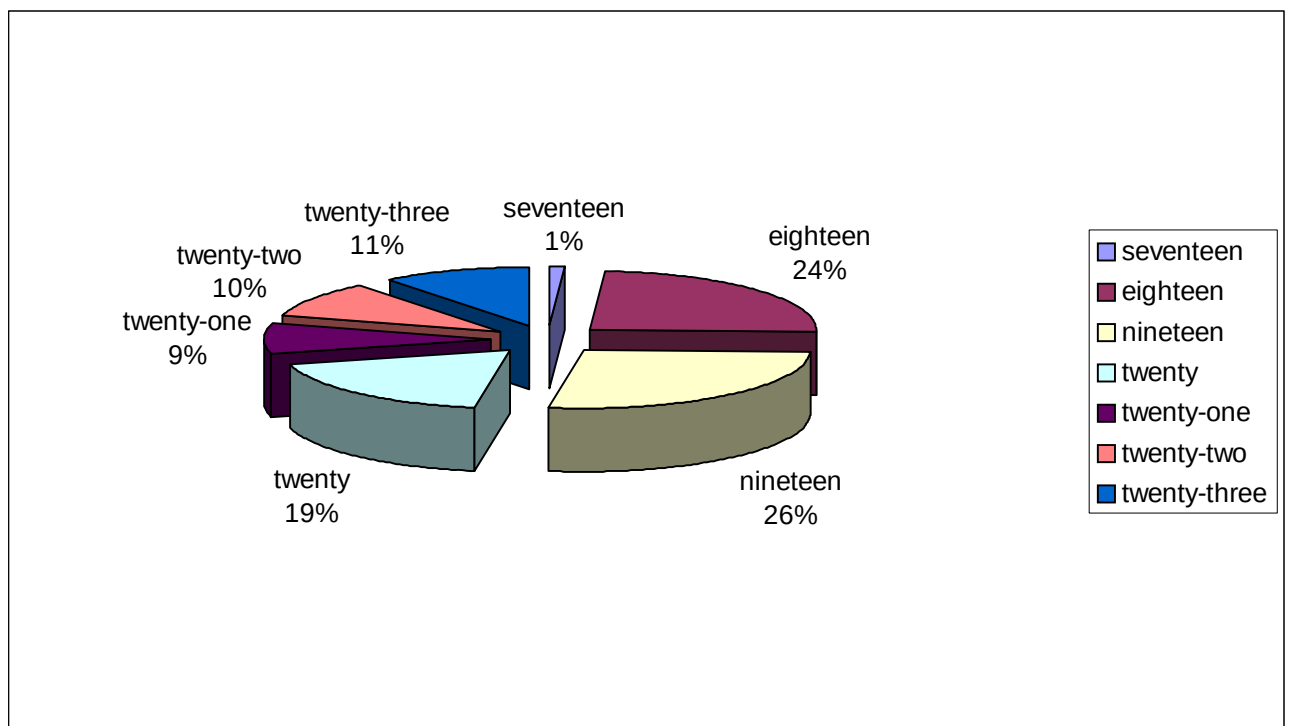
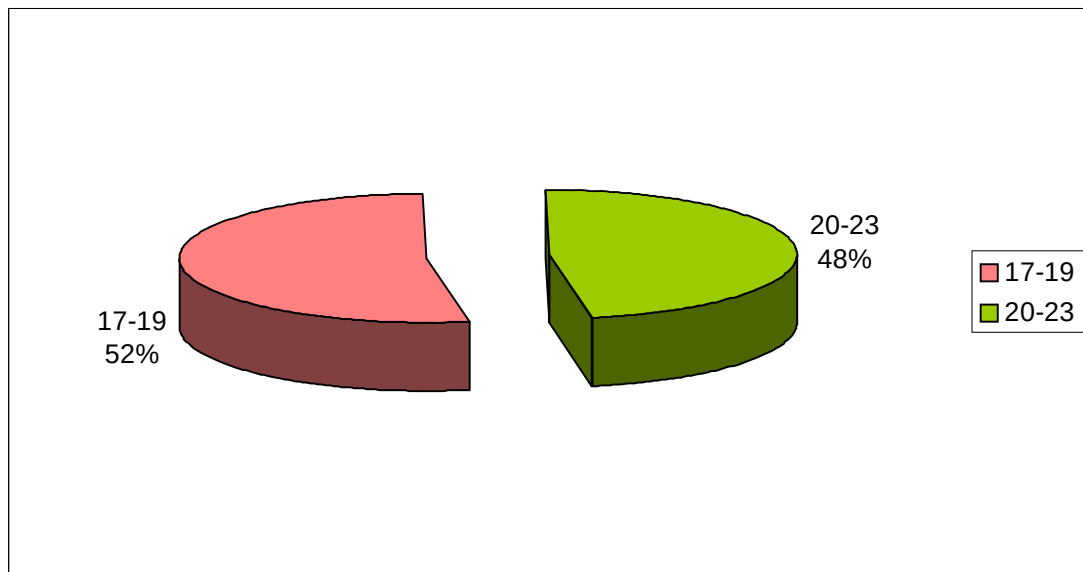


Figure 5.2b illustrates that the age groups are almost split equally with 52% of respondents in the 17-19 age group (labelled as teenagers) and 48% of the respondents in the 20-23 age group (labelled as young adults). The importance of this age group composition is that 17-19 year olds are first and second years at the university and the 20-23 year olds are senior students studying at the university.

FIGURE 5.2b: AGE GROUP COMPOSITION OF RESPONDENTS (IN YEARS)

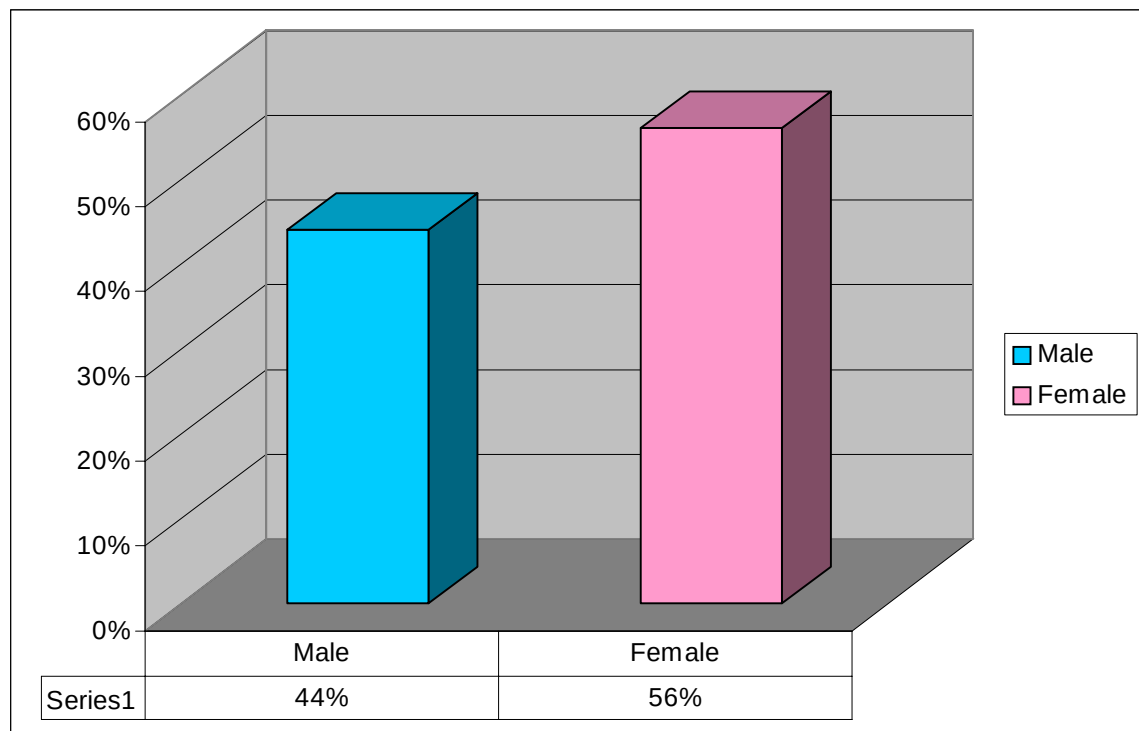


QUESTION 2: Gender

The division of gender of the respondents is shown in Figure 5.3 below.

Of the 200 respondents, 44 % were male and 56% were female. It is interesting to note that national statistics according to Statistics South Africa were not in line with the findings where 51% of the population are females and 49% are males. Therefore the genders of the respondents were not proportionally distributed. Moreover, it is also interesting to note that gender equity improved in higher education between 1993 and 2000. Whereas in 1993, 43% of students were female, this proportion increased to 54% in 2000 and this figure has increased ever since (Floyd, 2005), reflective of the demographics of the sample chosen. Gender cross-comparisons were further made to evaluate whether there were any differences in the mobile phone usage patterns and attitudes of female and male Generation Y respondents (See cross-tabulations in Section 5.3).

FIGURE 5.3: GENDER COMPOSITION OF THE RESPONDENTS



QUESTION 3: *Ethnic Background*

The division of ethnic background of the respondents is shown in Figure 5.4 below. As can be seen, respondents surveyed were predominantly White in ethnicity: 60% of them were White, 28% Indian, 11% Black, 1% Coloured and 1% other. ‘Other’ was given as a choice for ethnic background and was chosen by two respondents that felt they didn’t fall into either the White, Indian, Black or Coloured groups. The statistics above are once again in contrast to the national statistics where Africans are in the majority and constitute 79% of the total South African population. The White population is estimated to be 9.6%, the Coloured population 8.9% and the Indian population 2.5% (See Chapter 2, Section 2.4.3). The implication is that the White student population is skewed thus making it not representative of the South African population nor representative of the tertiary education population. Under apartheid, higher education participation rates of young people were initially sharply skewed by race- 9% for Blacks, 13% for Coloureds, 40% for Indians and 70% of Whites which in no way reflected society’s demographics. In 1993, 40% of students were Black, 6% Coloured, 7% Indian and 47% White. By 2002, the proportion of Black students in total universities had grown from 40% to 60% while in Technikons (presently known

as Universities of Technology) this figure increased from 32% to 72% over the same period (Study SA, 2005). The White student population decreased from 47% (223.000) in 1993 to 27% (182.000) in 2002. The proportion of Coloured and Indian students has been static (Study SA, 2005).

FIGURE 5.4: ETHNIC BACKGROUND COMPOSITION OF RESPONDENTS

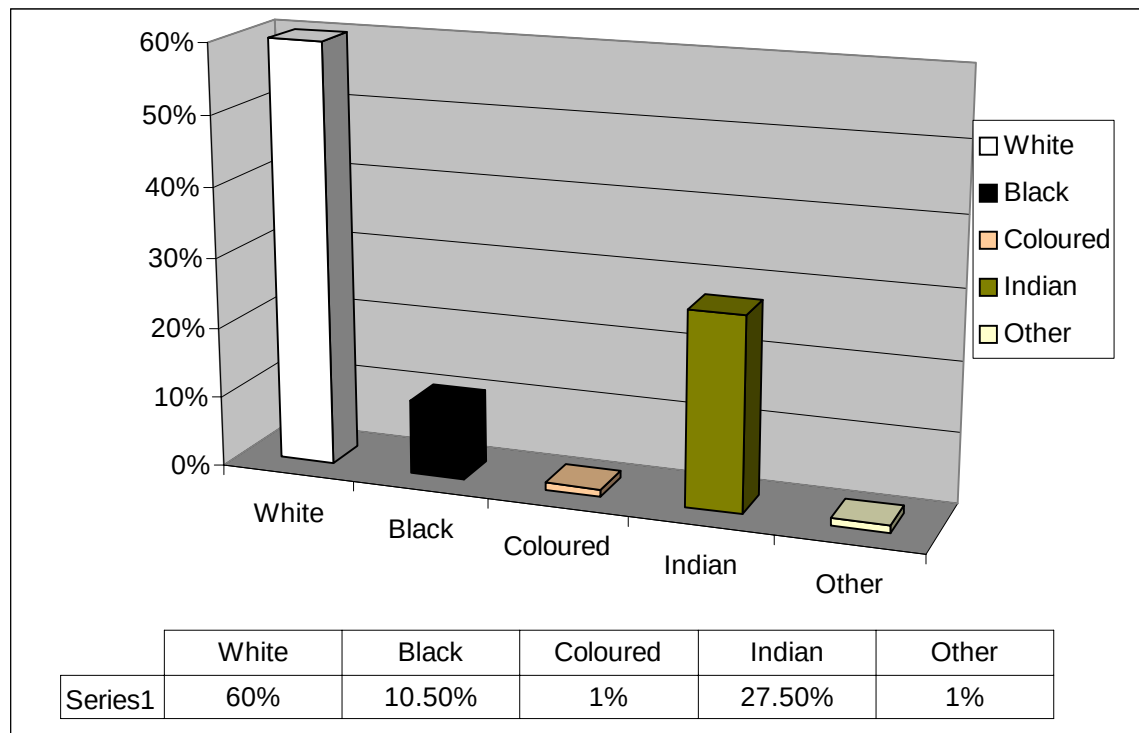


Table 5.3 further lists the values and the frequencies with which they occur for ethnic background. The “Value” column lists the values and the “N” column lists the number of cases obtaining each value. The number of cases as a percentage is shown in the “%” column whilst the “Cum %” (Cumulative Percentage) column lists what percentage of cases obtained a value equal or less than the value.

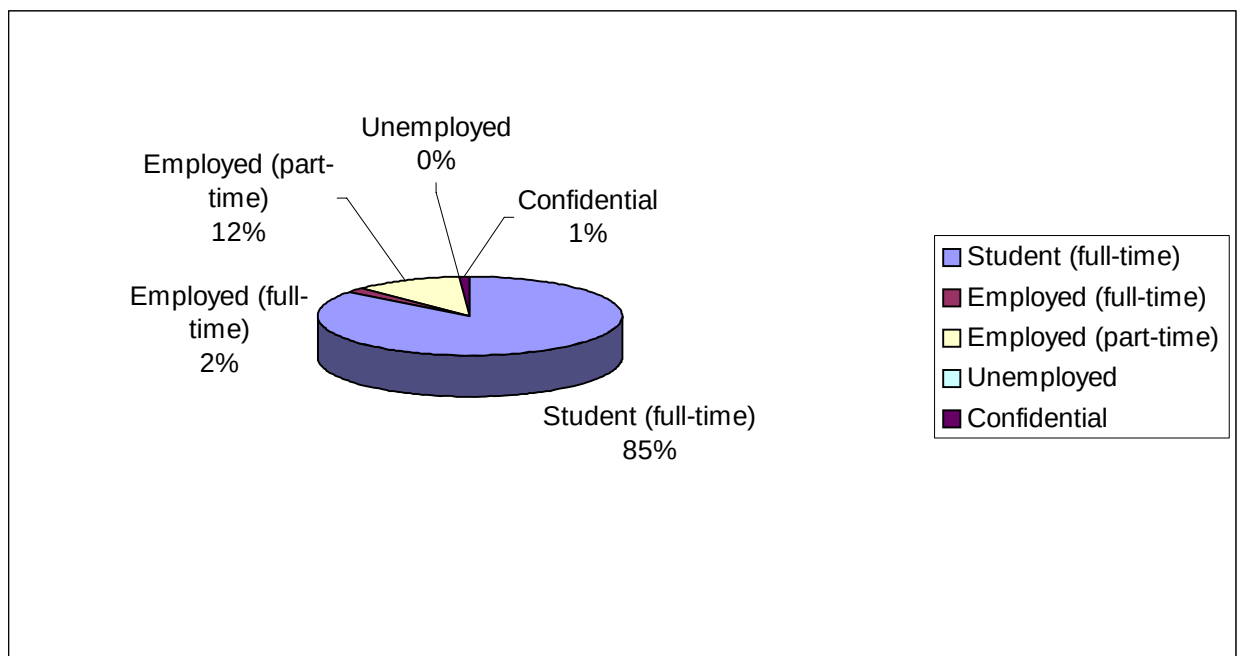
TABLE 5.3: FREQUENCY TABLE FOR ETHNIC BACKGROUND

Value	N	%	Cum%
White	120	60.0	60.0
Black	21	10.5	70.5
Coloured	2	1.0	71.5
Indian	55	27.5	99.0
Other	2	1.0	100.0
Total		200	100.0

QUESTION 4: *Employment Status*

There is no doubt that all the respondents were students since one of the screening questions at the beginning of the questionnaire (see Appendix A) was that the particular respondent had to be a student at the particular university. However some of these students were also employed indicating that older Generation Y students were studying part-time and working at the same time. Figure 5.5 illustrates that 85% of the respondents were full-time students, 12% were employed part-time and 2% were employed full-time. Only 2 of the respondents preferred not to divulge their occupation. None of the respondents were unemployed.

FIGURE 5.5: EMPLOYMENT STATUS COMPOSITION OF RESPONDENTS



Section A covered aspects regarding demographic Generation Y consumer information while Section B will focus more on mobile phone ownership.

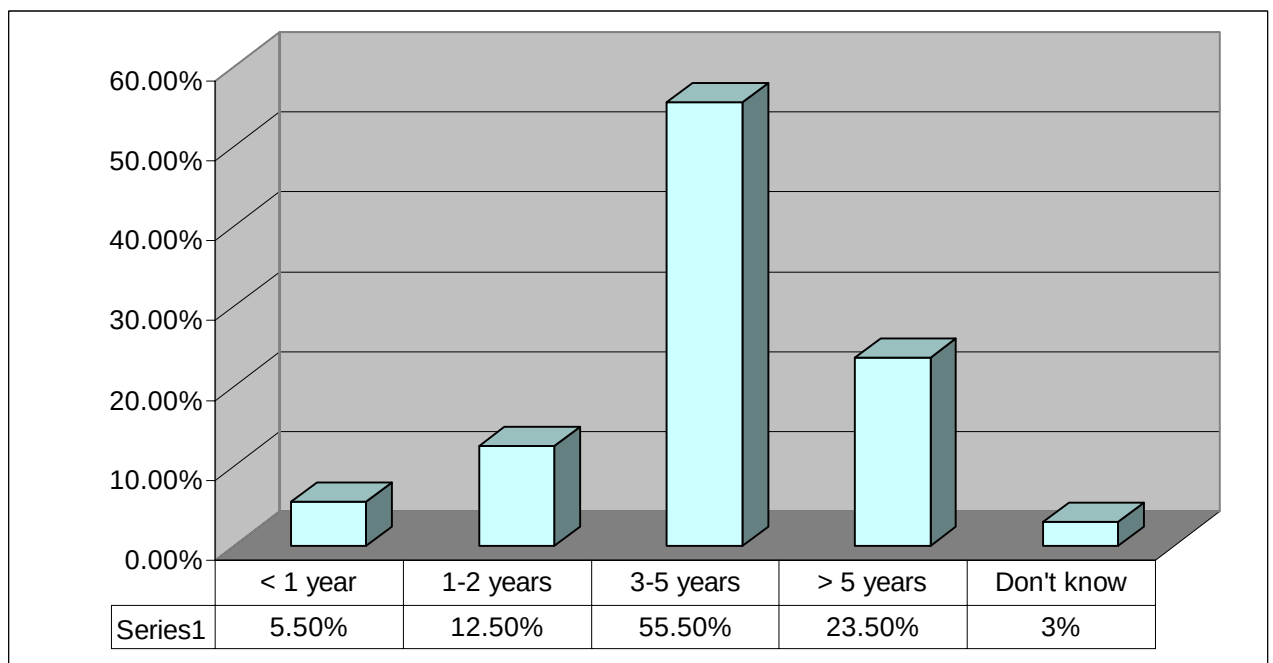
5.2.3 SECTION B: Mobile phone ownership

Section B was aimed at determining the mobile phone ownership of Generation Y consumers.

QUESTION 5: *How long have you owned a mobile phone (in years)?*

A substantial number of the respondents (56 %) have owned a mobile phone for three to five years. This is an important finding as the majority of Generation Y consumers have had adequate exposure to the technology for some years (See Figure 5.6 below).

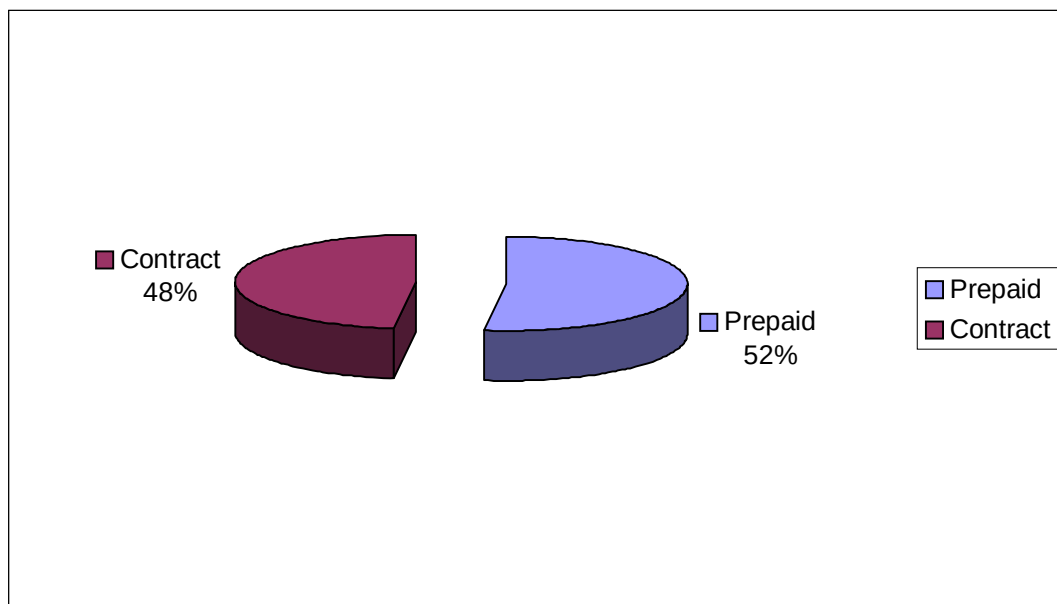
FIGURE 5.6: NUMBER OF YEARS OF OWNING A MOBILE PHONE



QUESTION 6: *What mobile calling plan do you have?*

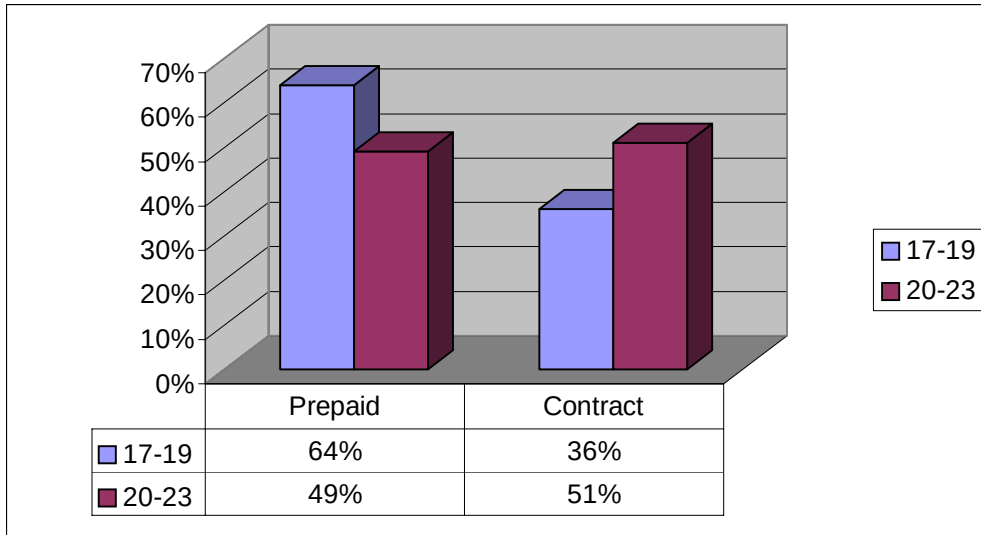
The choice of prepaid or contract is varied between the two age groups. About half of Generation Y consumers operate on prepaid (52%), but it can also be seen that a high proportion of the teenager segment (17-19 year olds) operate on contracts (48%) paid for by their parents. From Figure 5.7, it can be seen that 48% of Generation Y respondents were prepaid users while 52% were contract users.

FIGURE 5.7: PREPAID VERSUS CONTRACT



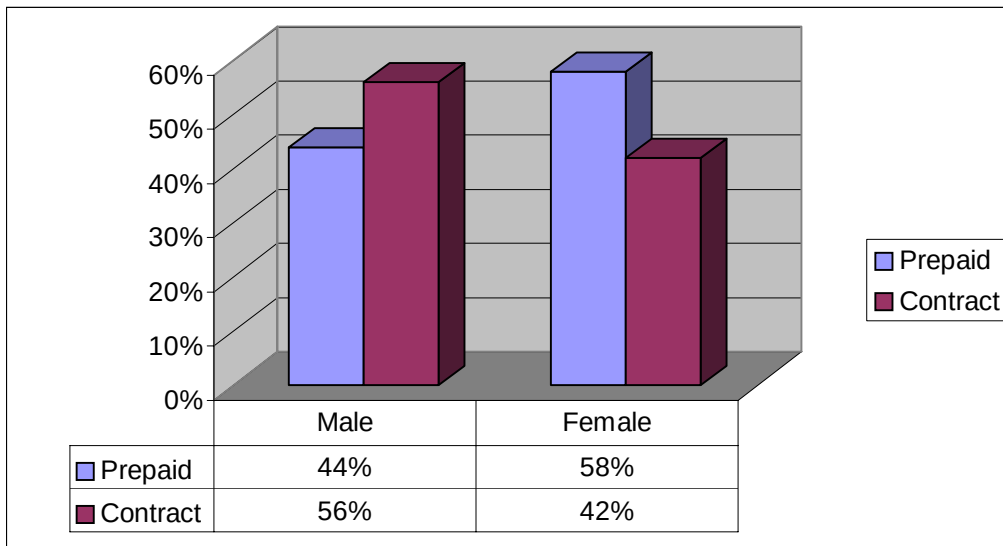
Furthermore, Figure 5.8 indicates that a majority of the teenagers (17-19) used prepaid service (64%) while 51% of young adults (20-23) were contract users.

FIGURE 5.8: AGE-BASED USAGE



Another interesting finding is that males had an inclination towards contract packages (56%) whereas females were more likely to be on prepaid packages (58%) as seen in Figure 5.9.

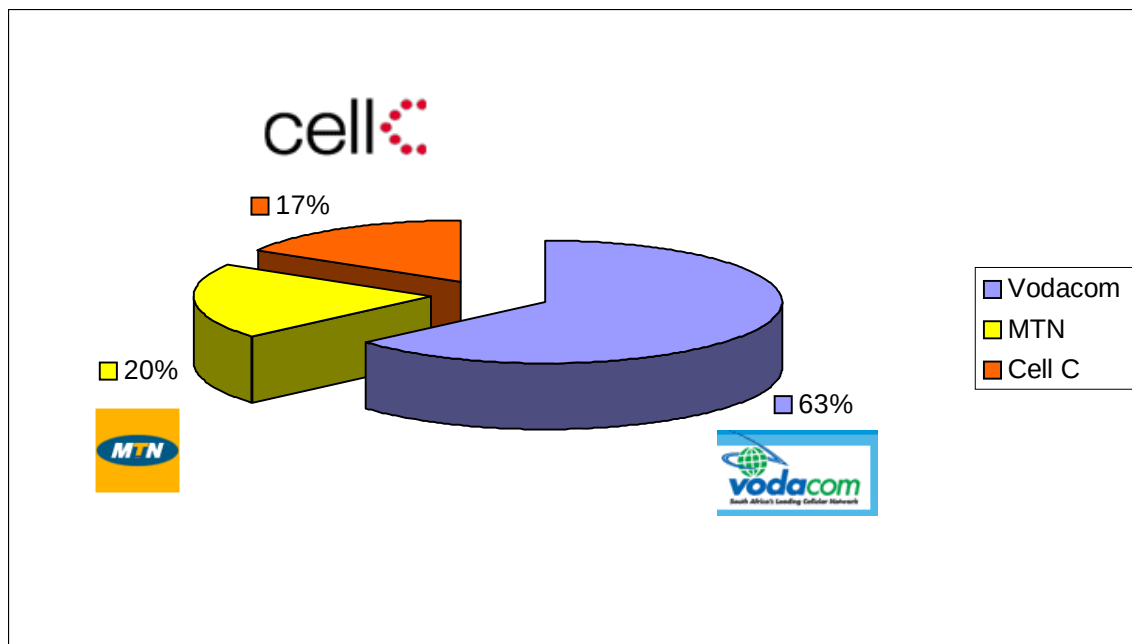
FIGURE 5.9: GENDER-BASED USAGE



Among the mobile phone operators, Vodacom has the upper hand with 63 % of Generation Y consumers being subscribed to its network, 20% subscribed to MTN, and 17% subscribed to Cell C as illustrated in Figure 5.10. These results coincide with the market share of each of the three operators specified in the literature review. Mobile market currently stands at around 56% for Vodacom, 32% for MTN and 12% for Cell C (See Chapter 2, Section 2.3.1).

It is interesting to see that the most frequent combination of “mobile phone brand and mobile phone operator” is Nokia-Vodacom.

FIGURE 5.10: VODACOM, MTN OR CELL C



QUESTION 7: Perceptions of the three operators: Vodacom, MTN and Cell C

Respondents were asked to write down one word or adjective that describes each of the operators. For Vodacom in Table 5.4, there were 36 mentions that the operator is “cool”, “trendy” (22), “cheap” (13), “aspirational” (8), “affordable” and “great” (6) and “reliable” (5). As discussed in Chapter 2 (Section 2.3.2.5) Vodacom strives to be the biggest and the best in terms of its market strategy and this is in line with the perceptions of the Generation Y consumers.

TABLE 5.4: PERCEPTIONS OF VODACOM

	Frequency	Percentage
Accommodating	1	.5
Affordable	6	3.0
Alright	1	.5
Amazing	1	.5
Aspirational	8	4.0
Basic	1	.5
Cheap	13	6.5
Chilled	1	.5
Complicated	1	.5
Conservative	1	.5
Convenient	2	1.0
Cool	36	18.0
Copy-cat	1	.5
Crap	1	.5
Decent	2	1.0
Economical	1	.5
Efficient	2	1.0
Excellent	4	2.0
Executive	1	.5
Fashionable	4	2.0
For poor people	1	.5
Friendly	1	.5
Functional	1	.5
Funky, elite	1	.5
Gimme summa	4	2.0
Good value for money	2	1.0
Great	6	3.0
Helpful	3	1.5
Hip	3	1.5
Kif	1	.5
Lekker	1	.5
Nice	3	1.5
Not bad	1	.5
Ok	3	1.5
Old	2	1.0
Pioneer	2	1.0
Power	1	.5
Professional	2	1.0
Reliable	5	2.5
Rocks	1	.5
Satisfactory	2	1.0
Sets the trends	1	.5
Structured	1	.5
Trendy	22	11.0
User friendly	1	.5
Vast	1	.5
Very good	1	.5
Worth your money	1	.5
Yebo Gogo	3	1.5
Youtful	2	1.0
Total	200	100.0

Whilst many young consumers deemed Vodacom to be “cool”, they also expressed their views regarding the other two operators, MTN and Cell C. For MTN in Table 5.5, there were 22 mentions that the operator is “cool”, “expensive” (12), “trendy” and “yellow” (11), “conservative” and “reliable” (7).

As discussed in Chapter 2 (Section 2.3.3.4) MTN’ s strategy revolves around attracting high-value consumer users. An interesting finding is that MTN is regarded as the most expensive of the three operators in this particular study.

TABLE 5.5: PERCEPTIONS OF MTN

	Frequency	Percentage
Affordable	1	.5
Alright	1	.5
Annoying	1	.5
Aspirational	1	.5
Average	6	3.0
Awesome	2	1.0
Bad service	3	1.5
Cheap	14	7.0
Conservative	7	3.5
Cool	22	11.0
Crap	4	2.0
Decent	1	.5
Difficult	2	1.0
Easier	1	.5
Expensive	12	6.0
Fashionable	1	.5
For rich people	1	.5
Garbage	1	.5
Good	3	1.5
Good coverage	3	1.5
Indifferent	1	.5
Kak	1	.5
Nice	4	2.0
Not bad	2	1.0
Ok	8	4.0
Problematic	2	1.0
Reliable	7	3.5
Restricted	2	1.0
Ripp off	3	1.5
Slow	1	.5
Sophisticated	1	.5
Sucks	1	.5
Supportive	1	.5
Traditional	2	1.0
Trendy	11	5.5
Unreliable	1	.5
Useful	1	.5
Way cool	1	.5
Yellow	11	5.5
Yellow summer	5	2.5
Yuppie	2	1.0
Total	200	100.0

For Cell C as illustrated in Table 5.6, there were 43 mentions of “cheap”, “cool” (19), “trendy” (15), “4urself”(8), “innovative” and “youthful” (4). As discussed in Chapter 2 (Section 2.3.4.5) Cell C adopted a traditional new-entrant approach by competing on price when it first entered the mobile phone market undercutting its established rivals in order to win market share quickly. Cell C has achieved this by trying to keep

prices at 10-15 percent below those of its rivals by giving its consumers benefits in the form of cheaper calls. It is thus no surprise that “cheap” was the most mentioned adjective associated with Cell C by the Generation Y respondents in this study. Furthermore Cell C has really gone all out to target the youth market and this is highlighted in the study where the respondents mentioned the words “4urself”(package aimed at the youth market) and “youthful” as two of the adjectives describing Cell C. In summary, all these are important findings especially when looking at the market strategy of each operator discussed in Chapter 2.

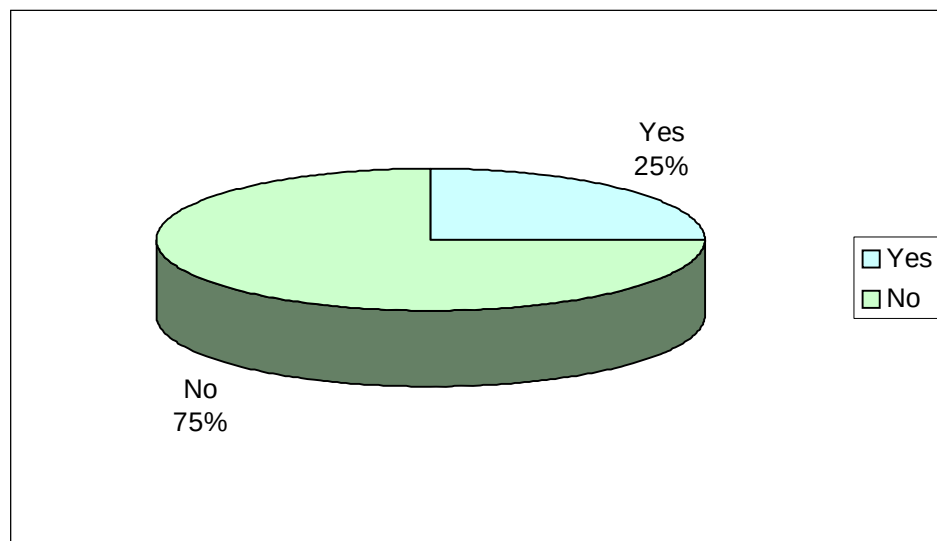
TABLE 5.6: PERCEPTIONS OF CELL C

	Frequency	Percentage
4 Urself	8	4.0
Aspirational	5	2.5
Bad	2	1.0
Boring	1	.5
Cheap	43	21.5
Confused	1	.5
Cool	19	9.5
Crap	6	3.0
Delayed	2	1.0
Easy	1	.5
Economical	1	.5
Excellent	1	.5
Expensive	4	2.0
For the teenager	1	.5
For the younger generation	1	.5
Fun	1	.5
Funky	2	1.0
Funny	1	.5
Great	2	1.0
Innovative	4	2.0
Inspirational	1	.5
Interesting	1	.5
Irritating	1	.5
Nice	1	.5
Not bad	1	.5
Ok	6	3.0
Original	1	.5
Receptionless	1	.5
Red	2	1.0
Retro	1	.5
Rubbish	1	.5
Silly	1	.5
Slinky	1	.5
Sponge off Vodacom	1	.5
Tell someone	1	.5
Terrible	1	.5
Trendy	15	7.5
Under-established	1	.5
Useless	3	1.5
Very bad	1	.5
Whatever	1	.5
Young	1	.5
Youthful	4	2.0
Total	200	100.0

QUESTION 8: *Have you used two or more of the operators above (Vodacom, MTN and Cell C)?*

As illustrated in Figure 5.11, a substantial number of Generation Y consumers have not used more than one of the operators (75%) whereas 25% of them have used more than one operator. This is interesting to note that Generation Y students seem to be brand loyal and that they stick to one provider.

FIGURE 5.11: MORE THAN ONE OF THE NETWORK OPERATORS USED



QUESTION 9: *Which of the networks do you personally think is best on each of the following aspects of service?*

Mobile users who would select a network as the best would unsurprisingly most likely to select the network they are currently using. Thus this question was answered by the 25% of Generation Y mobile customers who have used two or more of the mobile operators. The respondents were asked which networks they thought were the best (Table 5.7) in several aspects of service. Vodacom received the highest rating in choice of package, tariffs available, and geographic coverage whilst Cell C received the highest rating in cost of calls. It is interesting to note that MTN is seen as a me-too competitor because it did not feature strongly on any of the service items. In most of the other service aspects such as ability to make calls without getting cut off, quality of customer service, and choice of services available, the most common answer given was “don’t know” indicating that many Generation Y customers do not have a view regarding which network is best in several aspects of service.

TABLE 5.7: ASPECTS OF SERVICE (FREQUENCY*)

	Vodacom	MTN	Cell C	Don't know
Choice of packages and tariffs available	27	9	14	0
Cost of calls	11	6	33	0
Geographic coverage	34	12	0	4
Ability to make calls without getting cut off	15	12	9	14
Quality of customer service	14	8	11	17
Choice of services available (ie email, WAP, SMS)	16	7	9	18

* Less than 200 as a result of only respondents who answered yes in Question 8 completed Question 9

QUESTION 10: *Write down five mobile phone brands you are familiar with (eg. Nokia, Samsung etc)*

In the majority of instances (78%), Nokia was cited brand as the preferred brand of mobile phone and was found to be the first choice of many of the respondents (Table 5.8). Samsung was the second most cited brand (28%) with Motorola (21%), Siemens (24%) and Sony Ericsson (15%) following respectively. This finding reveals the supremacy of Nokia over other mobile phone brands and it is safe to say that Nokia has built top of mind awareness in the mobile industry. This is in line with the World Wide Worx year-long mobility 2005 research project (Chapter 3, Section 3.2) where Nokia is far and away the first choice of mobile phone brand for South African users.

TABLE 5.8: MOBILE PHONE BRAND AWARENESS

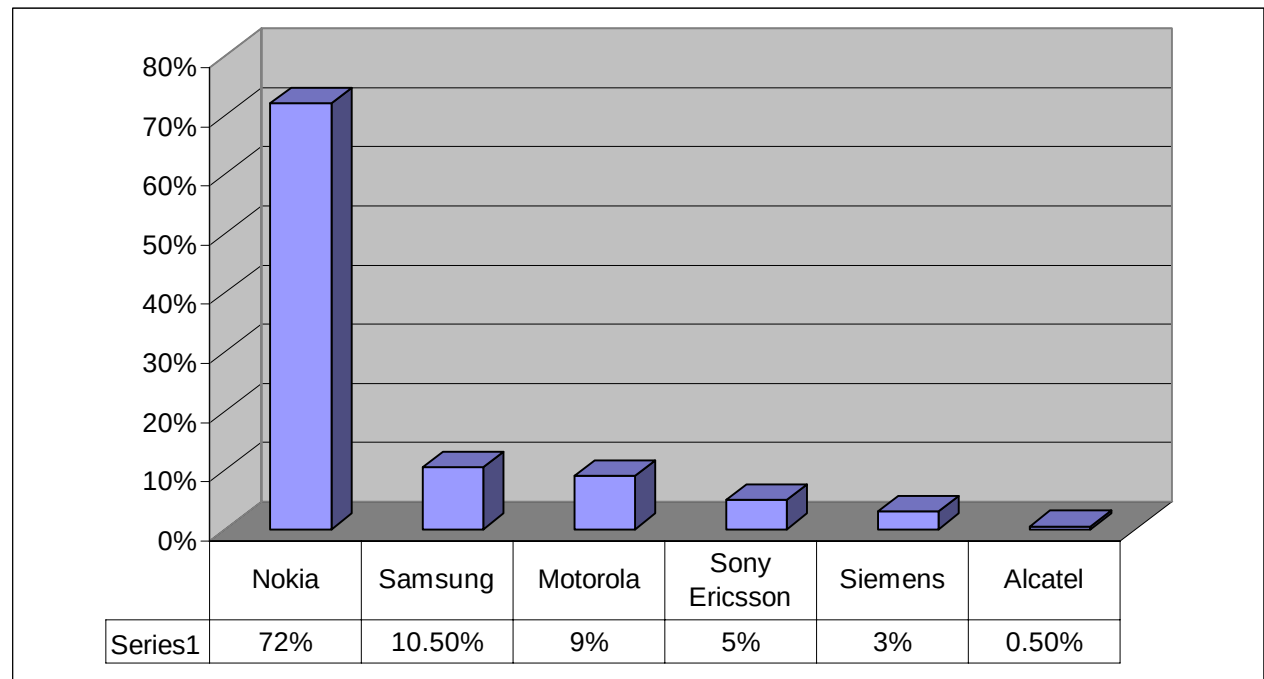
Mobile Phone Brand	Frequency*	Percentage (%)
Nokia	151	78%
Samsung	55	28%
Motorola	47	24%
Siemens	42	21%
Sony Ericsson	30	15%
Other specified	LG: 44 Alcatel: 22 Panasonic: 4 Sagem: 2 Bosch: 2 Phillips: 1	22% 11% 2% 1% 1% 0.5%

* More than 200 as a result of multiple responses

QUESTION 11: *What brand of mobile phone do you own?*

The majority of Generation Y respondents owned a Nokia phone (72%), followed by Samsung (11%), and Motorola (9%) (See Figure 5.12 below). This coincides with Question 10 above. The focus groups further showed that Nokia phone owners found the Nokia phone easier to use than other mobile phone brands on the market.

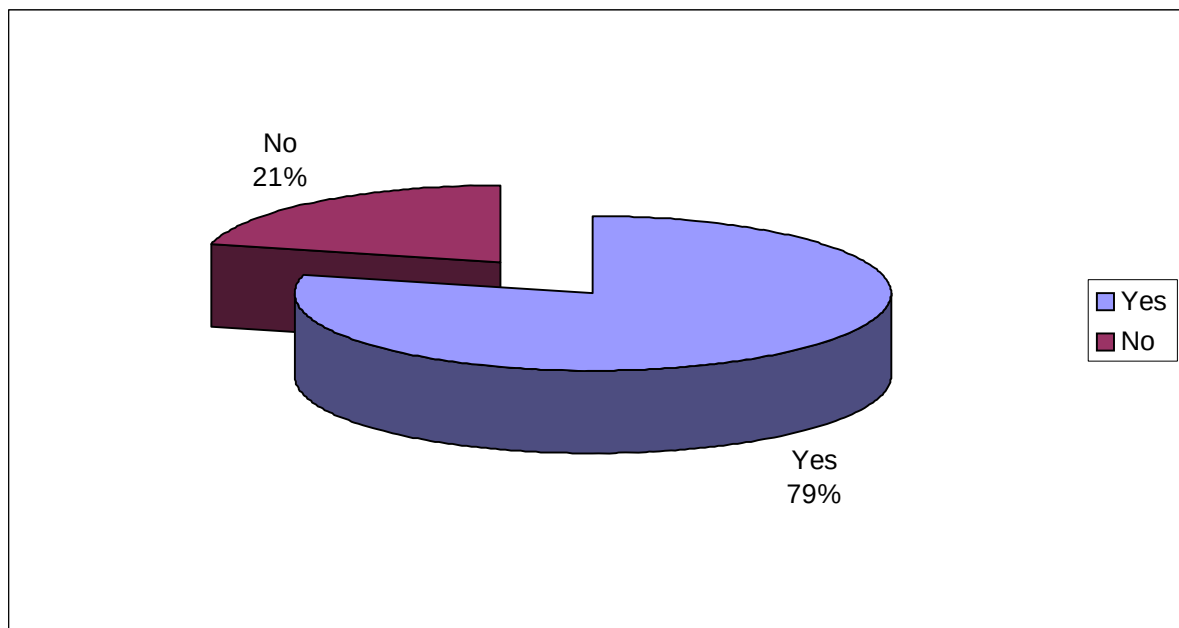
FIGURE 5.12: MOBILE PHONE BRANDS OWNED



QUESTION 12: *Will your next mobile phone be the same brand as your current mobile phone?*

Out of the 200 responses received, 79% of the respondents indicated that their next mobile phone would be the same brand as their current mobile phone (See Figure 5.13). This once again indicates that Generation Y consumers are brand conscious and brand loyal.

FIGURE 5.13: BRAND LOYALTY



QUESTION 13: *What is the main reason for choosing your brand of mobile phone?*
(Please tick one block)

A range of options were given to the respondents, from which they had to make their selection from options such as personal choice, recommendation by mobile phone store, recommendation by friends/family, phone design, and promotional offer as depicted in Table 5.9. Table 5.9 shows the responses for each of the reasons. The respondents were only allowed to tick one block but some ticked more than one option. All of the options chosen by the respondents were taken into account when analysing the results thus resulting in multiple responses as can be seen in Table 5.8. The main reason for choosing a particular brand of mobile phone seems to be as a result of personal choice (55%), followed by phone design, size and features (28%), recommendation by friends and family (17%), promotional offer (3%), recommendation by mobile phone store (2%), and other (1%). It can be seen that Generation Y respondents rely heavily on personal judgement when choosing a mobile phone but the influence of family and friends on consumer purchasing patterns is also evident. This was highlighted in the literature in Chapter 3 (Section 3.4.2.1) where the importance of family and reference groups such as friends influence purchasing and consumer behaviour.

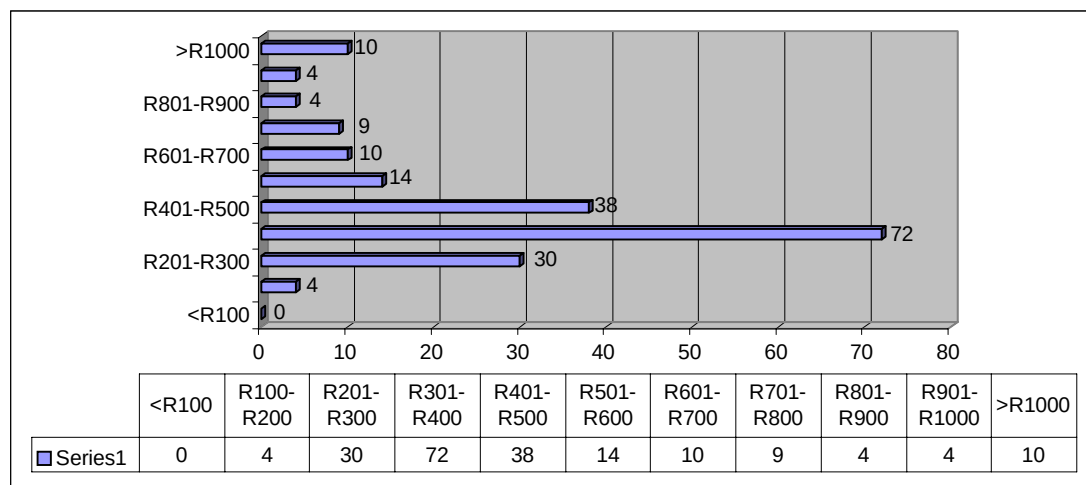
TABLE 5.9: REASONS FOR CHOOSING A PARTICULAR BRAND OF PHONE

Reasons	Frequency*	Percentage (%)	Cumulative %
Personal choice	110	55.0	55.0
Recommendation by mobile phone store	2	1.0	56.0
Recommendation by friends/family	28	14.0	70.0
Phone design, size and features	53	26.5	96.5
Promotional offer	6	3.0	99.5
Other specified	It was given to me: 1	0.5	0.5
Total	200	100.0	100.0

* More than 200 as a result of multiple-responses

QUESTION 14: *How much pocket money do you get on average per month?*

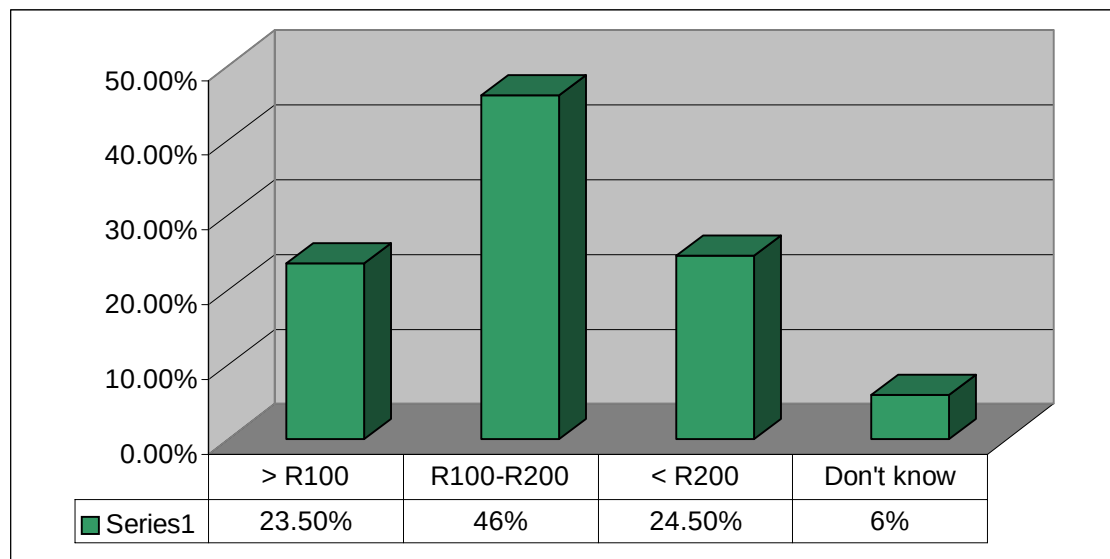
Figure 5.14 shows that the majority of the respondents (72 of them) receive between R300 and R400 of disposable income per month. Thirty eight of the respondents receive between R400 and R500 per month, fourteen between R500 and R600 per month and so on. It is important to note that students that worked full-time and part-time highlighted their income as disposable income. The sum of the amounts in the above figure totals R119 650.00 per month and these 200 respondents therefore command R1 435 800.00 of pocket money per year.

FIGURE 5.14: POCKET MONY RECEIVED PER MONTH

QUESTION 15: *How much does your mobile phone bill cost per month?*

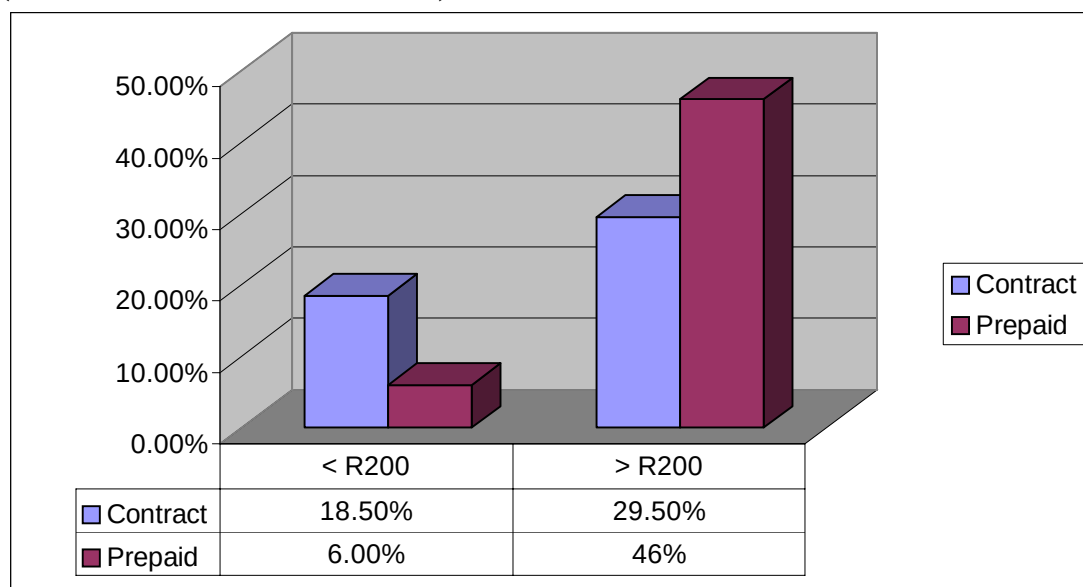
According to the statistics below Generation Y consumers did not spend excessive amounts of phone airtime. About 24 % spend less than R100 and 46 % spend between R100 and R200 (Figure 5.15). This coincides with the findings by MacGregor (2004) and Mattheus (2004) who found that average monthly spend per generation Y prepaid user is about R100 (See Chapter 1, Section 1.2.2).

FIGURE 5.15: MONTHLY MOBILE PHONE BILL



An interesting finding is that contract subscribers are more likely to have a mobile phone bill that costs more than R200 than the prepaid subscribers. This is illustrated in Figure 5.16 where out of the 49 respondents that spent more than R200 on their monthly mobile phone bills; 37 of them were on contracts (18.50%) and 12 were on prepaid (6%). This once again coincides with the findings by Mobility (2005) where contract users' average monthly phone bill amounted to R384 whereas prepaid users spent on average about R135 (See Chapter 3, Section 3.2.5).

FIGURE 5.16: MONTHLY MOBILE PHONE BILL AND CHOICE OF PACKAGE (CONTRACT VERSUS PREPAID)



QUESTION 16: *Who is responsible for paying your mobile phone bill?*

As can be seen in Table 5.10, for many respondents, parents pay all of their mobile bill (47%) with a smaller number paying the bill themselves (28%), sharing costs with parents (23%) and 2% of respondents having other arrangements.

TABLE 5.10: PERSON RESPONSIBLE FOR MONTHLY MOBILE PHONE BILL

Person responsible for paying mobile phone bill	Percentage (%)
I am personally responsible for the whole bill	27.5%
The bill is divided between myself and my parents	22.5%
My parents are responsible for the whole bill	47%
My employer	1%
Other	2%
Total	100%

Section B covered aspects relating to mobile phone ownership, while Section C focuses more mobile phone usage patterns as such.

5.2.4 SECTION C: Mobile phone usage patterns

Section C was aimed at determining the mobile phone usage patterns of the Generation Y respondents.

QUESTION 17: *How many mobile phone calls do you make and receive per day?*

Most Generation Y respondents reported making few mobile calls per day with 68% making less than five calls on their mobile phone most days and only 27% usually making between five to ten calls a day, 5% making between ten and twenty calls a day, and 1% making more than twenty calls a day (See Figure 5.17).

Young people seem to make as many voice calls as they receive so the usage patterns are balanced between the calls made and the calls received (See Figure 5.18). Both groups make as many voice calls as they do SMS.

FIGURE 5.17: NUMBER OF CALLS MADE PER DAY

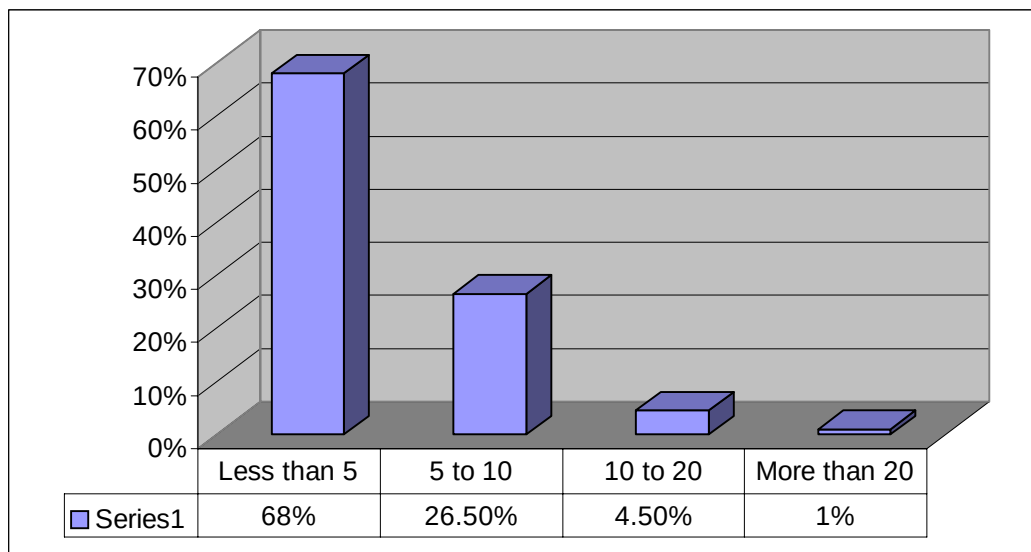
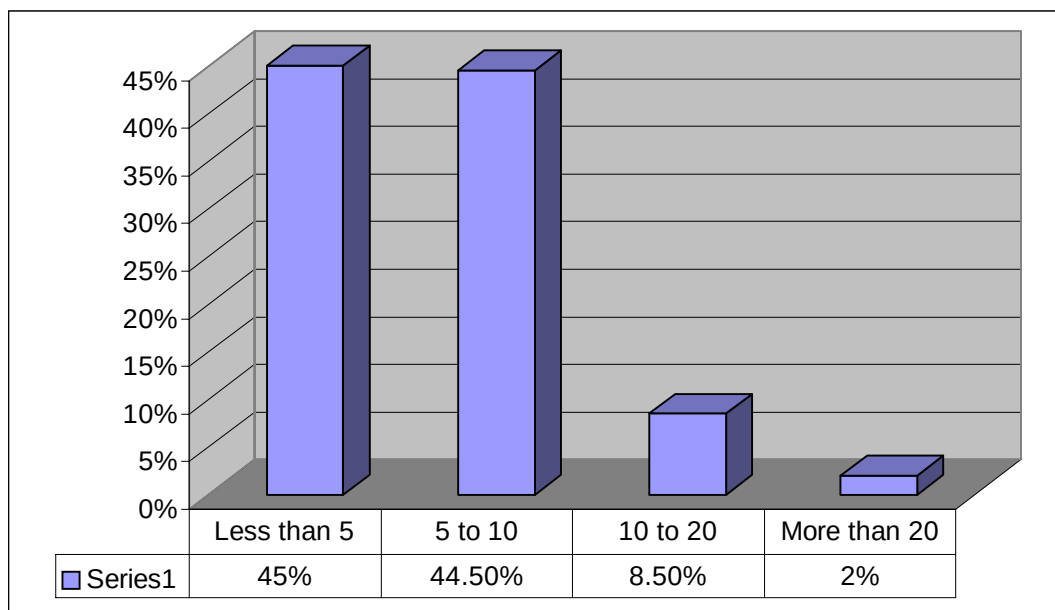


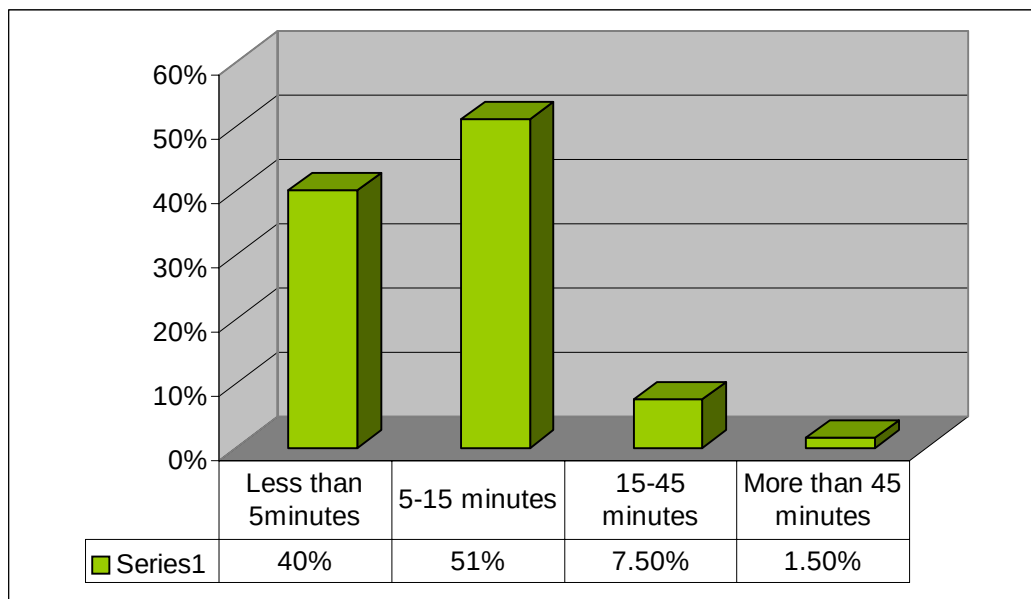
FIGURE 5.18: NUMBER OF CALLS RECEIVED PER DAY



QUESTION 18: *How long is your average mobile phone call?*

It is interesting to note that a large number of respondents (51%) do not talk on their mobile phones for long periods of time with the average mobile phone call being between five and fifteen minutes (Figure 5.19). Forty per cent of the respondents stated that their average mobile phone call is less than five minutes and 8% of them spend between fifteen to forty-five minutes on a call.

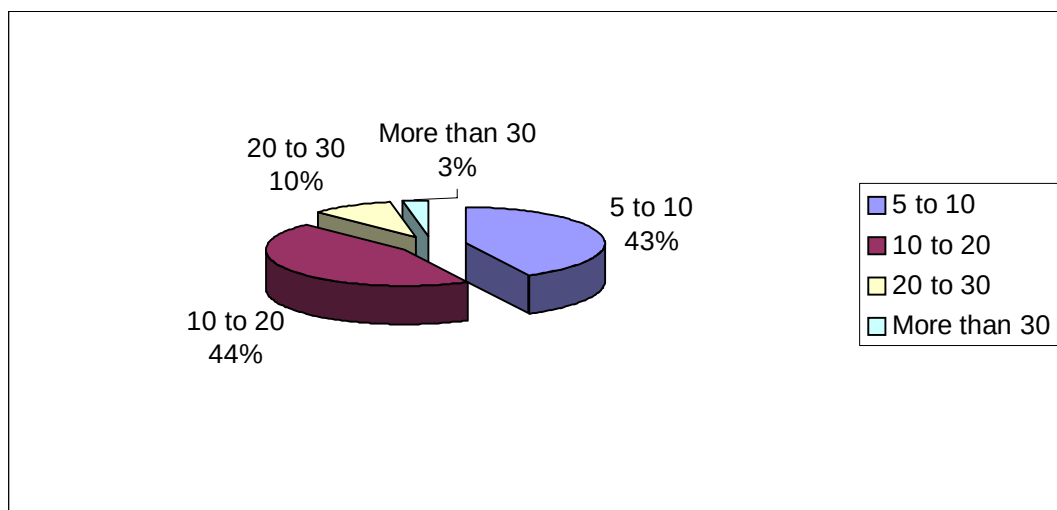
FIGURE 5.19: MINUTES PER DAY OF AVERAGE MOBILE PHONE CALL



QUESTION 19: *How many SMS' s do you send per day?*

As indicated in Figure 5.20, it is interesting to note that most respondents (44%) reported averaging five to ten SMS messages a day. Forty three percent of the respondents send on average between ten to twenty SMS messages and a smaller number of them (3%) send more than twenty SMS messages.

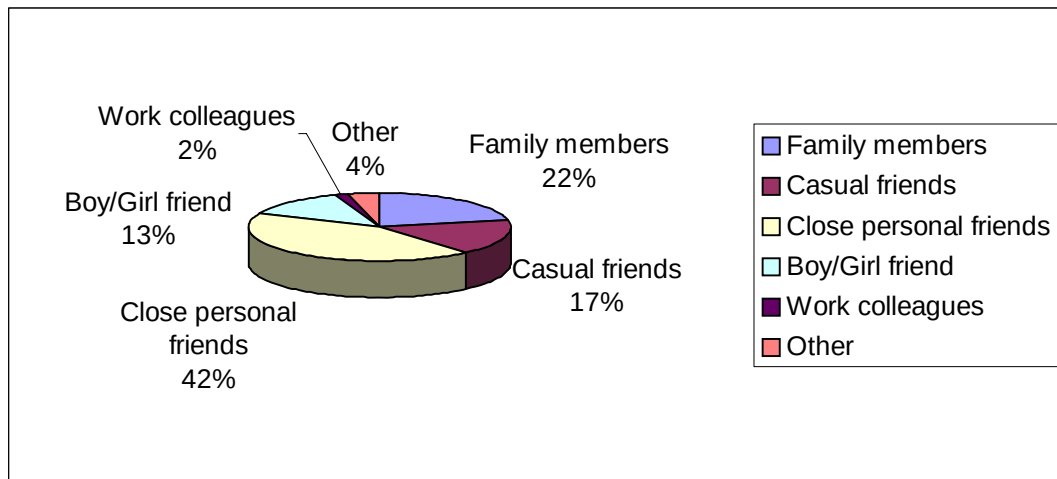
FIGURE 5.20: NUMBER OF SMS MESSAGES SENT PER DAY



QUESTION 20: *Who do you contact most regularly on your mobile phone?*

For a large number of respondents (42%), the people they contact most regularly on their mobile phone are close personal friends (see Figure 5.21). A total of 22% of the respondents contact family most regularly, 13% contact their boy/girl friends, and 2% their work colleagues.

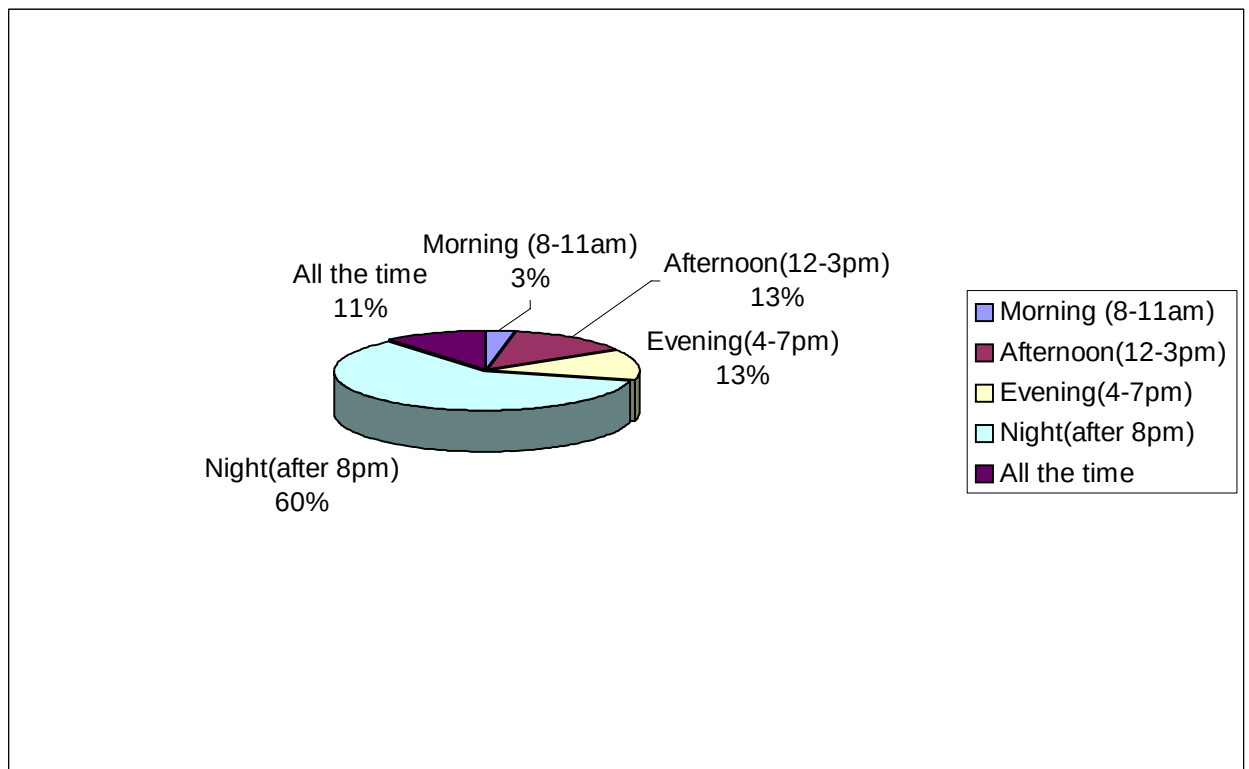
FIGURE 5.21: PEOPLE CONTACTED MOST REGULARLY ON MOBILE PHONE



QUESTION 21: *When do you use your mobile phone most often?*

Figure 5.22 illustrates that the majority of respondents (60%) use their mobile phone at night after 8 pm. This is interesting as it coincides with off-peak hours where mobile phone calls and SMS messages are cheaper. A total of 13% of the respondents use their mobile phone in the afternoon (12-3 pm) and evening (4-7 pm), 11% use their mobile phone all the time, and only 3% of the respondents use their mobile phone in the morning (8-11 am).

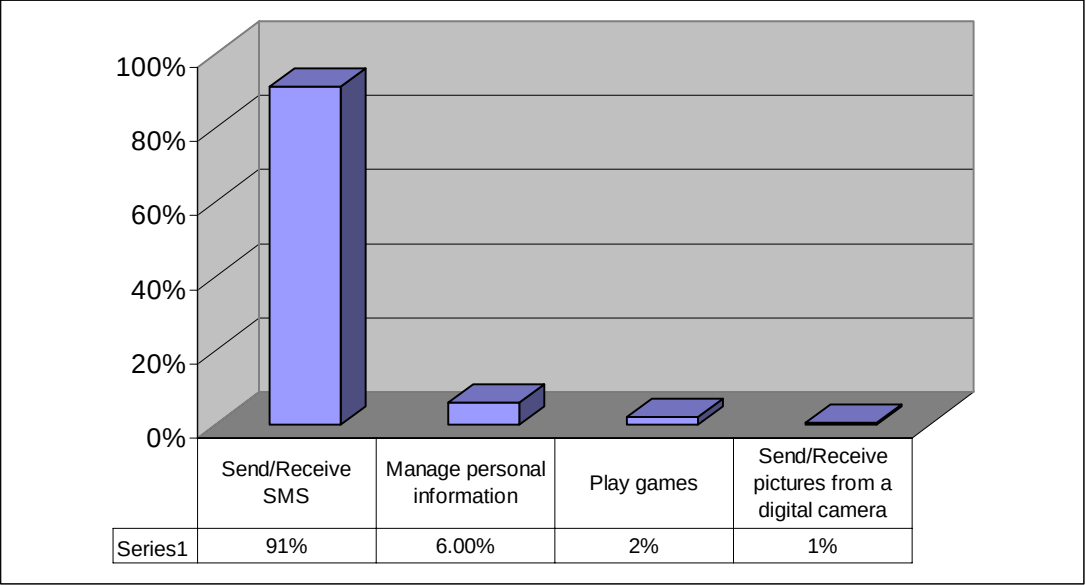
FIGURE 5.22: TIME OF DAY WHEN CALLS ARE MOST OFTEN MADE



QUESTION 22: *What do you do most often on your phone besides voice calls?*

The fact that such a large percentage of respondents (91%) use SMS messages besides voice calls is a clear indication that SMS is an important way for Generation Y consumers to communicate (Figure 5.23). A small percentage of respondents (6%) use their mobile phone to manage personal information, 2% play games and 1% receive pictures from a digital camera. Sending/receiving email and accessing the Internet (WAP) are clearly behind in adoption as a result of cost and none of the respondents ticked it as an option. Only 3G mobile phones have Internet capability and this may also be a reason why Generation Y students do not access the Internet.

FIGURE 5.23: USE OF MOBILE PHONE BESIDES FOR VOICE CALLS



Section C covered aspects relating to the mobile phone usage patterns of Generation Y customers while Section D will focus on the attitudes towards mobile phones.

5.2.5 SECTION D: Attitudes towards mobile phones

Section D contained a series of statements relating to the customer's attitudes towards mobile phones. Respondents were asked to rate these statements on a 5-point Likert scale:

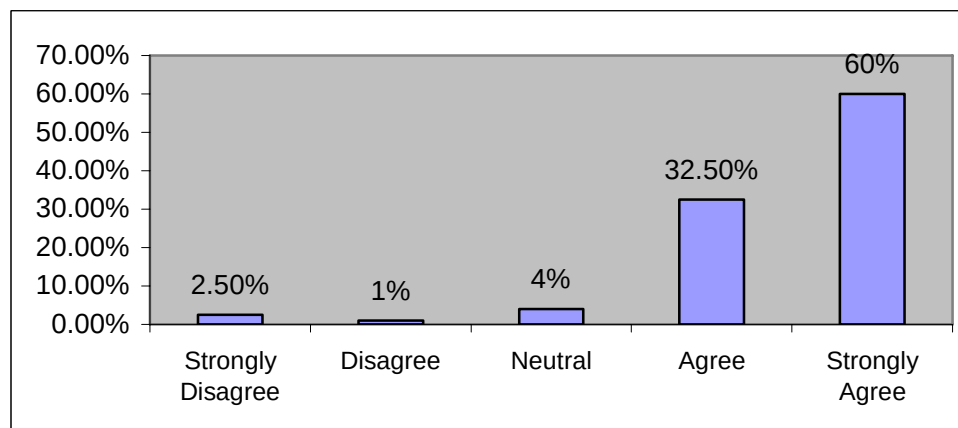
1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Statement 1

I use my mobile phone for emergency/safety purposes

According to Figure 5.24, a total of 92.5% of the respondents agreed and strongly agreed that they use their mobile phone for emergency and safety purposes, while only 3.5% disagreed with this statement. From these findings, it can be deduced that the notion of the mobile phone as a safety device is an important factor amongst Generation Y consumers in South Africa. Older Generation Y consumers were more likely to report feeling safer when going out because they have a mobile phone with them. However this difference in attitudes between younger and older Generation Y consumers may reflect the different activities that these groups are likely to partake in.

FIGURE 5.24: USE OF MOBILE PHONES FOR EMERGENCY/SAFETY PURPOSES

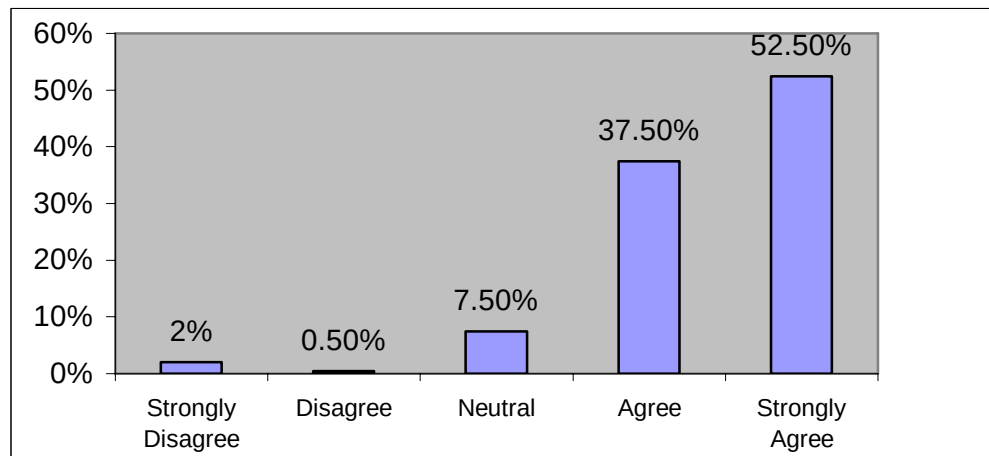


Statement 2

I use my mobile phone for convenience

A total of 90% of the respondents agreed (37.5%) and strongly agreed (52.5%) that they used their mobile phone for convenience. Only 2.5% of the respondents disagreed with the statement (See Figure 5.25).

FIGURE 5.25: USE OF MOBILE PHONE FOR CONVENIENCE

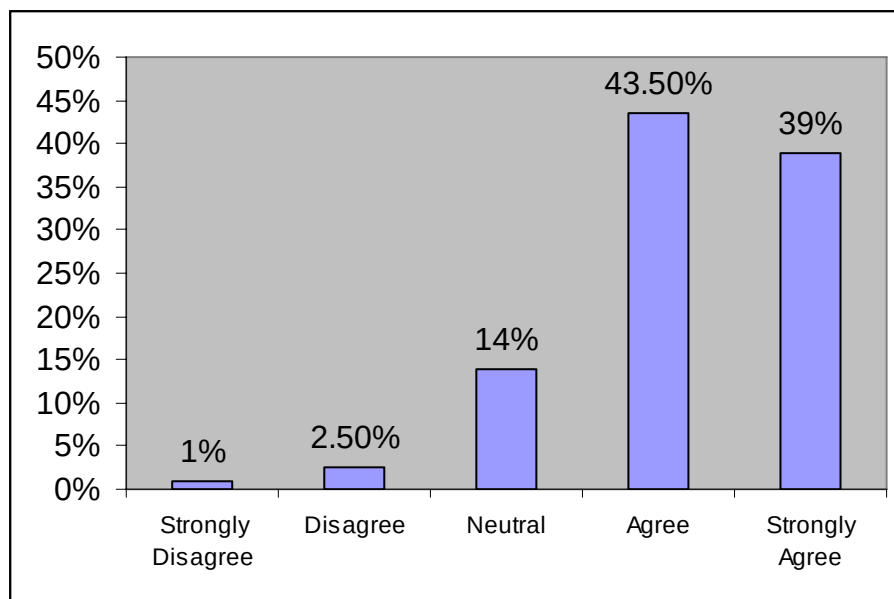


Statement 3

I feel more connected to my friends now that I have a mobile phone

Results reported below highlight the important role that mobile phones play in facilitating communication between Generation Y respondents and their friends. Nearly half of the respondents (44%) agreed that they feel more connected to their friends now that they have a mobile phone and a further 39% strongly agreed as seen in Figure 5.26. This implies that 83% of the respondents feel more connected to their friends as a result of their ownership of a mobile phone. Only 14% indicated indifference about the statement and 4% disagreed or strongly disagreed with the statement.

FIGURE 5.26: CONNECTION TO FRIENDS BY OWNING A MOBILE PHONE

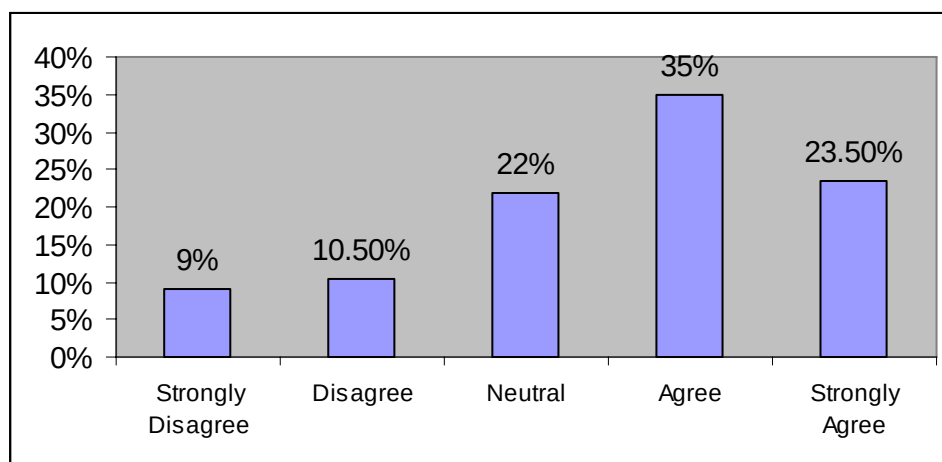


Statement 4

I save most of the SMS' s I receive

Figure 5.27 illustrates that 35% of the respondents agree that they save the SMS messages they receive on their mobile phones and 24% strongly agree with this statement. A total of 22% of the respondents indicated that they neither agree nor disagree that they save or don't save their SMS messages while 20% disagreed with the statement.

FIGURE 5.27: SAVING SMS MESSAGES RECEIVED

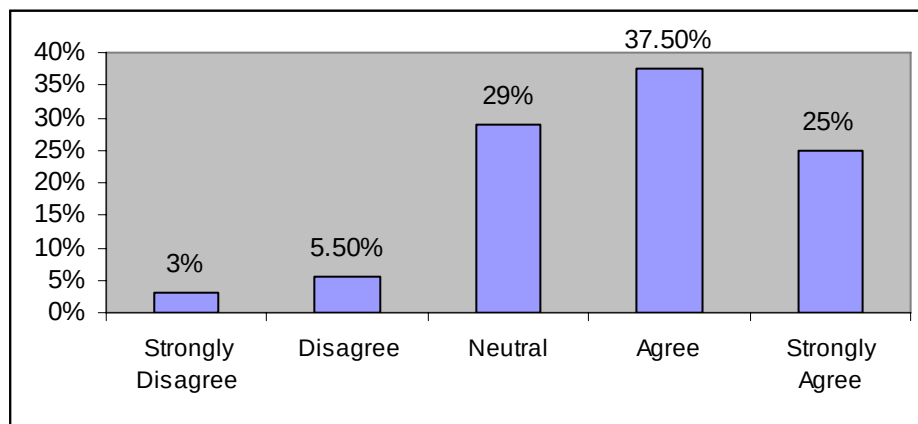


Statement 5

My mobile phone allows me to do more things at the same time

Wireless technologies according to Cheskin (2001:15) are speeding us up by allowing us to do more things quickly and concurrently; in other words multitasking. A total of 38% of the respondents agreed that their mobile phone allows them to do more things at the same time. A further 25% indicated that they strongly agreed with this statement, 29% of the respondents were indifferent and 9% disagreed and strongly disagreed with the statement as indicated in Figure 5.28.

FIGURE 5.28: MULTITASKING AND OWNING A MOBILE PHONE

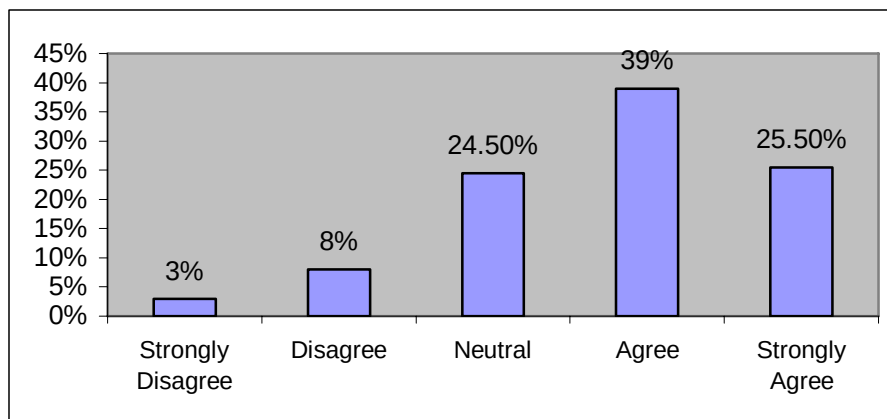


Statement 6

My mobile phone allows me to do things faster

As seen in Figure 5.29, a total of 39% of the respondents agreed that their mobile phone allows them to do things faster; in other words increasing productivity. Twenty six percent of the respondents strongly agreed with the statement while a quarter of them (25%) were indifferent. Only 11% responded that their mobile phone does not allow them to do things faster.

FIGURE 5.29: SPEED OF DOING THINGS BY OWNING A MOBILE PHONE

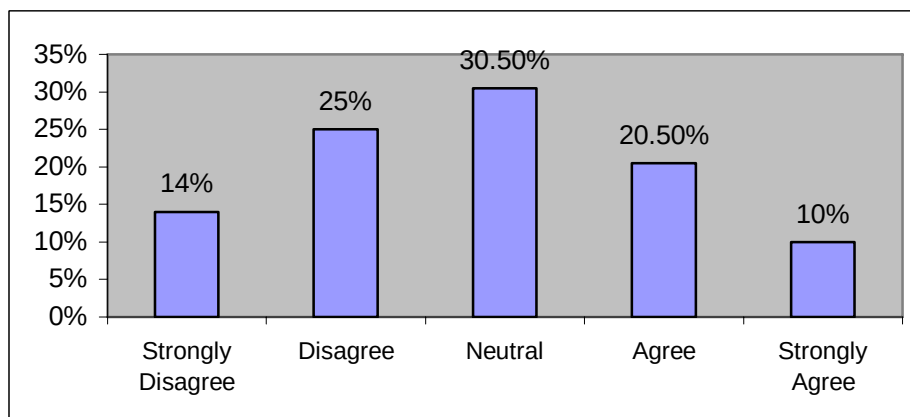


Statement 7

My mobile phone interferes in how I go about my day-to-day activities

From the responses received in Figure 5.30, it can be seen that 31% of the respondents agreed and strongly agreed that their mobile phone interfered in how they go about their day-to-day activities. Thirty one percent of the respondents were indifferent and 39% disagreed and strongly disagreed with this statement.

FIGURE 5.30: INTERFERENCE OF MOBILE PHONE IN DAY-TO-DAY ACTIVITIES

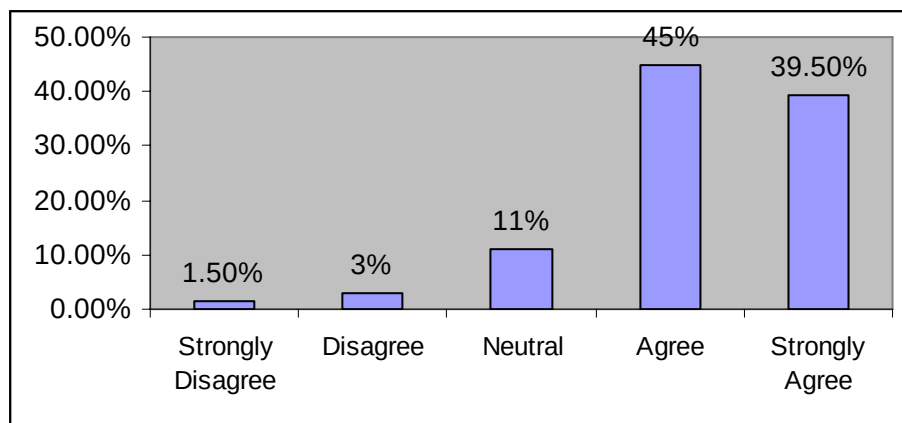


Statement 8

My mobile phone makes my life easier

A total of 45% of the respondents agreed that their mobile phone makes their life easier and a further 40% agreed even more with the statement. Only 11% of the respondents were indifferent and 4% of the respondents disagreed and strongly disagreed with the statement as illustrated in Figure 5.31.

FIGURE 5.31: MAKING LIFE EASIER BY OWNING A MOBILE PHONE

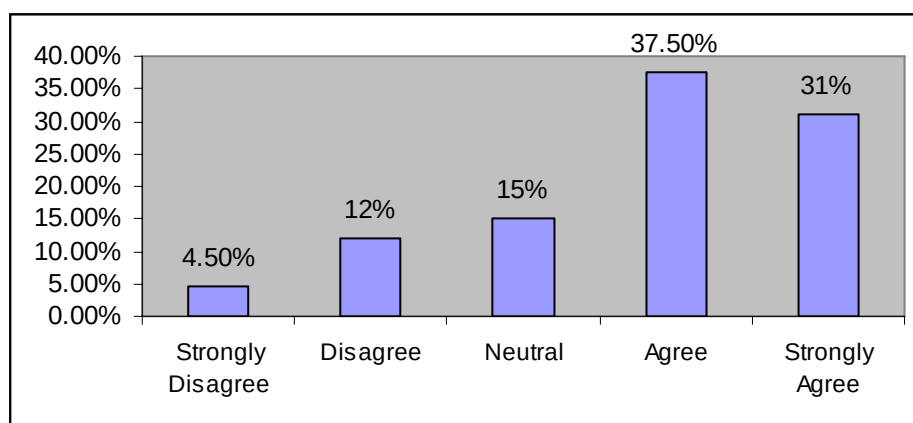


Statement 9

My parents regularly check up on me by calling me on my mobile phone

As well as for contacting friends, the mobile phone is also used by parents to contact their children. It is therefore not surprising that a large number of respondents (38%) agreed that parents are checking up on them by contacting them on their mobile phones and 31% strongly agreed with the statement. Only 16% did not agree or disagree with the statement, 12% disagreed with the statement and 5% strongly disagreed that their parents regularly check up on them by calling them on their mobile phone (refer to Figure 5.32).

FIGURE 5.32: SUPERVISION BY PARENTS ON MOBILE PHONE

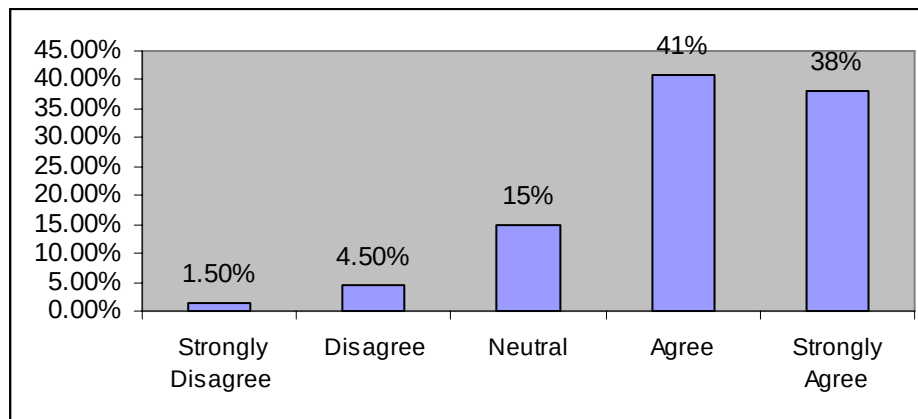


Statement 10

My mobile phone allows me more freedom

As seen in Figure 5.33, a total of 41% of the respondents agreed that their mobile phone allows them more freedom, 38% strongly agreed with this statement, 15% were indifferent and a mere 5% disagreed that their mobile phone allows them more freedom.

FIGURE 5.33: FREEDOM AND OWNERSHIP OF A MOBILE PHONE

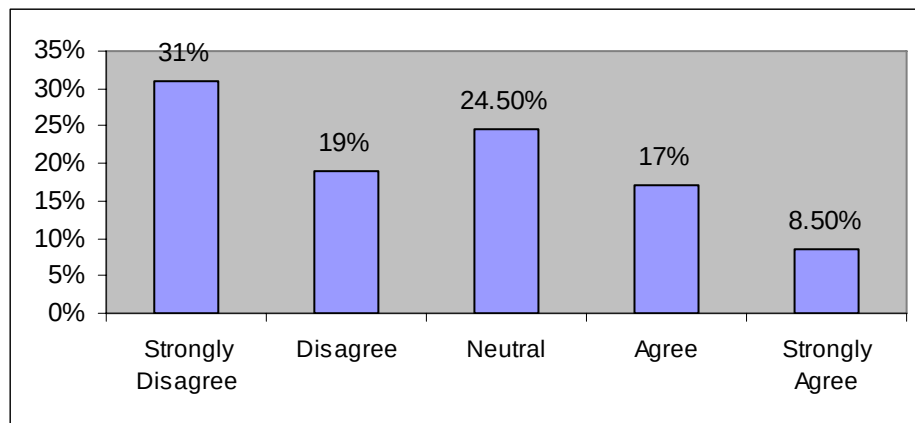


Statement 11

The mobile phone you have tells how fashionable you are

From the responses received, it can be inferred that the respondents do not believe that the mobile phone can be used as a fashion statement with 31% of the respondents strongly disagreeing with the statement. A total of 26% of the respondents agreed and strongly agreed that the mobile phone you have tells how fashionable you are and 25% of the respondents were indifferent with the statement (see Figure 5.34).

FIGURE 5.34: MOBILE PHONE AS A FASHION STATEMENT



Section D covered aspects regarding the attitudes of Generation Y respondents towards mobile phones. Each question was discussed by means of figures, tables and frequencies and some questions will be used simultaneously to draw cross-tabulations between different constructs.

5.3 CROSS TABULATIONS

Cross-tabulation is a “statistical technique that describes two or more variables simultaneously and results in tables that reflect the joint distribution of two or more variables with a limited number of categories or distinct values” (Malhotra 1996:459). Cross-tabulations thus allow the researcher to make some interesting observations by analysing two or more questions of the questionnaire simultaneously. Several cross-tabulations were done and will be discussed in more detail below.

5.3.1 Age versus number of years of owning a mobile phone

This cross-tabulation indicates that most of the respondents in both the teenager and young adult segment (111 of the 200 responses) have owned a mobile phone between three to five years (see Table 5.11). There is thus no significant difference between the teenager and young adult segment.

TABLE 5.11: AGE (SECTION A QUESTION 1) AND NUMBER OF YEARS OF OWNING A MOBILE PHONE (SECTION B QUESTION 5)

Age*Number of years of owning a mobile phone Crosstabulation

Count

	Number of years of owning a mobile phone					Total
	< 1 year	1-2 years	3-5 years	> 5 years	Don't know	
Age 17	0	2	0	0	0	2
18	4	13	23	8	1	49
19	5	5	29	15	0	54
20	1	5	18	11	2	37
21	0	0	14	2	1	17
22	1	0	16	1	2	20
23	0	0	11	10	0	21
Total	11	25	111	47	6	200

5.3.2 Age versus mobile calling plan

As illustrated in Table 5.12 a total of 64% of the respondents who are on prepaid are aged between 17 and 19 (teenager segment). This could mean that the teenager segment finds prepaid cheaper. It is also evident from the table above that the young adults aged between 20 and 23 operate mostly on contract (58 of 95 responses or 61%).

TABLE 5.12: AGE (SECTION A QUESTION 1) AND MOBILE CALLING PLAN (SECTION B QUESTION 6)

Age*Mobile Calling Plan Crosstabulation

Count

	Mobile Calling Plan						Total
	Vodacom Prepaid	MTN Prepaid	Cell C Prepaid	Vodacom Contract	MTN Contract	Cell C Contract	
Age 17	2	0	0	0	0	0	2
18	19	8	2	9	3	8	49
19	24	6	6	8	5	5	54
20	12	3	6	10	2	4	37
21	5	0	0	9	2	1	17
22	6	2	1	9	2	0	20
23	2	0	0	12	7	0	21
Total	70	19	15	57	21	18	200

5.3.3 Gender versus mobile calling plan

A total of 58% of the respondents who use prepaid are female and 56% of the respondents who use contract are male as shown in Table 5.13. It is interesting to note that females have an inclination towards prepaid and males towards contract.

TABLE 5.13: GENDER (SECTION A QUESTION 2) AND MOBILE CALLING PLAN (SECTION B QUESTION 6)

Gender*Mobile Calling Plan Crosstabulation

Count

	Mobile Calling Plan						Total
	Vodacom Prepaid	MTN Prepaid	Cell C Prepaid	Vodacom Contract	MTN Contract	Cell C Contract	
Gender Male	30	5	4	29	12	8	88
Female	40	14	11	28	9	10	112
Total	70	19	15	57	21	18	200

5.3.4 Age versus pocket money received

The majority of the respondents aged between 18 and 22 in Table 5.14 receive between R300 and R400 of disposable income per month. The respondents aged 23 were the only ones that had pocket money over R1000. This shows that as the Generation Y respondents grow older, their disposable income increases; a large number of young adults aged between 21 and 23 were employed part-time and full-time and put their household income down as pocket money.

This could also mean that as age increases, lifestyles shift: there are more responsibilities (e.g. work, moving out) and more control of how to spend time (e.g. less parental supervision).

TABLE 5.14: AGE (SECTION A QUESTION 1) AND POCKET MONEY RECEIVED (SECTION B QUESTION 14)

Age*Pocket Money received Crosstabulation

Count

	Pocket money received										Total
	R101- R200	R201- R300	R301- R400	R401- R500	R501- R600	R601- R700	R701- R800	R801- R900	R901- R1000	> R1000	
Age 17	0	1	1	0	0	0	0	0	0	0	2
18	1	11	18	7	3	5	1	0	0	0	46
19	1	6	19	14	5	3	2	1	1	1	53
20	1	5	20	5	1	0	2	1	0	1	36
21	1	1	6	6	2	0	0	0	1	0	17
22	0	4	8	3	2	1	0	2	0	0	20
23	0	2	0	3	1	1	4	0	2	8	21
Total	4	30	72	38	14	10	9	4	4	10	195

5.3.5 Age versus average monthly mobile phone bill

Respondents spending between R100 and R200 for their mobile phone bill are spread more evenly between the different ages (See Table 5.15). A total of 91% of teenagers (11 of 12 responses) did not know how much their average monthly mobile phone bill amounted to. This might be due to the fact that the parents are responsible for their mobile phone bill and the teenage respondent doesn't know how much he/she spends.

TABLE 5.15: AGE (SECTION A QUESTION 1) AND AVERAGE MONTHLY MOBILE PHONE BILL (SECTION B QUESTION 15)

Age*Average Monthly Mobile Phone Bill Crosstabulation

Count

	Average Monthly Mobile Phone Bill				Total
	> R100	R100-R200	<R200	Don't know	
Age 17	1	1	0	0	2
18	11	18	13	7	49
19	15	20	15	4	54
20	15	14	7	1	37
21	1	11	5	0	17
22	3	15	2	0	20
23	1	13	7	0	21
Total	47	92	49	12	200

5.3.6 Age versus person responsible for monthly mobile phone bill

The older the Generation Y respondent, the more likely he/she will be personally responsible for his/her mobile phone bill. On the one hand, looking at the young adult segment in Table 5.16, a total of 76% of 23-year olds (16 of 21 responses) are personally responsible for their mobile phone bills, followed by 35% of 22-year olds (7 of 20 responses). This is in line with the fact that most young adults are either employed part-time or full-time. On the other hand, a total of 55% of 18-year olds stated that their parents are responsible for their whole mobile phone bill followed by 54% of 19-year olds who also stated that their parents are responsible for the whole bill (See Table 5.16). Splitting the bill between the parents and the Generation Y respondent is more apparent in the teenager segment (26%) as opposed to the younger adult segment (19%). This could be as a result of ‘emancipation’ or liberation (discussed in Chapter 3, Section 3.4.1.2.1) where the teenager is given more responsibility in finance matters.

TABLE 5.16: AGE (SECTION A QUESTION 1) AND PERSON RESPONSIBLE FOR MONTHLY MOBILE PHONE BILL (SECTION B QUESTION 16)

Age*Person responsible for mobile phone bill Crosstabulation

Count

	Person responsible for mobile phone bill					Total
	I am personally responsible	The bill is divided between myself and parents	My parents are responsible for the whole bill	My employer	Other	
Age 17	0	1	1	0	0	2
18	8	13	27	0	1	49
19	9	13	29	0	3	54
20	11	9	17	0	0	37
21	4	4	9	0	0	17
22	7	4	9	0	0	20
23	16	1	2	2	0	21
Total	55	45	94	2	4	200

5.3.7 Gender versus person responsible for monthly mobile phone bill

Out of the 88 male respondents, 36 of the 88 (41%) cited that their parents are responsible for the whole mobile phone bill (refer to Table 5.17). A total of 52% of the female respondents also stated that their parents are responsible for the whole bill.

TABLE 5.17: GENDER (SECTION A QUESTION 2) AND PERSON RESPONSIBLE FOR MONTHLY MOBILE PHONE BILL (SECTION B QUESTION 16)

Gender*Person responsible for mobile phone bill Crosstabulation

Count

	Person responsible for mobile phone bill					Total
	I am personally responsible	The bill is divided between myself and parents	My parents are responsible for the whole bill	My employer	Other	
Male	28	19	36	2	3	88
Female	27	26	58	0	1	112
Total	55	45	94	2	4	200

5.3.8 Average monthly mobile phone bill versus person responsible for mobile phone bill

This cross-tabulation (Table 5.18) indicates that parents in the majority of instances are responsible for the mobile phone bill no matter what the mobile phone bill amounts to per month. A total of 61% of the respondents (30 of 49 responses) who had a mobile phone bill amounting to more than R200 per month had their parents pay their mobile phone bill with only 24% of them (12 of 49 responses) paying the mobile phone bill themselves.

TABLE 5.18: AVERAGE MONTHLY MOBILE PHONE BILL (SECTION B QUESTION 15) AND PERSON RESPONSIBLE FOR MOBILE PHONE BILL (SECTION B QUESTION 16)

Average Monthly Mobile Phone Bill*Person responsible for mobile phone bill Crosstabulation
Count

	Person responsible for mobile phone bill					Total
	I am personally responsible	The bill is divided between myself and parents	My parents are responsible for the whole bill	My employer	Other	
Average >R100	17	9	19	0	2	47
Monthly R100-R200	26	29	37	0	0	92
Phone <R200	12	5	30	2	0	49
Bill Don't know	0	2	8	0	2	12
Total	55	45	94	2	4	200

5.3.9 Employment status versus person responsible for monthly mobile phone bill

As would be expected, all the respondents who were employed full-time were responsible for their mobile phone bill whereas the majority of students (89 of 171 responses) stated that their parents were responsible for the whole mobile phone bill as indicated in Table 5.19.

TABLE 5.19: EMPLOYMENT STATUS (SECTION A QUESTION 4) AND PERSON RESPONSIBLE FOR MONTHLY MOBILE PHONE BILL (SECTION B QUESTION 16)

Employment Status*Person responsible for mobile phone bill Crosstabulation
Count

Employment Status	Person responsible for mobile phone bill					Total
	I am personally responsible	The bill is divided between myself and parents	My parents are responsible for the whole bill	My employer	Other	
Student	37	41	89	1	3	171
Employed (full-time)	4	0	0	0	0	4
Employed (part-time)	14	4	4	1	0	23
Confidential	0	0	1	0	1	2
Total	55	45	94	2	4	200

5.3.10 Pocket money received versus person responsible for monthly mobile phone bill

According to Table 5.20, of the 55 respondents who indicated that they are personally responsible for their mobile phone bill, 12 of them receive R301-R400 per month and 9 of them receive R202-R300. The respondents who earn more than R1000 mostly pay their own way. The two respondents who indicated that their employer is responsible for their mobile phone bill receive between R701-R800 per month and more than R1000 respectively.

TABLE 5.20: POCKET MONEY RECEIVED (SECTION B QUESTION 14) AND PERSON RESPONSIBLE FOR MONTHLY MOBILE PHONE BILL (SECTION B QUESTION 16)

Pocket Money received *Person responsible for mobile phone bill Crosstabulation

Count

		Person responsible for mobile phone bill					Total
		I am personally responsible	The bill is divided between myself and parents	My parents are responsible for the whole bill	My employer	Other	
Pocket Money	R101-R200	1	1	2	0	0	4
	R202-R300	9	7	11	0	3	30
	R301-R400	12	21	39	0	0	72
	R401-R500	8	10	20	0	0	38
	R501-R600	7	1	6	0	0	14
	R601-R700	3	1	6	0	0	10
	R701-R800	2	1	5	1	0	9
	R801-R900	2	1	1	0	0	4
	R901-R1000	3	1	0	0	0	4
	>R1000	8	0	1	1	0	10
Total		55	44	91	2	3	195

5.3.11 Age versus number of mobile phone calls made and received per day

All ages receive and make similar amounts of calls as shown in both cross-tabulations (Table 5.21 and Table 5.22) above, however younger Generation Y respondents received significantly more calls. Many factors could contribute to this including the fact that most of the teenagers were on prepaid hence a limit to the amount of calls they make and secondly the fact that parents would probably check up on their younger kids as opposed to the younger adults who are less under their parental influence.

TABLE 5.21: AGE (SECTION A QUESTION 1) AND NUMBER OF MOBILE PHONE CALLS MADE PER DAY (SECTION C QUESTION 17a)

Age*Number of mobile phone calls made per day Crosstabulation

Count

	Average Number of Calls Made per Day				Total
	Less than 5	5-10	10-20	More than 20	
Age 17	0	2	0	0	2
18	37	10	2	0	49
19	34	16	4	0	54
20	28	6	1	2	37
21	14	2	1	0	17
22	14	6	0	0	20
23	9	11	1	0	21
Total	136	53	9	2	200

TABLE 5.22: AGE (SECTION A QUESTION 1) AND NUMBER OF MOBILE PHONE CALLS RECEIVED PER DAY (SECTION C QUESTION 17b)

Age*Number of mobile phone calls received per day Crosstabulation

Count

	Average Number of Calls Received per Day				Total
	Less than 5	5-10	10-20	More than 20	
Age 17	0	1	1	0	2
18	28	16	4	1	49
19	23	27	4	0	54
20	15	16	3	3	37
21	8	8	1	0	17
22	11	9	0	0	20
23	5	12	4	0	21
Total	90	89	17	4	200

5.3.12 Age versus average length of mobile phone call

The age group of 17-19 (44% of them) spend less than 5 minutes on the mobile phone and 42% spend between 5 and 15 minutes as illustrated in Table 5.23. The age group of 20-23 (36%) spend less than 5 minutes on the mobile phone and 61% spend between 5 and 15 minutes. It can be deduced from the cross-tabulation above that the average length of a mobile phone call tends to be longer the older the respondent.

TABLE 5.23: AGE (SECTION A QUESTION 1) AND AVERAGE LENGTH OF MOBILE PHONE CALL (SECTION C QUESTION 18)

Age*Average length of mobile phone call Crosstabulation

Count

		Average Length of Mobile Phone Call				Total
		Less than 5 minutes	5-15 minutes	16-45 minutes	More than 45 minutes	
Age	17	1	1	0	0	2
	18	17	25	5	2	49
	19	28	18	7	1	54
	20	15	21	1	0	37
	21	6	9	2	0	17
	22	8	12	0	0	20
	23	5	16	0	0	21
	Total	80	102	15	3	200

5.3.13 Gender versus average length of mobile phone call

Out of the 88 male respondents in Table 5.24, 51 of the 88 (58%) mostly spend less than 5 minutes on a mobile phone call. A total of 63% of female respondents mostly spend between 5-15 minutes on average on a mobile phone call. This indicates the tendency for female respondents to spend longer time on a mobile phone call than do their male counter parts.

TABLE 5.24: GENDER (SECTION A QUESTION 2) AND AVERAGE LENGTH OF MOBILE PHONE CALL (SECTION C QUESTION 18)

Gender*Average length of mobile phone call Crosstabulation

Count

		Average Length of Mobile Phone Call				Total
		Less than 5 minutes	5-15 minutes	16-45 minutes	More than 45 minutes	
Gender	Male	51	32	4	1	88
	Female	29	70	11	2	112
	Total	80	102	15	3	200

5.3.14 Age versus number of SMS messages sent per day

The teenage respondents tend to send on average between 5 to 10 SMS messages daily while the young adults tend to send on average between 11-20 SMS messages daily (see Table 5.25). This difference may be due to the fact that some of the younger adults are also employed (part-time or full-time) and use SMS' s more than the teenager segment.

TABLE 5.25: AGE (SECTION A QUESTION 1) AND NUMBER OF SMS MESSAGES SENT PER DAY (SECTION C QUESTION 19)

Age*Number of SMS messages sent per day Crosstabulation

Count

		Number of SMS messages sent per day				Total
		5-10	11-20	21-30	More than 30	
Age	17	1	1	0	0	2
	18	26	17	6	0	49
	19	29	17	7	1	54
	20	13	15	5	4	37
	21	6	10	1	0	17
	22	5	14	0	1	20
	23	5	16	0	0	21
	Total	85	90	19	6	200

5.3.15 Gender versus number of SMS messages sent per day

It is evident from the cross-tabulation above (Table 5.26) that 49% of male respondents send on average 5 to 10 SMS messages per day (43 of 88 responses) and 50% of female respondents send on average 11-20 SMS messages (56 of 112 responses).

TABLE 5.26: GENDER (SECTION A QUESTION 2) AND NUMBER OF SMS MESSAGES SEND PER DAY (SECTION C QUESTION 19)

Gender*Number of SMS messages sent per day Crosstabulation

Count

		Number of SMS messages sent per day				Total
		5-10	11-20	21-30	More than 30	
Gender	Male	43	34	8	3	88
	Female	42	56	11	3	112
Total		85	90	19	6	200

5.3.16 Gender versus person contacted most regularly on mobile phone

Table 5.27 shows that out of the 112 female respondents, 55 of the 112 (49%) cited contacting their close personal friends most regularly on their mobile phones, followed by family members (28%), boyfriends (12%), and casual friends (9%). A total of 35% of the male respondents contacted their close personal friends most regularly, followed by casual friends (26%), girlfriends, and family members (15%) and work colleagues (3%).

It is interesting to note that male respondents do not contact family members as much as female respondents.

TABLE 5.27: GENDER (SECTION A QUESTION 2) AND PERSON CONTACTED MOST REGULARLY ON MOBILE PHONE (SECTION C QUESTION 20)

Gender*person contacted most regularly on mobile phone Crosstabulation

Count

	Person contacted most regularly on mobile phone						Total
	Family Members	Casual Friends	Close Personal Friends	Boy/Girl Friend	Work Colleagues	Other	
Gender Male	13	23	31	13	3	5	88
Female	31	10	55	13	0	3	112
Total	44	33	86	26	3	8	200

5.3.17 Mobile phone brand awareness versus brand of mobile phone owned

The cross-tabulation in Table 5.28 indicated that most of the respondents cited the brand of the mobile phone they owned as the first mobile phone brand that comes to mind. However it seems quite clear that Nokia has reached top of mind awareness in the mobile phone market and a large number respondents (19%) who own a mobile phone other than Nokia still cited Nokia as the first mobile phone brand that comes to mind. Out of the 139 respondents who owned Nokia mobile phones, 81% of them (122 of 139 responses) cited Nokia as the first mobile phone brand. Out of the 17 respondents who owned Motorola mobile phones, 71% cited Nokia as the first mobile phone brand (12 of 17 responses) followed by 29% who cited Motorola. Samsung mobile phone owners cited that Samsung and Nokia (10 of 20 responses) is the first mobile phone brand. Respondents who owned Siemens mobile phones cited

that Nokia is the first brand that comes to mind (2 of 4 responses), followed by Siemens and Samsung with 25% respectively (1 of 4 responses). Similarly, Generation Y respondents who owned Sony Ericsson mobile phones cited Sony Ericsson (50%), Nokia (25%) and Motorola (25%) as their first mobile phone brand that comes to mind.

TABLE 5.28: MOBILE PHONE BRAND AWARENESS (SECTION B QUESTION 10) AND BRAND OF MOBILE PHONE OWNED (SECTION B QUESTION 11)

Mobile Phone Brand Awareness*brand of mobile phone owned Crosstabulation

Count

Mobile phone brand awareness	Brand of Mobile Phone Owned						Total
	Nokia	Motorola	Samsung	Siemens	Sony Ericsson	Own more than one brand	
Nokia	122	12	10	2	2	3	151
Motorola	5	5	0	0	2	0	12
LG	1	0	0	0	0	0	1
Samsung	8	0	10	1	0	1	20
Siemens	1	0	0	1	0	0	2
Sony Ericsson	2	0	0	0	4	0	6
Total	139	17	20	4	8	4	192

5.3.18 Brand of mobile phone owned versus brand loyalty

Nokia, Motorola and Samsung holders are more likely to be brand loyal as opposed to Siemens, Sony Ericsson and Alcatel holders (refer to Table 5.29). This is in line with mobile phone brand awareness (question 10 of questionnaire) where Nokia was cited as the preferred brand of mobile phone and was found to be the first choice of many of the respondents with Samsung being reported as the second most cited brand (28%) and Motorola following respectively (21%). Siemens came fourth with 24% and Sony Ericsson came fifth with 15%. This finding reveals that the three top-of-mind awareness brands in the mobile phone industry (Nokia, Samsung and Motorola) are likely to create brand loyalty amongst its customers.

TABLE 5.29: BRAND OF MOBILE PHONE OWNED (SECTION B QUESTION 11) AND BRAND LOYALTY (SECTION B QUESTION 12)

Brand of mobile phone owned*Brand loyalty Crosstabulation

Count

Brand of mobile phone owned	Brand Loyalty		Total
	Yes	No	
Nokia	121	20	141
Motorola	13	5	18
Samsung	18	3	21
Siemens	2	3	5
Sony Ericsson	3	6	9
Alcatel	0	1	1
More than one brand	1	4	5
Total	158	42	200

5.3.19 Brand of mobile phone owned versus reason for choosing particular brand of mobile phone

Personal choice appears to be the main reason for choosing a particular brand of mobile phone no matter what the brand of mobile phone owned is as shown by the cross-tabulation above (see Table 5.30). A total of 56% of Nokia, Motorola, and Sony Ericsson holders stated personal choice and 28% phone design, size, and features. A total of 52% of Samsung holders stated personal choice followed by 29% who stated recommendation by friends and/or family. Siemens holders stated that both personal choice and recommendation by friends and/or family were the main reasons for choosing their mobile phone. The only Alcatel holder stated promotional offer as the reason for choosing his//her mobile phone.

TABLE 5.30: BRAND OF MOBILE PHONE OWNED (SECTION B QUESTION 11) AND REASON FOR CHOOSING PARTICULAR BRAND OF MOBILE PHONE (SECTION B QUESTION 13)

Brand of mobile phone owned*Reason for choosing particular brand of mobile phone

Crosstabulation

Count

Brand of mobile phone owned	Reason for choosing particular brand of mobile phone						Total
	Personal Choice	Recommendation by mobile phone store	Recommendation by friend and or family	Phone design, size and features	Promotional offer	Other: It was given to me	
Nokia	79	1	17	39	4	1	141
Motorola	10	0	3	5	0	0	18
Samsung	11	0	6	4	0	0	21
Siemens	2	1	2	0	0	0	5
Sony Ericsson	5	0	0	3	1	0	9
Alcatel	0	0	0	0	1	0	1
More than one brand	3	0	0	2	0	0	5
Total	110	2	28	53	6	1	200

5.3.20 Brand of mobile phone owned versus the mobile phone as a fashion statement

As illustrated in Table 5.31, the majority of Nokia holders (75 of 141 responses) disagreed and strongly disagreed with the statement that “the mobile phone you have tells how fashionable your are.” Motorola holders on the other hand were split in half with 39% disagreeing and strongly disagreeing with the statement and 33% agreeing and strongly agreeing with the statement. Almost half of the Samsung holders (10 of 21 responses) disagreed and strongly disagreed with the statement, 2 of the 5 Siemens holders once again disagreed with the statement, and 44% (4 of the 9 responses) of Sony Ericsson holders strongly disagreed and disagreed with the statement. Although the mobile phone acting as a fashion statement (or crystallisation symbol) is seen as a motive by some authors in the literature review in Chapter 3 (Ling 2000, Alexander 2000), there doesn’t seem to be evidence supporting the statement “the mobile phone you have tells how fashionable you are” in this particular study no matter what brand of mobile phone Generation Y respondents have.

TABLE 2.31: BRAND OF MOBILE PHONE OWNED (SECTION B QUESTION 11) AND THE MOBILE PHONE AS A FASHION STATEMENT (SECTION D QUESTION 23 STATEMENT 11)

Brand of mobile phone owned* the mobile phone you have tells how fashionable you are

Crosstabulation

Count

Brand of mobile phone owned	The mobile phone you have tells how fashionable you are					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	
Nokia	46	29	31	23	12	141
Motorola	4	3	5	5	1	18
Samsung	7	3	7	3	1	21
Siemens	2	0	2	0	1	5
Sony Ericsson	1	3	3	2	0	9
Alcatel	0	0	0	0	1	1
More than one brand	2	0	1	1	1	5
Total	62	38	49	34	17	200

5.4 FACTOR ANALYSIS

To test the attitudes of Generation Y regarding mobile phone, SPSS' s factor analysis was done on the statements in Section D. Factor analysis is a data reduction technique that involves the study of inter-relationships among variables in an effort to find a new set of observed variables. This new set of variables is smaller in number than the original data set and further establishes dimension within the data. (Malhotra, 1996:586)

Factor analysis was applied to minimise the number of variables whilst simultaneously maximising the amount of information in the analysis. Factor analysis was used to reduce the eleven criteria in question 23 in the questionnaire into a smaller set of linear composites that preserved most of the information of the original data set.

To illustrate factor analysis in this dissertation, the researcher wanted to determine the underlying attitudes Generation Y consumers have towards mobile phones. The attitudes towards mobile phones on attributes (V1 to V11) are examined to 1) understand if these attitudes can be “grouped” and 2) reduce the eleven variables to a smaller number. By grouping the attitudes, it will be easier to see the “big picture” in

terms of understanding what respondents feel the attitudes towards mobile phones could be. A number of contingent statements were tested regarding the perceived attitudes towards mobile phones. The respondents were faced with these 11 attitudes that were in turn scored on the importance scale as shown in Table 5.32. The respondents were asked to indicate their degree of agreement with the following statements using a 5-point scale (1=Strongly Disagree, 5=Strongly Agree).

TABLE 5.32: ELEVEN ATTITUDES TOWARDS MOBILE PHONES

V1: I use my mobile phone for emergency/safety purposes
V2: I use my mobile phone for convenience
V3: I feel more connected to my friends now that I have a mobile phone
V4: I save most of the SMS' s I receive
V5: My mobile phone allows me to do more things at the same time
V6: My mobile phone allows me to do things faster
V7: My mobile phone interferes in how I go about my day-to-day activities
V8: My mobile phone makes my life easier
V9: My parents regularly check up on me by calling me on my mobile phone
V10: My mobile phone allows me more freedom
V11: The mobile phone you have tells how fashionable you are

5.4.1 Construction of the correlation matrix

A correlation matrix was constructed based on these ratings data and was obtained to understand attitudes towards mobile phones. The correlation matrix, constructed from the data obtained to understand mobile phone attitudes is shown in Table 5.33 below. There are relatively high correlations among V5, V6, V7 and V8. Likewise, there are relatively high correlations among V3, V9 and V10. V1 and V2 also seem to be highly correlated. These variables may be expected to correlate with the same factors.

TABLE 5.33: CORRELATION MATRIX

Correlation	Qu23a	Qu23b	Qu23c	Qu23d	Qu23e	Qu23f	Qu23g	Qu23h	Qu23i	Qu23j	Qu23k
V1 Qu23a	1.000	.578	.385	.160	.350	.292	.080	.214	.169	.186	.123
V2 Qu23b	.578	1.000	.498	.282	.371	.427	.123	.328	.191	.228	.055
V3 Qu23c	.385	.498	1.000	.381	.404	.504	.154	.401	.334	.334	.206
V4 Qu23d	.160	.282	.381	1.000	.325	.271	.088	.154	.174	.126	.253
V5 Qu23e	.350	.371	.404	.325	1.000	.691	.291	.307	.279	.325	.211
V6 Qu23f	.292	.427	.504	.271	.691	1.000	.291	.390	.262	.315	.167
V7 Qu23g	.080	.123	.154	.088	.291	.291	1.000	.141	.173	.182	.220
V8 Qu23h	.214	.328	.401	.154	.307	.390	.141	1.000	.302	.568	.156
V9 Qu23i	.169	.191	.334	.174	.279	.262	.173	.302	1.000	.274	.150
V10 Qu23j	.186	.228	.334	.126	.325	.315	.182	.568	.274	1.000	.208
V11 Qu23k	.123	.055	.206	.253	.211	.167	.220	.156	.150	.208	1.000

The Bartlett's test of sphericity was highly significant indicating high correlation between the variables (See Table 5.34). The hypothesis, that the population correlation matrix is an identity matrix is rejected by the Bartlett's test of sphericity. As illustrated in Table, the appropriate Chi-square statistic is 607.237 with 55 degrees of freedom that is significant at the 0.000 level. The value of the KMO statistic is also large, 0.793 which is bigger than 0.5. Thus factor analysis may be considered an appropriate technique for analysing the correlation matrix.

TABLE 5.34: KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.793
Bartlett's Test of Sphericity	Approx. Chi- Square	607.237
	df	55
	Sig.	.000

5.4.2 Determining the method of factor analysis

Table 5.35 shows the application of principal components analysis to the report. Under "Communalities", "Initial Column" it can be seen that the communality for each variable V1 to V11, is 1.0 as unities were inserted in the diagonal of the correlation matrix. The table labelled "Initial Eigenvalues" gives the eigenvalues. The eigenvalues for the factors, are as expected, in decreasing order of magnitude as we go from Factor 1 to Factor 11. The eigenvalue for a factor indicates the total variance attributed to that factor. The total variance accounted for by all 11 factors is 11.00, which is equal to the number of variables. The second column under "Communalities" in Table 5.35 gives relevant information after the desired number of factors has been extracted.

TABLE 5.35: COMMUNALITIES

	Initial	Extraction
Qu23a	1.000	.605
Qu23b	1.000	.723
Qu23c	1.000	.579
Qu23d	1.000	.454
Qu23e	1.000	.587
Qu23f	1.000	.584
Qu23g	1.000	.439
Qu23h	1.000	.723
Qu23i	1.000	.327
Qu23j	1.000	.707
Qu23k	1.000	.498

Extraction Method: Principal Components Analysis

Table 5.35 shows that Factor 1 accounts for a variance of 3.891, which is $(3.891/11)$ or 35.372 % of the total variance. Likewise the second factor accounts for $(1.235/11)$ or 11.227% percent of the total variance, and the first two factors combined account for 46.599% of the total variance. Several considerations are involved in determining the number of factors that should be used in the analysis.

5.4.3 Determining the number of factors

Several procedures have been suggested for determining the number of factors. In this report, the author used the approaches based on eigenvalues, percentage of variance and scree plot accounted for (Malhotra, 1996:593).

5.4.3.1 Determination based on eigenvalues

In this approach, only factors with eigenvalues greater than 1.0 are retained; the other factors are not included in the model (Malhotra, 1996:596).

The eigenvalue greater than 1.0 results in three factors being extracted. The “Extraction Sums of Squared Loadings” gives the variances with the factors that are retained. These are the same as those under “Initial Eigenvalues”.

TABLE 5.36: TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.891	35.372	35.372	3.891	35.372	35.372
2	1.235	11.227	46.599	1.235	11.227	46.599
3	1.099	9.991	56.590	1.099	9.991	56.590
4	.950	8.641	65.231			
5	.823	7.486	72.716			
6	.785	7.135	79.852			
7	.642	5.837	85.688			
8	.520	4.728	90.417			
9	.431	3.916	94.332			
10	.364	3.309	97.641			
11	.259	2.359	100.00			

Extraction Method: Principal Components Analysis

1.4.3.1.Determination based on the percentage of variance

In this approach the number of factors extracted is determined so that the cumulative percentage of variance extracted by the factors reaches a satisfactory level. The factors extracted should account for at least 60% of the variance (Malhotra, 1996:593).

From the cumulative percentage of variance accounted for, the first four factors accounted for 65.231%. Thus three to four factors appear to be reasonable in this situation (See Table 5.36). The factors can be labelled as:

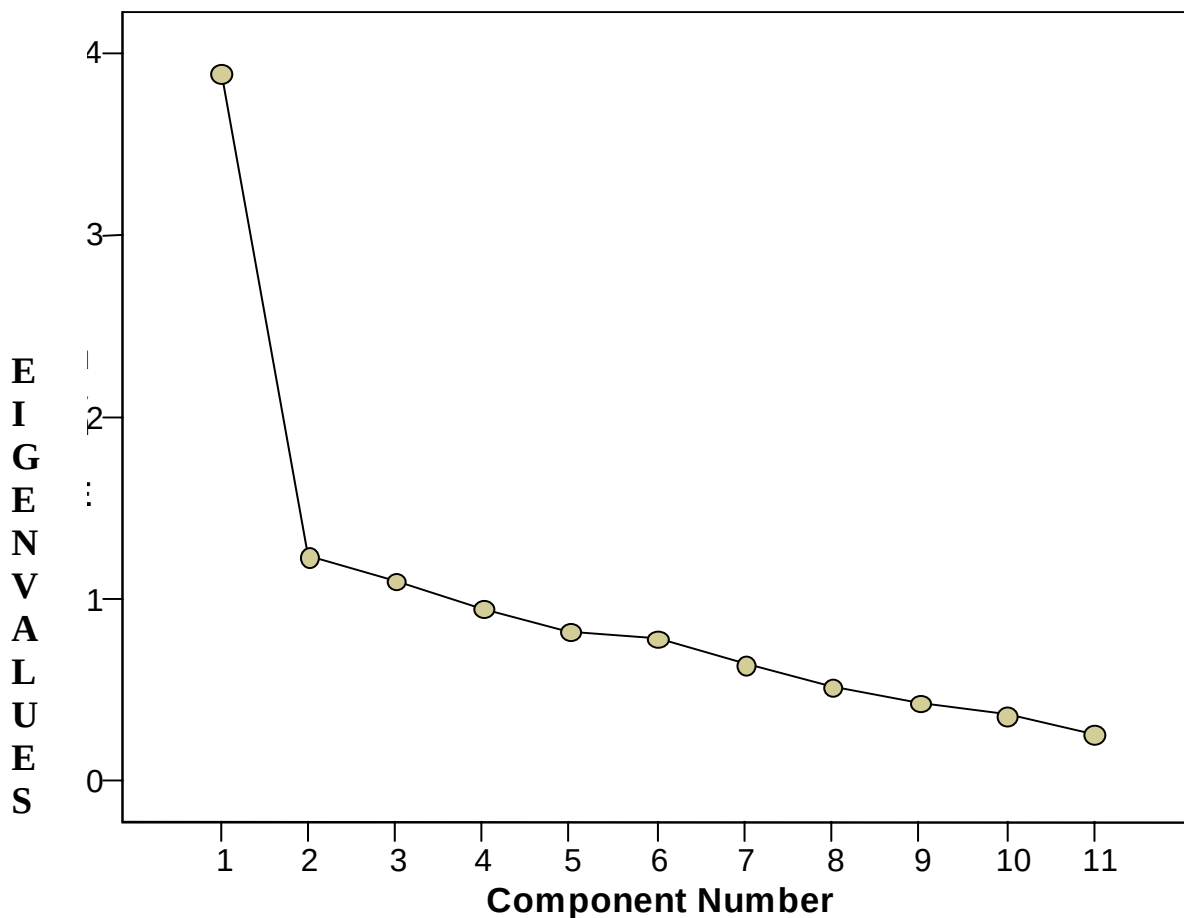
- Factor 1: *Safety and Security*
- Factor 2: *Emancipation*
- Factor 3: *Micro-Coordination*

1.4.3.2. Determination based on scree plot

A scree plot is a plot of the eigenvalues against the number of factors in order of extraction as illustrated in Figure 5.35. The shape of the plot is used to determine the number of factors. Typically the plot has a distinct break between the steep slope of factors, with large eigenvalues and a gradual trailing off associated with the rest of the factors. Generally, the number of factors determined by a scree plot will be one or a few more than that determined by the eigenvalue criterion (Malhotra, 1996:593).

From the scree plot given below, a distinct break occurs at three factors.

FIGURE 5.35: SCREE PLOT



One could summarise the data by stating that the respondents appear to have three major kinds of attitudes towards mobile phones. The factors can be labelled:

- **Factor 1:** The first factor can be called *Safety and Security* as the highest loading relate to three variables pertaining to V1 and V2. The notion of a mobile phone as a security device is an important theme; the mobile phone is used as a monitoring device by parents-it is a practical way of keeping in touch with their children, children and teenagers can use their mobile phones to contact parents in case of emergencies, etc.
- **Factor 2:** The second factor has high loadings for V3, V9 and V10 and may be labelled as *Emancipation* or *Liberation* (Responsibility given to Generation Y'ers as they are growing up)

- **Factor 3:** Factor 3 is highly related with V5, V6, V7 and V8 and may be labelled as *Micro-Coordination* (or direct co-ordination of activities in Generation Y's everyday life). The mobile phone allows for contact to be made when needed and coordination of activities with the parents.

5.4.4 Reliability testing

SPSS's reliability analysis was done on Section D's statements to test the reliability of the responses given by Generation Y respondents. Both the Alpha test and the split-half method were determined to give the best indication of the reliability of the questions. The results were given by SPSS in Table 5.37 and 5.38 as follows:

TABLE 5.37: RELIABILITY STATISTICS

Cronbach's Alpha: .787
N of items: 11
N of cases: 200.0

TABLE 5.38: SPLIT-HALF METHOD

Cronbach's Alpha	Part1	Value	.783
		N of items	6 ¹
	Part 2	Value	.579
		N of items	5 ²
Total N of items			11
Correlation between forms			.504
Spearman-Brown	Equal Length		.670
	Unequal Length		.671
Guttman Split-Half Coefficient			.663

1. The items are: Qu23a, Qu23b, Qu23c, Qu23d, Qu23e, Qu23f.
2. The items are: Qu23f, Qu23g, Qu23h, Qu23i, Qu23j, Qu23k

The average of the two tests results in a score of 0.725 (the average of 0.787 and 0.663). The closer alpha's value is to 1, the more reliable the measurement scale was. In conclusion, Section D was thus a reliable measurement scale to determine the attitudes of Generation Y respondents towards mobile phones.

5.5 CONCLUSION

This chapter discussed the research results. Microsoft Excel and SPSS 12.0 statistical software for Windows were used for the results. The results were presented on a question-by-question basis and analysed using tables and graphs. Some cross-tabulations were then made between some questions to indicate some interesting findings regarding mobile phone behaviour by Generation Y respondents.

The main findings regarding mobile phone usage by Generation Y students in the city of Johannesburg were as follows: Generation Y respondents surveyed were reported to have owned a mobile phone for three to five years with a majority of them owning Nokia mobile phones. Most Generation Y respondents were on prepaid packages and were not big spenders of airtime with the average mobile phone bill amounting to between R100-R200. Furthermore, SMS is seen as the more cost-effective way to communicate. Regarding the competitive situation in the mobile phone market, the perceptions of this segment is that Vodacom is perceived to be the “cool” operator, MTN the most “expensive” network operator and Cell C as “cheap and youthful.” A factor analysis was discussed for the attitudes towards mobile phones and was followed by a reliability testing. The data extracted provided answers to the primary and secondary objectives set in Chapter 1.

The following chapter, Chapter 6, will give recommendations and the conclusion of the study based on the findings and results of this chapter.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The results of the study were discussed in Chapter 5. In the last chapter of this study, Chapter 6, general conclusions will be drawn based on the findings in Chapter 5. The conclusions provide opportunities to make recommendations to academics, marketers, network providers and handset manufacturers concerning future research in the field of marketing in respect of Generation Y consumers in South Africa.

6.2 TESTING FOR THE RESEARCH OBJECTIVES

The objectives and sub-objectives of the study will be dealt with, together with recommendations and conclusions, in the following sections.

6.2.1 Primary research objective

This study was conducted in order to increase the understanding of the mobile phone usage of Generation Y consumers. The main objectives of the study indicate the following. First of all, the primary research objective was to gain information regarding the use of mobile phones by Generation Y consumers in the city of Johannesburg. The information relating to this question is contained in Section C and certain questions in Section B of the questionnaire in which mobile phone usage patterns were discussed. The main results of the study indicate the following.

6.2.1.1 Generation Y mobile phone usage

Mobile phone ownership figures among Generation Y students of two universities in the city of Johannesburg revealed the following facts. Students owning a mobile phone at the time the survey was conducted were screened.

Generation Y respondents were reported to have owned a mobile phone for three to five years with a majority of them owning a Nokia mobile phone, followed by Samsung, Motorola, Sony Ericsson and Siemens. Most Generation Y respondents were on prepaid packages and did not spend excessive amounts of airtime with the average mobile phone bill amounting to between R100-R200 per month. The teenager segment (17-19 years old) and the young adult segment (20-23 years old) reported different behaviours regarding their mobile phone usage. The teenagers were more likely to be prepaid users whereas a large proportion of young adults were contract users due to higher incidence of employment. Thus, the older the Generation Y respondent, the more likely he/she will be to be personally responsible for his/her mobile phone bill. Furthermore Generation Y respondents reported making less than five calls a day. Usage patterns are divided into calls made and calls received, with young people receiving as many calls as they make (less than five). There were no significant differences between the teenager and young adult segment regarding the number of mobile phone calls made per day. However, younger Generation Y respondents received significantly more calls than the young adults.

According to over half of the respondents, the average length of a mobile phone call is between five and fifteen minutes. Furthermore, the average length of a mobile phone call tended to be longer the older the respondent. The Generation Y respondents send on average five to ten SMS' s a day, with the younger adults using SMS' s more than the teenager segment due- once again this fact is attributable a higher incidence of employment. This indicates a preference for SMS' s which can be ascribed to reasons such as convenience and cost. Unlike voice communications SMS' s may be sent anywhere, anytime and anyplace. Cost is the other important criteria for sending SMS' s. While a voice mobile phone call costs around R2.50, an SMS costs no more than 70 cents during peak times (See Chapter 2, section on tariffs).

Close personal friends, family members, casual friends, boy/girl friends and work colleagues are all people contacted by mobile phone in order of preference as indicated by Generation Y. Peer relationships are highly regarded by this generation and therefore it comes as no surprise that Generation Y contact their close personal friends mostly on their mobile phones. Most Generation Y respondents indicated that they use their mobile phones during off-peak hours (after 8pm); this is the period during which calls and SMS' s are cheaper, and also during which free minutes apply if the callers are on contracts- This reveals the cost-conscious nature of the generation. SMS' s were the most frequently used feature after voice calls, indicating the popularity of the SMS as an important way in which Generation Y respondents communicate.

Generation Y respondents do on occasions use their mobile phone calls to manage personal information, play games, and receive and send pictures from a digital camera. Accessing the Internet (WAP) and sending and receiving email were not as popular, indicating the slow uptake of such a feature by Generation Y. New technologies such as WAP will be adopted by Generation Y consumers only once tariffs for this service are in line with their budgets and needs. Generation Y has thus refrained from excessive use of advanced 3G technologies as a result of cost. For a detailed exposition on the main findings in this regard please consult Chapter 5.

6.2.2 Secondary research objectives

The first secondary research objective was to determine the demographics of Generation Y respondents. The researcher thus used information retrieved from Section A of the questionnaire to find out more about the demographics of Generation Y consumers. The results provide interesting aspects of demographics for use by network providers (See Table 6.1):

TABLE 6.1: GENERATION Y STUDENT DEMOGRAPHIC INFORMATION

	Total Sample (N = 200)	17-19 n =105	20-23 n = 95
University:			
University of the Witwatersrand (Wits)	114	55	59
University of Johannesburg (UJ)	86	50	36
Age Breaks	200	105	95
Sex			
Male	88	38	50
Female	112	67	45
Ethnic Background			
White	120	44	76
Black	21	9	12
Coloured	2	1	1
Indian	55	49	6
Other	2	2	0
Employment Status			
Student (full-time)	171	100	70
Employed (full-time)	4	0	4
Employed (part-time)	23	3	21
Unemployed	0	0	0
Confidential	2	2	0

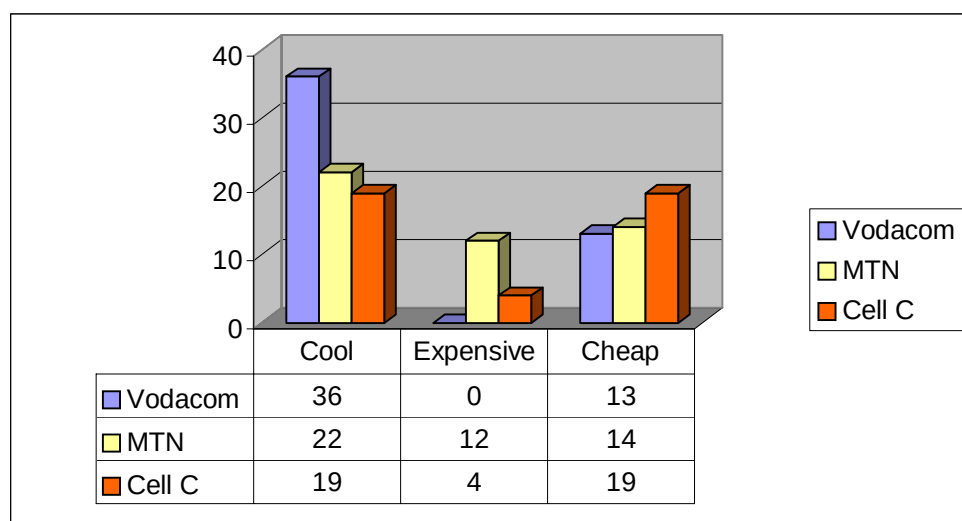
As indicated in Table 6.1 the total sample consisted of 200 respondents. Of those respondents 105 were labelled as teenagers (17-19 years old) and 95 as young adults (20-23 years old); 114 of the respondents attended the University of the Witwatersrand (Wits) and 86 attended the University of Johannesburg (UJ); 88 of the respondents were males and 112 were females; 120 were White, 21 were Black, 2 Coloured, 55 Indian and 2 other. Out of the 200 respondents 171 of them were full-time students, 4 were employed full-time, 23 employed part-time and 2 chose confidential as their answers. In summary these findings yield the following profile of the Generation Y students surveyed.

Profile of Generation Y students surveyed

- Aged between 18 and 25
- Majority teenagers (17-19 years old)
- Mostly female
- Mostly white
- Mostly full-time students

The second research objective was to determine the perceptions of Generation Y regarding the competitive situation in the mobile phone market. This information was provided by Section B (question 7) in which respondents were asked to write down one word or adjective to describe each of the three network operators (Vodacom, MTN and Cell C). As illustrated in Figure 6.1 Vodacom received the highest rating as being the “cool” operator, MTN was rated the most “expensive” network operator, and Cell C was regarded as “cheap and youthful”.

FIGURE 6.1: PERCEPTIONS OF THE THREE OPERATORS: VODACOM, MTN AND CELL C



6.2.3 Recommendations to network providers

Network providers should focus on marketing to the youth and develop youth focused services. This study has found that Generation Y students are extremely brand conscious and most of them are very loyal to the type of mobile phone they own and to the service provider they have chosen. Younger Generation Y consumers are more frequently likely to churn, whereas older Generation Y consumers are less likely to churn as a result of the inconvenience of time and cost. However, according to the findings, the Generation Y respondents surveyed were mostly brand loyal and were less likely to churn when it comes to operators and handsets if they are happy with the service provided. There is no doubt that capturing the attention of this group of consumers will ultimately increase the possibility of keeping these consumers loyal for life- a challenge many marketers face.

Based on the findings the following is recommended to network providers on how to market to the Generation Y segment.

TABLE 6.2: NETWORK PROVIDER'S BRANDING AND MARKETING STRATEGIES TO THE YOUTH SEGMENT

<u>Target Group:</u>	Generation Y consumers (18 to 24 year olds)
<u>Operator Brand Perception:</u>	Strength or specific positioning of operator brand
	Vodacom (Cool)
	MTN (Expensive)
	Cell C (Cheap and Youthful)
<u>Products and Services:</u>	
	Mobile Phones offered: Cheap and unique handsets (customisable mobile phones)
	Ease of Payment: Pay-as-you go plan (no activation fee nor annual contract)
<u>Flexibility of offer:</u>	Per second billing
	Ability to bundle: SMS bundles
	Cheapest per minute tariffs
<u>Loyalty Programmes:</u>	Discount family plans
	Fun features
<u>Customer service:</u>	Value added service
	Availability and variety of advanced services including MMS and WAP
<u>Distribution Channels:</u>	Focus on selling at places frequented by Generation Y (CD stores etc.)
	Range of operator stores and outlets
	Sponsor Generation Y events: sports

The concept highlighted in Table 6.2 above is clearly distinguishable, that is, target Generation Y with a pre-paid service that is heavily branded and presents few difficulties technology-wise.

- This pre-paid service should be sub-branded; for example, Cell C's youth offering is sub-branded "CY", and Vodacom's youth offering is sub-branded "4U".
- Mobile phone usage behaviour requires the following forms of support: simple mobile plans, mobile phone bill limits, cheap handsets and relevant outlets.
- Although the youth market commands a large amount of disposable income they are nonetheless extremely cost-conscious. Mobile network providers should consider reducing entry costs and tariffs for new Generation Y users in order to increase subscriber members.

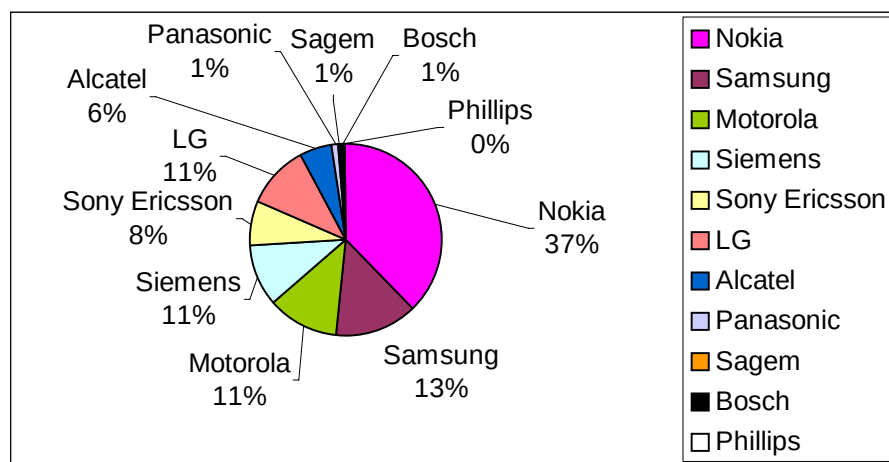
Pricing should be tailored for Generation Y in the following ways: per second billing, cheapest per minute tariffs and SMS bundles.

- Prepaid services, as discussed in Chapter 2, should charge a fixed amount per minute for the first minute and this amount should decrease the longer a consumer talks on the phone. Cheaper per minute tariffs and per second billing will encourage increased use of voice calls. Furthermore discount plans in terms of which additional family members may be added (usually for a flat monthly fee) should also be taken into account (Cell C is currently using this form of incentive). Any Generation Y user who uses more than R200 of airtime a month should receive an incentive (e.g. another R50 of airtime free of charge). An example of such an incentive, given by Cell C, is their youth brand known as CY. CY's initial offering is a uniquely branded starter pack, additional lifetime value (10 SMS' s per month for free forever), R20 worth of airtime, free logos and ringtones, and two movie vouchers (Chapter 2, Section 2.3.4).
- SMS' s have proved to be a more efficient and less costly method of communicating than mobile voice calls and should therefore be included in the pre-paid service by way of bundles. The calling features should also be youth-orientated.
- Network providers in South Africa should follow the examples by Virgin Mobile and Boost Mobile of how to tap the Generation Y market successfully. Virgin Mobile features include "Rescue Ring" which allows Virgin users to schedule an incoming call in advance- young adults commonly use it as an excuse to escape from a boring date or meeting. Voicemania (voicemail greetings from celebrities) and ringtones from latest hit songs are additional fun features provided by Virgin Mobile. Virgin also built the Star-MTV platform which gives the users access to music news (Maier, 2003).

The third secondary objective of the research was to determine the mobile phone brand awareness of Generation Y. This information was obtained from Section B (question 10), and is tabulated in Table 6.3 and illustrated in Figure 6.2. Nokia was cited as the preferred brand of mobile phone and was found to be the first choice of many of the respondents. Samsung was the second most cited brand with Motorola, Siemens and Sony Ericsson following respectively.

TABLE 6.3: MOBILE PHONE BRAND AWARENESS

Mobile Phone Brand	Frequency*
Nokia	151
Samsung	55
Motorola	47
Siemens	42
Sony Ericsson	30
Other specified	LG: 44 Alcatel: 22 Panasonic: 4 Sagem: 2 Bosch: 2 Phillips: 1

FIGURE 6.2: MOBILE PHONE BRAND AWARENESS BY PERCENTAGE

6.2.4 Recommendations to handset manufacturers

It is not only network providers that are focusing on the youth market. Handset manufacturers have also placed great emphasis on designing their mobile phones to appeal to Generation Y. It is no surprise that Nokia, Samsung, Motorola and other handset manufacturers have gone to great lengths in their advertising budgets.

Clever advertising campaigns that will in turn lead to strong brand image are essential when targeting Generation Y consumers.

Nokia is still first in the mobile phone market but needs to keep abreast of technological changes as Motorola (Nokia's strongest competitor) and Samsung are taking market share away from Nokia.

This loss of market share is partly due to Nokia's refusal to incorporate new technologies, and also to the improvement in quality in the manufacture of Motorola and Samsung handsets.

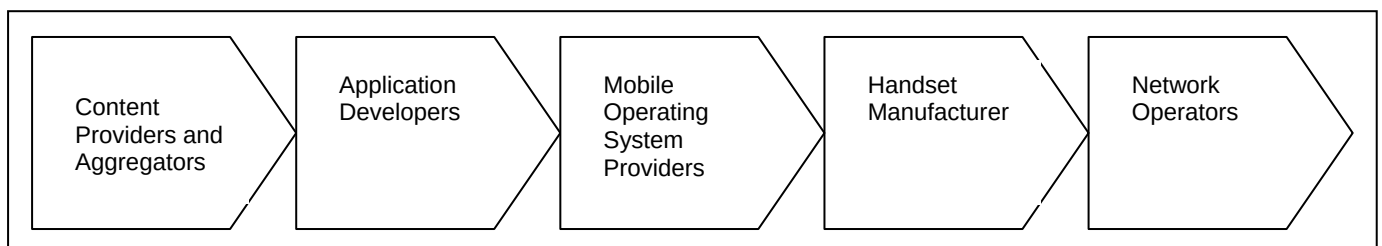
Each handset manufacturer should carefully re-think its strategy when marketing to Generation Y and focus on brand personality, brand positioning, product design and differentiation (Temporal & Lee, 2001).

For example Nokia focuses on customer relationships- trust is at the heart of the brand. It uses a combination of aspirational, benefit-based emotional features, and competition-driven positioning strategies. Nokia owns the "human" element of the mobile world- an understanding of what consumers want and what will fit in their particular lifestyle (Temporal & Lee, 2001). In turn, product design is also very important in the success of the brand. The way in which the consumer will experience the brand and how that experience reflects its brand character are all taken into account (the shape of the phone should be designed in such a way so as it is easy to hold).

According to a report by Nokia (Ahem, Billings, Lee, Spring, Tran & Yang, 2005), when Motorola first started to manufacture more technologically advanced phones, Nokia predicted that mobile phones were eventually going to become a popular product. Nokia adopted an off-core differentiation approach which made the brand what it is today. Nokia believed that the mobile phone would become a fashion statement and was the pioneer behind the idea of interchangeable faceplates. When the technology of most handset manufacturers became similar they began to compete over design. Samsung has begun to gain ascendancy over Nokia using Nokia's strategy. Samsung has recently joined Vogue in an attempt to lead the mobile phone fashion. Nokia is said to dominate the value chain (see in Figure 6.3) through the strength of its application developers, mobile operating systems and handsets (Ahem et al., 2005). Nokia SA noted that, for the African youth market, the lifestyle aspect of handsets is very important-this includes cameras, music and entertainment features. Nokia recognised that handsets were no longer a communication tool only, but also an important part of the individual's life (Lowman, 2005).

Network operators appear to dominate the value chain by using their billing relationship with end-users to become the sole brand identified by users. Nokia needs a new differentiation approach if it is to remain at the top and perhaps specifically targeting the Generation Y market is the way to do this. Generation Y has been found to be more technology aware than other segments of the markets so any new advances in technology will be readily adopted.

FIGURE 6.3: MOBILE COMMUNICATION INDUSTRY VALUE CHAIN



Source: Adapted by Ahem, Billings, Lee, Spring, Tran & Yang (2005)

6.3 AREAS FOR FUTURE STUDY

The following possibilities for future research emerge from this study:

- Consumer attitudes keep changing and these findings may not be applicable in all cases. Surveys should thus be undertaken periodically in order to gauge changing consumer mobile phone usage patterns and perceptions over time. These surveys should be carried out annually and this will, in turn, help academics, network providers and handset manufacturers alike to acquire useful information and to target users more effectively.
- The findings of this study are based entirely upon the research conducted in the Gauteng area (Johannesburg area) and hence may not be applicable to other areas on accounts of contextual and cultural factors. This survey should be carried out on a wider scale (nation-wide) so as to include Generation Y consumers from other areas. In future work the researcher encourages the replication of this study in other regional areas in which cross-regional similarities and differences could be studied.

Moreover, the population could also be extended to include tweens (7 to 12 year olds) and teens (13 to 17 year olds), as the use of mobile phones by children has increased significantly over the last years.

- The size of the sample in this study is relatively small. The results will thus vary with those from a larger universe. A larger sample size would yield more accurate results.
- More research is needed to analyse the differences between teenagers and young adults, as well as to examine cross-gender differences. Differences between males and females in this study are significant in certain cases but not always to the extent one may have expected.
- Additional research exploring the way in which mobile phones influence the communication patterns between young people and their parents, and amongst themselves should be undertaken. The preservation of relationships as a result of the mobile phone was a central theme and should be further explored.
- Each of the sub-topics covered in the literature review, for example, the determinants influencing consumer behaviour (Chapter 3, Section 3.4), should be analysed in greater depth.

Future research into the topics discussed above will not only contribute to the existing literature on the mobile phone usage of Generation Y, but, more significantly, to an improvement in our understanding of Generation Y's future consumer behaviour. A better understanding of this market will hopefully improve the marketing efforts of mobile phone groups and result in better mobile products and services being delivered to the market.

6.4 CONCLUSION

South Africa has a large youth population and ultimately their mobile phone usage will account for growing revenue. This investigation of mobile phone usage among Generation Y students in the city of Johannesburg provided several insights and clear conclusions. Firstly, Generation Y is one of the most important demographics shaping the landscape of consumer behaviour. This generation is fickle, lucrative, cost-conscious and very brand aware. Secondly, usage patterns are likely to differ between age groups and between genders.

There is no doubt that Generation Y will exhibit different attitudes and, behaviours towards and acceptance of a wireless device such as a mobile phone as opposed to the population at large, hence one tariff alone may not be sufficient to target this lucrative market. A variety of bundled services offered by network providers could prove to be a valuable method of retaining subscribers.

Signing up a greater number of Generation Y consumers will go beyond merely increasing the number of subscribers as this target market is more likely to experiment with new communications- they are the primary adopters of text-messaging technologies including SMS and MMS. SMS has been found to be a more cost-effective way to communicate with peers than voice calls. Furthermore, the Generation Y respondents surveyed were brand loyal so branding and name recognition are obviously in favour. Understanding the way in which Generation Y consumers have incorporated the mobile phone into their everyday lives will be of relevance for all future applications. Mobile network providers will ultimately succeed if they custom design their products and services in order to serve this unique segment of the market and if they tailor their companies around the Generation Y consumer.

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APPENDIX A
QUESTIONNAIRE

Appendix A

QUESTIONNAIRE



I am currently completing a Masters' dissertation as part of my Masters' degree. The subject matter of the questionnaire deals with the use of mobile phones by teenagers and young adults (known as Generation Y) in the South African market.

This questionnaire should not take longer than ten minutes to complete.

Please answer all questions to the best of your ability. Mark your answer by placing a cross (X) in the appropriate block.

Thank you for your time and co-operation

Helena Koutras

Screening Questions

1. Are you a student on campus?

Yes	
No	

2. Do you own a mobile phone?

Yes	
No	

If your answer is yes to both questions above, please respond to the following questions by filling in the gaps or putting an X in the appropriate block

SECTION A- Demographics

1. Age?

2. Gender?

Male	
Female	

3. Ethnic Background?

White	
Black	
Coloured	
Indian	
Other	

4. Employment Status?

Student	
Employed full-time	
Employed part-time	

Unemployed	
Confidential	

SECTION B- Mobile Phone Ownership

5. How long have you owned a mobile phone (in years)?

..... years

6. What mobile calling plan do you have?

	Pay-as-you go	Contract
Vodacom		
MTN		
Cell C		

7. Write down one word or adjective that describes each of the operators (such as trendy, cheap, cool, aspirational, etc...)

Vodacom:

MTN:

Cell C:

8. Have you used two or more of the operators above (Vodacom, MTN and Cell C)?

Yes	
No	

If your answer is yes, please answer question 9.

If your answer is no, please proceed to question 10.

9. Which of the networks do you personally think is best on each of the following aspects of service?

	Vodacom	MTN	Cell C	Don't know
Choice of packages and tariffs available				
Cost of calls				
Geographic coverage				
Ability to make calls without getting cut off				
Quality of customer service				
Choice of services available (ie email, WAP, SMS)				

10. Write down five mobile phone brands you are familiar with (eg Nokia, Samsung, etc):

- a).....
- b).....
- c).....
- d).....
- e).....

11. What brand of mobile phone do you have?

12. Will your next mobile phone be the same brand as your current mobile phone?

Yes	
No	

13. What is the main reason for choosing your brand of mobile phone? (Please tick one block)

Personal choice	
Recommendation by mobile phone store	
Recommendation by friends/family	
Phone design, size and features	
Promotional offer	
Other, please explain:	

14. How much pocket money do you get on average per month?

R.....

15. How much does your mobile phone bill cost per month (in Rands)?

R.....

16. Who is responsible for paying your monthly mobile phone bill?

I am personally responsible for the whole bill	
The bill is divided between myself and my parents	
My parents are responsible for the whole bill	
My employer	
Other, please explain:	

SECTION C- Mobile Phone Usage Patterns

17. How many mobile phone calls (on average) do you make and receive per day:

I make calls per day

I receive calls per day

18. How long is your average mobile phone call?

My average mobile phone call is minutes

19. How many SMS do u send per day?

I send SMS a day

20. Who do you contact most regularly on your mobile phone?

Family members	
Casual friends	
Close personal friends	
Boy/Girl friend	
Work colleagues	
Other	

21. When do you use your mobile phone most often?

Morning (8-11 am)	
Afternoon (12-3 pm)	
Evening (4-7 pm)	
Night (after 8 pm)	
All the time	

22. What do you do most on your phone besides voice calls?
(please tick only one block)

Send/ Receive SMS	
Send/Receive Email	
Send/Receive pictures from a digital camera	
Play Games	
Access the Internet (WAP)	
Manage personal information (calendar, scheduling)	
Other	

SECTION D- Attitudes towards Mobile Phones

23. What are your attitudes towards mobile phones? Please indicate your degree of agreement or disagreement with the following statements by placing a cross next to each statement.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

	1	2	3	4	5
I use my mobile phone for emergency/safety purposes					
I use my mobile phone for convenience					
I feel more connected to my friends now that I have a mobile phone					
I save most of the SMS's I receive					
My mobile phone allows me to do more things at the same time					
My mobile phone allows me to do things faster					
My mobile phone interferes in how I go about my day-to-day activities					
My mobile phone makes my life easier					
My parents regularly check up on me by calling me on my mobile phone					
My mobile phone allows me more freedom					
The mobile phone you have tells how fashionable you are					

Thank you for completing this questionnaire and participating in the customer survey

