FACTORS INFLUENCING SOUTH AFRICAN INTERNET USERS PURCHASING A PRODUCT OR SERVICE ONLINE

By

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ABSTRACT

Of the various channels to market, one that has probably received the greatest attention and produced the highest expectations of impact and adoption is the Internet (Wright and Clark, 2005: 1). According to Feher and Towell (1997), and Paul (1996), as cited by Vijayasarathy and Jones (1998: 322), the Internet promises a number of benefits to both businesses and consumers. From a business perspective, the Internet can be a powerful medium to establish a unique relationship with consumers (Pattinson and Brown, 1996: 31). For the consumer, the Internet can be a valuable communication medium to facilitate controlled, non-linear search for up-to-date information, simulated product and service testing, and provide assistance with comparison-shopping and decision-making (Hoffman *et al*, 1996: 26).

The Internet has grown at an incredible rate. By March 2006, there were approximately 1 023 million Internet users worldwide (internetworldstats, 2006: 1). However, the Internet has not grown in South Africa at the pace that it has grown in first world countries such as America, Japan and the United Kingdom (internetworldstats, 2006: 1). According to Computer Industry Almanac Inc (2005: 1), South Africa had 4 780 000 million Internet users in 2005. This is approximately 0.5% of the worlds Internet users.

Global studies have been conducted on why Internet users purchase online, but not much information is available on why South African Internet users purchase online. Moreover, this limited information is mainly available only commercially. South African Internet research companies such as *Webcheck*, *World Wide Worx* and *eMarketer* generally charge between R6 000 and R14 000 (2005 Rand prices) for South African online shopping studies, which generally deal more with Internet usage, buying behaviour in terms of products and services purchased, online shopping trends and to a limited extent factors that influence South African Internet users purchasing online.

Due to South Africa's diversity and unique situation in terms of its economy (what is commonly referred to as it's digital divide), the factors that influence South African Internet users purchasing online may not be the same as the factors influencing Internet users from other countries purchasing online.

In order to investigate the factors that influence South African Internet users purchasing online, the following research objectives were identified:

- **Primary Research Objective**

  To identify factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 1**

  To determine the significance of the identified factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 2**

  To determine the relative importance of the identified factors that influence South African Internet users purchasing a product or service online.

A questionnaire (provided in **Annexure One**) was developed to investigate the above research objectives and was distributed, via e-mail, to 437 employees of Ninham Shand (Pty) Ltd. A response rate of 269 was achieved.

The research found that the following factors were rated important to the sample purchasing online: *(1)* **the price of the product or service being purchased**; *(2)* **the convenience to the Internet user**; *(3)* **the experience as an Internet user**; *(4)* **the web site layout**; *(5)* **the ease of use of the web site**; *(6)* **the brand of the product or service**; *(7)* **the type of product or service**; *(8)* **the availability of online information on the product or service**; *(9)* **the method of payment**; and *(10)* **the web site security features**.

From the above factors, **the web site security features** was ranked as the most important factor influencing respondents purchasing a product or service online, **the ease of use of the web site** was ranked as the second most important factor and **the web site layout** was ranked as the third most important factor influencing respondents purchasing a product or service online.

Based on these findings, it can be concluded that the results from this study can contribute to the body of knowledge on online consumer behaviour theory and knowledge of South African Internet users.

DECLARATION

This dissertation was prepared in support of the partial fulfillment for the requirements of the Master in Business Administration, from the School of Business, University of KwaZulu Natal. The entire dissertation, unless specified in the text, is my own work and has not been submitted in part, or in full to any other university.

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Ashwin Mohanlal   **Date**

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LIST OF ACRONYMS

ARPA	: Advanced Research Projects Agency
ARPANET	: Advanced Research Projects Agency Network
ATM	: Automatic Teller Machine
B2C	: Business-to-Consumer
CERT/CC	: Computer Emergency Response Team Coordination Center
CSI	: Computer Security Institute
DARPA	: Defense Advanced Research Projects Agency
DARPANET	: Defense Advanced Research Projects Agency Network
E-Commerce	: Electronic Commerce
EDI	: Electronic Data Interchange
E-Mail	: Electronic Mail
EPS	: Extended Problem Solving
FAQs	: Frequently Asked Questions
FBI	: Federal Bureau of Investigation
FNC	: Federal Network Council
IP	: Internet Protocol
ISP	: Internet Service Provider
ISPA	: Internet Service Provider Authority
Kbps	: Kilo bits per second
LPS	: Limited Problem Solving
MILNET	: American Military Network
MPS	: Midrange Problem Solving
NSFNet	: American National Science Foundation Network
PIN	: Personal Identification Number
SNO	: Second Network Operator
SPSS	: Statistical Package for the Social Sciences
TCP/IP	: Transmission Control/Internet Protocol
URL	: Uniform Resource Locator
US	: United State of America
WWW	: World Wide Web

1. INTRODUCTION

Of the various channels to market, one that has probably received the greatest attention and produced the highest expectations of impact and adoption is the Internet (Wright and Clark, 2005: 1). Furthermore, according to Chesnut (2005: 3), online access has enabled people from all walks of life to bring entire libraries, entertainment venues, post offices and financial centers to a workplace, to a desktop or to a shirt pocket.

According to Feher and Towell (1997), and Paul (1996), as cited by Vijayasarathy and Jones (1998: 322), the Internet promises a number of benefits to both businesses and consumers. From a business perspective, the Internet can be a powerful medium to establish a unique relationship with consumers (Pattinson and Brown, 1996: 31). Besides the creation of new markets, organisations can achieve operational efficiencies by shrinking the distribution channel (Alba and Lynch, 1997: 49). For the consumer, the Internet can be a valuable communication medium to facilitate controlled, non-linear search for up-to-date information, simulated product and service testing, and provide assistance with comparison-shopping and decision-making (Hoffman et al, 1996: 26). The Internet can also reduce transaction costs to consumers by providing direct access to a multitude of product and service providers and also eliminates time and spatial barriers (Aldridge et al, 1997: 161).

As the Internet presents an extremely efficient medium for accessing, organising and communicating information (Peterson and Balasubramanian, 1997: 329), it appears to have significant potential for business and marketing (Hoffman and Novak, 1996: 50 and Anadarajan et al, 2000: 69). One of the greatest impacts of the Internet is that it unifies many countries markets (Dunlap, 2000: 1). Dunlap (2000: 1) further state that many people are seeing the logic in dealing with the global market as a unified market, in the same way as Europe saw the need for breaking down country boundaries in the last few decades, to form the European Union.

With the rapid and growing Internet audience, a wide variety of businesses have quickly adopted the Internet as a means to conduct their marketing communications functions and have realised the benefits of trading online economically and efficiently (Breitenbach and Doren, 2000: 558).

In view of the above, it can be inferred that as electronic commerce over the Internet increases, it will become more important for businesses trading on the Internet to have some basis to better market their products and services over the Internet. This implies that businesses trading on the Internet must understand what factors influence consumers purchasing on the Internet, so that they can effectively and profitably serve such consumers.

1.1 Background

Ever since the Internet became commercially available in the early 1990s, communication between people has never been the same (Aboba, 1993:1). The Internet introduced a borderless, international communication environment. New applications were developed all the time allowing users the ability to receive and transmit information across countries, at any time of the day or night, and at a fraction of what it used to cost (Lee, 2004: 57).

The Internet has grown at an incredible rate. By March 2006, there were approximately 1 023 million Internet users worldwide (internetworldstats, 2006: 1). The incredible growth of the Internet can be seen from the following analogy provided by (Export America, 2001:22): it took 74 years for the telephone to reach 50 million users. The personal computer hit that number in 16 years and the Internet's World Wide Web did it in only 4 years.

The Internet has not grown in South Africa at the pace that it has grown in first world countries such as America, Japan and the United Kingdom (internetworldstats, 2006: 1). According to Computer Industry Almanac Inc (2005: 1), South Africa had 4 780 000 million Internet users in 2005.

Global studies have been conducted on *why* Internet users purchase online, but not much information is available on *why* South African Internet users purchase online. Due to South Africa's diversity and unique situation in terms of its economy (what is commonly referred to as it's digital divide), the factors that influence South African Internet users purchasing online may not be the same as the factors influencing Internet users from other countries purchasing online.

This study thus aims to focus on identifying and ranking factors that influence South African Internet users purchasing online.

1.2 Motivation

The Internet provides businesses with an additional channel through which to market, sell and distribute their goods and services (Chau and Lai, 2003: 123). As this channel is available 24 hours a day, 7 days a week and 365 days a year, the potential for businesses to generate sales through this channel is immense (Brownlow, 2000: 4). Additional advantages are that the unit cost for each additional sale is virtually zero (Strader and Willcocks, 1999: 315) and businesses are able to target segments outside their traditional geographic areas (Plonien, 1998: 82).

In order for businesses to fully utilise the Internet as a means for becoming more profitable, managers need to understand *why* Internet users purchase online and what drives them to purchase online as opposed to purchasing via traditional channels. These two key concepts identify the factors that influence Internet users purchasing online. An added advantage to managers would be if they knew the relative importance of these factors so that company resources could be allocated accordingly.

1.3 Problem Statement

Although marketers are beginning to gain some understanding of the marketing strategies that will attract visitors to web sites (Hoffman *et al*, 1995; Morr, 1997 and Schwartz, 1996), very little is known about the factors that make using the Internet a compelling experience (Novak *et al*, 2000: 22).

As stated in Section 1.1, studies have been conducted in first world countries with large Internet usage such as America, Japan and the United Kingdom on *why* Internet users purchase online in these countries. Studies of a similar nature are very limited in South Africa. Moreover, these limited studies are mainly available only commercially in South Africa.

South African Internet research companies such as *Webcheck*, *World Wide Worx* and *eMarketer* generally charge between R6 000 and R14 000 (2005 Rand prices) for South African online shopping studies, which generally deal more with Internet usage, buying behaviour in terms of products and services purchased, online shopping trends and to a limited extent factors that influence South African Internet users purchasing online.

This Research Report thus aims to add to the body of knowledge on online consumer behaviour theory and knowledge of South African Internet users by providing freely to South African marketers the factors that influence South African Internet users purchasing online. In addition, this Research Report also aims to establish the significance and relative importance of these identified factors to South African marketers.

1.4   Research Objectives and Hypotheses

The following two sections provide the research objectives and hypotheses developed for this study.

1.4.1   Research Objectives

As stated in Section 1.3, the problem statement for this study was derived from the relative lack of literature regarding the Internet's role and effectiveness as a new marketing medium in South Africa. In order to investigate the problem statement, the following research objectives were identified:

- **Primary Research Objective**

  To identify factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 1**

  To determine the significance of the identified factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 2**

  To determine the relative importance of the identified factors that influence South African Internet users purchasing a product or service online.

1.4.2 Research Hypotheses

The research hypotheses formulated for the purposes of this study were: -

(i)   *The price of the product or service being purchased*

H_0: A lower priced product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1: A lower priced product or service does influence the decision of an Internet user purchasing such product or service online.

(ii)   *The convenience of purchasing online*

H_0: The convenience of purchasing a product or service online does not influence the decision of an Internet user purchasing such product or service online.

H_1: The convenience of purchasing a product or service online does influence the decision of an Internet user purchasing such product or service online.

(iii)   *The experience of Internet user*

H_0: Longer experience as an Internet user does not influence their decision to purchase a product or service online.

H_1: Longer experience as an Internet user does influence their decision to purchase a product or service online.

(iv)   *The web site layout*

H_0: A well presented web site layout does not influence an Internet users decision to purchase a product or service online.

H_1: A well presented web site layout does influence an Internet users decision to purchase a product or service online.

(v)   *The ease of use of the web site*

H_0: An easy to use web site does not influence the decision of an Internet user purchasing a product or service online.

H_1: An easy to use web site does influence the decision of an Internet user purchasing a product or service online.

(vi)   *The brand of the product or service being purchased*

H_0: A well-known brand of the product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1: A well-known brand of the product or service does influence the decision of an Internet user purchasing such product or service online.

(vii)   *The type of product or service being purchased*

H_0: Tangible products (in terms of sight and sound) do not influence the decision of an Internet user purchasing such product or service online.

H_1: Tangible products (in terms of sight and sound) do influence the decision of an Internet user purchasing such product or service online.

(viii)   *The availability of online information on the product or service*

H_0: More online information on the product or service does not influence the decision of an Internet user purchasing such a product or service online.

H_1: More online information on the product or service does influence the decision of an Internet user purchasing such a product or service online.

(ix)   *The method of payment required for purchasing the product or service online*

H_0: Using a credit card for payment of a product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1: Using a credit card for payment of a product or service does influence the decision of an Internet user purchasing such product or service online.

(x)   *The web site security features*

H_0: More web site security features do not influence the decision of an Internet user purchasing a product or service online.

H_1: More web site security features do influence the decision of an Internet user purchasing a product or service online.

1.5   Study Area

The study area used for this investigation comprised of South African Internet users. No differentiation was made regarding users who have Internet access at home, through Internet cafes or via corporate networks or educational institutions. The focus of the study was based on Internet users conducting *Business-to-Consumer* (B2C) transactions only.

1.6   Research Methodology

Secondary data available from free external sources was used to determine the factors that influenced Internet users purchasing a product or service online and primary data was collected using descriptive research to determine whether these factors influenced South African Internet users purchasing online.

The target population was determined to consist of Internet users living in South Africa in 2005 and the sampling frame was determined to comprise of Internet users employed at Ninham Shand (Pty) Ltd, a firm of consulting engineers with approximately 500 employees and fifteen offices throughout South Africa.

A questionnaire was designed with the view of obtaining clear, relevant information from the above-mentioned sample. For this purpose, the questionnaire comprised primarily structured, closed ended questions. The questionnaire was developed and pretested amongst fifteen respondents. Minor changes were made and the final questionnare was distributed via e-mail to 437 employees of Ninham Shand (Pty) Ltd.

The employees/respondents were requested to complete the questionnaire and submit it to a web server on the Internet. This web server then e-mailed the completed questionnaire to the researcher. This data collection method ensured that the respondent could remain anonymous if they wanted to.

The data was analysised using the computer spreadsheet package **Microsoft Excel** and the computer statistical package **SPSS**.

1.7   Dissertation Structure

Chapter Two outlines the beginnings and the history of the Internet. The first part of the chapter discusses the origins and growth of the Internet. It begins with a discussion of how the Internet began and who the key people involved in its design were. The phenomenal growth of the Internet is presented next and then the discussion leads to e-commerce and the growth of online retailing.

The second part of the chapter discusses the Internet situation in South Africa. It discusses the particularly difficult emergence of the Internet during the apartheid era, its exponential growth from 1994 to 1999, its consolidation period over the next three years and its exponential growth again over the last year. The chapter then ends with a discussion of online retailing in South Africa.

Chapter Three discusses consumer behaviour and the consumer decision-making process. The first part of the chapter provides an overview of consumer behaviour. The discussion then leads to the four broad factors that affect consumer behaviour. Two of these factors influence specific consumer choices and influence the ways in which consumers make decisions. The other two factors are relative to the individual and are important as the ultimate decision to purchase a product or service rests with individuals themselves.

The second part of Chapter Three discusses the consumer decision-making process. The various types of purchase decisions are discussed and the different stages of the consumer decision-making process are outlined. The chapter then ends with a discussion and presentation of a consumer behaviour model for Internet buying.

Chapter Four discusses factors that influence Internet users purchasing a product or service online. These factors are not country specific and it is hoped that they provide some meaning as to *why* Internet users purchase online as opposed to purchasing via the more traditional channels. These factors also highlight concerns as to why some Internet users may choose not to purchase online.

Chapter Five provides a methodology to determine whether the factors identified in the previous chapter influence South African Internet users purchasing a product or service

online. Chapter Five also provides a methodology whereby the significance and relative importance of the identified factors would be established.

Chapter Six provides the findings of the survey conducted to investigate the factors that influenced the sample purchasing a product or service online. The questionnaire used for this study is provided in **Annexure One**. For each question, the results are presented. The first part of the chapter presents the demographic profile and the Internet usage characteristics of the sample. The second part of the chapter presents how the sample rated each of the factors identified in Chapter Four in terms of importance when purchasing a product or service. The third part of the chapter discusses the validity and reliability of the research findings.

Chapter Seven draws conclusions from the research findings presented in Chapter Six. The first part of the chapter discusses the linkages between Section Two of the questionnaire (i.e. questions specifically dealing with factors influencing the sample purchasing online) and the research objectives. The second part of the chapter highlights the other major findings of the study and draws conclusions from them.

Chapter Eight provides implications and recommendations for businesses intending to sell or selling to consumers on the Internet in South Africa. The implications and recommendations are based on the main findings of the study as discussed in Chapter Seven.

Chapter Nine provides some of the limitations experienced by the researcher during this research undertaking and also provides some recommendations for future research

Chapter Ten provides the references used for the compilation of this dissertation.

1.8   Summary

This chapter provided the reader with an introduction to this research study. The chapter provided an outline of the problem statement, research objectives, motivation for the study and dissertation structure. The following chapters present this report as per the dissertation structure mentioned above.

2. THE HISTORY AND GROWTH OF THE INTERNET

2.1 Introduction

The first part of this chapter discusses the origins and growth of the Internet. It begins with a discussion of how the Internet began and who the key people involved in its design were. The phenomenal growth of the Internet is presented next and then the discussion leads to e-commerce and the growth of online retailing.

The second part of the chapter discusses the Internet situation in South Africa. It discusses the particularly difficult emergence of the Internet during the apartheid era, its exponential growth from 1994 to 1999, its consolidation period over the next three years and its exponential growth again over the last year. A major reason for its consolidation period is provided and current developments in terms of the increasing Internet usage over the last year are also provided. The chapter then ends with a discussion of online retailing in South Africa.

2.2 The Beginnings of the Internet

As with most great advances in the history of ideas, there was no defining Internet moment. No scientist or engineer set out to build a global communications medium, rather the idea occurred as a result of something else (Diamond and Bates, 1995: 34). According to Diamond and Bates (1995: 34), this "something else" was the launch of a space capsule called Sputnik I on 4 October 1957 by the then Soviet Union.

In response to the Soviet Union's space program, America boosted their mathematics and science requirements for schools and colleges in the hope to produce graduates who would out-think their Soviet Union counterparts (Diamond and Bates, 1995: 34). In 1958, the Department of Defense in America established the Advanced Research Projects Agency (ARPA), whose primary aim was to lead America in the worldwide science and technology field (Zakon, 2004: 1).

Among ARPA's first priorities were projects on command, control and communication, known among war planners as C3 (Diamond and Bates, 1995: 34). The American Department of Defense wanted to use computers not only at the Pentagon, but also in the

battlefield. ARPA sought a communications solution to send signals from a battlefield computer terminal to a headquarters-based computer. In order to accomplish this, a signal had to be sent from a computer terminal to a radio and then to a satellite and then back via the same route (Diamond and Bates, 1995: 34).

During the same time as the C3 project, the American Air Defense Headquarters established a reinforced control center in the Colorado Mountains. Similar venues were established in the Catoctin Mountains in Maryland and in White Sulphur Springs in West Virginia (Diamond and Bates, 1995: 35). The aim of these reinforced shelters was to evacuate the American President and key congress officials during a nuclear war. The hope was that during a nuclear war, federal officials could govern the nation from these subterranean hideouts (Diamond and Bates, 1995: 35). The war planning needs of the military and the research interests of computer scientist thus began to converge and the ARPANET Project had started to gain momentum.

2.2.1 ARPANET

In the early 1960s, scientists and engineers saw enormous potential value in allowing computers to share information on research and development in the scientific and military fields (Howe, 2002: 1). In 1962, J. C. R Licklider first proposed a global network of computers (Howe, 2002: 1). He, along with Leonard Klienrock, proposed to ARPA to organise and run a Network Measurement Center for the ARPANET project (Aboba, 1993: 3).

The problem with the existing system was that in the event of the circuit between two computers being broken, no information could be communicated and the connection had to be re-established (Aboba, 1993: 7). In 1964, Paul Baran developed a network that could route around the damage to allow two computers to communicate (Zakon, 2004: 4). In such a system, Baran wrote, "there would be no obvious central command and control point, but all surviving points would be able to re-establish contact in the event of an attack on any one point" (Diamond and Bates, 1995: 13). The key to creating this survivable grid was what later came to be called packet switching (Leiner, *et al*: 2003: 9).

With packet switching, computers would not monopolise a circuit for the duration of their communication, as telephones do. Instead the messages would get broken up into small

packets, which would flow with other packets, each of which would carry enough information to seek out its destination. Packets from a single message could take different paths to reach its final destination. When all the packets arrived, the addressee would reassemble the message. The approach would be slower than having a dedicated circuit between two computers, but it would be much more reliable (Diamond and Bates, 1995: 16). Also, according to Diamond and Bates (1995: 16), if one connection broke, the message could re-route itself.

One of the many interesting aspects about the ARPANET packet switches was that it was heavily instrumented in software and additional programs could be installed remotely (Aboba, 1993: 7). In 1969, Beranek and Newman delivered an Interface Messenger Processor to the University of California Los Angeles (Zakon, 2004: 9). This computer was connected to two other sites, Stanford Research Institute and the University of California Santa Barbara by 50 kilobits per second (Kbps) circuits (Leiner *et al*, 2003: 10). A node at the University of Utah was added in December 1969 (Zakon, 2004: 9).

By the end of 1969, the initial ARPANET connected four host computers together and the budding Internet, which is discussed in the next section, was off the ground (Leiner *et al*, 2003: 10).

2.2.2   Internet

In 1970, Vinton Cerf, the computer scientist *The New York Times* called the father of the Internet, began to take a leading role in the development of the Internet (Diamond and Bates, 1995: 38). He, together with Robert Khan developed a set of software "protocols" to enable different types of computers to exchange packets, despite varying packet sizes and computer clock speeds (Leiner *et al*, 2003:17). This new protocol could meet the needs of an open architecture network environment and was to be called Transmission Control/Internet Protocol or TCP/IP (Leiner *et al*, 2003: 17). The Transmission Control Protocol converted messages into packet streams and reassembled them and the Internet Protocol transported the packets across different nodes, even different types of networks (Diamond and Bates, 1995: 38).

Around this time, the American military security concerns became more critical and in 1972 a D for "Defense" was added to ARPA. The institution was thus called, the Defense Advanced

Research Projects Agency or DARPA (Diamond and Bates, 1995: 34). In 1978, packet radio systems were installed at the American military base called Fort Bragg and was used in military field exercises. Satellite systems were further extended to include ground stations in Italy and Germany (Aboba, 1993: 25).

The DARPANET System was thus global. In 1980 the American Department of Defense adopted the TCP/IP architecture and in 1983 the TCP/IP architecture was adopted universally (Howe, 2002: 8). Also in 1983, DARPANET split into MILNET, which supported the American Defense Force and ARPANET, which supported research needs (Leiner *et al*, 2003: 35).

Thus, by 1985, the Internet was already well established as a technology supporting a broad community of researchers and developers and was beginning to be used by other communities for daily computer communications (Leiner *et al*, 2003: 35). According to Hardy (1996: 55), the most popular APRANET mailing lists were: -

- NETWORK-HACKERS, dealing with programming and host protocol issues over ARPA networks;
- SF-LOVERS, for discussion of science fiction literature;
- WINE-TASTERS, for discourse between glass-tipping connoisseurs of the communication age; and
- HUMAN-NETS, a forum for examination of human factors in networks and computer science.

In 1986, the American National Science Foundation funded NSFNet as a cross-country 56 Kbps backbone for the Internet (Zakon, 2004: 24). They maintained their sponsorship for nearly a decade, setting rules for its non-commercial government and research uses (Howe, 2002: 11).

In 1989, another significant event took place in making the Internet easier to use (Zakon, 2004: 27). Tim Berners-Lee and others at the European Laboratory for Particle Physics, more popularly known as CERN, proposed a new protocol for information distribution (Segal, 1995: 22). This protocol, which became the World Wide Web in 1991, was based on

hypertext, which is a system of embedding links in text to link other text (Howe, 2002: 19 and Plotnikoff, 1998: 9).

In the early 1990s, when independent commercial networks began to grow, it became possible to route Internet traffic from one commercial site to another without passing through the American government funded NSFNet Internet backbone (Howe, 2002: 21). Delphi was the first national commercial service to offer Internet access to its subscribers. It opened up an e-mail connection in July 1992 and full Internet service in November 1992 (Zakon, 2004: 30). Microsoft's full-scale entry into the browser, server and Internet Service Provider market completed the major shift over to a commercially based Internet and the release of *Microsoft Windows 98* in June 1998 with the Microsoft browser well integrated into the desktop showed Bill Gates' determination to capitalise on the enormous growth of the Internet (Howe, 2002: 22).

Before moving on to the growth of the Internet, mention needs to be made of the official definition of the Internet. According to Leiner *et al* (2003: 70), on 24 October 1995, the Federal Networking Council passed a resolution defining the term Internet. This definition was developed in consultation with members of the Internet and intellectual property rights communities. The resolution read: -

> *"The Federal Networking Council (FNC) agrees that the following language reflects our definition of the term "Internet". "Internet" refers to the global information system that: -*
>
> *(i)   Is logistically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/follow-ons;*
> *(ii)   Is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and*
> *(iii)   Provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described herein".*

2.3   Growth of the Internet

Since the Internet became commercially available in the early 1990s, the number of Internet users has grown exponentially (Howe, 2002: 21). This exponential growth can be seen from the following analogy provided by Export America (2001: 1): it took 74 years for the telephone to reach 50 million users. The personal computer hit that number in 16 years and the Internet's World Wide Web did it in only 4 years.

Figure 2.1 shows how the global number of Internet users has grown over time. It can be seen from *Figure 2.1* that the number of Internet users grew from approximately 16 million users in December 1995 to approximately 1 023 million users in March 2006. This represents an increase of approximately 6 400% over a ten-year period.

Figure 2.1: Growth of Internet Users Worldwide
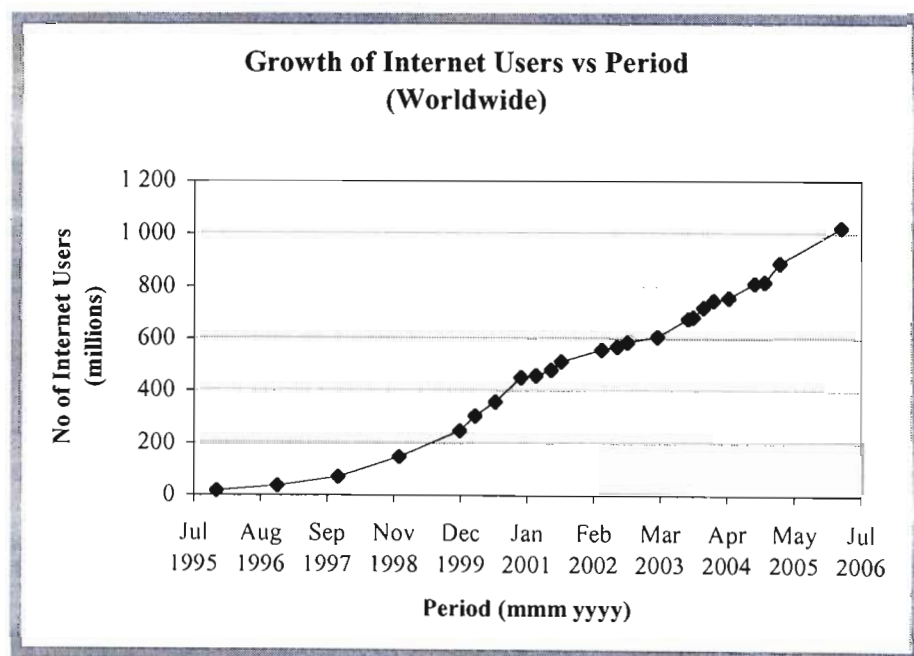
Source: internetworldstats, 2006

The number of computers and web pages on the Internet can also show the exponential growth of the Internet. *Figure 2.2* shows how the number of host computers and the number of domain names has increased over time. Note that a host computer is one that provides data and services (e-mail, bulletin board services, World Wide Web pages, etc) and domain name is a unique Internet address or Uniform Resource Locator (URL) that is used to identify every page on the World Wide Web.

Figure 2.2: Number of Hosts and Number of Domains Over Time
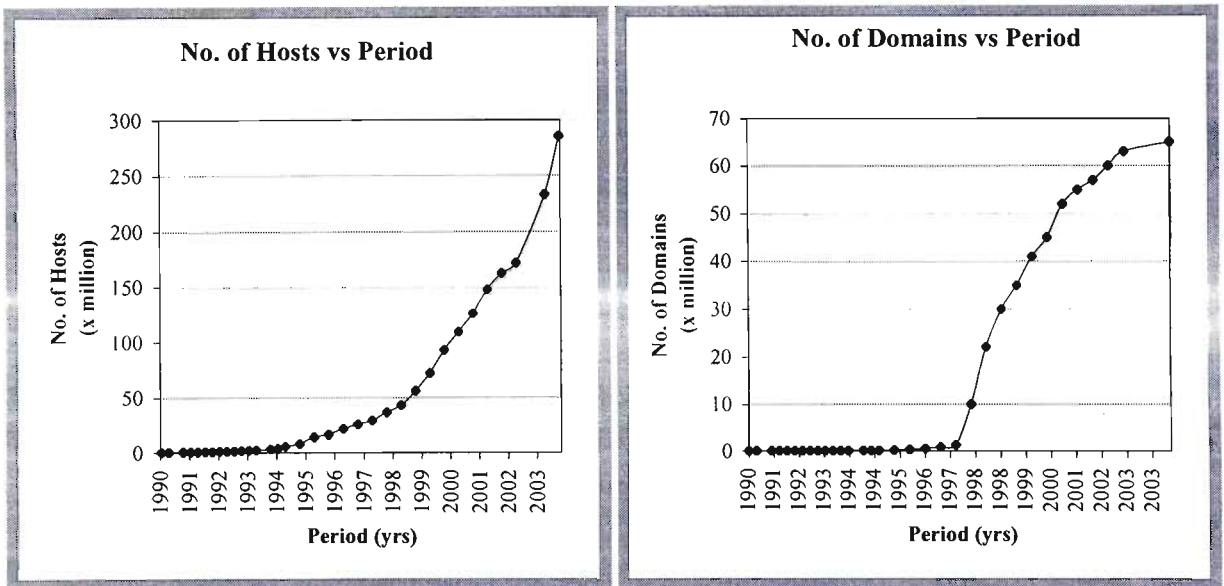
Source: Zakon, 2004; VeriSign, 2004 and Internet Systems Consortium, 2005

It can be seen from *Figure 2.2* that the exponential growth of the Internet began to occur during 1995. Metcalfe's Law, as cited by Rayport and Jaworski (2001: 31), can be used to explain this. Melcalfe's Law states that, "the value of a network to each of its members is proportional to the number of other users." In other words, Internet users tend to value the Internet more (because they get more utility from them) when there are a large number of users. Therefore as the numbers of Internet users receive more value from the Internet, the number of users increases at an increasing rate.

The previous sections discussed the origins of the Internet and its exponential growth. The following sections discuss electronic commerce and the growth of online retailing.

2.4   Electronic Commerce

Electronic Data Interchange (EDI) was one of the first forms of electronic commerce (e-commerce) and according to Weisman (2000: 2), was developed in 1968, but was only used substantially from 1984 onwards. Around that time, businesses began to recognise that establishing strategic alliances with trading partners through information technology held huge benefits for them, as EDI was allowing computer-to-computer communication of business information from organisation to organisation (Soliman, 2003: 35 and Chester *et al*, 2003: 33).

This computer-to-computer communication was based on proprietary technology and applied rigid standards to exchange data in well-defined, structured formats (Gebauer and Shaw, 2002: 7). A typical chain of events that surrounded a business-to-business interaction consisted of the requisitioning of resources, a request for quotes from candidate businesses, vendor selection, order enactment and delivery, and relation management among businesses (Blake and Gini, 2002: 7).

Although EDI created a closer relationship between suppliers and buyers, research has revealed that there were several obstacles that hindered the implementation of EDI between trading partners (businesses that engage in EDI with each other). Among the obstacles facing EDI enthusiasts were the high cost of subscribing to the value-added networks (Bartholomew, 1997: 44 and Schneider and Perry, 2000: 3), their inflexibility and the existence of industry specific communication standards (Blake and Gini, 2002: 7) and the expenses associated with switching EDI conformed trading partners (Bakos, 1991: 52 and Wilder, 1998: 38).

This situation changed in 1992, with the creation of the Mosaic browser and the World Wide Web, which allowed point and click access to the Internet (Weisman, 2000: 3). This meant that web sites could now show pictures as well as text and allowed users to move around the web page with a mouse (Brown, 1999: 40, and Breitenbach and Doren, 1998: 558). Also, according to Chesher et al (2003: 40), sophisticated web-based applications consisting of "shop-fronts" were creating an exciting new marketplace for selling directly to home consumers as well as business customers. This meant that virtually anyone could now gain access to the Internet, via a web browser, where previously only computer programmers had the knowledge of how to do this.

A new category of e-commerce, namely, business-to-consumer e-commerce was thus identified (Rayport and Jaworski, 2001: 4). According to (Rayport and Jaworski, 2001: 4), this category of e-commerce (called online retailing) allowed exchanges between a business and a consumer. This meant that a business could now sell its products or services on the Internet and a consumer, using a web browser to gain access to the Internet, could now purchase such products or services. The phenomenon of online retailing, which is discussed further in the next section, was thus borne.

2.5 Online Retailing

The term online retailing refers to the use of information and communication technologies for business purposes and specifically refers to business transactions based on use of the Internet (Davis, 2003: 1). Public Servant (2005: 1) more generally describes online retailing as a web-enabled interface between a business and a consumer. This interface sells products and services on the Internet, with the facility of online payment.

2.5.1 Growth of Online Retailing

According to Ernst and Young (2000: 5), the United States is the clear world leader in online shopping. Greenspan (2004: 7) also states that the United States has seen the largest growth in online retailing. In view of this, the growth of online retailing in the United States will be used as an example and will be discussed in this section. Even though the United States example is used, the same trends may be experienced worldwide.

According to Greenspan (2004: 8), the United States Census Bureau publishes an annual retail trade survey showing how much Americans spent online during the preceding year. A stratified simple random sampling method is used to select approximately 11 000 retail firms whose sales are then weighted and benchmarked to represent the complete universe of online retail firms in America (Greenspan, 2004: 8). *Figure 2.3* is a graphical representation of the online retail sales in America from the fourth quarter of 1999 to the first quarter of 2004.

Figure 2.3: Online US Retail Sales
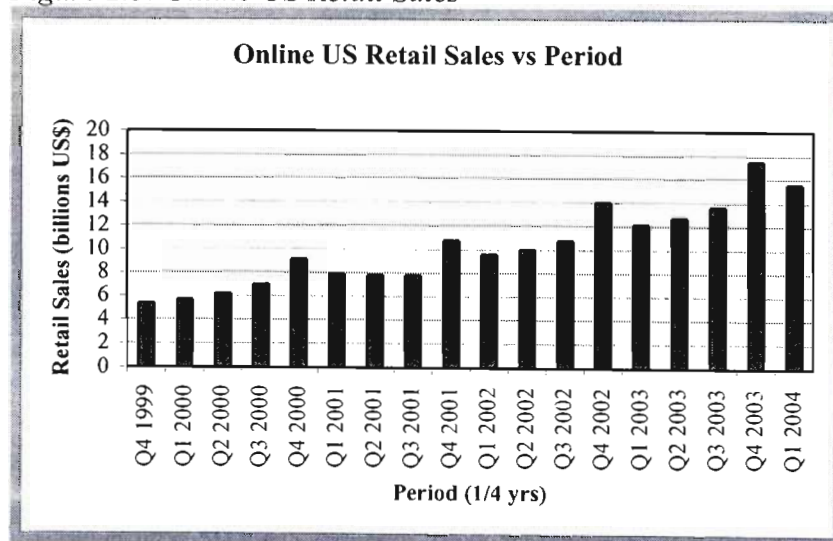
Source: Greenspan, 2004

It can be seen from *Figure 2.3* that over a four-year period (2000 to 2003), online retail sales in America increased at a steady rate from approximately 28 billion dollars in 2000 to approximately 56 billion dollars in 2003.

The previous sections discussed the Internet and online retailing from a global perspective. The following sections discuss the Internet and online retailing from a South African perspective.

2.6 The Internet in South Africa

This section describes how the Internet was started in South Africa. It must be noted that during the time that sanctions was held against South Africa by other democratic countries, South African academic researches could not readily obtain information on Internet technologies that were readily available in first world countries (Lawrie, 1997: 143). Also, according to (Lawrie, 1997: 143), it was not until 1992, when sanctions were lifted against South Africa by America, that the Internet in South Africa began to rapidly develop and grow.

2.6.1 History of the Internet in South Africa

Rhodes University was one of the first universities in South Africa to install a computer. It was an ICT 1301 computer and was installed in 1965. As a result it attracted academics that were interested in using computers as a communications tool. Over the next ten years or so, the university upgraded its computer no less than four times and gained a reputation for carrying out cutting edge technology in getting computers to communicate with one another (Lawrie, 1997: 12).

One of the major problems encountered was that even though TCP/IP protocols were in use internally in a number of South African universities, in particular Rhodes University, the University of Cape Town and the University of Natal, Durban, routers that controlled the flow and direction of information were not readily available in South Africa. This was due to sanctions held against South Africa during the apartheid area (Lawrie, 1997: 5).

Notwithstanding the above, in 1988, a group of three people, namely, Francios Jacot Guillarmod, Dave Wilson and Mike Lawrie found a way to establish a sustainable e-mail link to the Internet (Lawrie, 1997: 3). The e-mail link was established between Rhodes University

and the home of Randy Bush in Portland, Oregon in the United States of America. This e-mail link used the Fidonet mailing system as a transport mechanism to exchange e-mail between the Control Data Cyber computer at Rhodes University and a Fidonet gateway run by Randy Bush. Work on getting the e-mail to flow across the links between the universities and the Fidonet gateway took place in 1990. From then on, the rollout to other sites speeded up as the methodology of getting host computers onto the TCP/IP network had been established (Lawrie, 1997: 130).

2.6.2 Growth of the Internet in South Africa

Table 2.1 below, produced by MediaAfrica (2000: 5), shows the number of dial-up, academic and corporate users in South Africa since 1994. The percentage in brackets indicates the percentage change in users from the previous year.

Table 2.1: Number of South African Internet Users

Year	Dial-up	Academic	Corporate	TOTAL
1994	15 000	60 000	25 000	100 000
1995	33 600 (155%)	100 000 (66%)	65 000 (160%)	198 600 (98%)
1996	79 700 (137%)	125 000 (25%)	150 000 (114%)	354 700(78%)
1997	196 620 (146%)	150 000 (20%)	350 000 (133%)	696 620 (96%)
1998	366 235 (86%)	200 000 (33%)	700 000 (100%)	1 266 235 (81%)
1999	560 000 (53%)	280 000 (40%)	980 000 (40%)	1 820 000 (44%)
2000	782 000 (40%)	360 000 (28%)	1 274 000 (33%)	2 416 000 (33%
2001	1 040 000 (33%)	425 000 (18%)	1 555 000 (21%)	3 020 000 (25%)
2002	1 300 000 (25%)	470 000 (11%)	1 788 000 (15%)	3 558 000 (18%)
2003	1 560 000 (20%)	510 000 (9%)	2 056 000 (15%)	4 126 000 (16%)
2004	2 028 000 (30%)	540 000 (6%)	2 467 000 (25%)	5 035 000 (22%)

Source: MediaAfrica, 2000

Table 2.1 was produced in 2000 and hence the number of users given for 2001, 2002, 2003 and 2004 were projected values. Using surveys carried out at later dates by World Wide Worx (2002), World Wide Worx (2003), World Wide Worx (2004) and Computer Industry Almanac Inc (2005), the total number of Internet users in 2002, 2003, 2004 and 2005 can now be provided. The revised table is provided in *Table 2.2*. Note that the World Wide Worx and Computer Industry Almanac Inc yearly surveys did not distinguish between dial-up, academic or corporate users.

Table 2.2: Revised Number of South African Internet Users

Year	Dial-up	Academic	Corporate	TOTAL
1994	15 000	60 000	25 000	100 000
1995	33 600 (155%)	100 000 (66%)	65 000 (160%)	198 600 (98%)
1996	79 700 (137%)	125 000 (25%)	150 000 (114%)	354 700(78%)
1997	196 620 (146%)	150 000 (20%)	350 000 (133%)	696 620 (96%)
1998	366 235 (86%)	200 000 (33%)	700 000 (100%)	1 266 235 (81%)
1999	560 000 (53%)	280 000 (40%)	980 000 (40%)	1 820 000 (44%)
2000	782 000 (40%)	360 000 (28%)	1 274 000 (33%)	2 416 000 (33%
2001	-	-	-	2 890 000 (12%)
2002	-	-	-	3 100 000 (7%)
2003	-	-	-	3 280 000 (6%)
2004	-	-	-	3 523 000 (7%)
2005	-	-	-	4 780 000 (23%)

Source: MediaAfrica, 2000; World Wide Worx, 2002; World Wide Worx, 2003; World Wide Worx, 2004; Computer Industry Almanac Inc, 2005

It can be seen from *Table 2.2* that the number of Internet users approximately doubled from 1994 to 1998. From 1999 to 2003, the number of Internet users still increased on a year on year bases but also began to decrease as a percentage change of the previous year. What this meant was that the number of new or additional Internet users was becoming smaller to that of the previous year. During 2004 and 2005, the number of Internet users increased when compared to that of the previous year. Possible reasons for this are provided at the end of this section.

There are many factors that perhaps contribute to the trend that the number of new Internet users has reduced for the period 1999 to 2003. A contributing factor may be the high level of unemployment in South Africa. According to Hunter (2000: 40), the unemployment rate in South Africa has increased steadily from 34% in 1996 to 38% in 1998, where it has remained steady at that rate. As a basis for comparison, the unemployment rates for developed countries are generally below 10% (e.g. UK, 5%; US 4% and Japan 4%) (Hunter, 2000: 40). In view of this, unemployed people may not necessarily have the means to connect to the Internet.

Another contributing factor may be the low level of technical knowledge and skills in South Africa. According to McLeod (2000: 1), an Internet enabled economy is about people and more especially their intellect and how they apply it. Hunter (2000: 41) has also remarked

that the use of the Internet generally requires educated people. In this perspective, with South Africa's high illiteracy rate (according to Howa (2000: 1) approximately 30% of population aged between 15 and 65 are illiterate), not many people will connect to the Internet.

A major contributing factor is, what is referred to as the *digital divide*. According to Salinas (2003: 131), the term digital divide refers to that disparity between individuals and/or communities who can use electronic information and communication tools, such as the Internet, to better the quality of their lives and those who cannot. In short, individuals and/or communities can be divided into the "haves" and "have-nots".

The digital divide in South Africa is extremely pronounced in that only 4.5% of the total population are information "haves" and 95% are information "have-nots" (Webcheck, 2000a: 3). The main reason for the digital divide in South Africa is the apartheid legacy that promoted separate development, which provided inferior education and poor or no access to learning opportunities for non-whites (Singh, 2001: 8). According to Singh (2001: 9), the existence of the digital divide in South Africa is also attributed to high levels of poverty, the lack of telecommunication infrastructure and the high costs of connecting to the Internet. The latter of these is further discussed.

According to the Internet Service Provider Authority (ISPA) (2004: 1), South African Internet users face high access costs when connecting to the Internet. This contributing factor is also supported by NUA (1998: 2), who state that, the exorbitant telephone charge of connecting to the Internet was identified as a contributing factor to the impeding growth of the Internet in Africa. This access cost is made up of an Internet Service Provider (ISP) cost and the cost of a telephone call as determined by South Africa's only landline telephone operator, Telkom. *Table 2.3* lists the cost of spending 10, 20 and 40 hours per month online during each year for the last decade and its year on year increase.

The average ISP costs shown in *Table 2.3* are based on information provided by ISPA members and readers of the IOZ mailing list. The Telkom costs are for 10, 20 or 40 hours of local calls charges during peak call times (business hours) and do not take into account Telkom schemes such as Callmore or Surfmore. *Figure 2.4* shows a graphical representation of how the cost of connecting to the Internet has grown over the past decade.

Table 2.3: Cost of Connecting to the Internet in South Africa

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Average ISP Cost (R)	80.00	80.00	80.00	80.00	80.00	80.00	88.00	89.00	90.00	94.00	100.00
Year on year increase (%)		0.00	0.00	0.00	0.00	0.00	10.00	1.14	1.12	4.44	6.38
Telkom - 10 hours (R)	60.06	66.67	88.01	97.69	111.38	141.53	168.62	184.93	201.24	287.61	323.71
Telkom - 20 hours (R)	85.91	94.57	131.78	145.79	173.17	218.82	264.62	295.93	327.24	458.25	546.19
Telkom - 40 hours (R)	137.62	150.39	219.33	241.99	296.74	373.41	456.62	517.93	579.24	880.53	991.15
Year on year increase (%)		9.89	40.91	10.56	19.74	26.23	21.23	12.24	10.91	49.26	12.56
Telkom & ISP - 10 hours (R)	140.06	146.67	168.01	177.69	191.38	221.53	256.62	273.93	291.24	381.61	423.71
Telkom & ISP - 20 hours (R)	165.91	174.57	211.78	225.79	253.17	298.82	352.62	384.93	417.24	579.25	646.19
Telkom & ISP - 40 hours (R)	217.62	230.39	299.33	321.99	376.74	453.41	544.62	606.93	669.24	974.53	1 091.15
Year on year increase (%)		5.36	23.11	6.83	13.21	18.56	18.50	9.70	8.84	40.48	11.66

Source: ISPA, 2003

Figure 2.4: Cost of Internet Access in South Africa

Cost of Connecting to the Internet vs Time
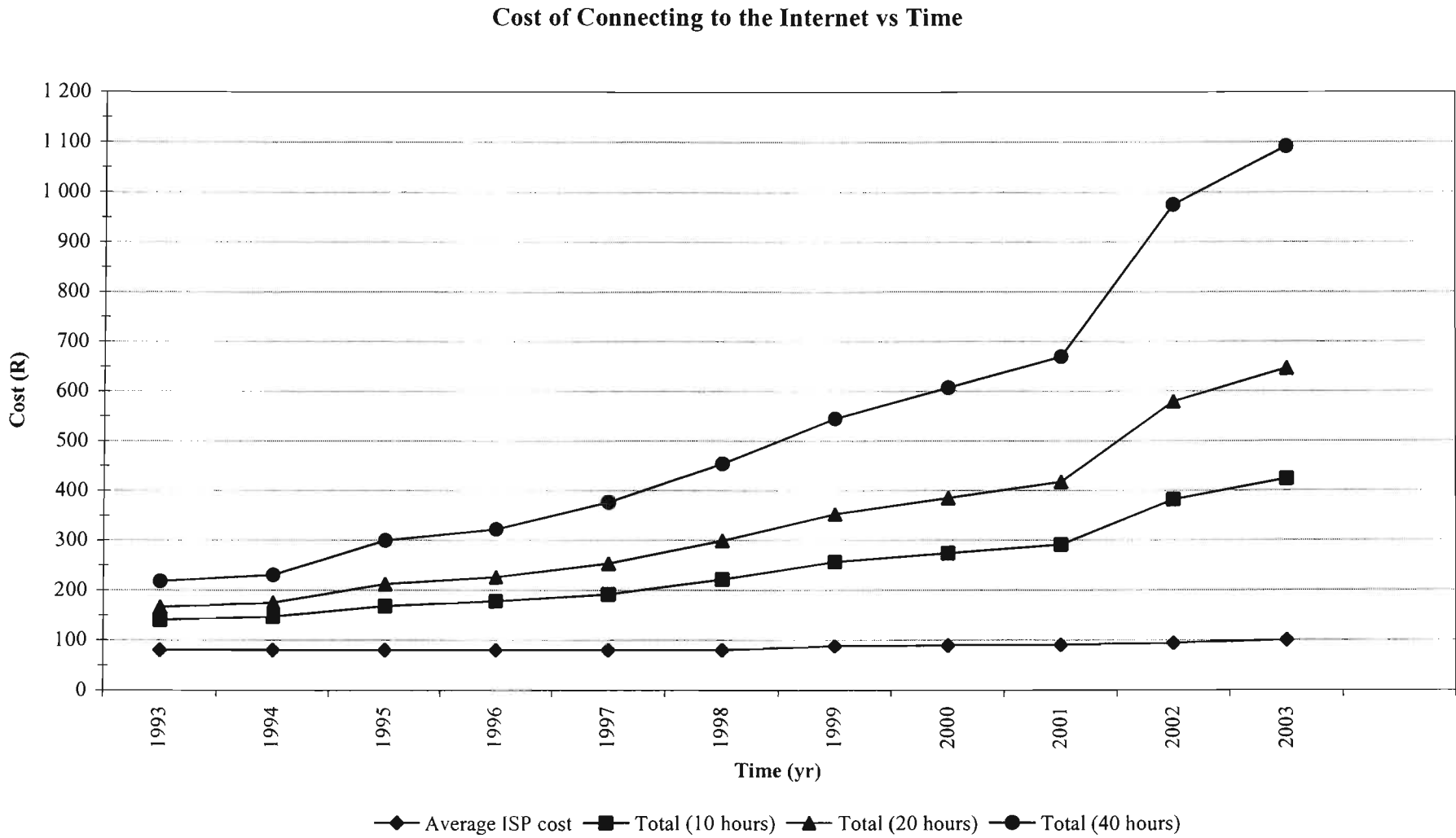
Source: ISPA, 2004

It can be seen from *Table 2.4* and *Figure 2.3* that the average ISP cost has increase from R80.00 per month in 1993 to R100.00 per month in 2003. This implies a growth of 25% over the last eleven years. On the other hand, Telkom costs have increased from R60.06 per month in 1993 for 10 hours of Internet usage, to R323.71 per month in 2003 for 10 hours of Internet usage. This implies a growth of 439% over the last eleven years. The growths for the last eleven years for 20 and 40 hours of Internet usage per month are 536% and 620% respectively.

According to World Wide Worx (2004: 1), the above-depicted scenario was set to change from 2004 onwards. Evidence of this can be seen from *Table 2.2*, where the number new or additional of Internet users in 2004 and 2005 has increased as compared to that of the previous years. World Wide Worx (2005a: 5) provide developments in South Africa that are expected to boost the growth of South African Internet users in upcoming years. They are: -

- The rollout of competitive access services to businesses by the Second Network Operator (SNO), which has finally been granted a license to operate. This means that the monopoly currently enjoyed by Telkom will soon come to an end;

- The roll-out of high-speed or broadband wireless access by Sentech, which is characterised as a Half Network Operator, due to its wide ranging license to provide access services;

- The introduction of Cellular phone operators now providing access to the Internet via products such as Vodacom 3G and MTN Edge; and

- The healthy Rand-Dollar exchange, which has dramatically brought down the cost of equipment for rolling out infrastructure to connect to the Internet.

With the above developments, the South African market will suddenly be faced with not one, but two or more players who will be eager to supply Internet access needs to those consumers who are currently not satisfied with their present Internet access.

Coupled with the above, are the steps Government has taken to reduce the digital divide in South Africa. Steps have been taken at a macro level to develop technologies centers or digital villages in townships and rural villages (Singh, 2000: 10).

2.6.3 Growth of Online Retailing in South Africa

In *Webcheck's Project SA Web User 1999B Study*, conducted in November 1999, a random sample of Internet users living in Gauteng, Cape Town and Durban were interviewed (Research Surveys, 2001: 1). One of the findings of the survey was that approximately one third of South African Internet users had shopped online and that this had increased from a quarter of Internet users in March 1999. In 2001, the number of South African Internet users shopping online was 26%, which increased to 30% in 2002 and 37% in 2003 (Research Surveys, 2004: 1).

According to Webcheck (2000a: 10), the main reasons cited by South Africans for buying on the Internet are: *(1)* it is convenient and easy; *(2)* there is a wider selection of goods and services; *(3)* it is cheaper to buy online; *(4)* it saves time; *(5)* online services are quicker than traditional channels; and *(6)* the ability to purchase items not available in South Africa. *Figure 2.5* shows the number of South African Internet users shopping online over the past five years.

Figure 2.5: Number of South African Internet Users Buying Online
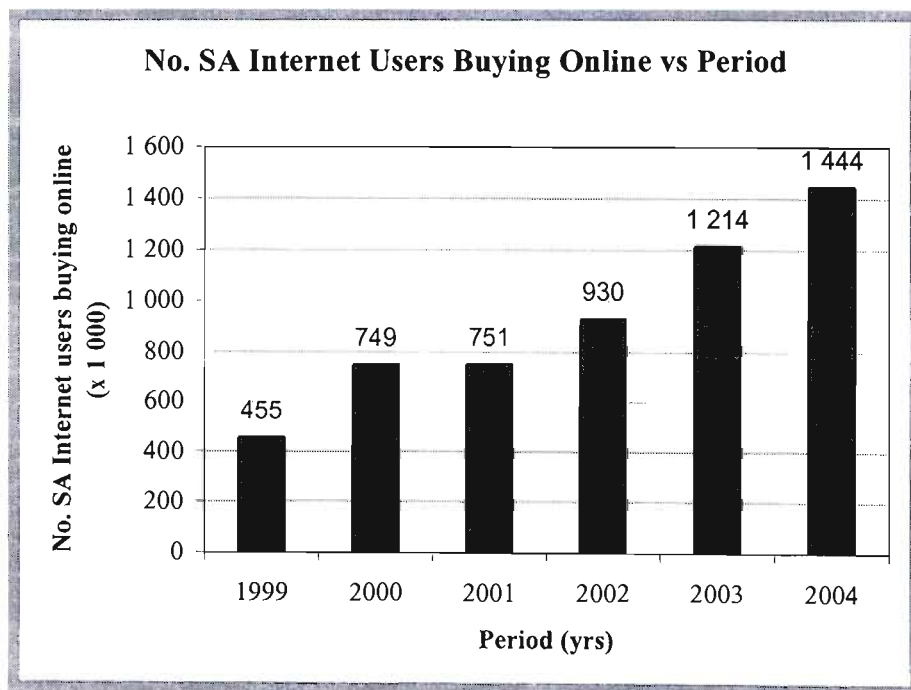
Source: Research Surveys, 2004 and Webcheck 2005b

It can be seen from *Figure 2.5* that the number of Internet users buying online increased from approximately 455 000 in 1999 to approximately 1 444 000 in 2004. According to Research Surveys (2004: 3), the number of Internet users purchasing online is expected to grow in the

following years as more people connect to the Internet and more people become accustomed to using the Internet.

In terms of monetary value, *Figure 2.6* shows the online retail sales achieved by South African retailers over the last four years. It must be noted that the amounts exclude property, cars and travel that was purchased on the Internet during this time. The reason, according to World Wide Worx (2005b: 3) is that online air ticket sales in particular dwarf the number for online retail. World Wide Worx (2005b: 3) further state that the four South African airlines selling tickets online sales, namely kulula.com, FlySAA.com, 1Time and Nationwide between them accounted for R1.8 billion in e-commerce in 2005, which more than doubled the 2004 figure of R850 million, and which was more than three times the size of conventional online retail in South Africa.

Figure 2.6: South African Online Retail Sales

South African Online Retail Sales

Note: * 2006 figure is estimated

Source: World Wide Worx, 2005b

It can be seen from *Figure 2.6* that online retail sales in South Africa has grown at approximately 20% on a year-on year basis from 2002 to 2005.

2.7   Summary

This chapter discussed the origins and growth of the Internet. It began with a discussion of how the Internet originated and who its key developers were. The phenomenal growth of the Internet, including online retailing was next discussed.

The chapter also discussed the Internet situation in South Africa. It discussed the particularly difficult emergence of the Internet during the apartheid era, its exponential growth from 1994 to 1999, its consolidation period over the next four years and its growth again over the next two years. A major reason for its consolidation period was provided and current developments in terms of increasing Internet usage were also provided. The chapter then ended with a discussion of online retailing in South Africa.

The next chapter discusses consumer behaviour and the consumer decision-making process.

3. CONSUMER BEHAVIOUR

3.1 Introduction

This chapter discusses consumer behaviour and the consumer decision-making process. The first part of the chapter provides an overview of consumer behaviour. The discussion then leads to the four broad factors that influence consumer behaviour. Two of these factors influence specific consumer choices and influence the ways in which consumers make decisions. The other two factors are relative to the individual and are important as the ultimate decision to purchase a product or service rests with individuals themselves.

The second part of this chapter discusses the consumer decision-making process. The various types of purchase decisions are discussed and the different stages of the consumer decision-making process are outlined. The chapter then ends with a discussion and presentation of a consumer behaviour model for Internet buying.

3.2 An Overview of Consumer Behaviour

It is of great importance to understand the most effective manner in which businesses can reach potential consumers. This is due to the globalisation of markets, heightened competition within various market sectors and the demands placed on businesses to increase profits (O' Shaughnessy, 1992: 1). In view of this, the study of consumer behaviour is extremely important.

An overview of consumer behaviour cannot be discussed without first understanding what a consumer is and what consumer behaviour means. Schiffman and Kanuk (1983: 6) state that the term consumer is often used to describe two different kinds of consuming entities: *(1)* the personal consumer and *(2)* the organisational consumer.

According to Schiffman and Kanuk (1983: 7), the *personal consumer* is the individual who purchases goods and services for his or her own use (e.g. shaving cream or lipstick), for the use of the household (e.g. a cake mix), for just one member of the household (e.g. a shirt), or as a gift for a friend (e.g. a book). Schiffman and Kanuk (1983: 7), further state that in all these contexts, individuals, who are referred to as end users or ultimate consumers, buy the

goods for its final use. The second category of consumer, *the organisational consumer*, encompasses private businesses, governments agencies (e.g. local, provincial and national), and institutions (e.g. schools, churches, prisons, etc), all of which must buy products, equipment and services in order to run their organisations, whether for profit or nonprofit (Schiffman and Kanuk, 1983: 7).

As stated in Section 1.5 of Chapter One, this study focuses on the individual consumer, who purchases for his or her own personal use or for household use as described above.

According to Williams (1982: 4), the term consumer behaviour can be defined as, "the decision process and physical activity individuals engage in when evaluating, acquiring and using economic goods and services". Kotler (2000: 160) provides a very similar view of consumer behaviour as he states that, "the field of consumer behaviour studies how individuals, groups, and organisations select, buy, use and dispose of goods, services, ideas, or experiences to satisfy their needs and desires".

From the above two definitions, it can be concluded that consumer behaviour is the study of how individuals make decisions to spend their available resources (i.e. money, time and effort) on consumption related items. It includes the study of *what* customers' purchase, *why* they purchase it, *how* they purchase it, *when* they purchase it, *where* they purchase it and *how* often they purchase it (Schiffman and Kanuk, 2000: 5).

It can be seen from the above discussion that understanding consumer behaviour and knowing customers is never simple. Customers may say one thing and do another, thus it is important for businesses to try and understand what influences customers purchasing and why customers behave in certain ways. In view of this, the following section discusses the factors that influence consumer behaviour.

3.3   Factors Influencing Traditional Consumer Behaviour

The previous section presented an overview of consumer behaviour. This section examines the factors that influence consumer behaviour. These factors help understand why consumers do the things they do and make the choices they make (Engel, 1978: 43).

According to Kotler (2000: 161), four broad factors have been identified that influence consumer behaviour. Environmental influences include *social* and *cultural* factors. These factors influence specific consumer choices and shape the nature of individuals in ways that influence their decisions (Engel, 1978: 43). The other two factors, *personal* and *psychological*, are relative to the individual. These two factors are important to consumer behaviour as the decision of whether to purchase a product or service is an individual decision (Walters, 1978: 12). Each of the four broad factors influencing the consumer is outlined below.

3.3.1 Cultural Factors

Culture is the underlying determinant of human decision-making. While psychology describes how human choices are made, anthropology and the study of culture explain why some choices are preferred over others (Engel *et al*, 1973: 71). Engel *et al* (1973: 71) further state that a realistic analysis of consumer choice must therefore include an understanding of the cultural context, which moulds human desires and shapes human decision-making.

The cultural factors, which influence consumer behaviour, include the culture of a society, the culture of smaller groups within that society and social classes within that society (Kotler, 2000: 161). Each of these is briefly discussed below.

- Culture

Culture can be defined as, "the some total of learned beliefs, values and customs that serve to direct the consumer behaviour of members of a particular society " (Schiffman and Kanuk, 2000: 322). Schiffman and Kanuk (2000: 322) further state that culture examines the character of a society and is, in a sense, a society's personality.

The function of any culture is two-fold. Firstly, culture exists to establish norms of behaviour as it is the standard people use for guidance when they are not sure which type of action or behaviour is proper. Secondly, culture functions as a type of enforcer of group standards as cultural characteristics often tend to force prescribed types of behaviour among a society (Walters, 1978: 451).

- Subculture

Each culture (as discussed above) consists of smaller subcultures. These are subgroups that share the values of the larger culture and yet have their own characteristic values (Walters, 1978: 450). Williams (1982: 179), define subculture as, "a distinct cultural group that exists as an identifiable segment within a larger, more complex society".

According to Kotler (2000: 161), these subcultures provide more specific identification and socialisation for their members and may include nationalities, religions, racial groups and geographic regions.

- Social Class

According to Kotler (2000: 161), social classes are relatively homogeneous and enduring divisions in a society, which are hierarchically ordered and whose members share similar values, interests and behaviour. This implies that a social class is stratified hierarchically according to the social prestige within the society they live in. According to Sheth *et al* (1999: 176), social classes are also relatively ranked in terms of social prestige and are relatively permanent positions in a society. This implies that a person's social class does not change from day to day or even year to year.

3.3.2   Social Factors

In addition to the cultural factors discussed above, a consumer's behaviour is influenced by social factors such as reference groups, family, and roles and statues. These forms of class structure or social stratification have existed in all societies throughout the history of human existence (Schiffman and Kanuk, 2000: 297) and these social factors are briefly discussed below.

- Reference Groups

Each consumer is a member of many groups, but those that influence a consumer's behaviour are called reference groups (Kotler, 2000: 164). A reference group is thus a group that serves as a point of comparison (or reference) for a consumer in forming either general or specific values, attitudes or a specific guide for behaviour (Schiffam and Kanuk, 2000: 264). This power may be exerted because a consumer is a member of a group and wants to retain membership in it or because a consumer aspires to belong to the group or emulate other consumers (Williams, 1982: 174).

Many types of reference groups exist. Primary groups are collections of individuals or consumers small enough and intimate enough so that all members can communicate with each other face-to-face (e.g. family, friends). Secondary groups are social organisations, were less continuous, face-to-face interactions takes place (e.g. professional associations, religious organisations, etc) (Engel, 1978: 139).

- Family

The term family generally refers to a group of people who are related by blood, marriage or legal adoption. This means an immediate group of father, mother and child (ren) living together (Block and Roering, 1976: 126). An extended family refers to the above-mentioned family plus other relatives, including grandparents, uncles, aunts, cousins and in-laws (Williams, 1982: 201).

A family, whether extended or not, differs from other social factors in that it is both an earning and consuming unit. The consumption needs of each individual as well as family needs, must be satisfied from a common pool of financial resources. This means that individual needs must sometimes be subordinated to those of other family members or to the needs of the family as a whole (Engel *et al*, 1973: 191).

- Roles and Statuses

A consumer participates in many groups, for example, family, clubs, organisations, etc. The consumer's position in each of these groups can be defined in terms of a role and a status (Engel *et al*, 1973: 114).

A role consists of the activities that a person is expected to perform and a person's status accompanies each role (Kotler, 2000: 167). For example, a Supreme Court judge has more status than a sales manager and a sales manager has more status than an office clerk.

3.3.3 Personal Factors

A consumer's decisions are also influenced by personal characteristics. These include the consumer's age and stage in the life cycle, occupation, economic circumstances, lifestyle, and personality and self-concept (Kotler, 2000: 167). These factors are briefly discussed below.

- Age and Stage in Life Cycle

Age refers to a person's chronological age, i.e. the length of time that has elapsed since a person's birth. According to Sheth *et al* (1999: 224), a person's age has a monumental influence on consumer behaviour as it divides consumers into various groups such as youth and seniors, toddlers and preschoolers or even four year olds and five year olds.

According to Sheth *et al* (1999: 225), this monumental influence is based on three reasons. Firstly, a consumer's needs and wants vary by age. For example, a younger consumer's needs and preferences in clothing, food and cars vary considerably to those of older consumers. Secondly, a consumer's behaviour can be influenced from their lifetime revenue i.e. the estimated revenue that an organisation may expect to receive from a consumer over their lifetime. Thirdly, changes in a population's age composition implies massive shifts in markets and in the values and demands of consumers in the aggregate i.e. younger consumers prefer different products and services to that of older consumers.

- Occupational and Economic Circumstances

According to Kotler (2000: 167), a person's occupation influences their consumption pattern. For example, a blue-collar worker may buy work clothes, work shoes and lunchboxes. On the other hand, a company president may buy expensive suits, air travel and country club memberships.

Product choice is greatly affected by economic circumstances: spendable income (level, stability and time pattern), savings and assets (including the percentage that is liquid), debts, borrowing power and attitude toward spending versus saving (Kotler, 2000: 168). Kotler (2000: 168), further state that marketers of income sensitive products and services need to pay constant attention to their target customer's trends in personal income and savings as these economic indicators show when products and services need to be redesigned, repositioned or re-priced in order to still offer value to their customers.

- Lifestyle

Lifestyle can be defined as the patterns in which people live and spend time and money i.e. how a person interacts with his or her environment (Engel, 1978: 174).

According to Feldman and Thielbar (1972: 3), lifestyles can be described by four behviours. Firstly, lifestyle is a group phenomenon i.e. a consumer's lifestyle bears the influence of participation in social groups and relationships with significant others. Secondly, lifestyle pervades many aspects of life. This means that a consumer's lifestyle commits that individual, in a sense, to a certain consistency of behaviour. Thirdly, lifestyle implies a central life interest i.e. a distinct lifestyle may be identified when some activity or interest pervades other even unrelated activities. Fourthly, lifestyles vary according to sociologically relevant variables. These variables include age, sex, social class and a number of other determinants.

- Personality and Self-Concept

Personality can be defined as, "the human characteristics or traits built into a person that makes each person different from every other person" (Walters, 1978: 14). This is due to a person's attributes, traits and mannerisms and implies that a consumer has a distinct personality that influences him or her to act in a specific manner. This personality is not based on their first time purchase of a product or service, but is rather based on their consistent repeated pattern of behaviour (Sheth *et al*, 1999: 235).

Related to personality, is self-concept or self image. These self-images or perceptions of self are closely associated with personality in that consumers tend to purchase products or services and patronise retailers whose images closely correspond to their own self-images (Shiffman and Kanuk, 2000: 111). This implies that consumers tend to depict themselves in their product and service choices.

3.3.4   Psychological Factors

A consumer's buying behaviour choices are influenced by four major psychological factors. These are motivation, perception, learning, and beliefs and attitudes (Kotler, 2000: 171). Each of these psychological factors is briefly discussed below.

- Motivation

A person has many different needs at any given time. Some needs are biogenic i.e. they arise from physiological states of tension such as hunger, thirst and shelter. Other needs are psychogenic i.e. they arise from psychological states of tension such as the need for recognition, esteem or belonging (Kotler, 2000: 171).

According to Walters (1978: 218), a motive is that something within a person that causes him or her to act, move or behave in a goal orientated manner and the attempt of consumers to satisfy needs through market activities is termed motivated behaviour i.e. a motive is a need that is sufficiently urgent to drive a consumer to purchase a product or service. Thus motivation can be defined as, "the drive to satisfy perceived needs by purchasing a specific brand of products or services" (Berkman and Gilson, 1978: 276).

• Perception

As stated above, a motivated consumer is ready to purchase. According to Kotler (2000: 173), how a motivated consumer actually acts, is influenced by his or her perception. Perception then, can be defined as, "the process by which an individual selects, organises and interprets the information he or she receives from the environment" (Williams, 1982: 298).

The above definition implies that perception is unique to individuals as different consumers can emerge with different perceptions of the same product or service. According to Kotler (2000: 173), this occurs because of three perceptual processes. Firstly, consumers are exposed to huge amounts of stimuli per day and therefore cannot process all of them. Consequently, consumers are more likely to notice stimuli that relate to a current need or expected need. Secondly, consumers have a tendency to twist information into personal meanings and interpret information in a way that will fit their preconceptions and thirdly, a consumer is likely to remember the good points mentioned about a product or service and forget about the good points mentioned about a competitor's product or service (Kotler, 2000: 173).

• Learning

Williams (1982: 113) defines learning as a permanent change in behaviour resulting from past experience. Williams (1982: 113) further states that this definition specifically excludes temporary behavioural changes such as those brought about by fatigue, disease, alcohol, injury, motivation, drugs, sleep, hunger and physical growth. Although these forces may result in behavioural changes, they do not represent learning.

The above definition is based on the behaviourist approach to learning. This approach can be reduced to a simple relationship of some stimulus from the environment evoking a desired

response (Berkman and Gilson, 1978: 224). The other common approach to learning is the cognitive approach to learning.

The cognitive approach to learning can be defined as, "the acquisition of new responses to behavioural cues in the environment, occurring as the result of reinforcement" (Berkman and Gilson, 1978: 227). This implies that a consumer changes his behaviour towards purchasing a product or service that returns the highest satisfaction.

- Beliefs and Attitudes

A belief is a descriptive thought that a person holds about something and may be based on knowledge, opinion or faith (Kotler, 2000: 174). This implies that a consumer's belief is an expectation as to what something is or is not, or what something will or will not do.

Attitude may be defined as, "a consumer's inclination towards or against any elements in his or her market domain and these elements may include products, services, ideas, people, media, brands or any item that enters into the purchasing process" (Berkman and Gilson, 1978: 310). Thus simply stated, attitude is a consumer's preference or disposition towards a product or service.

Kotler (2000: 175) further states that a consumer's attitude puts them into a frame of mind of either liking or disliking a product or service. This implies that a consumer's attitude towards a product or service is relatively permanent and very difficult to change.

The preceding discussion provided an overview of the factors that influencing consumer behaviour. It answered questions such as, why consumers purchase products and services and what influences a consumer to purchase a particular product or service. The following section describes how these factors influence the consumer decision-making process and also outlines the different types of purchase decisions consumers make.

3.4. Types of Purchase Decisions

In any decision, there is always a choice, which implies that there is always an opportunity for a consumer to make a decision. *Figure 3.1* summarises the various types of purchase related decisions. While this list is not exhaustive, it does serve to demonstrate that the scope of consumer decision-making is much broader than the mere selection of one brand over another (Schiffman and Kanuk, 1983: 532).

Figure 3.1: Types of Purchase Decisions

Decision Category	Alternatives	
Basic purchase decision	To purchase a product (or service)	Not to purchase a product (or service)
Brand purchase decision	To purchase a specific brand	To purchase another brand
	To purchase one's usual brand	To purchase another established brand (possibly with special features)
	To purchase a new brand	To purchase one's usual brand or some other established brand
	To purchase a standard quantity	To purchase more or less than a standard quantity
	To purchase an on-sale brand	To purchase a non-sale brand
	To purchase a national brand	To purchase a store brand
Channel purchase decisions	To purchase from a specific type of store (e.g. department store)	To purchase from some other type of store (e.g. a discount store)
	To purchase from one's usual store	To purchase from some other store
	To purchase in home (by phone or catalog)	To purchase in store
	To purchase from a local store	To purchase from some store requiring some travel

Source: Schiffman and Kanuk, 1983

3.4.1 The Consumer Decision Making Process

The decision making process can be viewed as three distinct but interlocking components, namely, the *input component*, the *process component* and the *output component* (Schiffman and Kanuk, 2000: 6). These components are depicted in *Figure 3.2* below.

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Figure 3.2: A Simple Model of Consumer Decision Making

External Influences
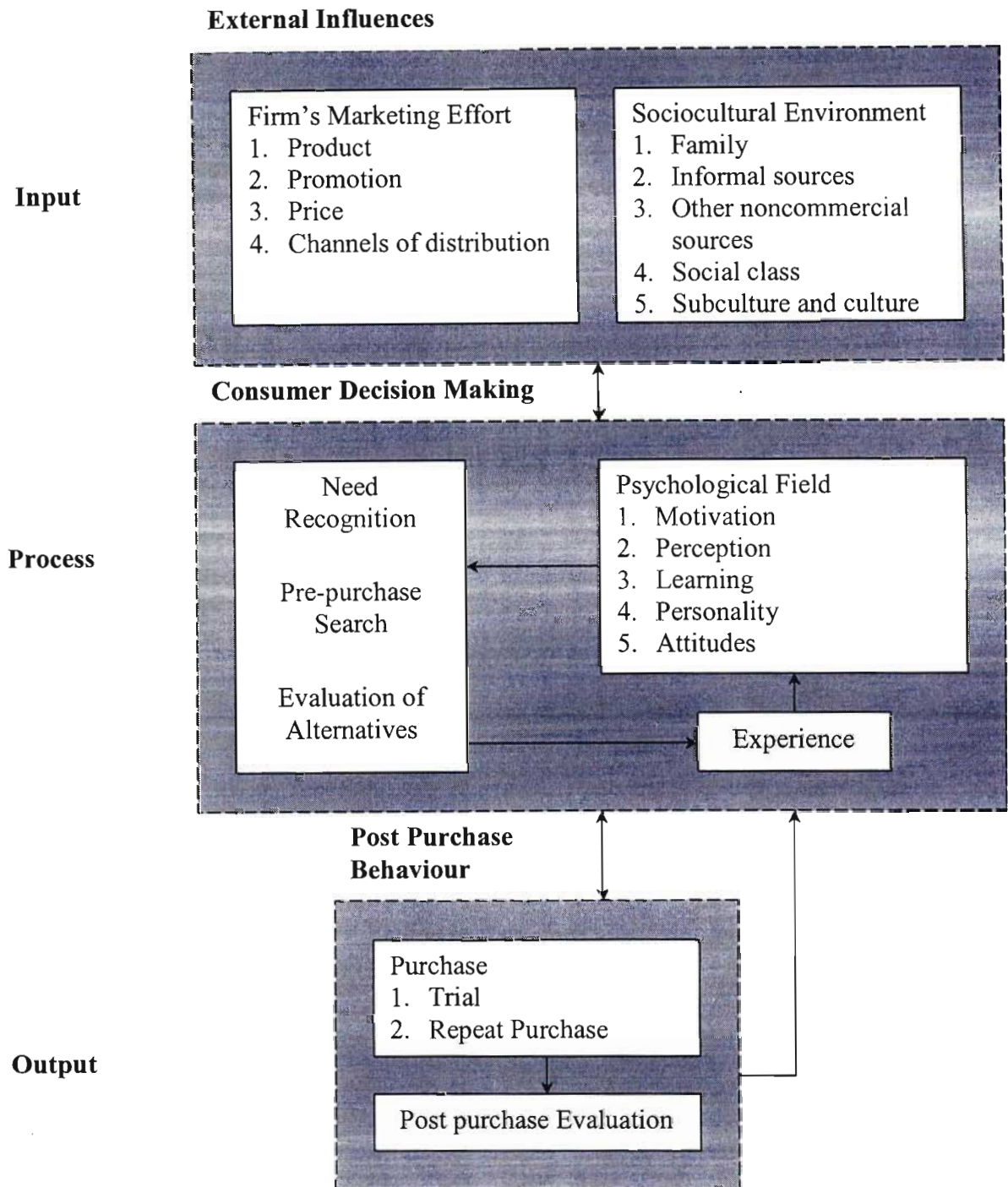
Source: Schiffman and Kanuk. 2000: 443

The *input component* comprises of the consumer's recognition of a product or service need and consists of two major sources of information: the organisation's marketing efforts and the sociological factors, as described in Sections 3.3.1 and 3.3.2, of the consumer. *The process component* of the model focuses on how consumers make decisions. The psychological

factors, as described in Sections 3.3.3 and 3.3.4, influence how the external influences from the *input component* influences the consumer. The *output component* of the consumer decision-making model consists of two closely related post decision activities: purchase behaviour and post purchase evaluation (Schiffman and Kanuk, 2000: 6).

Not all consumer decision situations receive or require the same degree of consumer effort. If all purchase decisions required extensive effort, consumer decision-making would be an exhaustive process that left little time for anything else. On the other hand, if all purchases were routine, they would tend to be monotonous and would provide little pleasure or novelty (Schiffman and Kanuk, 1983: 540).

A consumer making process can therefore be regarded as a continuum of decision-making complexity ranging from high to low (Schiffman and Kanuk, 1983: 540). In situations in which consumers make a decision for the first time, actions are based on some sort of problem solving. According to Engel, Blackwell and Miniard (1995: 155), when this process is very complex, it is called *extended problem solving* (EPS) and when the process requires a lower degree of complexity, it is called *limited problem solving* (LPS). For convenience the process along the middle of the continuum is referred to as *midrange problem solving* (MPS). The consumer decision-making continuum is reproduced as *Figure 3.3* below.

Figure 3.3: The Consumer Decision Making Continuum

Extended Problem Solving (EPS)	Midrange Problem Solving (MPS)	Limited Problem Solving (LPS)
High	Degree of Complexity	Low
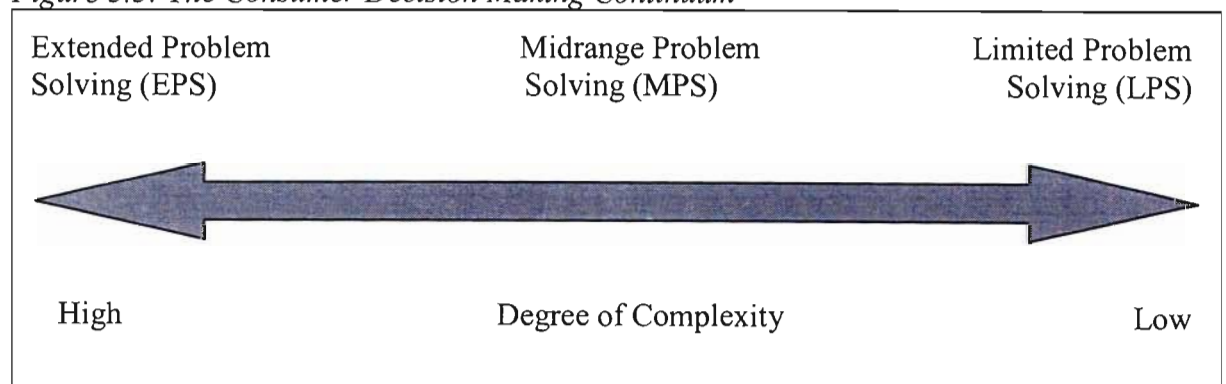
Source: Engel, Blackwell and Miniard, 1995

It can be seen from *Figure 3.3* that EPS has a high degree of complexity and LPS has a low degree of complexity. Each of the problem solving strategies and their corresponding degrees of complexity are discussed below.

- Extended Problem Solving

When a decision process is especially detailed and rigorous, extended problem solving generally is a necessity (Schiffman and Kanuk, 1983: 540). This implies that a consumer requires a great deal of information in order to establish a set of criteria on which to choose a specific brand as they have no established criteria for evaluating a product category or specific brands within that category, or have not narrowed down the number of brands that they will consider. Furthermore, according to Schiffman and Kanuk (1983: 541), an EPS strategy is generally used when purchasing a product or service for which the costs and risks of a wrong decision are high.

- Limited Problem Solving

At the other extreme of the decision-making continuum is LPS. At this level, consumers have had some experience with the product category and possess a well-established set of criteria with which to evaluate the brands in their evoked sets (Engel, Blackwell and Miniard, 1995: 156). In most situations, consumers do not have the time, the resources or the motivation to engage in EPS and it is common to simplify the process and reduce the number and variety of information sources, alternatives and criteria used for evaluation. In other situations, consumers may search for a small amount of additional information or may simply review what they already know before purchasing a product or service (Schiffman and Kanuk, 1983: 541).

- Midrange Problem Solving

MPS falls between the extremes of EPS and LPS on the decision-making continuum. According to Schiffman and Kanuk (1983: 542), at this level, consumers have already established the basic criteria for evaluating the product category and the various brands within that category; however, they have not fully established preferences concerning a select group of brands. Their search for additional information is more like "fine tuning" as consumers have to gather additional brand information in order to discriminate among the various brands (Engel, Blackwell and Miniard, 1995: 157). This implies that consumer's adopt this strategy when purchases are nontrivial, the risk is limited and the product or service is not complex or technical in terms of its features.

3.4.2 Stages of the Consumer Decision Making Process

Almost 70 years ago, John Dewey itemised what he termed the steps in problem solving to explain the process a consumer goes through in arriving at a decision to purchase a product or service (Engel, 1978: 21). According to Engel (1978: 21), the advantage of this model was that it viewed consumer behaviour as a process rather than as a discrete act and the model was as concerned with how a decision was reached as it was with the decision itself. Dewey's model was made up of five important stages of consumer decision-making behaviour. These five stages are briefly outlined below.

- Need Recognition

The buying process starts when the buyer recognises a problem to be solved or a need to be satisfied and can be triggered by internal or external stimuli. Internal stimuli are perceived states of discomfort (e.g. hunger, thirst, etc) and external stimuli are marketplace information items (e.g. advertisements) that lead a customer to realise the problem. This stage is also an acknowledgment by the consumer that they need to purchase something to get back to their normal state of comfort – physically and psychologically (Sheth *et al*, 1999: 520).

- Information Search

The information search stage begins when a consumer perceives a need that might very well be satisfied by the purchase and consumption of a product or service. A sign that a consumer is at this stage is the sense of a need for information upon which to base a choice. This need could simply require the consumer to bring from his or her memory the recollection of past experiences that might provide adequate information for the present choice. On the other hand, if the consumer has no prior experience, it could require an extensive search of the outside environment for useful information upon which to base a choice (Schiffman and Kanuk, 1983: 543).

- Evaluation of Alternatives

Once the consumer has all the information, an evaluation of all the gathered information needs to be undertaken. According to Kotler (2000: 180), there is no single evaluation process used by all consumers or by one consumer in all buying situations and as such, consumers vary as to which product attributes they see as most relevant and most important.

- Purchase Decision

Once the consumer has evaluated the alternatives, a decision of whether to purchase the product or service is made. For a positive decision, two types of purchases can be made, namely, trial purchases and repeat purchases. A trial purchase occurs when a consumer purchases a product or service for the first time. Thus a trial phase is an exploratory phase in which the consumer attempts to evaluate the product or service through direct use. Repeat purchases on the other hand are items purchased on a regular basis (e.g. food products, cigarettes, etc) as consumers generally use them in large quantities and at regular intervals (Schiffman and Kanuk, 1983: 548).

- Post-purchase Behaviour

The consumer's decision-making process does not end with the purchase decision. After purchasing a product or service, a consumer will experience some level of satisfaction or dissatisfaction. If a product or service lives up to a consumer's expectation, that is, if they are basically satisfied, then they will probably buy it again. However, if the product's performance is disappointing and does not meet expectations, then consumers will most likely search for more suitable alternatives (Kotler, 2000: 182).

Windham and Orton (2000: 79) built on Dewey's model and provided a consumer purchase decision cycle with six stages. The one additional stage, to that of the five stages discussed above, is the *buy stage* where the physical transaction is actually made. Windham and Orton's *stimulate stage* is the same as the *problem recognition stage*; the *consider stage* is the same as the *information search stage*; the *search stage* is the same as the *evaluation of alternatives stage*; the *choose stage* is the same as the *purchase decision stage*; the *buy stage* is the new stage; and the *buy again stage* is the same as the *post purchase behaviour stage* discussed above. Windham and Orton's consumer decision-making cycle is shown as *Figure 3.4*.

Figure 3.4: The Traditional Consumer Purchase Decision Cycle

STIMU-LATE	CON-SIDER	SEARCH	CHOOSE	BUY	BUY AGAIN
Consumer Behaviour: First realize need **Merchant Goal:** Raise awareness	**Consumer Behaviour:** Collect ideas for potential solutions **Merchant Goal:** Get on list of alternatives	**Consumer Behaviour:** Choose a category **Merchant Goal:** Differentiate within category	**Consumer Behaviour:** Make selection **Merchant Goal:** Differentiate within category and get chosen	**Consumer Behaviour:** Make purchase transaction **Merchant Goal:** Deliver on promise	**Consumer Behaviour:** Repurchase as needed **Merchant Goal:** Ensure positive experience to achieve repeat purchases

Soure: Windham and Orton, 2000

It can be seen from *Figure 3.4* that the steps in the cycle are both from the consumers and merchant's (or business) point of view, representing the actions consumers take as they move through the purchase decision cycle. Windham and Orton (2000: 79) point out that there are variations to the above decision cycle as some steps may be collapsed or skipped, but basically the steps are sequential behavioural stepping-stones that form part of the consumer purchase decision.

3.5   A Consumer Behaviour Model for Internet Buying

According to Hernandez (2002: 255), the Internet is one of the current most intriguing research topics and understanding the differences between online and offline consumers is key for the development of online retailing. As such, with the remarkable increase in the use of the Internet as a shopping place in the last few years, there has been an increasing interest in the investigation of significant behavioural differences between online shoppers and offline shoppers (Koufaris, 2002: 206).

These behavioural differences were explained with attempts at building models of online consumer behaviour over the past few years (Koufaris, 2002: 206). Examples included analysis of the conversion of Internet users to Internet shoppers (Berton *et al*, 1996), studying consumer information acquisition and purchasing decisions online (Alba and Lynch, 1997) and determining reasons for consumers not shopping online (Peterson and Balasubramanian, 1997). According to Koufaris (2002: 206), these online consumer models

were not generally accepted as they viewed online consumers differently from offline consumers.

Windham and Orton (2000: 81) took these models one step further, as they stated that online and offline consumers were generally the same as they had the same needs with the same amount of money to spend, but as information was so readily available on the Internet, the decision making cycle had become more compressed.

According to Windham and Orton (2000: 81), purchasing on the Internet has three addressable purchase decision phases. The traditional consumer decision-making stages, as discussed in Section 3.4.2, merge into three new phases. The *stimulate, consider* and *search stages* merge into one called the *confidence building phase*. The *choose* and *buy stages* merges into the *skirmish phase* and the *buy again stage* merges into the *war phase*. Windham and Orton's new consumer purchase decision cycle is given in *Figure 3.5* below.

Figure 3.5: The New Consumer Decision Purchase Model

CONFIDENCE BUILDING

Consumer Behaviour:
Learn about alternatives and become sure of action

Merchant Goal:
- Raise awareness
- Build credibility
- Create trust

WAR

Consumer Behaviour:
Buy more

Merchant Goal:
- Customer retention
- Identify and constantly deliver value
- Remain competitive

SKIRMISH

Consumer Behaviour:
Purchase for the first time

Merchant Goal:
- Customer acquisition
- Close the deal
- Deliver the value
- Ensure satisfaction

Soure: Windham and Orton, 2000

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The three phases depicted in *Figure 3.5* are briefly outlined below.

- The Confidence Building Phase

The confidence building phase compresses the stimulate, consider and search consumer behaviours (see Section 3.3.4, Figure 3.4) into a quick, nearly simultaneous succession.

According to Windham and Orton (2000: 82), it is often argued that the *stimulate stage* is still an initial and separate phase relying primarily on traditional mass media to raise awareness. The danger in that thinking, however, is missing the importance of search engines in creating initial web site awareness.

Also, according to Windham and Orton (2000: 82) consumers become aware of web sites through many different means (e.g. suggestion from friends, search engines and portals, newspaper and magazine articles, and advertisements) and sometimes consumers are "stimulated", or become aware of web sites through more traditional means such as print or broadcast advertising. Other times, the stimulus occurs simultaneously with searching as consumers discover new web sites through search engines, portals and links.

The reliance on trusted sources is apparent when consumers name their preferred sources of information for learning about new web sites. According to Windham and Orton (2000: 83), the three most important sources cited by respondents are references by friends (100%), magazine and newspaper articles (95%), and search engines and search links (83%). This shows that consumers perceive these sources as credible and are comfortable with references from people and places they trust.

Once a consumer has become aware of a web site, they actively "consider" the site by searching for it, finding it and confirming the validity of the web site's existence. When the consumer hasn't had the benefit of a direct reference from a trusted acquaintance, sometimes that validation is obtained by checking reviews on other web sites, querying people in chat rooms and user groups, or reading articles in the media (Windham and Orton, 2000: 84).

- The Skirmish Phase

The skirmish phase represents the merging of the traditional *choose and buy stages* of the traditional consumer decision purchase cycle (Windham and Orton, 2000: 93).

Windham and Orton (2000: 93) named this phase the *skirmish phase*, as they state that in business-to-consumer e-commerce, getting the customer to purchase for the first time was just a preliminary competitive conflict as the battle for online businesses to retain Internet users purchasing online had only just began. This implies that online businesses had to find ways of retaining online consumers.

It can be gathered from the above, that the impact of correct actions in the *confidence building phase* will influence an online consumer's decision to purchase much more quickly. Because the Internet marketplace moves so fast, there is little distinction between choosing and buying on the Internet as a purchase can be made with just a few clicks once the choices have been narrowed down.

- The War Phase

According to Windham and Orton (2000: 97), the war phase is an ongoing battle for businesses selling on the Internet as retaining customers is as difficult as acquiring them. Thus the challenge for businesses selling on the Internet is to retain first time customers purchasing on the Internet.

For example, during the dot com bubble, businesses selling on the Internet made expensive freebie offers to acquire customers. The theory was that free offers were the first time price of a customer acquisition and that once a customer was acquired, customer retention would be achieved through offering good web experiences and competitive prices (Windham and Orton, 2000: 97).

According to Winham and Orton (2000: 99), the above theory did not materialise as promotional offers were not only successful in getting Internet users to purchase online, it also created customer expectations in that shoppers believed that discount prices, free shipping and incentives were the norm. The net result was that promotional offers moved beyond customer acquisition and became a requirement for maintaining customer loyalty in many market segments.

3.6   Summary

This chapter discussed consumer behaviour and the consumer decision-making process. The first part of the chapter provided an overview of consumer behaviour. The discussion then lead to the four broad factors that influence consumer behaviour. These four factors were: cultural factors, social factors, personal factors and psychological factors.

The second part of this chapter discussed the consumer decision-making process. The various types of purchase decisions were discussed and the different stages of the consumer decision-making process were outlined. The chapter then ended with a discussion and presentation of a consumer behaviour model for Internet buying

The next chapter discusses the factors that influence Internet users purchasing a product or service online.

4. FACTORS INFLUENCING INTERNET USERS PURCHASING A PRODUCT OR SERVICE ONLINE

4.1 Introduction

This chapter discusses factors that influence Internet users purchasing a product or service online. These factors are not country specific and it is hoped that they provide some meaning as to *why* Internet users purchase online as opposed to purchasing via the more traditional channels. These factors also highlight concerns as to why some Internet users may choose not to purchase online.

Demographic factors are not discussed. It must be noted that this does not imply that demographic factors do not affect Internet users purchasing online. The factors discussed in this chapter are generic factors, which have been highlighted in previous literature. It must also be noted that the factors discussed here are not exhaustive and there may be factors that are specific to the research conducted and the time and place in which the research was undertaken.

4.2 The Price of the Product or Service Being Purchased

Not only does the Internet allow one to purchase a good or service without fighting through crowds at brick and mortar stores, but one can also purchase items at bargain basement prices. Web sites such as Amazon, Jungle and eToys all boast how much cheaper their goods are than those of their brick and mortar rivals (Public Servant, 1999: 1).

Early literature seems to agree with the above view, as consensus among marketers was that the Internet would intensify price competition. The wisdom was that the Internet would lower the cost of distribution and the costs of consumer search, thereby lowering barriers to entry and thus creating what Adam Smith called perfect competition i.e. large number of buyers and sellers and complete information about market prices (Lal and Sarvary, 1999: 485).

Alba and Lynch (1997: 45) pointed out that, "Interactive home shopping can reduce the cost and increase the discriminatory power of information regarding merchandise quality". It was

hoped that this would lead to decreased product differentiation and potentially higher price competition. This, according to Alba and Lynch (1997: 46) would lead to lower prices.

Bakos (1997: 1 689) explored the impact of different types of search costs on competition when each seller has only one store. He found through comparative statistics that when the cost of searching for prices was lower than the cost for searching for product attributes, competition increased thereby lowering prices.

Notwithstanding the above, more recent literature does not share the above views completely. In the past, many Internet retailers focused on building up a large customer base by a combination of lower prices and high advertising to attract new online buyers. In order to convert first time buyers to long-term buyers, many Internet retailers used low prices to attract this large customer base. However, this strategy was not very favourable as consumers began to view these low prices as normal and expected. This resulted in resistance to repurchasing at higher, normal or non-promotional prices (Cao *et al*, 2003: 31).

As previously stated, more recent literature now seems to agree that competing on price alone may not be a viable long-term strategy for online retailers. In a survey carried out by *Jupiter Research* during the Christmas period of 2001, it was discovered that price alone did not affect consumer's decisions to purchase (Haeberle, 2002: 76). In fact, lower prices online ranked only fourth as to why consumers purchased their holiday gifts via the Internet. The top three reasons according to *Jupiter Research* and cited by Haeberle (2002: 77) were: -

- Saving time by not going to the store (75% of respondents);
- Avoiding the holiday crowds (69% of respondents); and
- The ability to shop when the stores were closed (also 69% of respondents).

In comparison, the survey found that only 61% of the respondents were concerned with low prices when shopping online for gifts (Haeberle, 2002: 78). This research is collaborated by research undertaken throughout the same year by *GartnerG2* in its research of Americans buying online. *GartnerG2* found that price comes a distant fourth behind speed, access and ease of use of the web site (Laura, 2002, 4).

A study undertaken by Hernan Riquelme, also in 2001, found that companies selling online that had differentiated and built brand equity could still command premium prices. The study identified factors that allowed companies selling online to charge normal prices. The factors identified by Riquelme (2001: 264), and a brief description of them is provided below.

- Brand loyalty – brand loyalty is a consumer's consistent preference for one brand over all others. Hence loyal customers are less likely to spend time searching on the Internet to find price bargains.

- Time value – consumers are becoming more demanding, more impatient and much less likely to spend time agonizing over small purchases or driving across town to the shopping center.

- Value associated to customisation – product and services do not usually have the same value for all potential customers. Value is a matter of perception of the overall costs and benefits that the product or service offers to the consumer. Hence the value that a customer can place on one attribute may differ from another person and the price customers are willing to pay will differ accordingly.

- Product attributes – as some product attributes cannot be easily communicated through the Internet (e.g. texture, taste, smell), some consumers will only buy a familiar product online. For example, when searching for hotels, consumers sometimes find it difficult to judge how good a hotel is unless they have stayed there. In such a case, customers who have stayed in a hotel they like may be less inclined to search for cheaper rates.

4.3   The Convenience to the Internet User

The Internet represents a tremendous convenience for Internet shoppers in that consumers can cheaply search and compare products and services and as a result, have the opportunity to purchase items without visits to their brick and mortar counterparts (Lal and Sarvary, 1999: 485).

In a survey carried out by *Jupiter Research* during the Christmas period of 2001, it was discovered that convenience was the leading reason why Internet users shopped online during that period (Haeberle, 2002: 74).

Market analyst *Datamonitor* singled out convenience as one of the more significant consumer trends for British consumers in 2001. From prepared meals, to online banking and shopping, consumers, it said, are trying to make their time pressured lives simpler (Laura, 2002: 1). Laura (2002: 1) substantiates this view by providing the example that over 7.5 million British people bank online, while sales of prepared meals reached £2.24 million and grocery sales were close to £400 million in the UK alone.

The significance here is that more and more Internet users are realising the convenience of using the Internet to buy almost anything. Almost 80% of those surveyed by *Datamonitor*, cited factors such as the ability to shop at any time and the convenience associated with buying online as reasons why they prefer to use the Internet to shop (Laura, 2002: 5).

In an example cited by Naudi (2002: 13), a recent request for all single-family homes for sale, in Perry Township Indianapolis America, on the web site www.realtor.com brought up nearly 500 homes. By limiting the search to homes with three or more bedrooms, took the list to 417 homes. Eliminating the homes less than 1 400 square feet brought up 288 homes and by further limiting the price of homes between US$ 100 000 and US$ 125 000 brought the search to a more manageable 100 homes. These 100 homes could further be reduced as most homes have anywhere from one to six photographs on them. Some listings also featured a virtual tour in which every part of a home could be scanned using a digital video camera. Naudi (2002: 15) go on to point out that some house hunting web sites even offer Internet users one-click access to other web sites that provide demographic, cultural, social and even crime statistics of the geographic area where the house is located.

The above example shows how a person looking for a new home in a specific area can narrow their search without even leaving their computers. All a person needs to do is redefine their search parameters until just a few homes are left and then only visit those homes to physically confirm their choice. The convenience factor here is immense, especially for those people wanting to relocate to another area.

4.4 The Experience as an Internet User

At any given time, the Internet user population comprises of people with different levels of Internet experience, for example, those who were early enthusiasts and have been online for several years, those who have recently become very experienced and those who are Internet neophytes (Windham and Orton, 2000:17). These three experience levels of Internet users are summarised by Windham and Orton (2000: 18) as follows: -

- Internet neophytes tend to use web sites that are optimised for ease of use, as they are more comfortable with them. As their confidence and ability increases, they feel more comfortable with other web sites such as those containing chat rooms, e-mail and instant messaging. By using these different types of web sites, they quickly develop an understanding of what is possible in the online environment.

- Once the newcomer has become more experienced, they venture to other web sites and learn how to use search engines. In addition, they go to the e-commerce sites that their friends have recommended and buy something inexpensive just to see whether it works. If they are successful, they continue to go to these recommended web sites and buy more. They also pay attention to online advertisements, as they are interested in web sites that will help them reap their newly discovered benefits of the Internet.

- In contrast, highly experienced Internet users become more habitual in their behaviour and more demanding of web site performance. Even though they are experienced and are still interested in learning about new web sites, they establish routines that consistently work for them i.e. how to search for good prices, which web sites are of value to them and which web sites store their individual profiles and preferences.

  Experienced users also tend to want higher-speed connections. They tend to abandon the familiar environments where they began and switch to Internet Service Providers (ISPs) that can deliver greater bandwidth and faster performance or upgrade to higher-speed alternatives with their existing ISPs. These consumers are very dependent on the advantages of the Internet and they use it for many aspects of their

daily lives. Therefore, their demands for more convenience and greater timesavings grow with time.

To illustrate the above, *Figure 4.1* provides a snapshot of the proportion of Internet users in early 2000, sorted by the number of years that they have been shopping online.

Figure 4.1: Experience with Online Shopping
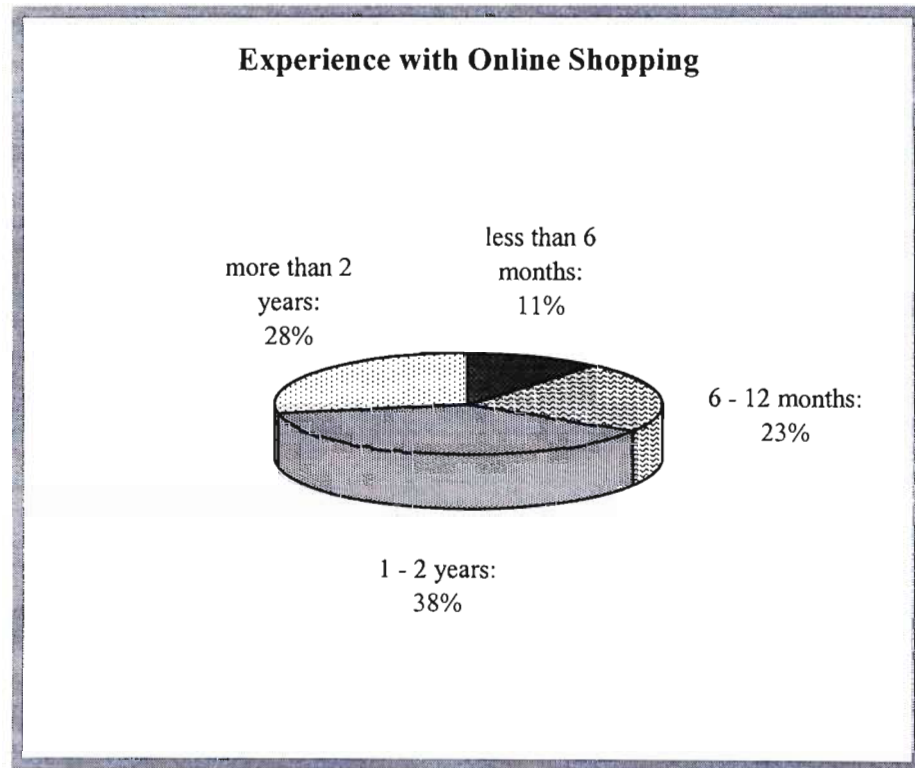
Source: Windham and Orton, 2000

It can be seen from *Figure 4.1*, that the majority (approximately 90%) of lnternet users in 2000 had more than six months experience buying online and very few Internet users (approximately 10%) had less than six months experience buying a product or service online.

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4.5   The Web Site Layout

According to McGovern (2002: 20), people who use the Internet, spend most of their time reading what is on the web page. This implies that people are fundamentally influenced by what they read on a web site and as such, the quality of the content and how it is presented is therefore critical (McGovern, 2002: 20). This viewpoint is collaborated by Carr (2003; 11), who state that every web site must maintain a professional image by keeping the web site layout clean and focused.

Alex (2005: 1), states that the above crucial web site design attributes are often overlooked as generally the programmers who build and administer the web sites are too savvy to be good judges of whether the web site is intuitive or not. Also, according to Brown (1999: 39), it is no easier to lay out a web site than it is to lay out a magazine well. Brown (1999: 39) further states that in some ways it is more difficult as it is less obvious that the material in the different parts of a web site must be as carefully arranged as it is in a magazine. This means that people other than programmers should be involved in the development of an organisations web site.

McGovern (2002: 20) also states that the first and most critical thing to understand about the web page layout is that the style is in the text and not in the page layout itself. This means that the readability of a web page should not sacrificed at the expense of better graphics and fancy fonts.

Bonner (2002: 1) points out that a well-defined web site (in terms of layout) must also be accessible to people with disabilities. Bonner (2002: 1) further states that Internet users who are colour blind, visually impaired or hearing impaired must have a variety of assistive technologies to access commercial and private web sites. This viewpoint is also collaborated by Petrie (2001), as cited by Harrysson *et al* (2004: 138), who state that until technology is accessible and usable for those who are disabled, they will not be fully able to make use of what information and communication technology has to offer.

Beyond the ethical considerations, there are good reasons for designing accessible web sites. According to www.census.gov as cited by Bonner (2002: 2), over 19% of the American population live with some sort of disability, including 8 million visually impaired. According

to www-3.ibm.com also cited by Bonner (2002: 2), America's disabled have over US$ 175 billion in disposable income and such an amount is too big to ignore or alienate through inadequate web site layout.

4.6   The Ease of Use of the Web Site

According to Neufeld and Parent (2000: 73), the decision to create a Web presence must not be undertaken lightly, as consumers form impressions of your web site quickly, and just as quickly decide whether or not to do business with your firm. Neufeld and Parent (2000: 73) further state that, due to the above, the design and user friendliness of a transactional web site is therefore critical.

According to Hurst (2001: 1), there are six elements that determine how easy a web site is to use. These elements are: -

- *Quickness*

Many Internet users still use dial up modems, which are generally slow. As such, web sites needs to have small graphics, limited number of frames and needs to rely on text, not graphics in order to cater for many of its customers.

- *Easy*

The web site is going to be used by customers, so it needs to be quick and easy for customers to use. In addition, it should not have any rude error messages or a complicated ordering process.

- *Search*

The search function should be simple and should make it easy for customers to find the items or basic information that they require. Customers usually type one to two words that describe what they are looking for, so the search function should be well developed.

- *Outside Option*

A professional, experienced third party agent should evaluate your web site. Don't rely on internal resources as they are already biased with insider knowledge.

Alex (2005: 3), also substantiate this element by stating that often, those who build and administer web sites are too savvy to be good judges of whether a site is intuitive or not. Alex (2005: 3) further recommends that two to three inexperienced web users browse a web site before it is launched.

- *Categories*

When customers arrive on the web site homepage, most would click on a link that describes the category of the item they want. Prominently and clearly listing item categories would help customers get to their desired item quickly and easily.

Lazar *et al* (2003: 24), also substantiate his element by stating that large web sites are most effective if they have fewer levels, with many links at each level. This means that Internet users should not have to click through many levels on a particular web site to get to the information that they want.

- *Product Names*

Product names should be used, which are understood by first time buyers and seasoned buyers alike. It should not be assumed that customers understand the jargon associated with an item.

Lazar *et al* (2003: 24), also substantiate his element by stating that web pages should have consistent and predictable interfaces. Lazar *et al* (2003: 24) provides the example that the term "shopping cart" on an e-commerce web site is understood by online consumers and should not be changed to anything else as it will most likely cause confusion.

4.7   The Brand of the Product of Service

The use of brands has been central to marketing for more than a century. The dominant logic has been, "build a brand and the world will beat a path to your door" (Berton *et al*, 1999: 53).

The simple question then is, what is a brand and why is it so important? Kotler (2000: 404) defines a brand as, "a name, term, sign, symbol, or design or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors". Kotler (2000: 404) further states that a brand's function is to create a distinction amongst products or services that may satisfy a customer's need.

There are two diametrically opposed arguments about the effects of the Internet on brands (Hernandez, 2002: 255). The first states that brands are no longer important on the Internet and the second, states that the Internet can only strengthen brands. These two major arguments are discussed below.

Sealey (1999: 171) argues that brand management is out of date in today's e-markets, where the wide range of new media and new techniques such as interactive marketing make traditional brand management less effective. Chen (2001: 288) states that, some see the widespread availability of information about product prices, features and competitors on the Internet as posing a threat to brands. For example, consumers buying on the Internet can judge more accurately the real cost involved in delivering a product or service. As such, they may decide that a brand's price premium is too high and may leave the product or service altogether. This threat is what economists call "cost transparency", a situation made possible by the abundance of free, easily obtainable information on the Internet (Sinha, 2000: 43).

The above argument is however not backed up by other surveys, which demonstrate the continued value of brands, both online and offline. According to Chen (2001: 288), well known brands have not been decimated. For example, *Interbrand's 2004 Survey*, as cited by Brady *et al* (2004: 12), confirms that Coca-Cola remains the world's most valuable brand at US$67 million, closely followed by Microsoft Windows at US$61 million. The survey also pointed out that the most valuable Internet brands followed way behind, for example, eBay! was 60th in ranking at US$4.7 million, followed by Yahoo! in 61st position at US$4.5 million and Amazon at 66th position at US$4.1 million.

4.8   The Type of Product or Service

One weakness of the Internet is that it can realistically reproduce only two of our five senses, namely, sight and sound. One cannot feel, smell or taste products or services sold over the Internet (Phau and Poon, 2000: 103). This suggests that the types of products or services sold over the Internet are limited.

Stern (1995: 26) suggests that products that make use of the hypermedia advantages of the World Wide Web would be suitable for online trading. For example, although the World Wide Web appeals to only the sight and sound of consumers, this capability is sufficient for

customers to sample a certain category of products. Web sites selling CDs and DVDs are typical examples of these, as they show short audio and visual clips of songs and movies.

The type of product or service sold over the Internet also depends to a large extent on the characteristics of the products and services being sold. It is therefore necessary to explicitly consider product and service characteristics when evaluating the impact of the Internet (Phau and Poon, 2000: 104).

The above can be done by formally incorporating a product and service classification into three analyses. Peterson and Balasubramanian (1997: 335) suggested a classification system in which products and services are categorised along three dimensions: cost and frequency of purchase; value proposition; and degree of differentiation.

Goods vary along the first dimension from low-cost, frequently purchased goods (e.g. consumable products such as milk) to high-cost, infrequently purchased goods (e.g. durable products such as a television set). In general, when purchase fulfillment requires physical delivery, the more frequent the purchase and smaller the cost (e.g. milk), the less likely there is to be a good "fit" between a product or service and Internet based marketing (Peterson and Balasubramanian, 1997: 336). In other words, the cheaper the product or service and the more frequently it is purchased, the less likely the item would be sold over the Internet.

Goods vary along the second dimension according to their value proposition, that is, if they are tangible and physical or intangible and service related. In general, the Internet is more suited to selling certain types of intangible or service related goods (i.e. those based on sight and sound attributes) than to selling tangible and physical products (i.e. those having touch, feel and smell attributes) (Peterson and Balasubramanian, 1997: 336).

The third dimension reflects the degree to which a product or service is differentiable. In particular, it reflects the extent to which a seller is able to create a sustainable competitive advantage through product and service differentiation. For example, using the Internet to sell can result in extreme price competition when products and services are not well differentiated. However, when products or services are well differentiated, the Internet can serve as an effective segmentation mechanism for guiding buyers to their ideal product or service (Peterson and Balasubramanian, 1997: 336).

4.9   The Availability of Online Information on Product or Service

Ceteris paribus, the more accurate the information that Internet shoppers have concerning homogeneous goods and services, the lower the prices that they will pay (Koch and Cebula, 2002: 25). This implies that as Internet users become more accustomed to using the Internet, they will find it easier to find information on the products and services that they want to buy.

Approximately, forty-five years ago, Stiger (1961: 213) noted that the representative, optimising consumer with imperfect information will search for additional price information and will move to the point where falling marginal search benefits equal rising marginal search costs. This implies that a point will be reached when the additional effort required to search for more information on the product or service will not reveal much more on that product or service.

The above view holds for items that are standardised and more easily compared to similar items that are unique and/or differentiated. Koch and Cebula (2002: 25) explain this by saying that consumers who intend to purchase expensive items expend greater resources on searching for more information on these items. Hence it can be expected that an Internet shopper can be expected to do a more extensive search relating to a motor vehicle purchase than a movie ticket purchase.

It must also be noted that information on some items are often difficult to find on the Internet, as these items generally involve the senses of "touch, feel and smell" to the consumer. In these cases, consumers often focus on the seller's reputation because they do not know whether they will like the product or service until they have consumed it (Koch and Cebula, 2002: 26).

Lal and Sarvary (1999: 487) also distinguish a product or service by two types of attributes: digital and non-digital attributes. Digital attributes are those that can be communicated through the Internet and assessed through visual inspection. Such items include books, CDs and DVDs. Non-digital attributes are those that can only be evaluated through the physical inspection of the items in brick and mortar stores. In the context of clothing for example, texture and fit are key product attributes that can only be explored through physical presence. Other items where non-digital attributes are important are items in a supermarket where smell,

and feel are important, wine where taste is important and flowers where freshness is important (Lal and Sarvary, 1999: 487).

4.10   The Method of Payment

During the last 10 years many new payment systems were developed that were specially designed for online usage. Some systems created a new cyber currency as a substitute for cash, while others built systems based on a new authentication scheme (Lamberti and Kawamura, 2003: 34). The typical problem with these new payment systems was that vendors were not willing to integrate new payment systems until they gathered a reasonable market share and customers at the same time did not apply to a system that was only accepted by a small number of online businesses.

The 2003/2004 Study of Consumer Payment Preferences conducted by *Dove Consulting* in conjunction with the *American Bankers Association* found that credit cards remain the predominant payment method for Internet purchases (Dove Consulting, 2003: 12). In 2001, Credit cards were accepted at over 4 million locations in the United States and over 14 million locations around the world (Sienkiewicz, 2001: 2).

Credit cards are not the panacea that we might hope, for as with the increase in credit card use on the Internet, there has been a dramatic increase in credit card fraud (Shankar and Walker, 2001: 4). *Figure 4.2* shows how Internet payment fraud is expected to increase exponentially to 2005.

Figure 4.2: Internet Payment Fraud

Internet Payment Fraud
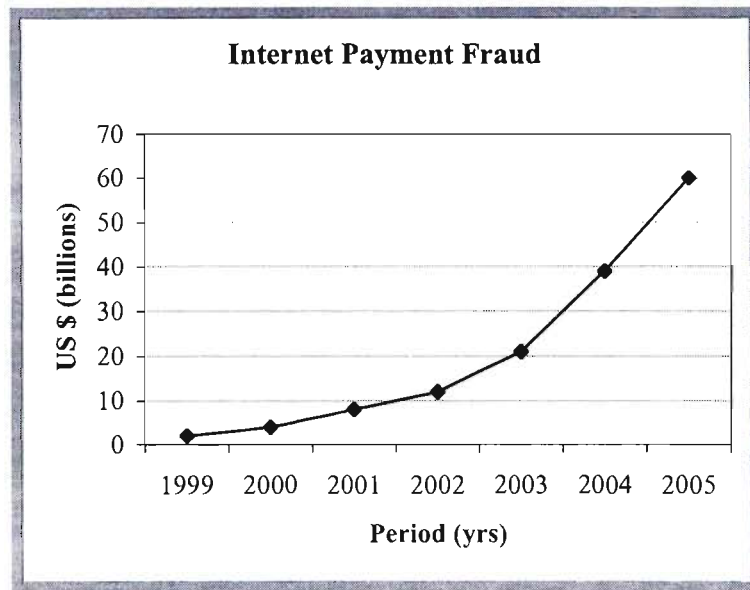
Source: Shankar and Walker, 2001

Both individuals and merchants can perpetrate the Internet payment fraud shown in *Figure 4.2*. According to Shankar and Walker (2001: 7), merchant fraud takes three basic forms: non-delivery, overcharging and charges for unwanted goods and services. Non-delivery means that the merchant either does not deliver the correct item ordered or does not deliver the item at all. Overcharging involves the merchant charging more than the agreed upon amount for the correct item purchased and charging for unwanted goods and services is usually part of an ongoing scam, where consumers are simply fraudulently billed or duped into paying extra charges.

Individual fraud, according to Shankar and Walker (2001: 9), is a more pervasive problem, as it is easy for individuals to remain anonymous or to impersonate others. Credit cards were designed to rely on physical signatures for authentication, a mechanism that is rendered useless in e-commerce. Furthermore, there are no security cameras or other physical mechanisms to catch criminals after the fact, as the purchaser does not have to present the physical card when buying an item online.

To improve upon the limited payment options and the high rate of Internet fraud that is prevalent with the use of with credit cards, several companies have created new payment mechanisms. According to an FTC Publication (2001: 11), these fall into three methods used for authentication: who you are (by means of a thumbprint, retina scan, etc); what you have

(by possessing tamperproof smart cards, keys, etc); and what you know (by having passwords, credit card numbers, etc).

According to Pulse EFT Association (2001: 4), the following payment innovations are now available in addition to the normal credit cards: -

- Credit Card Technology – solutions in this field include smart card technology, unique identifiers for cardholders, temporary numbers, digital signatures and electronic wallets.

- Prepaid Cards – paid for in advance, these cards are popular among consumers because they limit potential losses and help consumers manage their spending.

- Internet Currency – acquired through various channels, virtual currencies are good for online purchases only.

- Micro payments – Internet payments under a nominal amount are generally considered micro payments and many online businesses are seeking ways to aggregate these payments into a standing monthly bill.

- Online (PIN based) Debit – customers have to enter their PIN (personal identification number) in addition to their card number. This type of technology offers greater security for consumers and lowers costs for merchants.

4.11   The Web Site Security Features

The immense popularity of the Internet in recent years has been fueled largely by the prospect of performing business online. Companies have setup corporate intranets, extranets and use the Internet to work collaboratively with their customers, suppliers and partners. However, the lack of security is one of the leading barriers to widespread commerce on the Internet (Wen and Tarn, 2001: 22 and *Manitoba E – Commerce*, 2005: 5).

The Internet, by its very design is an open public communication forum. Thus, its strength actually creates its most severe weakness – security (Plonien, 1998: 82). As such according to

Plonien, 1998: 82), hackers, corporate spies and white-collar criminals all see an unmatched opportunity for entry into this virtual cash register.

The 2003/2004 Study of Consumer Payment Preferences conducted by *Dove Consulting* in conjunction with the *American Bankers Association* found that despite these residual reservations about e-commerce security, consumers expect their use of the Internet for shopping to increase over the next two years. This finding is reflected in *Figure 4.3*.

Figure 4.3: The Future Change in Internet Shopping
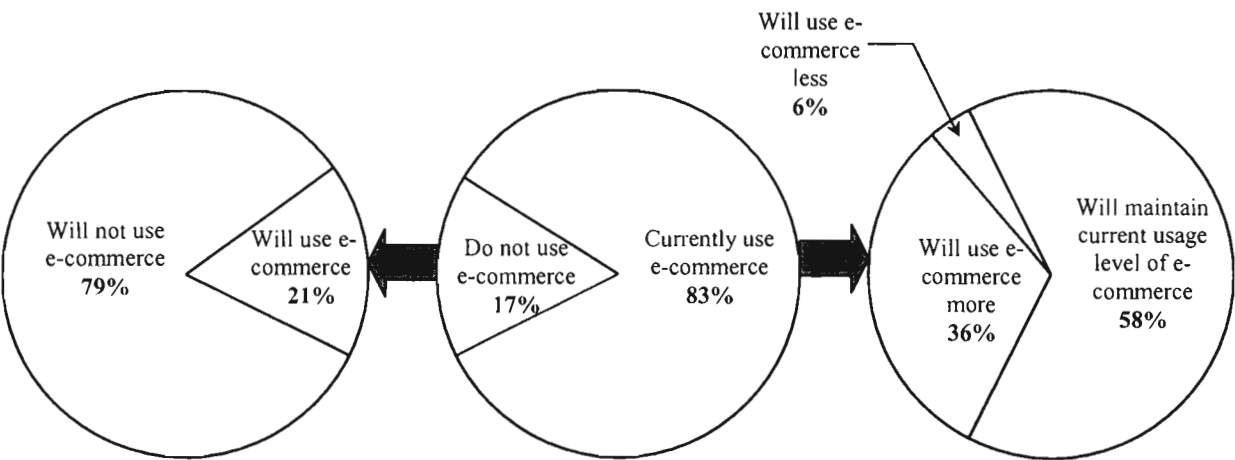
Source: Dove Consulting, 2004

It can be seen from *Figure 4.3* that currently, 17% of Americans do not purchase online, while 83% purchase online. Of the 17% who do not purchase online, 79% indicated that they would not use the Internet to purchase products or services, while 21% indicated that they would use the Internet to purchase a product or service within the next two years. Also, from the 83% of Americans purchasing online, 36% indicated that they would purchase more over the Internet, 58% indicated that they would maintain their current level of Internet purchases and 6% indicated they would no longer use the Internet for online purchasing.

Internet security is only as strong as its weakest link (Grippo and Seigel, 2001: 64). One must always be aware of the risks when sending and receiving information over the Internet as there will always be unscrupulous people who will steal whatever they can get their hands on. For this reason, the Computer Emergency Response Team Coordination Center (CERT/CC) reports and responds to computer and Internet security incidents, which they identify as any

act that violates an explicit or implied security (Piscitello and Kent, 2003: 49). According to Piscitello and Kent (2003:49) the specific activities reported as security incidents include: -

- Attempts to gain unauthorised access to a computer system or data contained therein;

- Unwanted disruption or denial of service;

- Unauthorised use of a computer system for the processing or storage of data, or hosting of an application e.g. an underground chat room or illegal software distribution;

- Unauthorised modifications to computer hardware, firmware or software; and

- Unauthorised installation and execution of software on a computer e.g. a virus.

The 2002 CSI/FBI Computer Crime and Security Survey, conducted by the *Computer Security Institute* and the *San Francisco FBI Computer Intrusion Squad*, as cited by Piscitello and Kent (2003: 49), attempts to gauge the scope and scale of cyber-crime in the US and is acknowledged as one of the most comprehensive and encompassing studies. While the US remained the source of most attacks, with 35.4% of the total, South Korea ranked second with 12.8% ahead of China and Germany. The United Kingdom was ninth with 2.2% (Hopkins, 2003: 4). *Figure 4.4* illustrates the security incidents reported from 1993 to the third quarter of 2002.

Figure 4.4: Security Incidents reported to CERT/CC
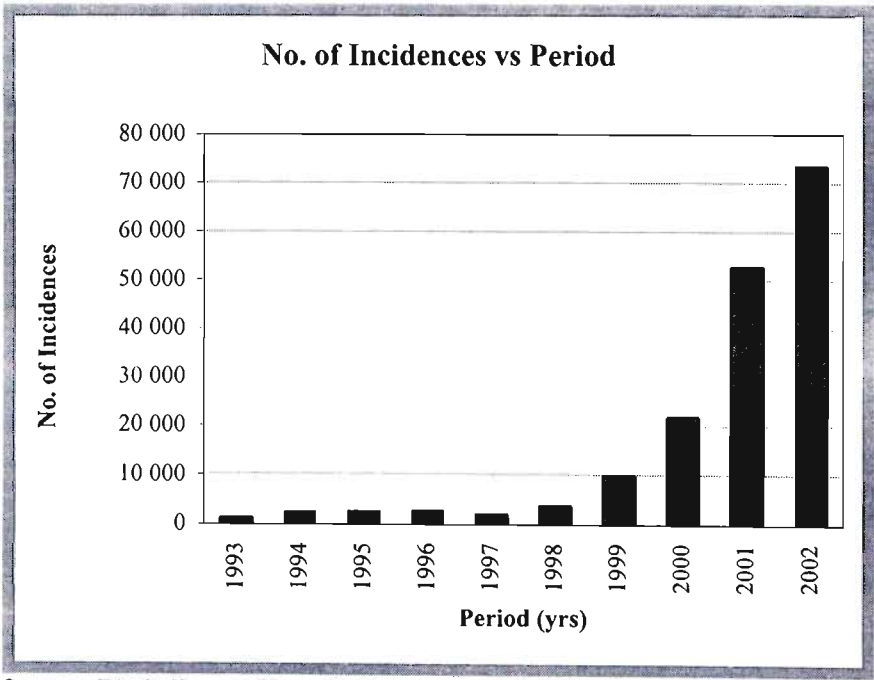
Source: Piscitello and Kent, 2003

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Figure 4.4 shows that 73 359 incidents was reported for the first three quarters of 2002. Extrapolating this number to the fourth quarter, it can be assumed that approximately 100 000 security incidents were reported to CERT/CC in 2002. This implies that since 1998, the security incidents reported have been approximately doubling on a yearly basis.

It can be concluded from the statistics provided in *Figure 4.4* that many Internet users may be deterred from purchasing online due to security concerns. Walker *et al* (2003: 291), support this view as they state that the major security fear for online shoppers is that they cannot see the people/organisations that they are dealing with, hence they are skeptical about providing their personal details to them.

4.12   Summary

This chapter discussed factors that influence Internet users purchasing a product or service online. The factors were generic factors, which had been highlighted in previous literature. Ten factors in all were identified as influencing Internet users purchasing a product or service online. These factors were not country specific and it is hoped that they provided some meaning as to *why* Internet users purchased online as opposed to purchasing via the more traditional channels. Some of these factors also highlighted concerns as to why some Internet users chose not to purchase online.

The following chapter provides a methodology to investigate whether the factors identified in this chapter influence South African Internet users purchasing online. The following chapter also provides a methodology whereby the significance and relative importance of the identified factors can be established.

5. RESEARCH METHODOLOGY

5.1 Introduction

Chapter Five provides a methodology to investigate whether the factors identified in the previous chapter influence South African Internet users purchasing a product or service online. The chapter also provides a methodology whereby the significance and relative importance of the identified factors would be established.

5.2 Problem Statement

In marketing research, defining the problem is the most important step, since only when a problem has been clearly and accurately identified can a research project be conducted properly (Malhotra, 1996: 34). Cooper and Schindler (2001: 614), further state that the problem statement contains the need for the research project and is followed by a detailed set of objectives. The problem statement is defined below and the research objectives are stated in Section 5.3.

The problem statement for this study was derived from the relative lack of literature regarding the Internet's role and effectiveness as a new marketing medium in South Africa. As stated in Chapter One, studies have been conducted in first world countries with large Internet usage such as America, Japan and the United Kingdom on *why* Internet users purchase online in these countries. Studies of a similar nature are very limited in South Africa. Moreover, these limited studies are mainly available only commercially in South Africa.

South African Internet research companies such as *Webcheck, World Wide Worx* and *eMarketer* generally charge between R6 000 and R14 000 (2005 Rand prices) for South African online shopping studies, which generally deal more with Internet usage, buying behaviour in terms of products and services purchased, online shopping trends and to a limited extent factors that influence South African Internet users purchasing online.

This Research Report thus aims to add to the body of knowledge on online consumer behaviour theory and knowledge of South African Internet users by providing freely to South African managers and entrepreneurs the factors that influence South African Internet users

purchasing online. In addition, this Research Report also aims to establish the relative importance of these identified factors to South African managers and entrepreneurs.

5.3   Research Objectives

A marketing research "objective" refers to the specific information that is needed to solve a marketing research problem (Nel *et al*, 2003: 39). As stated in Section 5.2, the research problem was stated as being the relative lack of literature regarding the Internet's role and effectiveness as a new marketing medium in South Africa with regards to factors that influence Internet users purchasing online.

In order to investigate the problem statement, the following research objectives were identified:

- **Primary Research Objective**

    To identify factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 1**

    To determine the significance of the identified factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 2**

    To determine the relative importance of the identified factors that influence South African Internet users purchasing a product or service online.

5.3.1   Research Hypotheses

A hypothesis is an unproven statement or proposition about a factor or phenomenon that is of interest to the researcher (Malhotra, 1996: 54). Nel *et al* (2003: 41), state that a hypothesis refers to possible answers to stated research questions and helps to focus the specific aim and direction of the research study.

Nel *et al* (2003: 41), further state that a hypothesis that uniquely specifies the population parameter is called a *null hypothesis (H₀)* and the *alternative hypothesis (H₁)* specifies for the

population parameter a set of values that is not specified by the null hypothesis and that is important to the specific problem. This implies that a null hypothesis is a statement of the status quo, one of no difference or no effect and an alternative hypothesis is one in which some difference or effect is expected.

The research hypotheses formulated for the purposes of this study were: -

(a)   *The price of the product or service being purchased*

H_0:   A lower priced product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1:   A lower priced product or service does influence the decision of an Internet user purchasing such product or service online.

(b)   *The convenience of purchasing online*

H_0:   The convenience of purchasing a product or service online does not influence the decision of an Internet user purchasing such product or service online.

H_1:   The convenience of purchasing a product or service online does influence the decision of an Internet user purchasing such product or service online.

(c)   *The experience of Internet user*

H_0:   Longer experience as an Internet user does not influence their decision to purchase a product or service online.

H_1:   Longer experience as an Internet user does influence their decision to purchase a product or service online.

(e)   *The website layout*

H_0:   A well-presented web site layout does not influence an Internet users decision to purchase a product or service online.

H_1:   A well-presented web site layout does influence an Internet users decision to purchase a product or service online.

(f)   *The ease of use of the website*

H_0:   An easy to use website does not influence the decision of an Internet user purchasing a product or service online.

H_1:   An easy to use website does influence the decision of an Internet user purchasing a product or service online.

(g)   *The brand of the product or service being purchased*

H_0:   A well-known brand of the product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1:   A well-known brand of the product or service does influence the decision of an Internet user purchasing such product or service online.

(h)   *The type of product or service being purchased*

H_0:   Tangible products (in terms of sight and sound) do not influence the decision of an Internet user purchasing such product or service online.

H_1:   Tangible products (in terms of sight and sound) do influence the decision of an Internet user purchasing such product or service online.

(i)   *The availability of online information on the product or service*

H_0:   More online information on the product or service does not influence the decision of an Internet user purchasing such a product or service online.

H_1:   More online information on the product or service does influence the decision of an Internet user purchasing such a product or service online.

(j)   *The method of payment required for purchasing the product or service online*

H_0:   Using a credit card for payment of a product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1:   Using a credit card for payment of a product or service does influence the decision of an Internet user purchasing such product or service online.

(k)   *The website security features*

H_0:   More website security features do not influence the decision of an Internet user purchasing a product or service online.

H_1:   More website security features do influence the decision of an Internet user purchasing a product or service online.

5.4   Research Design

The research design is a framework or blueprint for conducting the marketing project and it specifies the details of the procedures necessary for obtaining the information needed to structure or solve the marketing research problem (Malhotra, 1996: 86).

In order to accomplish the above, two general types of marketing data may be required. These are *primary data* and *secondary data* (Baines and Chansarkar, 2002: 25). Primary data are collected specifically for the research needs at hand and secondary data are already published data collected for purposes other than the specified research needs at hand (Malhotra, 1996: 41). This implies that primary data originates with the specific research undertaking and secondary data are data that have been gathered from some other purpose but are applicable to the study.

During the marketing research process, three types of research can be used to gather *quantitative research*, *qualitative research* or a combination of both (Baines and Chansarkar, 2002: 23). *Quantitative research* refers to research that seeks to quantify the data and typically applies some form of statistical analysis (Kinnear and Taylor, 1991: 147) and *qualitative research* refers to research that provides insights and understanding of the problem setting (Kumar *et al*, 2002: 178). These three types of research are *exploratory*, *descriptive* and *causal* (Nel *et al*, 2003: 27).

According to Kumar *et al* (2002: 69), *exploratory research* is used when one is seeking insights into the general nature of the problem, the possible decision alternatives and relevant variables that need to be considered. Kumar *et al* (2002: 69) further state that the research methods are highly flexible, unstructured and qualitative as the researcher begins without firm preconceptions as to what will be found. This means that exploratory research is intended to

develop initial hunches or insights and to provide the necessary direction for any further research.

Descriptive research embraces a large proportion of marketing research and its purpose is to provide an accurate snapshot of some aspect of the market environment (Kumar *et al*, 2002: 70). Malhotra (1996: 88), further states that descriptive research is typically more formal and structured than exploratory research and is based on large, representative samples were the data obtained is subjected to quantitative analysis.

Also, according to Kinnear and Taylor (1991: 137), descriptive research is appropriate when the research objectives include: *(1)* portraying the characteristics of marketing phenomena and determining the frequency of occurrence, *(2)* determining the degree to which marketing variables are associated and *(3)* making predictions regarding the occurrence of marketing phenomena.

Causal research examines whether one variable causes or determines the value of another variable and reveals a cause-and-effect relationship between dependent and independent variables (Nel *et al*, 2003: 33). For example, when conducting causal research, researchers can measure the change in one variable (i.e. sales) that ascribed to change another variable (i.e. advertising), while holding all other variables constant.

For the purposes of this study, secondary data available from free external sources was used to determine the factors that influenced Internet users purchasing a product or service online and primary data was collected using descriptive research to determine whether these factors influenced South African Internet users purchasing a product or service online.

5.4.1 Questionnaire Design

The questionnaire was designed with the view of obtaining clear, relevant information from the selected sample. For this purpose, the questionnaire comprised primarily structured, closed ended questions.

A questionnaire was developed and pretested amongst fifteen respondents. The pretest questionnaire and pilot study is discussed in the next section. The construction of the final questionnaire is discussed in Section 5.4.1.2.

5.4.1.1 Pretest Questionnaire and Pilot Study

According to Malhotra (1996: 341), pretesting refers to testing of the questionnaire on a small sample of respondents to identify and eliminate potential problems. Kumar *et al* (2002: 288) further state that the purpose of a pretest is to ensure that the questionnaire meets the researcher's expectations in terms of the information that would be obtained.

For the purposes of this study, the questionnaire was distributed to fifteen potential respondents. The respondents were asked to read through the questionnaire and provide comments to the researcher on any questions that were unclear and that were not easily understood. The respondents were also asked to provide comments on the flow of questions, structure and wording of questions, and their interest and attention when providing answers to the questions.

From the comments received, the following amendments were made during construction of the final questionnaire: -

- In investigating the duration that a respondent has been an Internet user, the initial responses were in six-month increments. These increments were changed to yearly increments from less than one year to 5 years or more.

- An additional question investigating from where the respondent most frequently gained access to the Internet was included.

- In determining the population grouping of the respondent, the four South African population groupings i.e. African, Coloured, Indian and White were initially provided as alternatives. An additional alternative was provided whereby the respondents who did not fall into these groupings could specify their population group.

5.4.1.2 Construction of Final Questionnaire

After the pretest questionnaire was distributed to the pilot study respondents, a final questionnaire was developed. This questionnaire is provided in **Annexure One**. **Annexure One A** provides the questionnaire as it was e-mailed to the respondents. The questionnaire is in a hyper text markup language (html) format. **Annexure One B** provides the questionnaire with the available responses for each question. It is provided for clarity only. It can be seen

from **Annexure One** that the questionnaire is divided into three sections. Each of these sections is described below.

Section One comprised seven questions, which investigated the respondent's general Internet usage characteristics. Each of the six questions is discussed below.

Question 1.1: Are you an Internet user?

Question 1.1 investigated whether the respondent was an Internet user. The question was dichotomous with either a **yes** or **no** answer. This question was required as the target population consisted of Internet users. If a respondent answered **No** to this question, the respondent was excluded from the sample.

Question 1.2: How long have you been an Internet user?

Question 1.2 investigated how long the respondent was an Internet user. Six possible categories were provided, with the first being less than one year, the next four being in one-year increments and the last category being more than 5 years. These yearly increments were taken from studies of a similar nature (Teo, 2001: 137 and ITWeb, 2002).

Question 1.3: How often do you use the Internet?

Question 1.3 investigated how frequently the respondent used the Internet. Six possible categories were provided, with the first being less than 1 hour per month and the last being more than 12 hours per month. These hourly increments were taken from studies of a similar nature (GVU Rsearch, 1998; SIQSS, 2000 and ITWeb, 2002). The respondent's were requested to choose one category.

Question 1.4: From where do you most frequently gain access to the Internet?

Question 1.4 investigated from where the respondent most frequently gained access to the Internet. Four possible categories were provided. Three of the categories were taken from studies of a similar nature (ITWeb, 2002) and the fourth category requested the respondent to specify an answer, which did not fall into the previous four categories.

Question 1.5: What is your primary use of the Internet?

Question 1.5 investigated the respondent's primary use of the Internet. The question provided six possible answers. Five of these were taken from studies of a similar nature (GVU

Rsearch, 1998; Harris Interactive Inc 2004 and Webcheck, 2005a) and the sixth alternative requested the respondent to specify an answer, which did not fall into the previous five possibilities.

Question 1.6: Have you used the Internet to purchase a product or service online?

Question 1.6 investigated whether the respondent had previously used the Internet to purchase a product or service online. The question was dichotomous with either a **yes** or **no** answer. If a respondent answered **yes**, they were requested to provide information on the product or service category purchased from. Thirteen such product and service categories were taken from surveys of a similar nature (GVU Rsearch, 1998; SIQSS, 2000; actonvision.com, 2000; and Regan and Yozzo, 2005). If a respondent chose the **other** category, they were request to specify such category.

Question 1.7: Will you use the Internet in future to purchase a product or service online?

Question 1.7 investigated whether a respondent would purchase a product or service on the Internet at some future time. The question was dichotomous with either a **yes** or **no** answer.

Section Two comprised eleven questions, which investigated the factors that influenced the respondent's decision to purchase a product or service online. Questions 2.1 to 2.10 represented each of the ten factors identified in Chapter Four.

Respondents were asked to rate how important each factor was to them in purchasing a product or service online. For each question, **a scale of 1 – 10** was provided, **where 1 equaled the factor being least important and 10 equaled the factor being most important**. For discussion purposes, any factor rated **0 - 4** was considered **unimportant**, any factor rated **5 - 6** was considered **neutral**, any factor rated **7 - 10** was considered **important**.

Question 2.1: Lower priced products or services

Question 2.1 investigated whether the price of the product or service influenced the decision of an Internet user purchasing such product or service online.

Question 2.2: More convenience

Question 2.2 investigated whether the convenience to the Internet user influenced their decision to purchase a product or service online.

Question 2.3: Longer experience as an Internet user

Question 2.3 investigated whether the experience of an Internet user influenced their decision to purchase a product or service online.

Question 2.4: A well-presented website layout

Question 2.4 investigated whether the website layout influenced the decision of an Internet user purchasing a product or service online.

Question 2.5: An easy to use website

Question 2.5 investigated whether the ease of use of the website influenced the decision of an Internet user purchasing a product or service online.

Question 2.6: A well-known brand of product or service

Question 2.6 investigated whether the brand of the product or service influenced the decision of an Internet user purchasing such product or service online.

Question 2.7: Tangible, in terms of sight and sound, products

Question 2.7 investigated whether the type of product or service influenced the decision of an Internet user purchasing such product or service online.

Question 2.8: More online information on the product or service

Question 2.8 investigated whether the availability of online information on a product or service influenced the decision of an Internet user purchasing such product or service online.

Question 2.9: Using a credit card for payment

Question 2.9 investigated whether the method of payment influenced the decision of an Internet user purchasing a product or service online.

Question 2.10: More website security features

Question 2.10 investigated whether the website security features influenced the decision of an Internet user purchasing a product or service online.

Question 2.11: Are there any other factors, not covered above, which are important to you in using the Internet to purchase a product or service online?

Question 2.11 investigated whether any additional factors influenced the respondent's decision to purchase a product or service online.

Section Three comprised five questions, which provided a demographic profile of the respondent. Each of the five questions is discussed below.

Question 3.1: Gender
Question 3.1 investigated the respondent's gender.

Question 3.2: Age
Question 3.2 investigated the respondent's age. Five age categories starting at age 18 and ending at age 65 was provided as possible answers. The starting and ending ages was chosen as this range represented the working lifespan of a South African citizen.

Question 3.3: Place of Residence
Question 3.3 investigated the respondent's place of residence. South Africa's nine provinces were provided as alternatives.

Question 3.4: Household Language
Question 34 investigated the respondent's household language. Twelve possible answers were provided. Eleven of the alternatives represented South Africa's official languages and the twelfth alternative requested the respondent to specify an answer other than the eleven official languages.

Question 3.5: Population Group
Question 3.5 investigated the respondents population group. Five possible answers were provided. Four of the alternatives represented South Africa's population groups and the fifth alternative requested the respondent to specify an answer other than the four South African population groups.

Question 3.6: Marital Status
Question 3.6 investigated the respondent's marital status. Four possible alternatives were provided.

Due to the possible sensitivity in providing demographic information, it was explicitly stated, before the respondent provided the required information, that the information provided would be treated as highly confidential and the answers would only be used for statistical analyses.

5.4.2 Sample Design

According to Nel *et al* (2003: 124), the sample design consists of five steps: defining the target population, determining the sampling frame, selecting a sample technique, determining the sampling size and executing the sampling process. In terms of this study, each of the sample design steps is discussed below.

5.4.2.1 Target Population

The target population is the collection of elements or objects (i.e. people, products, organisations, markets etc) from which information is to be gathered to solve the research problem (Nel *et al*, 2003: 125).

According to Kinnear and Taylor (1991: 393), a properly designated population must be defined in terms of *element, sampling unit, extent* and *time*. An *element* is the object about which or from which the information is desired. A *sampling unit* is an element or a unit containing the element that is available for selection at some stage of the sampling process. *Extent* refers to geographical boundaries and the *time* factor is the period under consideration (Malhotra, 1996: 361).

In view of the above, for the purposes of this study the population *element* can be regarded as people living in South Africa, the population *sampling unit* can be regarded as Internet users, the population *extent* can be regarded as the geographic boundary of South Africa and the population *time* can be regarded as the year 2005. Thus, for the purposes of this study, the target population was determined to consist of Internet users living in South Africa in 2005.

5.4.2.2 Sampling Frame

A sampling frame can be defined as a list or means of representing the sampling units (i.e. items being measured or is available for measurement at some stage of the sampling process) containing the elements or objects of a target population (Baines and Chansarkar, 2002: 151). For the purposes of the study, the sampling frame was determined to comprise of Internet users employed at Ninham Shand (Pty) Ltd.

Ninham Shand (Pty) Ltd is a firm of consulting engineers with approximately 500 employees and fifteen offices throughout South Africa. These offices are located in Bloemfontein, Cape Town, Centurion, Durban, East London, George, Harrismith, Kimberly, Klerksdorp, Pietermaritzburg, Polokwane, Port Elizabeth, Stellenbosch, Umtata and Welkom. The employees comprise of engineers, technicians, scientists, environmentalists, townplanners and administration staff.

Due to the geographic spread of offices throughout South Africa and the various different types of people working within the organisation, a sampling frame consisting of employees working for Ninham Shand (Pty) Ltd was deemed acceptable for this study.

5.4.2.3 Sampling Technique

Sampling can be probabilistic or non-probabilistic and each method is particularly appropriate for specific situations (Malhotra, 1996: 364). Malhotra (1996: 364) further state that non-probability sampling methods use judgmental techniques whereby the sample is selected using procedures that are not related by chance. These procedures generally involve the selection of respondents using the judgment of the researcher (where the researcher places restrictions on the type of person that can be interviewed) or the interviewers themselves. In probability sampling procedures, the respondents are selected according to a process, which involves a random or chance element (Baines and Chansarkar, 2002: 152). This implies that the sampling procedure is nothing more than samples that are objectively selected (probability sampling) and samples that are subjectively selected (non-probability sampling).

In a probability sampling procedure, four sampling methods, namely, *simple random sampling, systematic sampling, stratified sampling,* and *cluster sampling* may be used and in a non-probability sampling procedure, also four sampling methods, namely *convenience sampling, judgment sampling, quota sampling* and *snowball sampling* may be used (Nel *et al,* 2003: 127).

For the purposes of this study, a non-probability sampling procedure, called *judgment sampling* was used. Judgment sampling is a non-probability sampling procedure in which the representativeness or meaningfulness of the sample is based on an evaluation by the researcher or some other expert (Cox, 1979: 269).

5.4.2.4 Sample Size

The sample size is the total number of elements included in the research and must be large enough to ensure that reliable and valid conclusions can be made about the population (Nel, *et al*, 2003: 136).

According to Kress (1979: 180), choosing the sample size through statistical methods only apply to probability sampling as in non-probability sampling, the probability of any member of the population being selected is unknown. This means that the central limit theorem or the principles of normal distribution do not apply (Malthotra, 1996: 256).

The sample size used for this study was dependent on the number of employees with e-mail access employed at Ninham Shand (Pty) Ltd. Thus, for the purposes of this study, a sample size of 434 was used.

5.4.2.5 Sampling Process

Execution of the sampling process requires a detailed specification of how the sample design decisions with respect to the target population, sampling frame, sampling technique and sample size are to be implemented (Malhotra, 1996: 363).

For the purposes of this study, the following sample design decisions were adhered to: -

- As this study focused on Internet users, those respondents who were not Internet users were rejected.
- The data collection period was three weeks. Due to time constraints, any questionnaires received after this period was rejected.

5.4.2.6 Sampling Errors

According to Kress (1979: 207), two categories of errors occur when surveys, observations and experiments are involved. One of the categories is *sampling errors*, which according to Kumar *et al* (2002: 94), is the difference between the statistics (sample) and the parameter (target population) because the sample is rarely an exact miniature of the target population from which it is drawn. The other category, *data collection errors*, is discussed in Section 5.4.3.1.

According to Kumar *et al* (2002: 94), three types of sampling errors may occur. These are: *(1) selection errors, (2) population specification errors and (3) sampling frame errors.* Each of these errors with regards to this study is discussed below.

According to Kumar *et al* (2002: 94), selection errors occur when a sample obtained through a non-probability sampling method is not representative of the population. As stated in Section 5.4.2.3 a non-probability sampling procedure, called *judgment sampling* was used to determine the sample. It is acknowledged that by using this type of sampling procedure, some selection error was inevitable and that this selection error was deemed appropriate for this study.

Population specification errors occur when an inappropriate population is chosen from which to obtain data for the research study (Kumar *et al*, 2002: 94). As stated in Section 5.4.2.1, the target population was determined to consist of Internet users living in South Africa in 2005. As the sample used to obtain data for this study was obtained from the target population, no population specification errors occurred.

Malhotra (1996: 103), define a sampling error frame as the variation between the population defined by the researcher and the population as implied by the sampling frame used. As stated in Section 5.4.2.2, the sampling frame consisted of employees with e-mail access employed at Ninham Shand (Pty) Ltd. It is acknowledged that by using this sampling frame, some sampling frame error was inevitable and that this error was deemed acceptable for this study.

5.4.3 Data Collection

As stated in Section 5.4, primary data is collected specifically for the research needs at hand. According to Kress (1979: 87), primary data can be collected in three ways: *(1) survey methods, (2) observational procedures and (3) experimental procedures.* According to Kress (1979: 87), in survey methods, data are collected by asking questions of people thought to have the desired information and can be conducted through personal interviews, telephone interviews or mail questionnaires. Also, according to Kress (1979: 87), in observational procedures, the researcher observes the objects or actions of interest and in experimental procedures, the researcher introduces selected stimuli into a controlled environment and then manipulates these stimuli.

Two self-administered survey options were viewed as most appropriate to conduct this research, namely, distribution of questionnaires via e-mail for completion by the respondent and returned to the researcher also via e-mail and Internet based research conducted on a dynamic website.

After considering the two options, it was decided to use the distribution and retrieval of the questionnaire via e-mail for the following reasons: *(1)* it was the most cost effective means to obtain data over a short period of time, *(2)* a website did not have to be developed, and *(3)* a website did not have to be hosted for the duration of the survey period.

For the purposes of this study, the researcher e-mailed the questionnaire to all employees of Ninham Shand (Pty) Ltd with e-mail access. The employees/respondents were requested to complete the questionnaire and submit it to a web server on the Internet. This web server then e-mailed the completed questionnaire to the researcher. This data collection method ensured that the respondent could remain anonymous if they wanted to. The questionnaire was sent, via e-mail, to respondents on 15 August 2005 and respondents were requested to complete and submit the questionnaire by 31 August 2005. A data collection period of seventeen days was thus used.

As the researcher worked for Ninham Shand (Pty) Ltd, reminder e-mails were sent out to respondents after five working days if they had not yet submitted a completed questionnaire. A further reminder e-mail was sent after ten working days.

5.4.3.1 Data Collection Errors

As stated in Section 5.4.2.6, two categories of errors occur when surveys, observations and experiments are involved. The first category, namely, sampling errors was discussed in Section 5.4.2.6. The second category, called *data collection errors*, is errors or differences between the statistics and the parameters caused by problems incurred in the actual collection of data (Kress, 1979: 207). According to Kress (1979: 207), these data collection errors are: *(1) non-response, (2) improper sample coverage and (3) influence of the interviewer.* Each of these errors with regards to this study is discussed below.

Due to the possible high non-response rate, when requesting data in this format (i.e. questionnaire sent and received via e-mail), an incentive scheme was devised. The researcher

sponsored three double movie tickets from Ster Kinekor, which was raffled after the data collection period.

In terms of improper sample coverage, all employees with e-mail access working for Ninham Shand (Pty) Ltd have access to the Internet. This implies that all respondents have access to the Internet, at least from their place of employment.

Data collection errors due to the influence of the interviewer did not apply to this study as the questionnaires were sent and received via e-mail.

5.4.4   Data Analysis

Before data can be analysed, it has to be prepared. Data preparation refers to the process of checking the quality of the data gathered during fieldwork and converting it into an electronic format so that it can be read and manipulated (Nel *et al*, 2003: 149). For the purposes of this study, the data collected was prepared in the following way.

5.4.4.1 Editing

Editing is the review of the questions with the objective of increasing accuracy and precision. It consists of screening questionnaires to identify illegible, incomplete, inconsistent or ambiguous responses (Malhotra, 1996: 473).

As the respondent remained anonymous, incomplete and inconsistent questionnaires were discarded.

5.4.4.2 Coding

Coding involves assigning numbers or other symbols to answers so the responses can be grouped into a limited number of classes or categories (Cooper and Schindler, 2001: 424).

The researcher for certain questions used coding as it reduced those responses to a few categories that were required for the analysis.

5.4.4.3 Data Entry

Data entry involves the process of transferring the coded data from the questionnaires onto a computer program (Malhotra, 1996: 478).

The data from the questionnaires was transferred to a computer program by keypunching.

5.4.4.4 Data Cleaning

Data cleaning includes consistency checks and treatment of missing responses. Even though preliminary consistency checks had been made during the editing stage, the checks at this stage are more thorough and extensive as a computer program carries it out (Malhtora, 1996: 480).

Any incomplete or inconsistent questionnaires not picked up in the editing stage were discarded.

5.4.5 Statistical Techniques

Once the data had been prepared using the methods outlined above, the data was analysed using the following statistical techniques.

5.4.5.1 Descriptive Statistical Summaries

Graphs and tables were used to present the findings of each question. Two common *measures of location* were also calculated for some questions. For the purposes of this study, the mean and standard deviation for the relevant questions were determined (i.e. questions from Section Two of the questionnaire). The mean represented the average value and the standard deviation summarised how far away from the averages the data value typically were (Malhotra, 1996: 506).

5.4.5.2 Inferential Statistics

For the purposes of this study, *hypothesis testing* was used to analyse the findings of Section Two of the questionnaire. The null hypotheses tested were those described in Section 5.3.2. The statistical test used was the *Chi – Square Test*. According to Wegner (2001: 257), the chi – square statistic can provide a measure of the goodness of fit between an observed frequency distribution of a random variable and an expected frequency distribution.

According to Mitchell and Jolley (2004: 211), a 0.05 level of significance (range in which you can be sure that the population means falls) should be used when comparing one variable, a 0.01 level of significance should be used when comparing five variables and a 0.001 level of significance should be used when comparing fifty or more variables. As there was a

maximum of ten variables (i.e. ten responses to each question in Section Two of the questionnaire), a 0.005 level of significance was deemed to be appropriate.

The *test statistic* for each hypothesis (as determined in Section 5.3.1) was calculated and the appropriate *critical test value* was read from a Chi – Square Distribution table. Each hypothesis was then interpreted (i.e. accepted or rejected) and thereafter a conclusion was made regarding the acceptance or rejection of the hypothesis.

5.4.5.3 Reliability Estimates

For the purposes of this study, an *Internal Consistency Reliability Test* was used to determine the reliability of the findings of Section Two of the questionnaire. The *coefficient alpha* would be determined for the ten questions in Section Two of the questionnaire. These ten questions referred to the factors influencing the decision of an Internet user purchasing online. Nunnally (1978: 230) states that *coefficient alpha* provides a good estimate of reliability in most situations, since the major source of measurement error is because of the sampling of content. Cooper and Schindler (2001: 206), and Mitchell and Jolley (2004: 104) further suggest that a *coefficient alpha* of 0.6 or less is deemed to indicate unsatisfactory internal consistency reliability. For this reason, a calculated *coefficient alpha* of less than 0.6 would indicated that a findings in Section Two had poor internal consistency reliability.

5.5   Validity and Reliability

Validity refers to the degree to which what has been measured corresponds with other independent measures obtained by different research tools (Banister *et al*, 1995: 10). This implies that the correlation between one survey and another survey of the same nature will be measure how far the first survey is determining what it claims to be finding out.

The findings of this research study will be compared to similar studies carried out internationally and also in South Africa. If the findings of this study compare well to the finding of other similar studies, then the validity of this research study would be considered good.

According to Nunnally (1978: 191), reliability refers to the extent to which measurements are repeatable i.e. when different persons make the measurements, on different occasions, with

supposedly alternative instruments for measuring the same thing and when there are small variations in circumstances for making measurements that are not intended to influence results. This implies that measurements are intended to be stable over a variety of conditions in which essentially the same results should be obtained. As mentioned in Section 5.4.5.3, the reliability of the findings of Section Two of the questionnaire will be determined by using the *Internal Consistency Reliability Test*.

5.7   Summary

This chapter provided a methodology to determine the factors influencing South African Internet users purchasing a product or service online. The following chapter provides the findings of the survey conducted to investigate the factors that influenced the sample's purchasing of products or services online.

6. RESEARCH RESULTS AND INTERPRETATION

6.1   Introduction

This chapter provides the findings of the survey conducted to investigate the factors that influenced the sample's purchasing of products or services online. The questionnaire used for this study is provided in **Annexure One**.

The first part of the chapter presents the demographic profile and the Internet usage characteristics of the sample. The second part of the chapter presents how the sample rated each of the factors identified in Chapter Four in terms of importance when purchasing a product or service online. The third part of the chapter discusses the validity and reliability of the research findings.

6.2   Response Rate

As previously mentioned in Section 5.4.2.4 of Chapter Five, the questionnaire was e-mailed to 434 employees of Ninham Shand (Pty) with e-mail access. The respondents were geographically spread among the fifteen offices of Ninham Shand in South Africa. These offices are located in Bloemfontein, Cape Town, Centurion, Durban, East London, George, Harrismith, Kimberly, Klerksdorp, Pietermaritzburg, Polokwane, Port Elizabeth, Stellenbosch, Umtata and Welkom.

Of the 434 respondents, 269 submitted completed questionnaires. A response rate of approximately 62% was therefore achieved. This relatively high response rate, in terms of the data collection method used, may be attributed to the two reminder e-mails sent to the respondents encouraging them to complete and submit the questionnaire.

6.3   Demographic Profile of the Sample

The following sections provide the demographic profile of the sample. Where possible, the sample was compared to the demographic profile of other Internet consumer behaviour research studies. Where this was not possible, the sample was compared to the South African population demographic profile.

6.3.1 Gender

Figure 6.1 shows the gender of the sample.

Figure 6.1: Gender
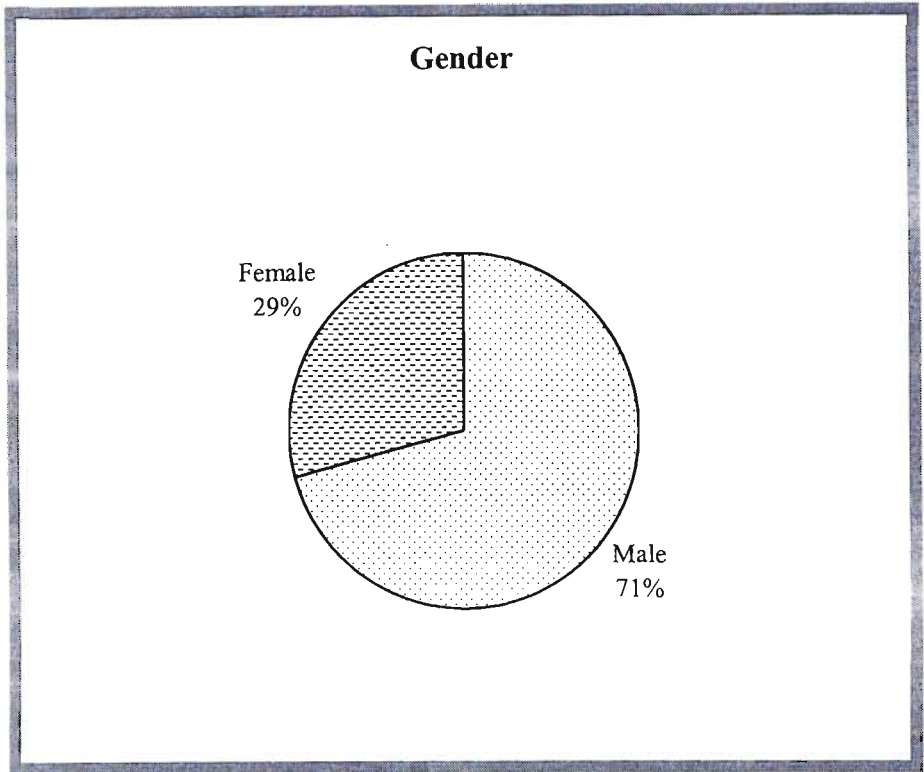
It can be seen from *Figure 6.1* that approximately 71% of the respondents were **male** and that approximately 29% were **female**.

When compared to the research undertaken by *Webcheck's Project SA Web User Survey 2004*, which found that approximately 51% of that sample was female and approximately 49% was male (Webcheck, 2005b: 2), this sample can be regarded as unbalanced. This sample's unbalanced gender distribution was expected as the sample was drawn from a predominately male - orientated industry. Possible sample demographic limitations relating to this question is discussed in Section 9.1.3 of Chapter Nine.

6.3.2   Age Distribution

Figure 6.2 shows the age distribution of the sample.

Figure 6.2: Age Distribution
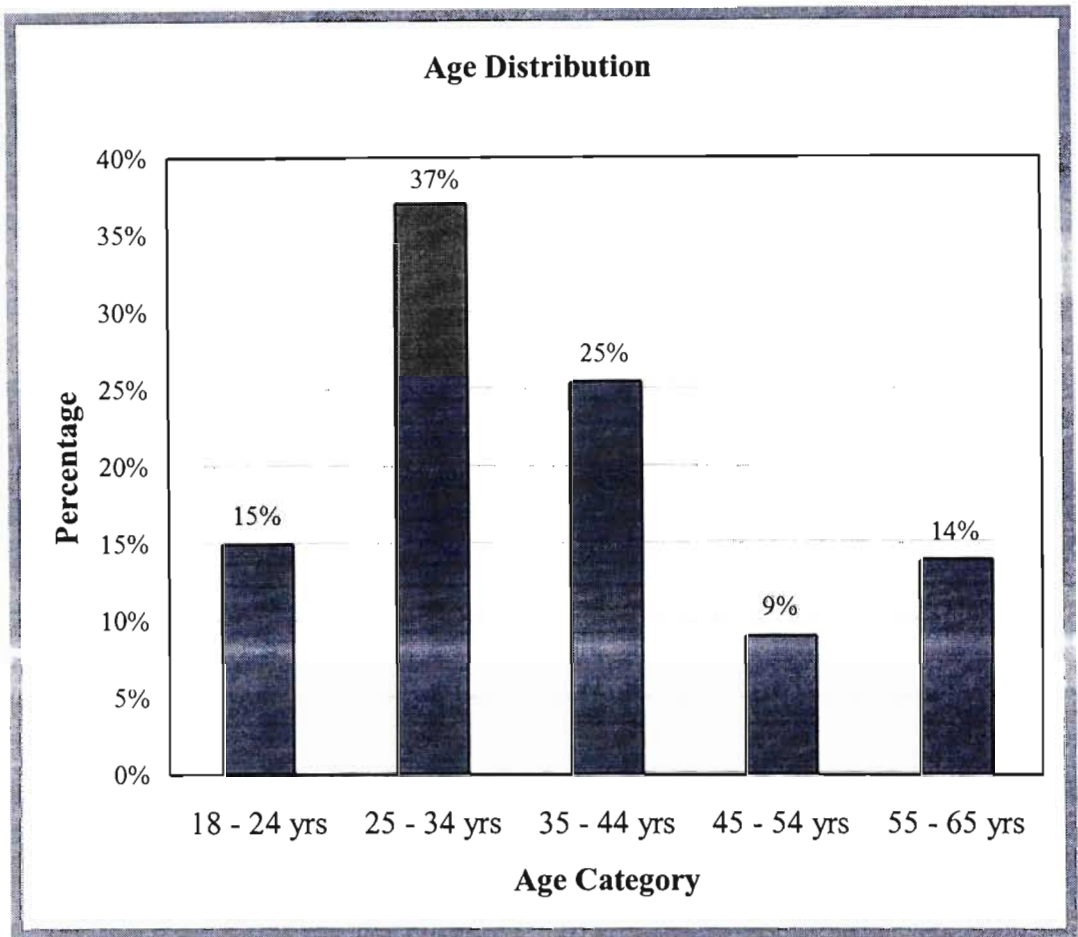
It can be seen from *Figure 6.2* that 37% of the respondents were from the **25 – 34 year age group** and 14% were from the **55 – 65 year age group**. It can also be seen from *Figure 6.2* that approximately 62% of respondents were from the 25 – 44 year age group.

When compared to *Webcheck's Project SA Web User Survey 2004*, almost half of that sample was between the ages of 25 and 44 years and 16% were over the age of 55 years (Webcheck, 2005b: 2). In this sample, approximately 62% was between the ages of 25 and 44 years and approximately 16% were from the 55 – 65 year group. This implies that this sample's population grouping compares somewhat favourably to Webcheck's survey undertaken in 2004.

6.3.3   Place of Residence

Figure 6.3 shows the different places of residence of the sample.

Figure 6.3: Place of Residence
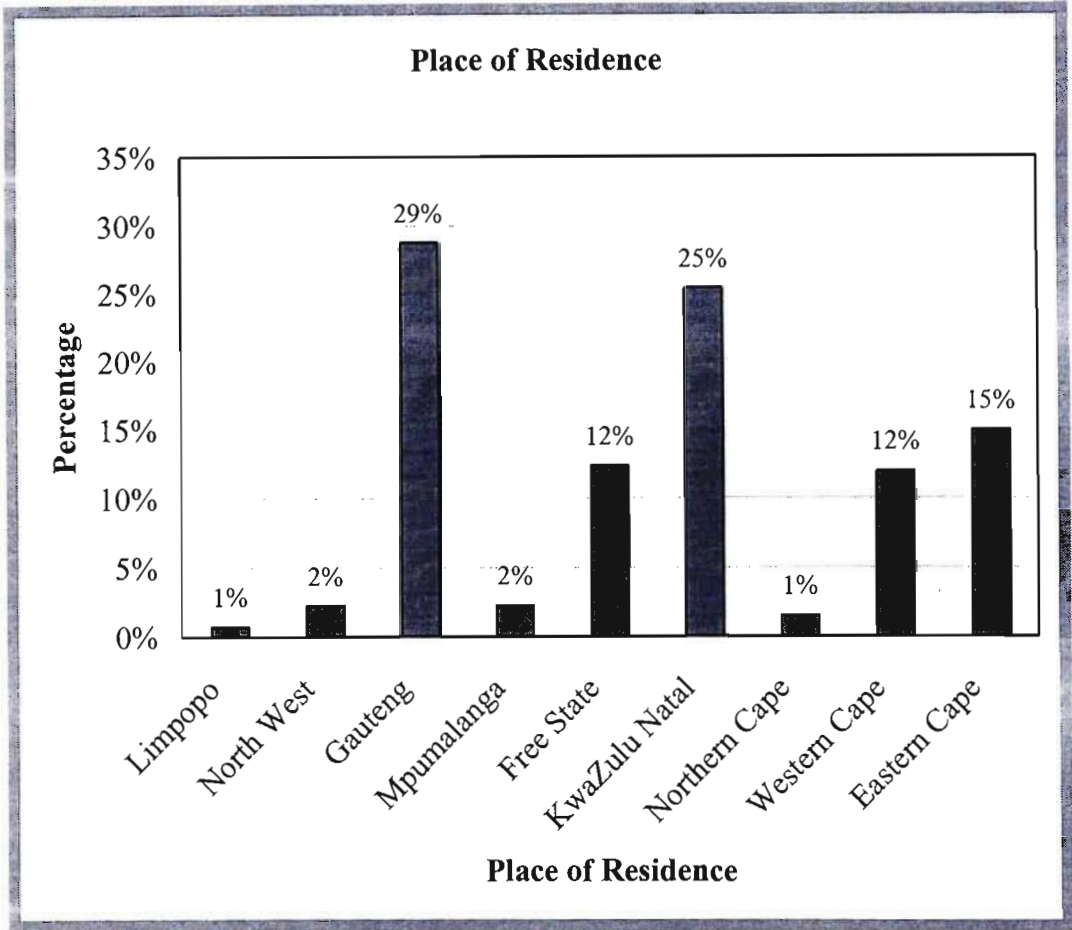
It can be seen from *Figure 6.3* that most of the respondents live in **Gauteng** and **KwaZulu Natal** (approximately 29% and 25% respectively) while the least live in **Limpopo** and **Northern Cape** (approximately 1% each).

When compared to the South African provincial residency estimates, the provinces with the highest residencies were KwaZulu Natal (approximately 20.6%) and Gauteng (approximately (19.2%) (Statistics South Africa, 2005: 9). This implies that the sample's place of residence compared somewhat favourably to the South African provincial residency estimates.

6.3.4   Household Language

Figure 6.4 shows the household language of the sample.

Figure 6.4: Household Language
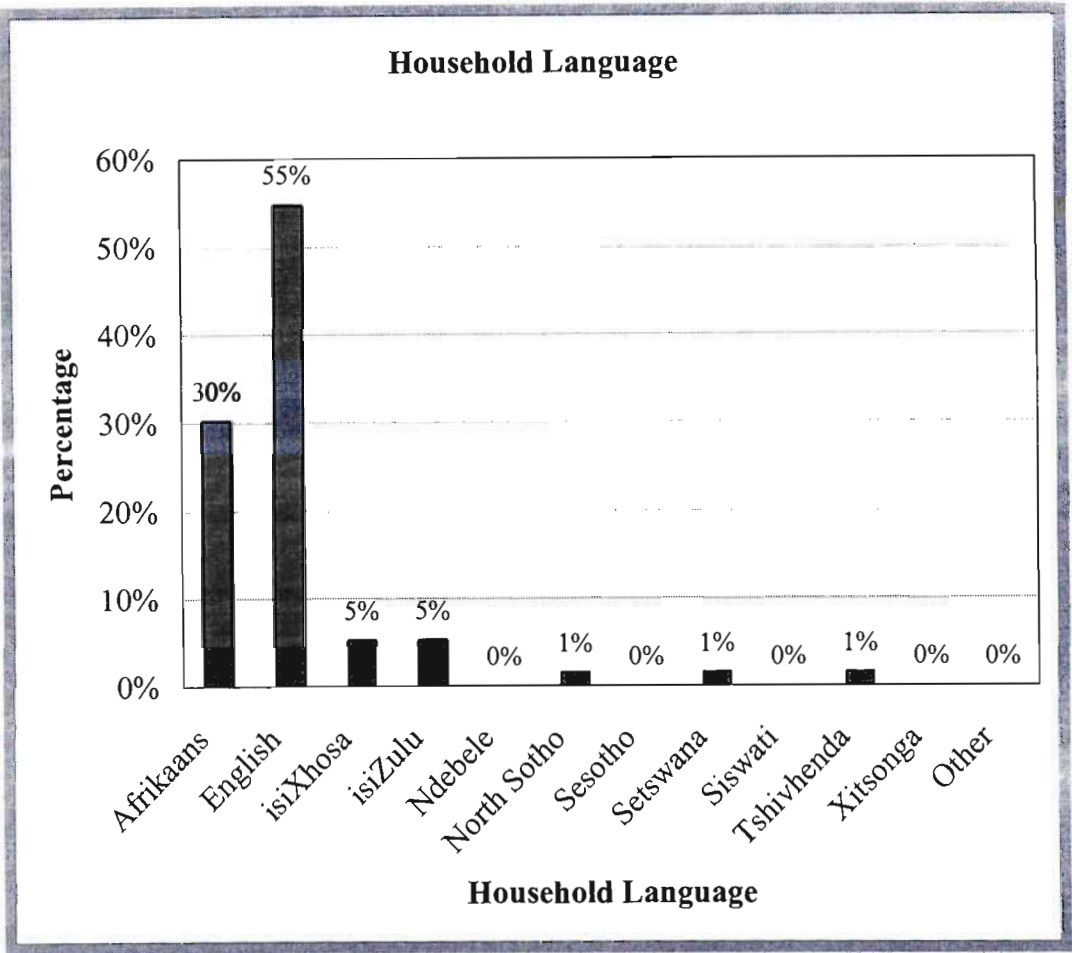
It can be seen from *Figure 6.4* that most respondents spoke either **English** or **Afrikaans** at home (approximately 55% and 30% respectively) and the least spoke **Ndebele, Sesotho, Siswati, Xitsonga** or any **"other"** language (approximately 0% each).

When compared to *Webcheck's Project SA Web User Survey 2004*, 72% of that sample was English-speaking (Webcheck, 2005: 2). This sample's lower English-speaking language distribution was expected as the sample was drawn from a largely Afrikaans-speaking organisation. Possible sample demographics limitations relating to this question is discussed in Section 9.1.3 of Chapter Nine.

6.3.5   Population Groupings

Figure 6.5 shows the population groupings of the sample.

Figure 6.5: Population Groupings
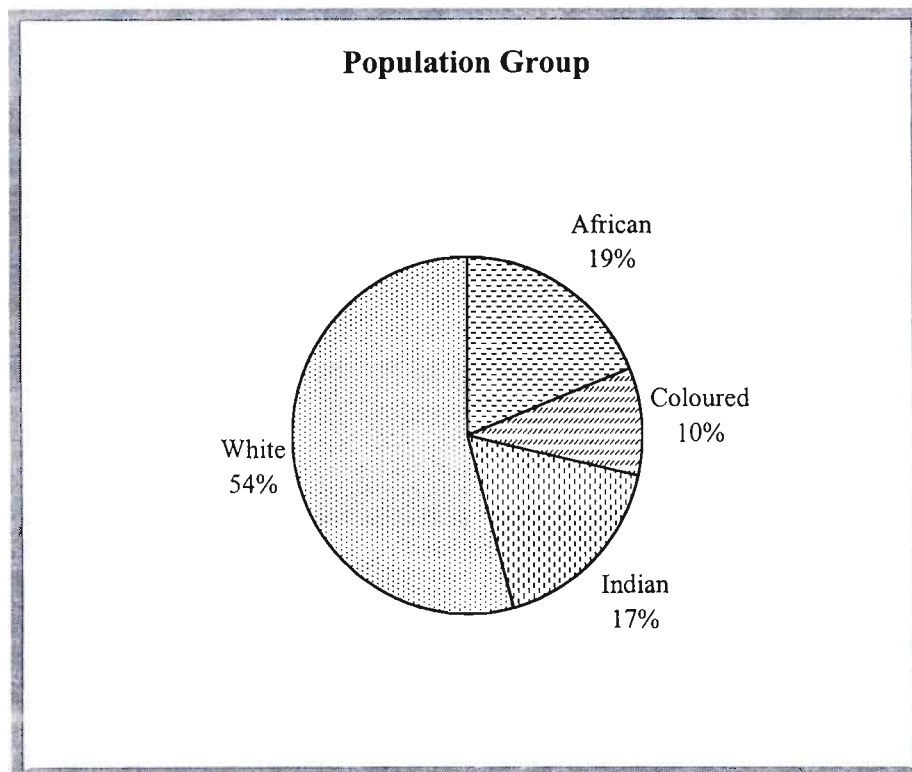
It can be seen from *Figure 6.5* that the majority of the respondents were from the **White** community (approximately 54%). Approximately 19% were from the **African** community, approximately 17% were from the **Indian** community and approximately 10% were from the **Coloured** community.

When compared to South African population estimates, the white community makes up approximately 9.3% of the population, the African community approximately 79.4%, the Indian community approximately 2.5% and the Coloured community approximately 8.8% (Statistics South Africa, 2005: 9). With the exception of the Coloured community, the sample was not representative of the South African population.

6.3.6 Marital Status

Figure 6.6 shows the marital status of the sample.

Figure 6.6: Marital Status
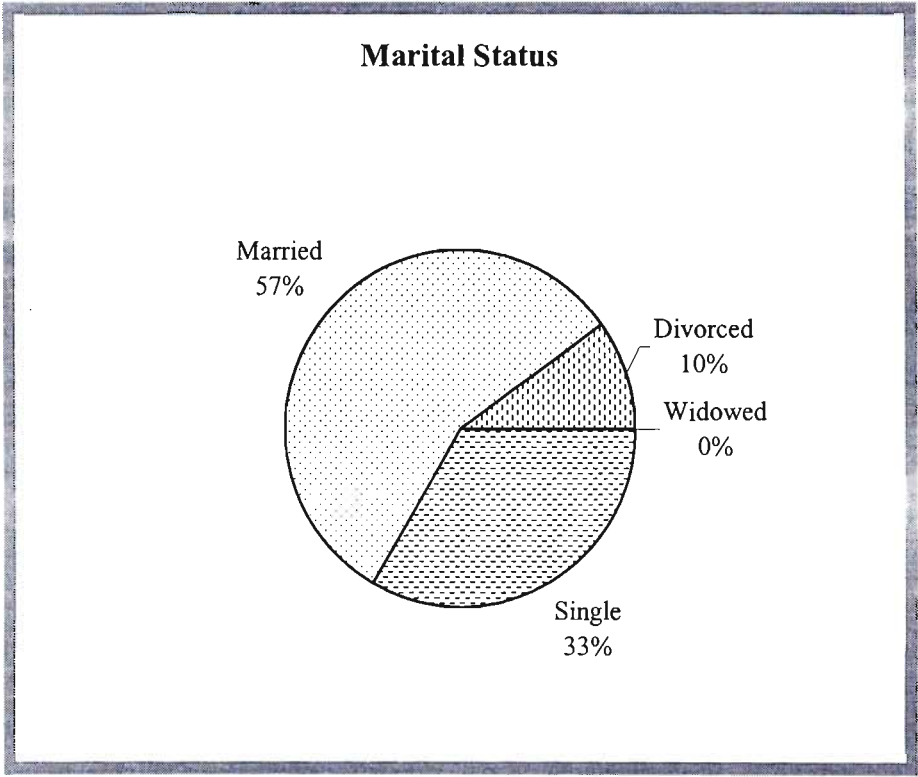
It can be seen from *Figure 6.6* that a large proportion of the respondents were either married or single (approximately 57% and 33% respectively).

6.4   Internet Usage Characteristics of the Sample

This section provides the Internet usage characteristics of the sample.

6.4.1   Internet User Status

Figure 6.7 shows the Internet user status of the sample.

Figure 6.7: Internet User Status
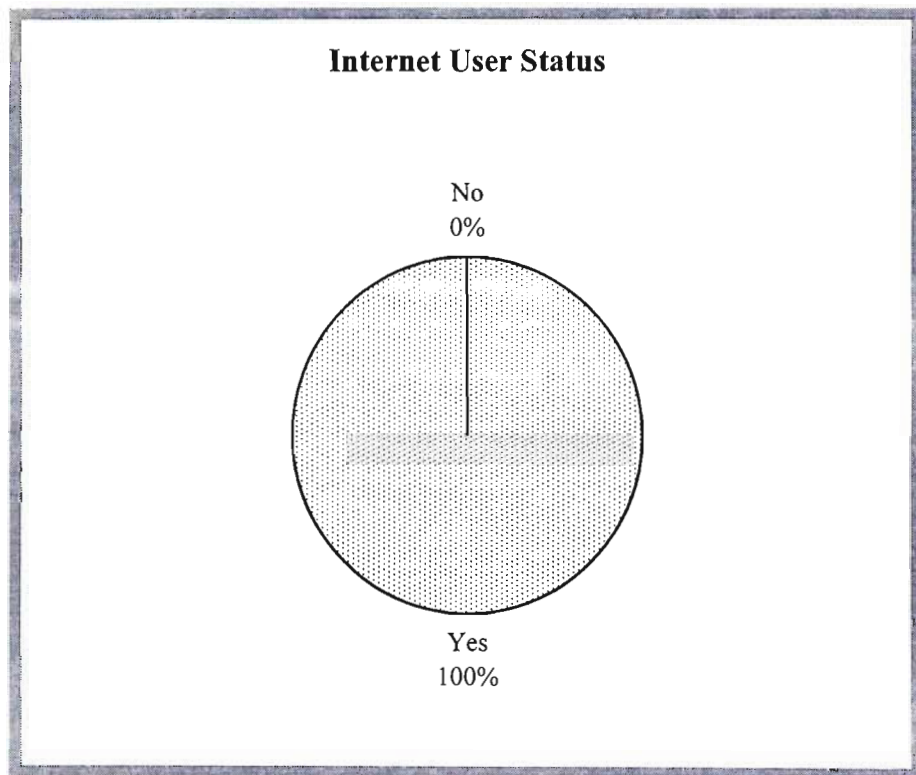
It can be seen from *Figure 6.7* that all the respondents were Internet users. This result was expected as all of the respondents had free access to the Internet from their place of work.

6.4.2   Duration as an Internet User

Figure 6.8 shows for how long the respondents have been Internet users.

Figure 6.8: Duration as an Internet User
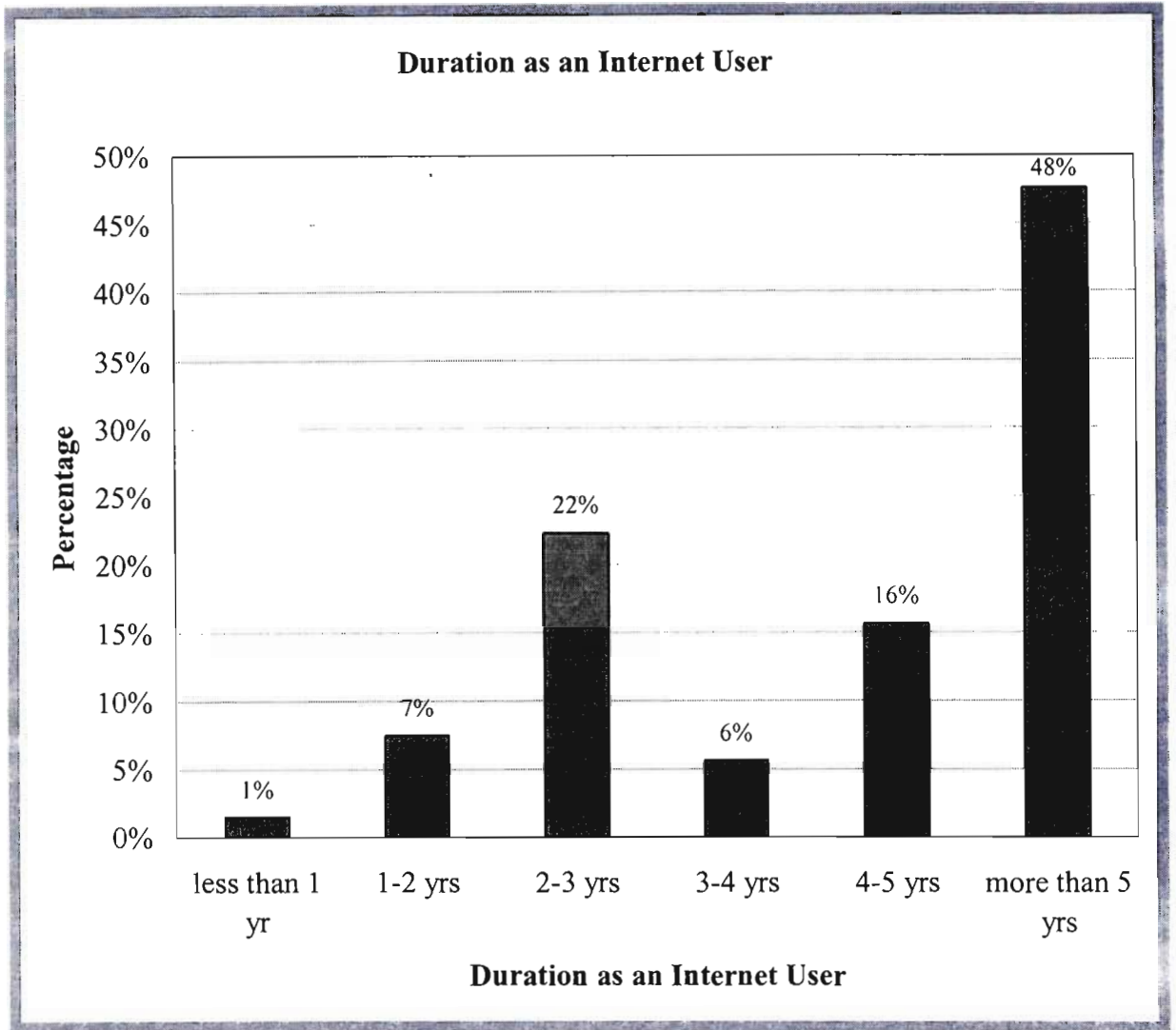
It can be seen from *Figure 6.8* that approximately 48% of the respondents started using the Internet **more than 5 years ago** and that only approximately 1% started using the Internet **less than 1 year ago**. It can also be seen from *Figure 6.8* that approximately 82% of the respondents started using the Internet between **more than 2 ago**.

6.4.3   Frequency as an Internet User

Figure 6.9 shows how often the respondents used the Internet.

Figure 6.9: Frequency as an Internet User
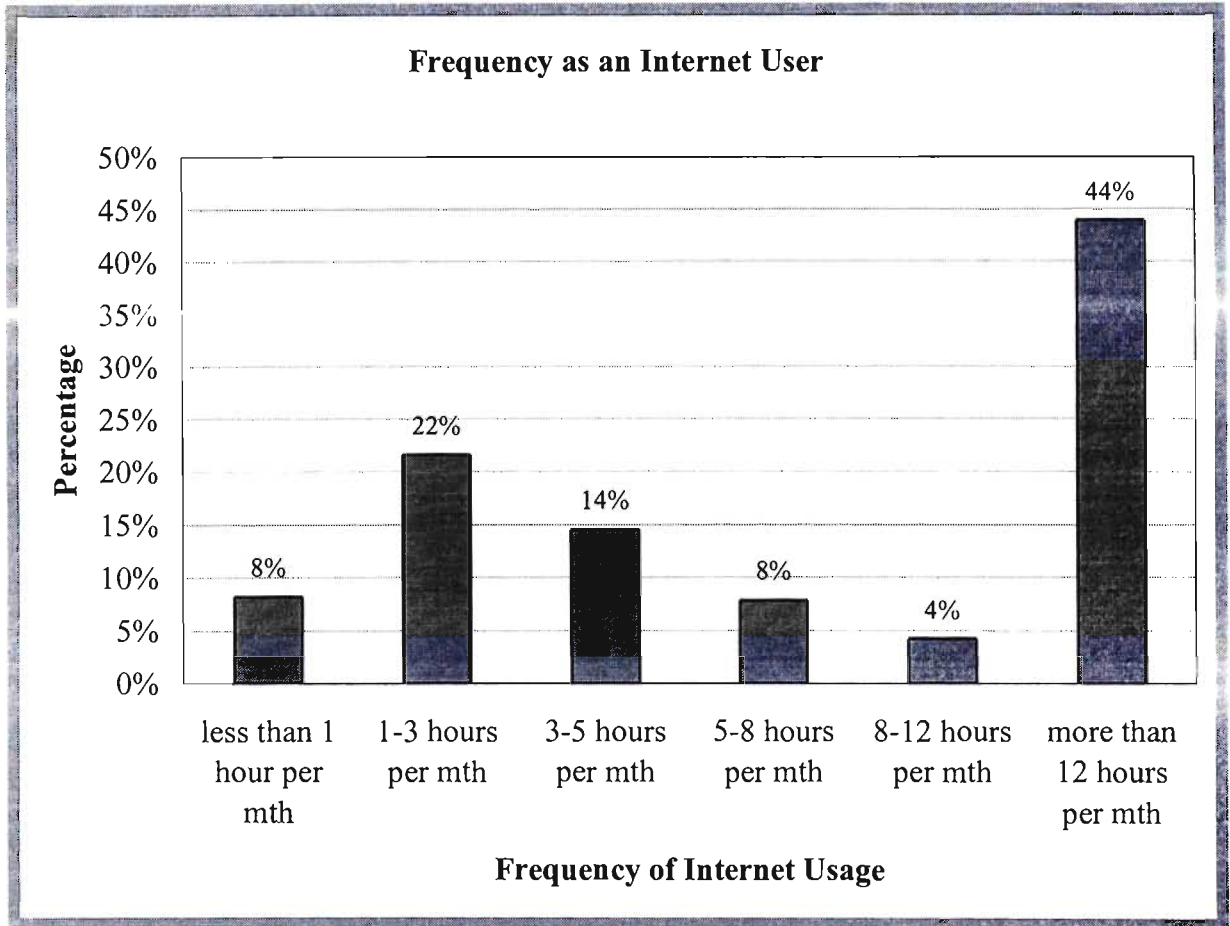
It can be seen from *Figure 6.9* that approximately 44% of the respondents used the Internet **more than 12 hours per month** and approximately 8% used the Internet **less than 1 hour per month**.   It can also be seen that from *Figure 6.9* that approximately 70% of the respondents used the Internet between **more than 3 hours per month**. Possible participant biasness relating to the response of this question is provided in Section 9.1.6 of Chapter Nine.

6.4.4   Access to the Internet

Figure 6.10 shows from where the respondents gained access to the Internet.

Figure 6.10: Access to the Internet
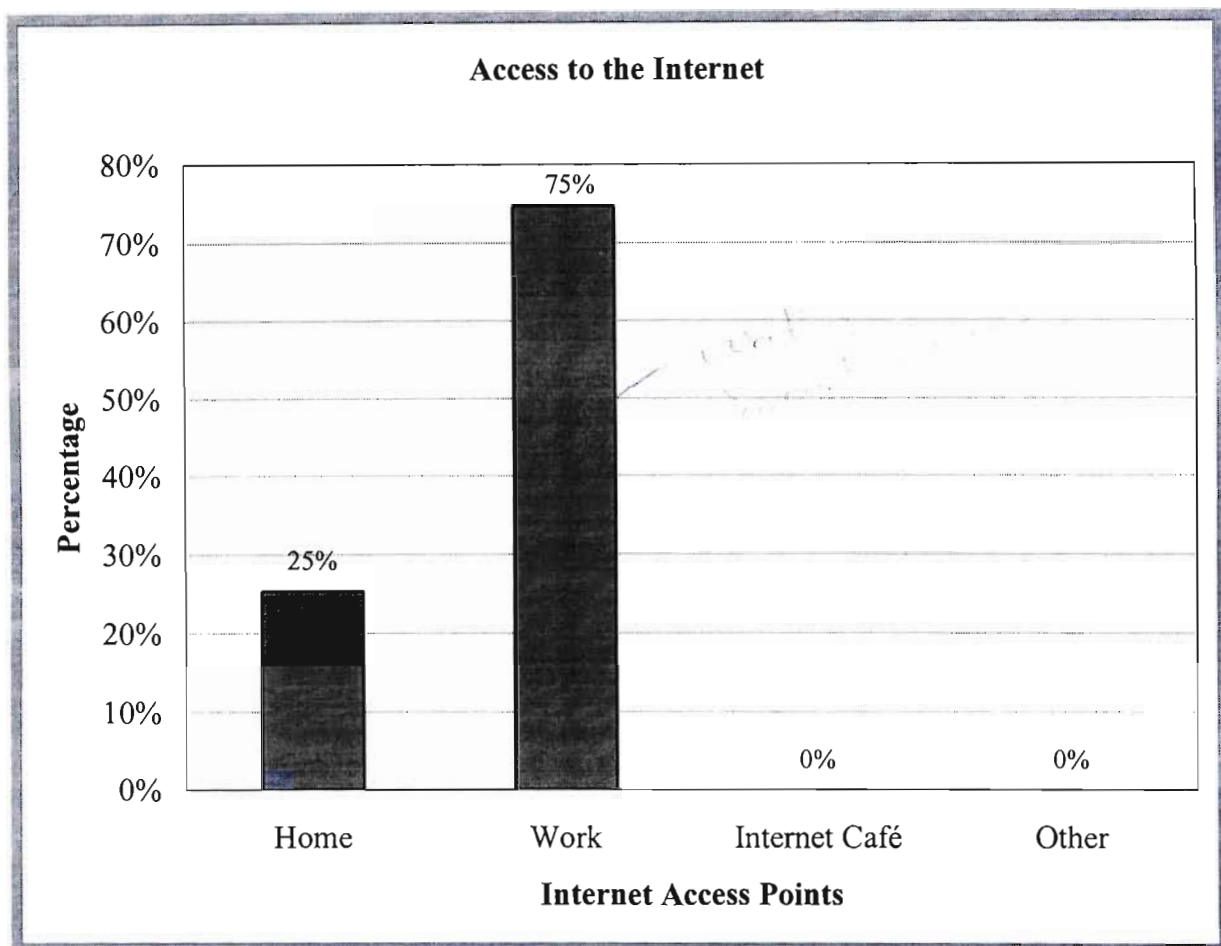
It can be seen from *Figure 6.10* that all the respondents gained access to the Internet from either their **places of work** (approximately 75%) or **home** (approximately 25%). This result was expected as all the respondents had free access to the Internet from their place of work.

6.4.5   Primary Use of the Internet

Figure 6.11 shows the primary use of the Internet by the sample.

Figure 6.11: Primary Use of the Internet
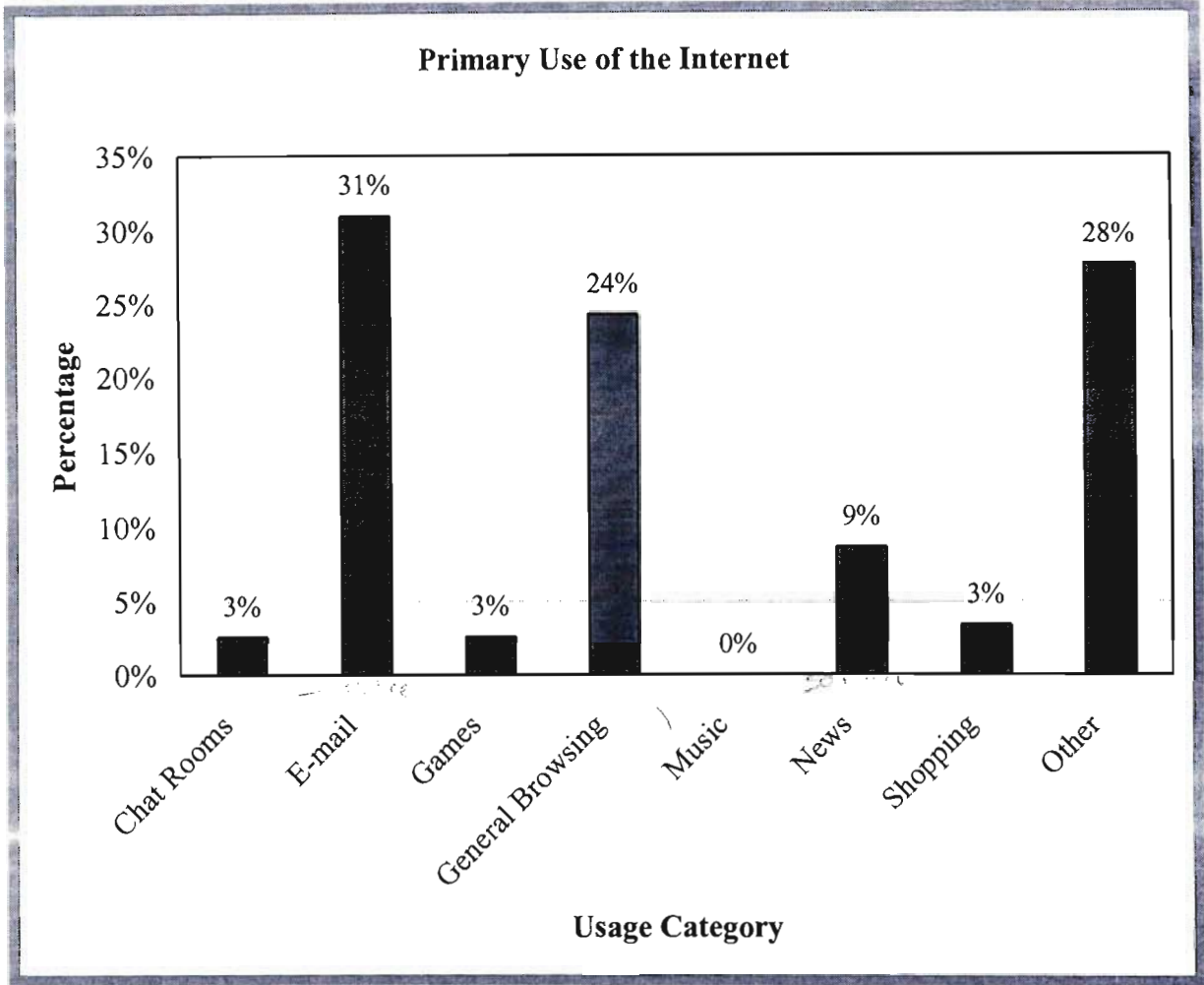
It can be seen from *Figure 6.11* that most respondents used the Internet for **e-mail** (approximately 31%) and for **general browsing** (approximately 24%).

From the respondents that selected **"other"** (approximately 28% of the respondents), 46% used the Internet to search for **information**, 28% used the Internet for **work related purposes**, 16% used the Internet for **research**, 5% used the Internet for **downloads** and 3% used the Internet for **banking**.

6.4.6   Current Purchase Behaviour

Figure 6.12 shows the current purchase behaviour of the sample.

Figure 6.12: Current Purchase Behaviour
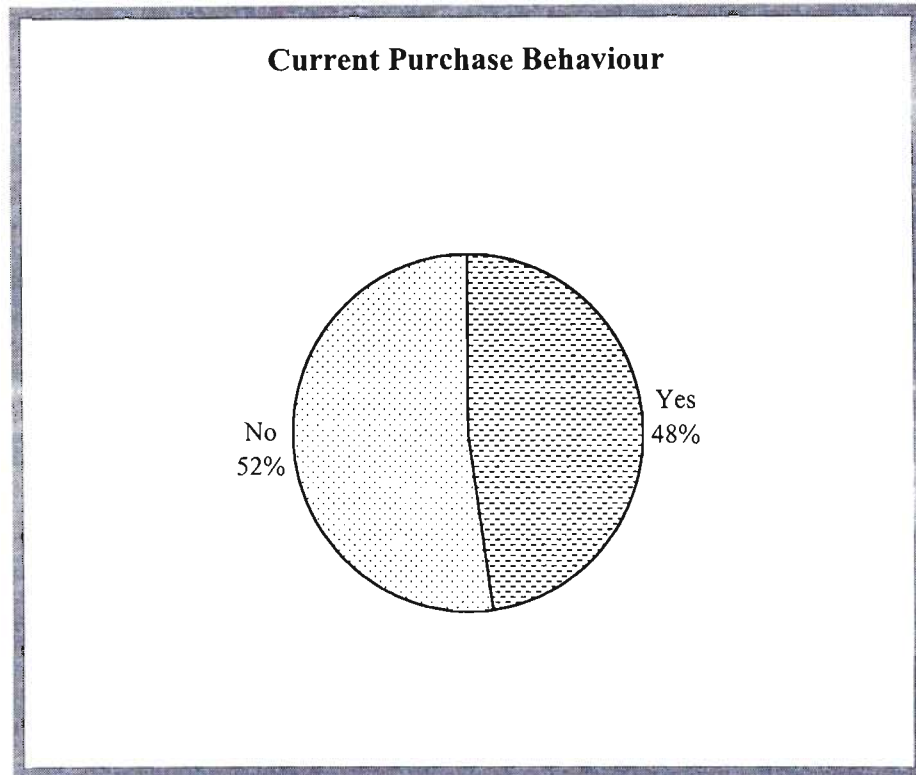
It can be seen from *Figure 6.12* that approximately 52% of respondents **currently do not purchase** products and services online while approximately 48% **currently purchase** products and services online. Possible participant biasness of the response to this question is discussed in Section 9.1.6 of Chapter Nine.

6.4.6.1 Current Purchases

Figure 6.13 shows what the respondents currently purchase online.

Figure 6.13: Current Purchases on the Internet
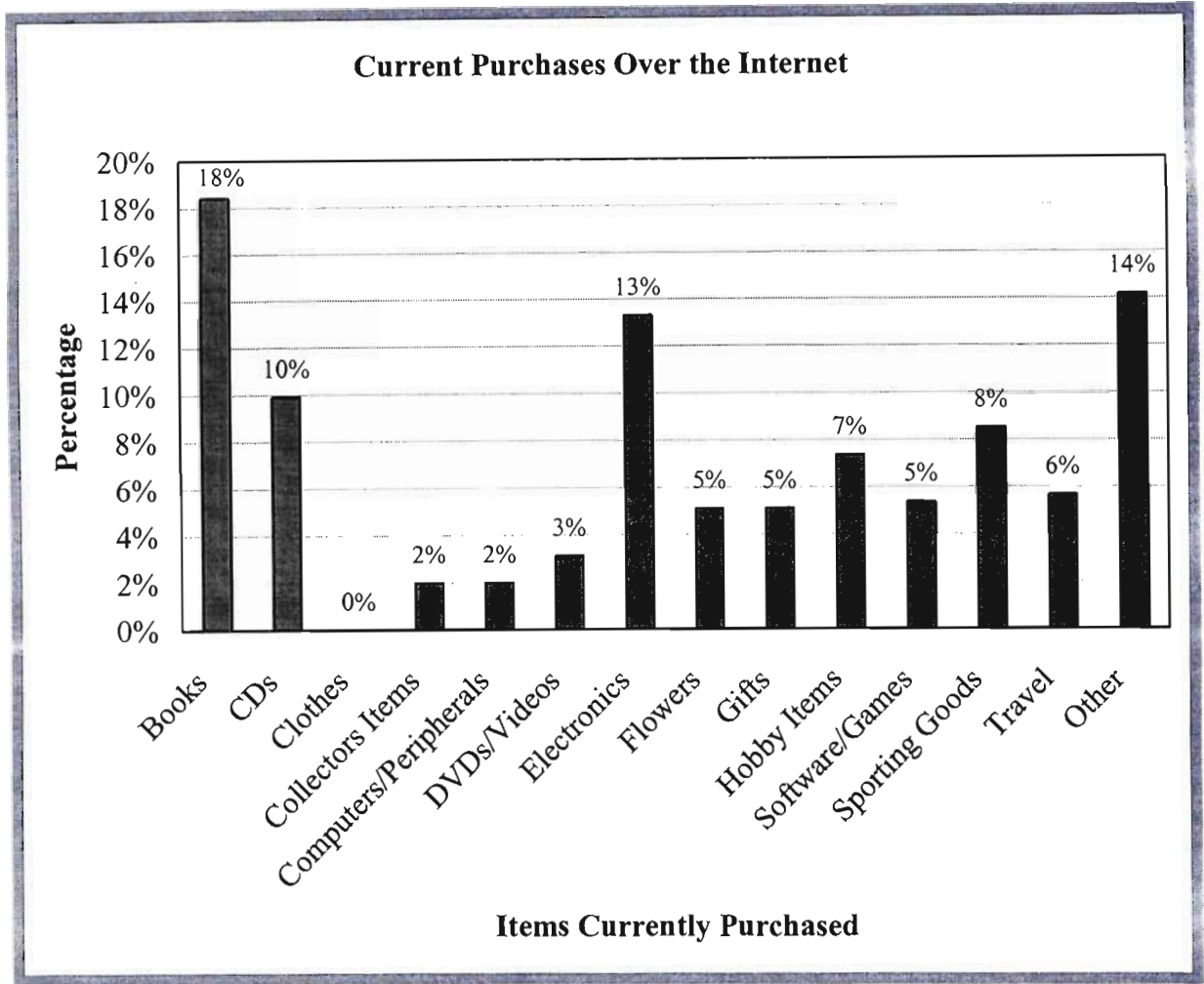
It can be seen from *Figure 6.13* that approximately 18% of respondents currently purchased **books** online while no respondents currently purchased **clothes** online. Also, from the approximately 14% of respondents who selected **"other"**, 53% purchased **tickets**, 20% purchased either **medicine** or **groceries** and 7% purchased **gadgets** online.

6.4.7 Future Purchase Behaviour

Figure 6.14 shows the future purchase behaviour of the sample.

Figure 6.14: Future Purchase Behaviour
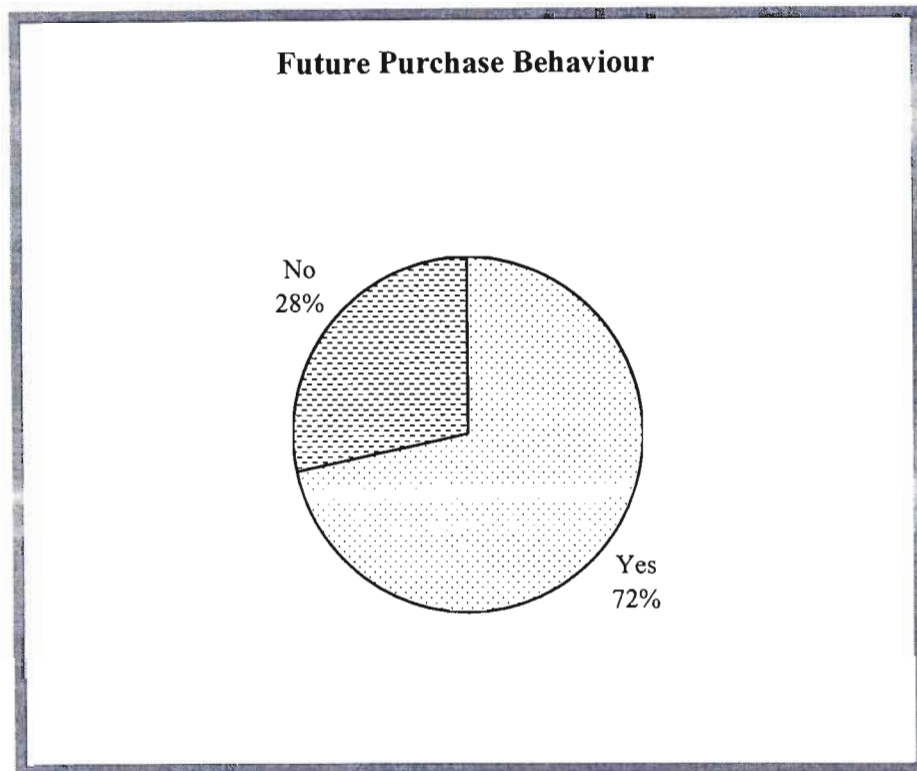
It can be seen from *Figure 6.14* that approximately 28% of respondents indicated that they would **not purchase products and services online in the future**; while approximately 72% indicated that they **would purchase products and services online in the future**.

From the respondents who indicated that they **currently do not purchase on the Internet** *(52% from Graph 6.12)*, approximately 51% indicated that they **would purchase on the Internet in the future**, while 49% indicated that they **would still not purchase on the Internet in the future**.

From the respondents who indicated that they **currently purchase on the Internet** *(48% from Graph 6.12)*, approximately 95% indicated that they **would continue to purchase on the Internet in the future**, while 5% indicated that they **would no longer purchase on the Internet in the future**.

6.5 The Rating of Each Factor

This section presents how the sample rated each of the factors identified in Chapter Four in terms of importance to them when purchasing a product or service online. For each question, **a scale of 1 – 10** was provided, **where 1 equaled the factor being least important and 10 equaled the factor being most important**. For discussion purposes, any factor rated **0 - 4** was considered **unimportant**, any factor rated **5 - 6** was considered **neutral**, any factor rated **7 - 10** was considered **important**.

6.5.1 The Price of the Product or Service Being Purchased

Figure 6.15 shows how respondents rated the price of the product or service, in terms of importance, when purchasing such product or service online.

Figure 6.15: The Price of the Product or Service Being Purchased
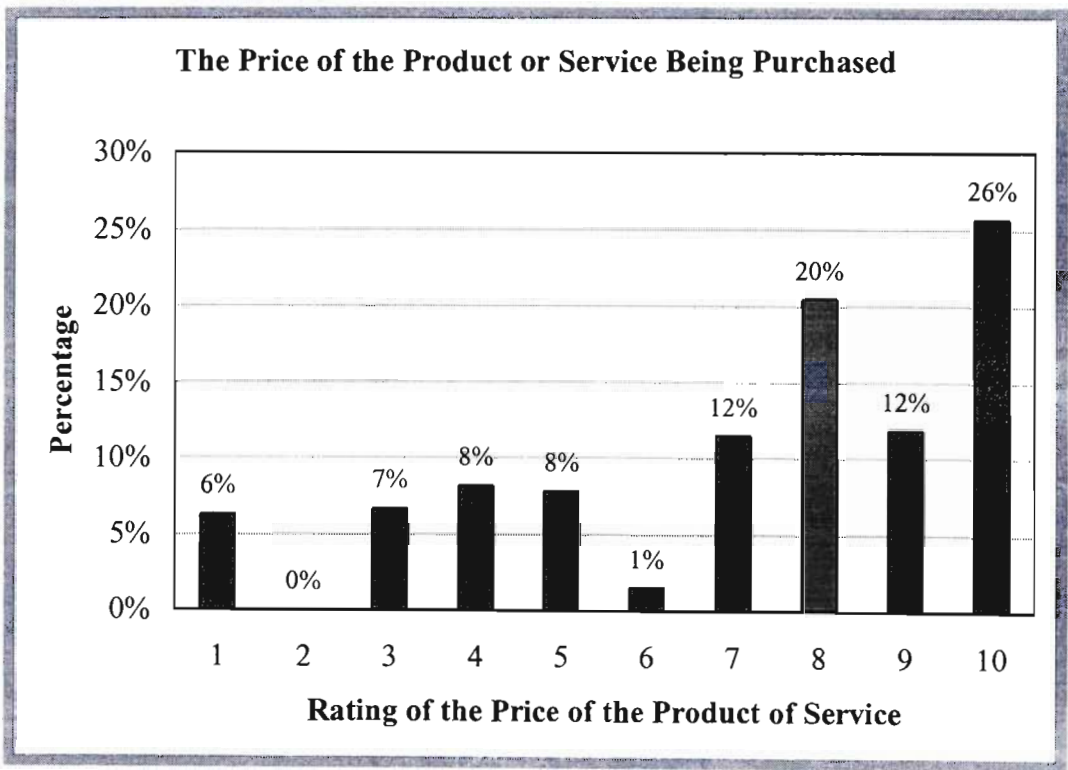
It can be seen from *Figure 6.15* that approximately 26% of respondents rated the factor **price of the product or service** as being most important in purchasing a product or service online while approximately 6% rated the factor **price of the product or service** as being least important in purchasing online. It can also be seen that approximately 70% of respondents rated the price of the product or service as an **important factor** to them purchasing online.

6.5.2 The Convenience to the Internet User

Figure 6.16 shows how respondents rated convenience to them, in terms of importance, when purchasing a product or service online.

Figure 6.16: The Convenience to the Internet User
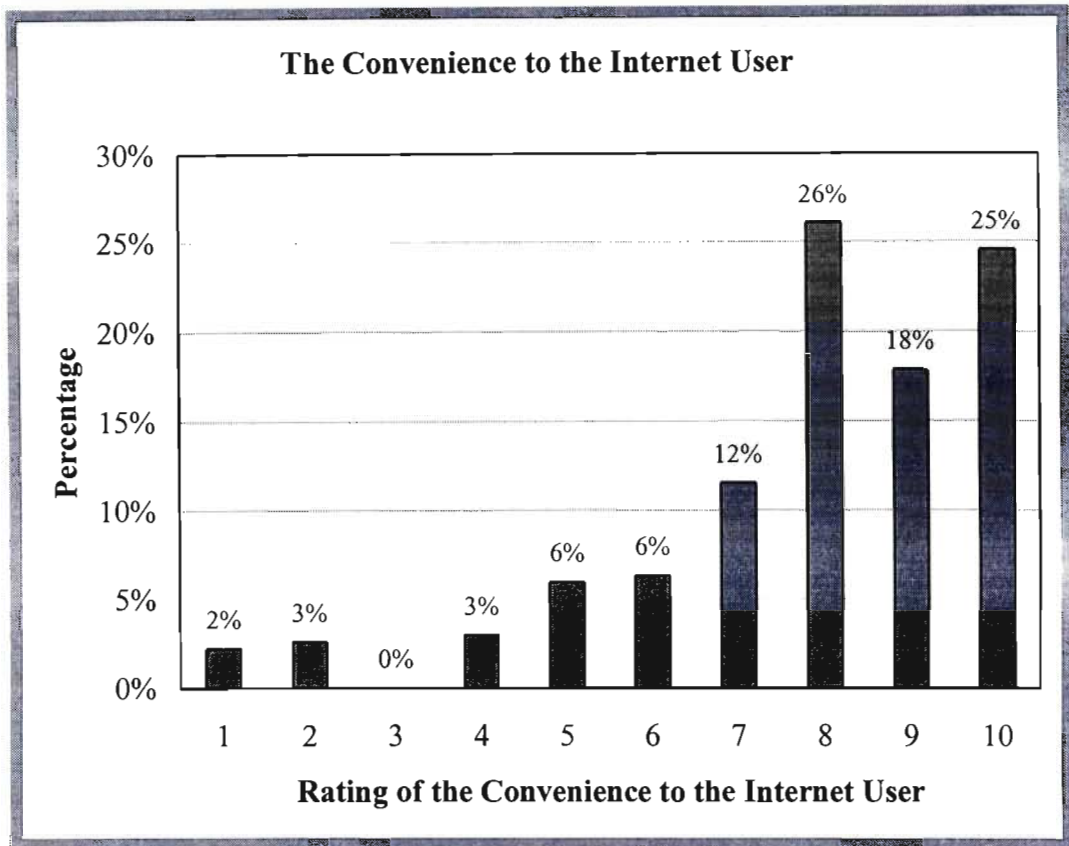
It can be seen from *Figure 6.16* that approximately 25% of respondents rated the factor **convenience** to them as being most important in purchasing a product or service online while approximately 2% rated the factor **convenience** to them as being least important to them purchasing online.

It can also be seen from *Figure 6.16* that approximately 12% of respondents rated convenience as a **neutral factor** and approximately 80% rated convenience as an **important factor** to them purchasing online.

6.5.3   The Experience as an Internet User

Figure 6.17 shows how respondents rated their experience as an Internet user, in terms of importance, when purchasing a product or service online.

Figure 6.17: The Experience as an Internet User
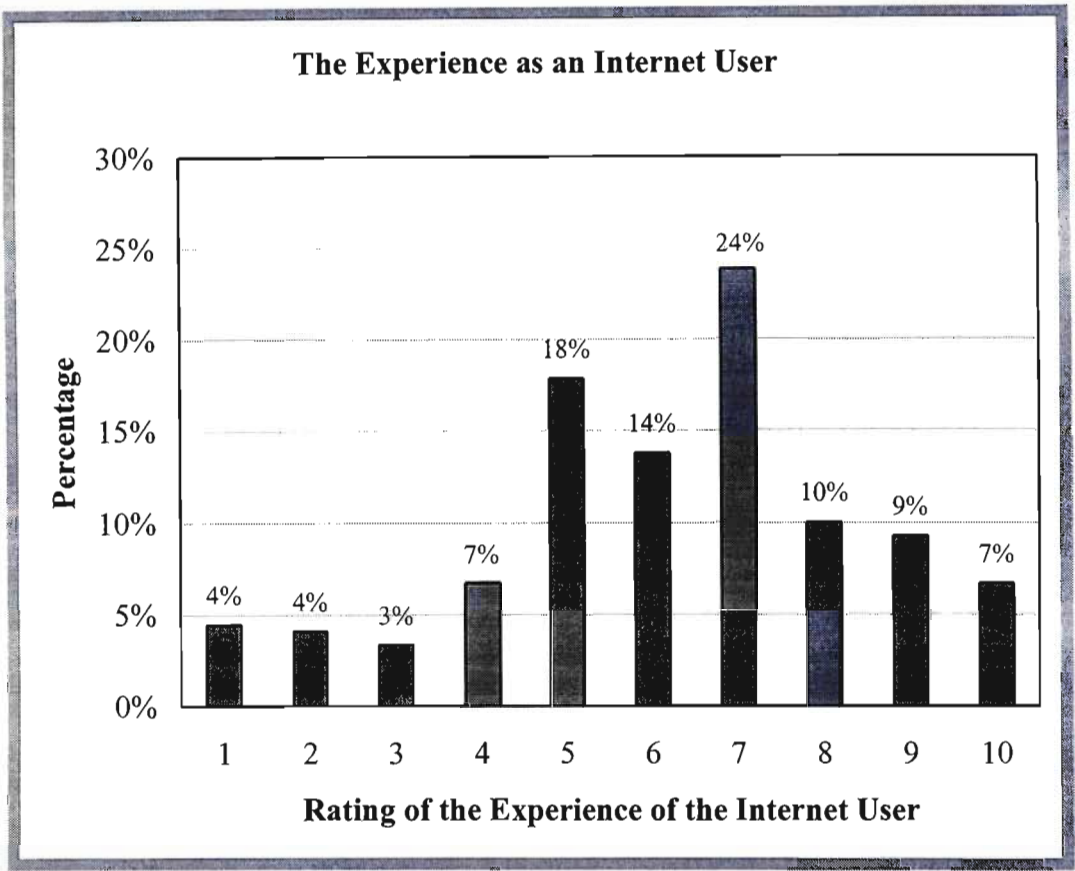
It can be seen from *Figure 6.17* that approximately 7% of respondents rated the factor **experience as an Internet user** as being most important in purchasing a product or service online while approximately 4% rated the factor **experience as an Internet user** being least important in purchasing online.

It can also be seen from *Figure 6.17* that approximately 32% of respondents rated experience as an Internet user as a **neutral factor** and approximately 50% rated experience as an Internet user as an **important factor** to them purchasing online.

6.5.4   The Web site Layout

Figure 6.18 shows how the respondents rated the web site layout, in terms of importance, when purchasing a product or service online.

Figure 6.18: The Web site Layout
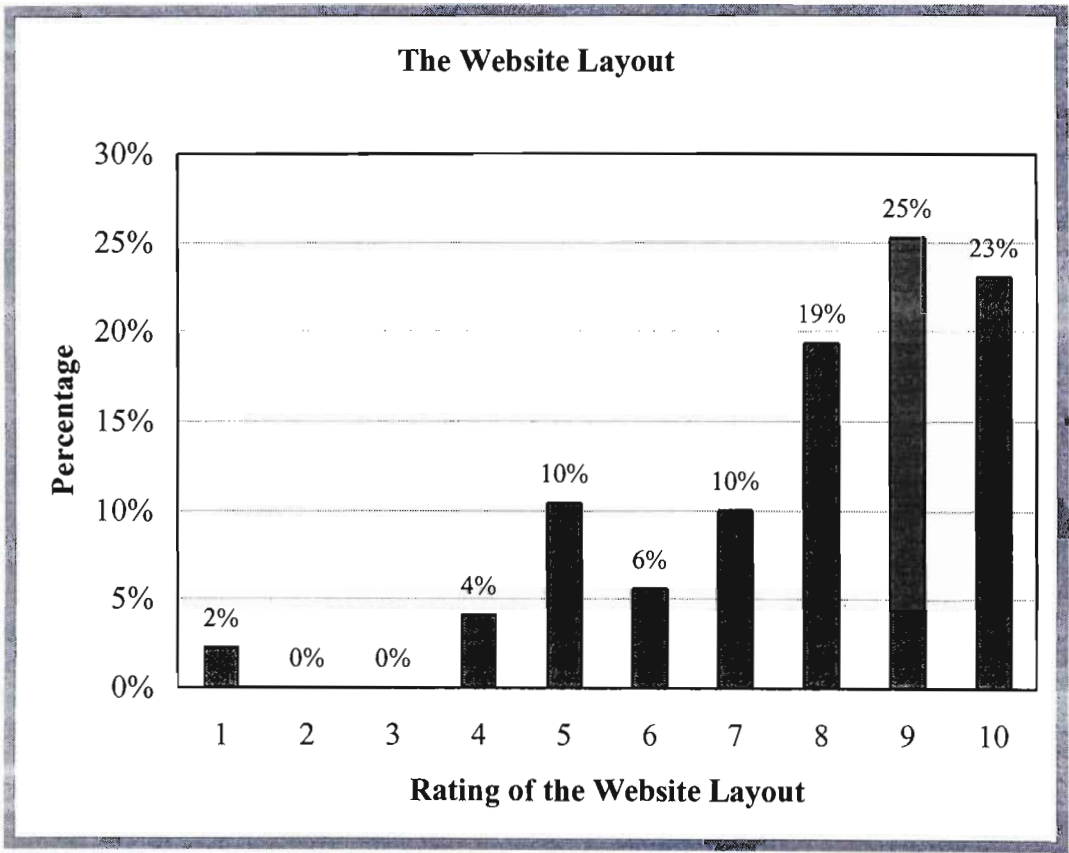
It can be seen from *Figure 6.18* that approximately 23% of respondents rated the factor **web site layout** as being most important in purchasing a product or service online while approximately 2% rated the factor **web site layout** as being least important in purchasing online.

It can also be seen from *Figure 6.18* that approximately 77% of respondents rated the web site layout as an **important factor**, while approximately 6% rated the web site layout as an **unimportant factor** to them purchasing online.

6.5.5   The Ease of Use of the Web Site

Figure 6.19 shows how respondents rated the ease of use of the web site, in terms of importance, when purchasing a product or service online.

Figure 6.19: The Ease of Use of the Web site
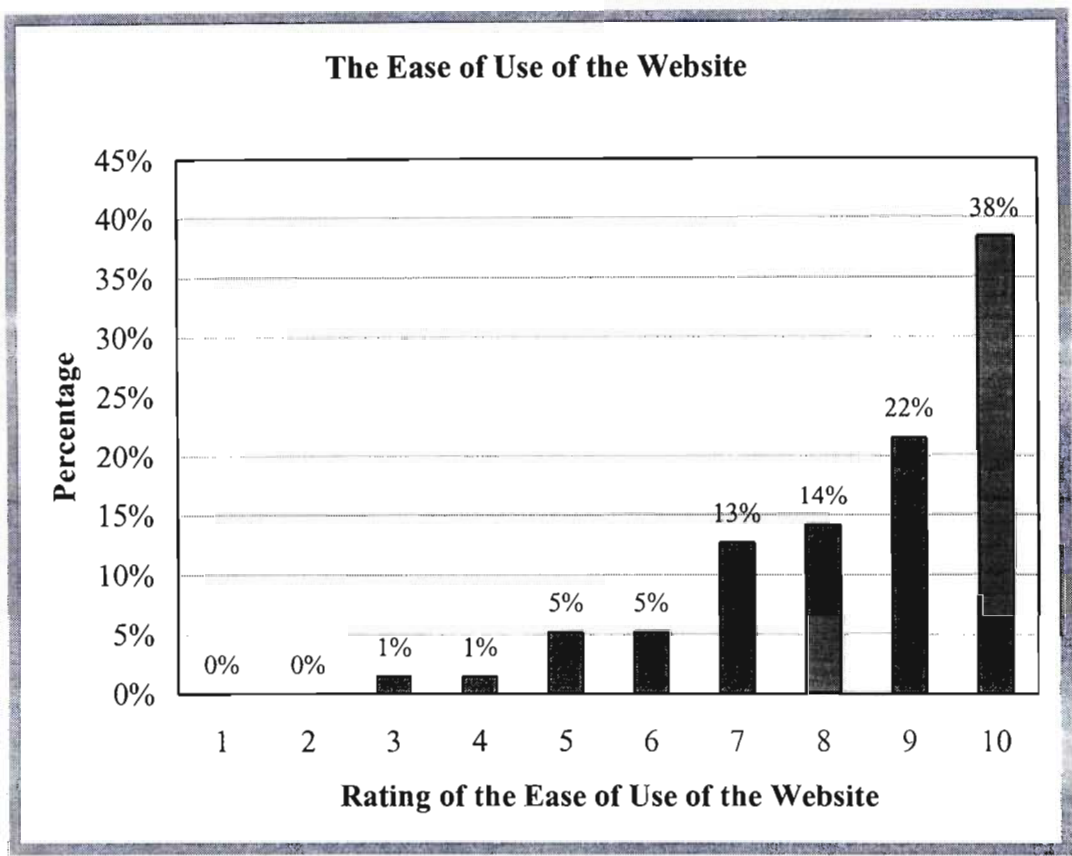
It can be seen from *Figure 6.19* that approximately 38% of respondents users rated the factor **ease of use of the web site** as being most important in purchasing a product or service online while no respondents rated the factor **ease of use of the web site** as being least important in purchasing online.

It can also be seen from *Figure 6.19* that approximately 84% of respondents rated the ease of use of the web site as an **important factor**, while approximately 2% rated the ease of use of the web site as an **unimportant factor** to them purchasing online.

6.5.6   The Brand of the Product or Service

Figure 6.20 shows how respondents rated the brand of the product or service, in terms of importance, when purchasing a product or service online.

*Figure 6.20: The Brand of the Product or Service*
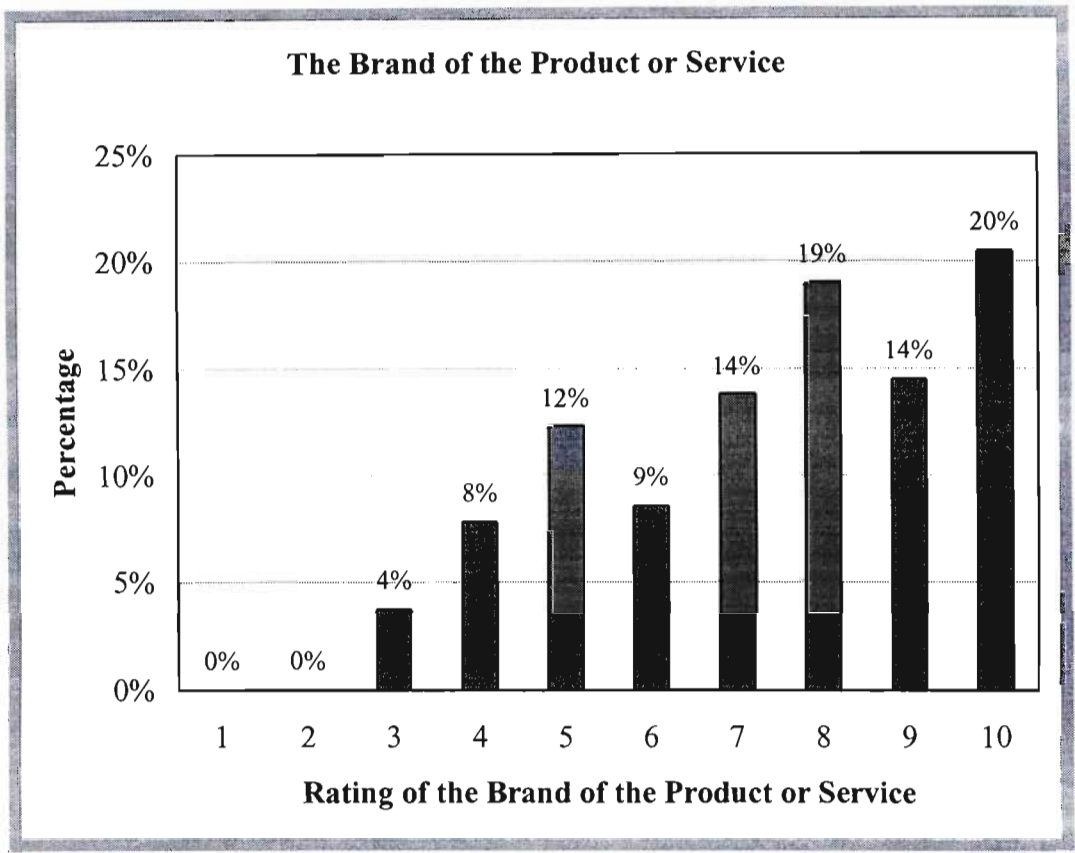
It can be seen from *Figure 6.20* that approximately 20% of respondents rated the factor **brand of the product or service** being purchased as being most important in purchasing a product or service online while no respondents rated the factor **brand of the product or service** as being least important in purchasing online.

It can also be seen from *Figure 6.20* that approximately 31% of respondents rated the brand of the product or service as a **neutral factor** and approximately 67% rated the brand of the product or service as an **important factor** to them purchasing online.

6.5.7 The Type of Product or Service

Figure 6.21 shows how respondents rated the type of the product or service, in terms of importance, when purchasing a product or service online.

Figure 6.21: The Type of the Product or Service
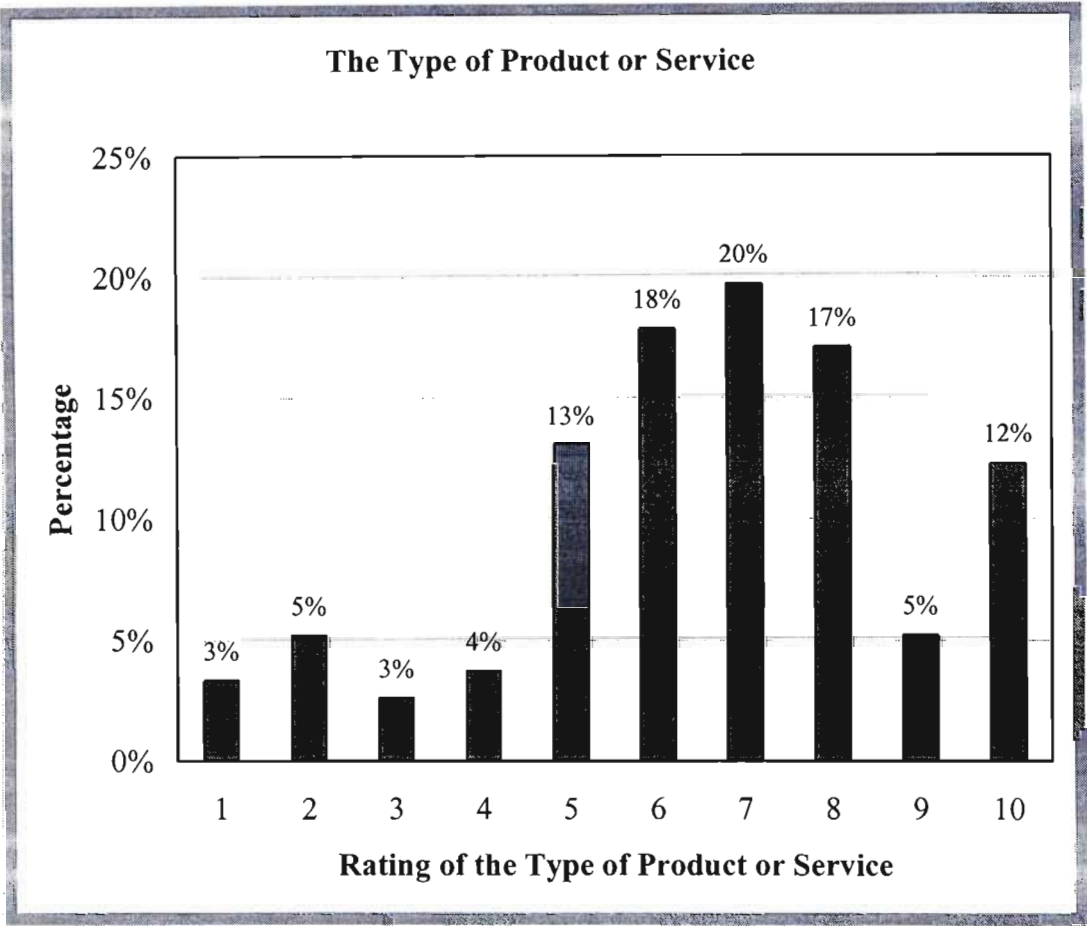
It can be seen from *Figure 6.21* that approximately 12% of respondents rated the factor **type of the product or service** being purchased as being most in purchasing a product or service online while approximately 3% rated the factor **type of the product or service** as being least important in purchasing online.

It can also be seen from *Figure 6.21* that approximately 31% of respondents rated the type of the product or service as a **neutral factor** and approximately 54% rated the type of the product or service as an **important factor** to them purchasing online.

6.5.8 The Availability of Online Information on the Product or Service

Figure 6.22 shows how respondents rated the availability of online information on the product or service, in terms of importance, when purchasing a product or service online.

Figure 6.22: The Availability of Online Information

It can be seen from *Figure 6.22* that approximately 32% of respondents rated the factor **availability of online information on the product or service** being purchased as being most important in purchasing a product or service online while no respondents rated the factor **availability of online information on the product or service** as being least important in purchasing online.

It can also be seen from *Figure 6.22* that approximately 73% of respondents rated the availability of online information on the product or service as an **important factor**, while approximately 8% rated the availability of online information on the product or service as an **unimportant factor** to them purchasing online.

6.5.9   The Method of Payment

Figure 6.23 shows how respondents rated the method of payment for the product or service, in terms of importance, when purchasing a product or service online.

Figure 6.23: The Method of Payment for the Product or Service
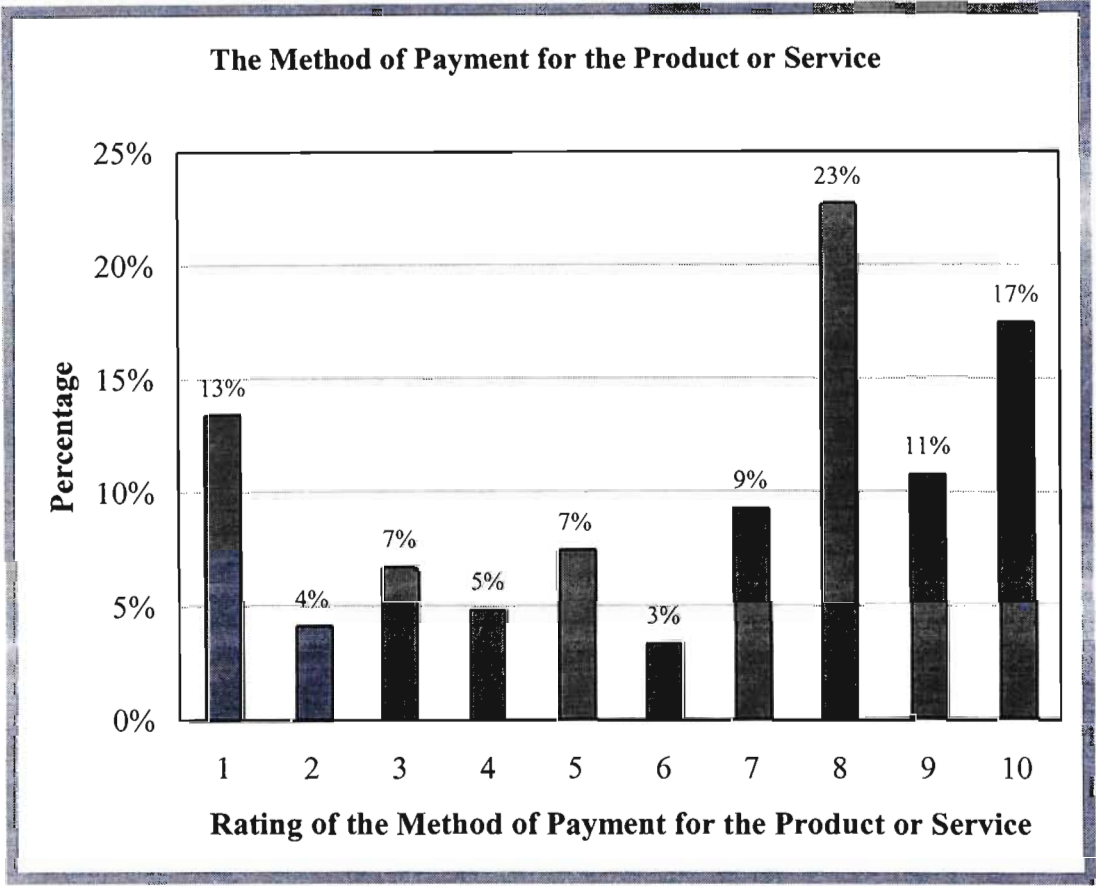
It can be seen from *Figure 6.23* that approximately 17% of respondents rated the factor **method of payment for the product or service** being purchased as being most important in purchasing a product or service online while approximately 13% rated the factor **method of payment for the product or service** as being least important in purchasing online.

It can also be seen from *Figure 6.23* that approximately 60% of respondents rated the method of payment for the product or service as an **important factor** and approximately 29% rated the method of payment for the product or service as an **unimportant factor** to them purchasing online.

6.5.10 The Web site Security Features

Figure 6.24 shows how respondents rated the web site security features, in terms of importance, when purchasing a product or service online.

Figure 6.24: The Web site Security Features
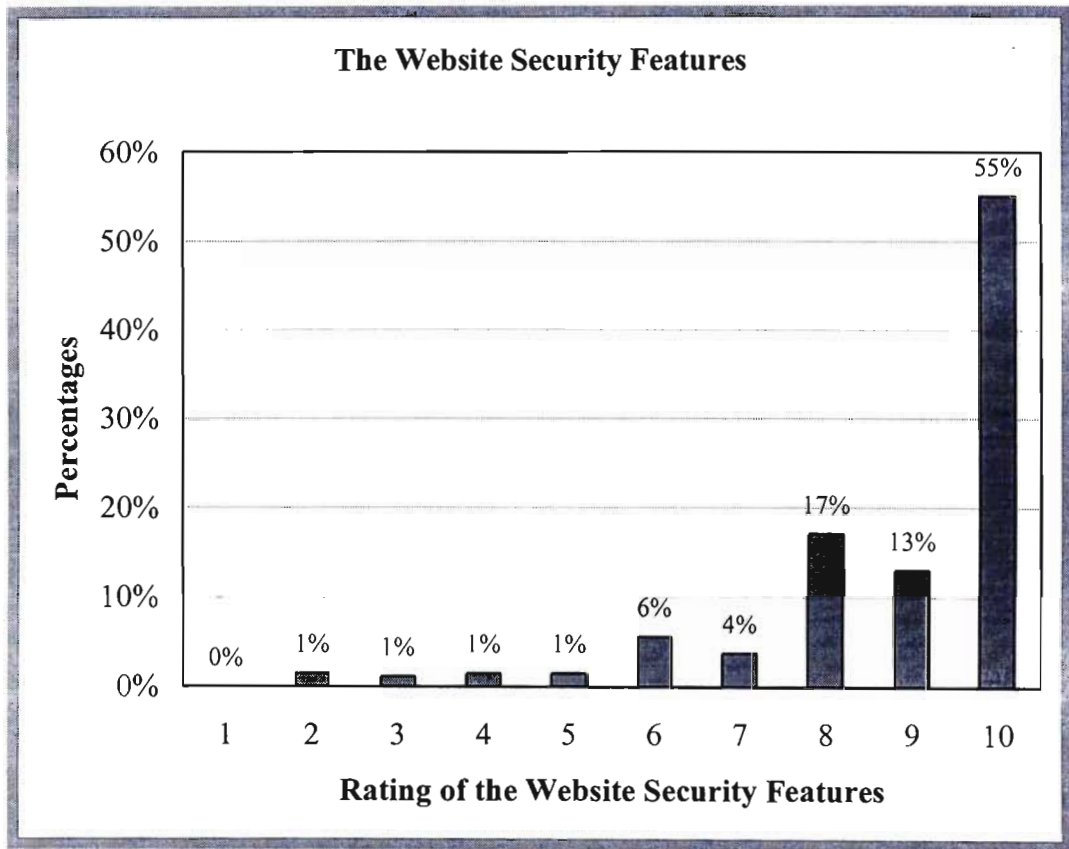
It can be seen from *Figure 6.24* that approximately 55% of respondents rated the factor **web site security features** as being most important in purchasing a product or service online while no respondents rated the factor **web site security features** as being least important in purchasing online.

It can be also seen from *Figure 6.24* that approximately 89% of respondents rated the web site security features as an **important factor** and approximately 3% rated the web site security features as an **unimportant factor** to them purchasing online.

6.5.11   Importance of Other Factors

Figure 6.25 shows whether respondents rated any other factors, not covered above, as being important to them when purchasing a product or service online.

Figure 6.25: Importance of Other Factors
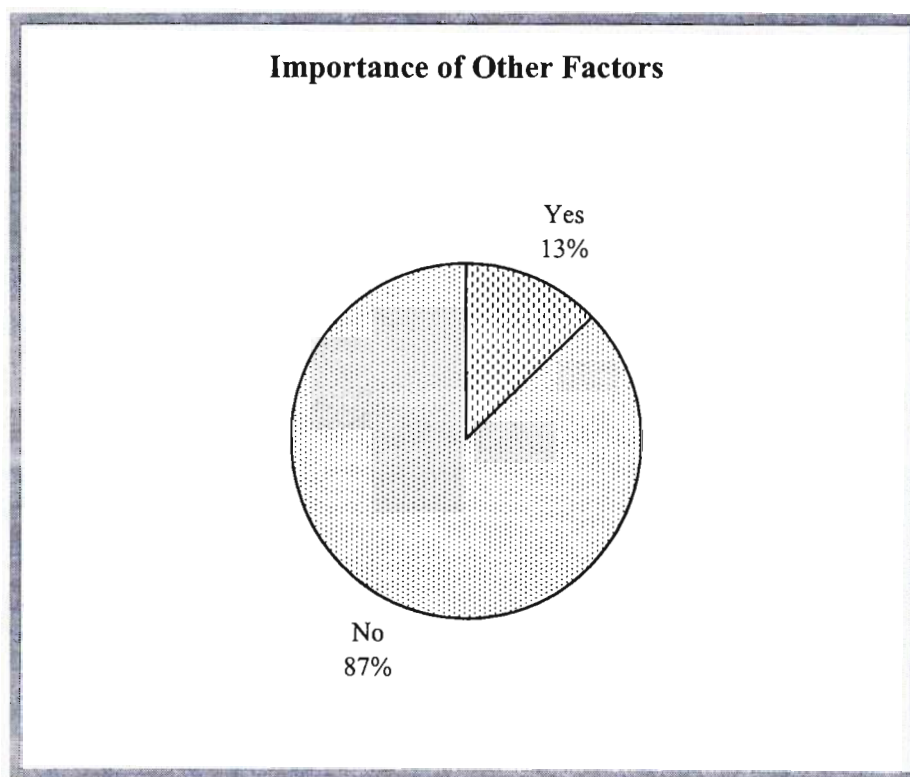
It can be seen from *Figure 6.25* that approximately 13% of respondents rated factors not covered in Sections 6.5.1 to 6.5.10 as being important to them when purchasing a product of service online.

These other factors included **the availability of the product or service in South Africa** (approximately 1.5%), **the delivery time of the product or service** (approximately 3.0%), **feedback and upgrades of products and services** (approximately 1.5%), **free shipping** (approximately 2.2%), **high Telkom charges** (approximately 1.9%), **reliability of the web site and links that actually work** (approximately 0.7%) and **trustable web sites** (approximately 1.9%).

6.6   The Relative Importance of Each Factor

Section Two of the questionnaire (as provided in **Annexure One**) investigated the factors influencing the sample's online purchase behaviour. The factors were those identified in Chapter Four. For each factor, the respondents rated how important the factor was to them in purchasing a product or service online. A scale of 1 – 10 was provided, where 1 equalled the factor being least important and 10 equalled the factor being most important. For discussion purposes, any factor rated **0 - 4** was considered **unimportant**, any factor rated **5 - 6** was considered **neutral** and any factor rated **7 - 10** was considered **important.** From the responses, the mean (i.e. average value) for each factor was calculated. *Table 6.1* shows the mean value for each factor.

Table: 6. 1: The Relative Importance of Factors Influencing Purchasing Behaviour

Factor Influence Purchase Behaviour	N	Min	Max	Mean	Std Dev
Web site security features	269	2	10	8.833	1.759
Ease of use of web site	269	3	10	8.461	1.720
Web site layout	269	1	10	7.870	2.045
Convenience to Internet user	269	1	10	7.818	2.134
Availability of online information	269	3	10	7.773	2.149
Brand of product or service	269	3	10	7.379	2.087
Price of product or service	269	1	10	7.149	2.721
Type of product of service	269	1	10	6.528	2.288
Method of payment	269	1	10	6.364	3.088
Experience as Internet user	269	1	10	6.186	2.247

It can be seen from *Table 6.1* that the factor, **web site security features,** had the highest mean value of 8.833. This implies that the sample found that the **web site security features** was the **most important factor** to them when purchasing products and services online. It can also be seen from *Table 6.1* that the **second most important factor** was the **ease of use of the web site** and the **third most important factor** was the **web site layout**.

It can also be seen from *Table 6.1* that seven of the ten factors i.e. **price of product or service, brand of product or service, availability of online information, convenience to Internet user, web site layout, ease of use of web site** and **web site security features** had a mean value of 7.149 or higher. This implies that the sample found that these factors were

important factors to them when purchasing online. The other three factors, namely, **experience as Internet, method of payment** and **type of product of service** had mean values between 6.186 and 6.528. This implies that the sample found that these factors were **neutral** factors to them when purchasing online.

6.7   Validity and Reliability

The following sections discuss the validity and reliability of the research findings.

6.7.1   Validity

As stated in Section 5.5 of Chapter Five, the validity of the findings of a research study referred to the degree to which what had been measured corresponds with other independent measures obtained by different research tools (Banister *et al*, 1995: 10).

With the exception of some of the demographic findings (such as gender, household language and population groupings), it can be assumed that the findings of this research study compared favourably to studies of a similar nature carried out internationally and also in South Africa.

6.7.2   Reliability

As stated in Section 5.4.4 of Chapter Five, an *Internal Consistency Reliability Test* would be used to determine the reliability of the findings of Section Two of the questionnaire. The *coefficient alpha*, or *Cronbach's Alpha* was determined for each question in Section Two of the questionnaire. Nunnally (1978: 230) states that *coefficient alpha* provides a good estimate of reliability in most situations, since the major source of measurement error is because of the sampling of content.

The computer statistical program, **SPSS**, was used to calculate the *coefficient alpha*, for the ten questions in Section Two of the questionnaire. These ten questions referred to the factors influencing the decision of an Internet user purchasing online. The output from the SPSS program is provided in **Annexure Three**.

As shown in **Annexure Three**, a *coefficient alpha* of 0.7221 was calculated for the ten questions in Section Two of the questionnaire. According to Cooper and Schindler

(2001: 206), and Mitchell and Jolley (2004: 104), a calculated *coefficient alpha* of less than 0.6 is deemed to indicate unsatisfactory internal consistency reliability. As the calculated *coefficient alpha* was greater that 0.6, it can be assumed that the ten questions in Section Two of the questionnaire had satisfactory internal consistency reliability.

6.8   Summary

This chapter provided the findings of the survey conducted to investigate the factors influencing the sample purchasing a product or service online.

The first part of the chapter presented the demographic profile and the Internet usage characteristics of the sample. The second part of the chapter presented how the sample rated each of the factors identified in Chapter Four in terms of importance to them when purchasing a product or service online and the third part of the chapter discussed the validity and reliability of the research findings.

The following chapter draws conclusions from the research findings presented in this chapter and discusses the linkages between questions specifically relating to factors influencing the sample purchasing online and the research objectives.

7. CONCLUSIONS

7.1 Introduction

This chapter draws conclusions from the research findings presented in Chapter Six. The first part of the chapter discusses the linkages between Section Two of the questionnaire (i.e. questions specifically dealing with factors influencing the sample purchasing online) and the research objectives. The second part of the chapter highlights the other major findings of the study and draws conclusions from them.

As stated in Section 1.3 of Chapter One, the problem statement for this study was derived from the relative lack of literature regarding the Internet's role and effectiveness as a new marketing medium in South Africa. In order to investigate the problem statement, the following research objectives were identified:

- **Primary Research Objective**

  To identify factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 1**

  To determine the significance of the identified factors that influence South African Internet users purchasing a product or service online.

- **Secondary Research Objective Number 2**

  To determine the relative importance of the identified factors that influence South African Internet users purchasing a product or service online.

The conclusions to businesses intending to sell or selling on the Internet with regard to each objective is discussed below.

7.2 Factors Influencing Purchase Behaviour

This section draws conclusions from the identified factors influencing purchase behaviour.

7.2.1 The Price of the Product or Service Being Purchased

Figure 6.14 from Chapter Six showed that approximately 70% of respondents rated the price of the product or service as an **important factor** to them purchasing online. With 70% of respondents rating this factor important, it can be **concluded** that the price of the product or service being purchased is an important factor to the sample purchasing online.

As discussed in Section 4.1 of Chapter Four, early literature seems to agree with the above view that the price of the product or service is an important factor when purchasing online, as consensus among marketers was that the Internet would intensify price competition. The wisdom was that the Internet would lower the cost of distribution and the costs of consumer search, thereby lowering barriers to entry and thus creating what Adam Smith called perfect competition i.e. large number of buyers and sellers and complete information about market prices (Lal and Sarvary, 1999: 485). This implies that the price of a product or service would be lower if there were many suppliers of such products or services. This viewpoint is collaborated by the 70% of respondents who rated the price of the product or service being purchased as an important factor to them purchasing online.

7.2.2 The Convenience to the Internet User

Figure 6.15 from Chapter Six showed that approximately 12% of respondents rated convenience as a **neutral factor** and approximately 80% rated convenience as an **important factor** to them purchasing online. With 80% of respondents rating this factor important, it can be **concluded** that the convenience to the Internet user is an important factor to the sample purchasing online.

The significance here is that more and more Internet users are realising the convenience of using the Internet to buy almost anything. This finding is also collaborated by the survey carried out by *Datamonitor*, which found that almost 80% of those surveyed cited factors such as the ability to shop at any time and the convenience associated with buying online as reasons why they prefer to use the Internet to shop (Laura, 2002: 5).

7.2.3 The Experience as an Internet User

Figure 6.16 from Chapter Six showed that approximately 32% of respondents rated experience as an Internet user as a **neutral factor** and approximately 50% rated experience as an Internet user as an **important factor** to them purchasing online.

As discussed in Section 4.4 of Chapter Four, Windham and Orton (2000: 18) state that those Internet users who have recently become more experienced in using the Internet are likely to buy something inexpensive, from web sites recommended by friends, just to see whether it works and if they are successful, they continue to go to these recommended web sites and buy more. This implies that these types of people are still not "fully fledged" Internet shoppers as they do not shop around for goods and services on their own and as such may fall into the 32% of respondents who rated the experience as an Internet user as a neutral factor.

Also, as discussed in Section 4.4 of Chapter Four, according to Winham and Orton (2000: 18), highly experienced Internet users are very habitual in their Internet behaviour and are very demanding of web site performance. This implies that these types of people find routines that work them and consider themselves experienced Internet users who know what they want and expect from a web site. It is possible that the 50% of respondents mentioned above could fall into this category.

7.2.4 The Web site Layout

Figure 6.17 from Chapter Six showed that approximately 77% of respondents rated the web site layout as an **important factor**, while approximately 6% rated the web site layout as an **unimportant factor** to them purchasing online. With 77% of respondents rating this factor important, it can be **concluded** that the web site layout is an important factor to the sample purchasing online.

As discussed in Section 4.5 of Chapter Four, a web site layout generally consists of an arrangement of text and images on a web page. According to McGovern (2002: 20), people who use the Internet spend most of their time reading what is on the web page and as such, the quality of the content and how it is presented is therefore critical. This implies that Internet users view the page layout as important. This viewpoint is collaborated by the 77% of respondents who rated the web site layout as an important factor to them purchasing online.

7.2.5 The Ease of Use of the Web Site

Figure 6.18 from Chapter Six showed that approximately 84% of respondents rated the ease of use of the web site as an **important factor**, while approximately 2% rated the ease of use of the web site as an **unimportant factor** to them purchasing online. With 84% of respondents rating this factor important, it can be **concluded** that the ease of use of the web site is an important factor to the sample purchasing online.

As discussed in Section 4.6 of Chapter Four, Neufeld and Parent (2000: 73), state that consumers form impressions of a particular web site very quickly and just as quickly, decide whether or not to do business with your firm. Neufeld and Parent (2000: 73) further state that the design and user friendliness of a transactional web site is therefore critical. This viewpoint is collaborated the 84% of the sample who rated the ease of use of the web site as an important factor to them when purchasing online.

7.2.6 The Brand of the Product or Service

Figure 6.19 from Chapter Six showed that approximately 31% of respondents rated the brand of the product or service as a **neutral factor** and approximately 67% rated the brand of the product or service as an **important factor** to them purchasing online. With 67% of respondents rating this factor important, it can be **concluded** that the brand of the product or service is an important factor to the sample purchasing online.

As discussed in Section 4.7 of Chapter Four, there are two diametrically opposed arguments about the effects of the Internet on brands. The first is that brand management is out of date in today's e-markets (Sealey, 1999: 171). The reasoning behind this is because of the widespread availability of information about product prices, features and suppliers on the Internet and as such, online consumers may decide that a brand's price premium is too high and may leave the product or service altogether (Sinha, 2000: 43 and Chen, 2001: 288). This argument can be collaborated by the 31% of respondents who rated the brand of the product or service as a neutral factor to them when purchasing online.

The other argument is for the continued value of brands. As also discussed in Section 4.7 of Chapter Four, certain well-known brands such as Coca-Cola, Microsoft Windows and Amazon, still maintain their extremely high monetary values (Brady *et al*, 2004: 12). The

67% of respondents who rated the brand of the product or service as an important factor to them purchasing online collaborate this argument.

7.2.7   The Type of Product or Service

Figure 6.20 from Chapter Six showed that approximately 31% of respondents rated the type of the product or service as a **neutral factor** and approximately 54% rated the type of the product or service as an **important factor** to them purchasing online.   With 54% of respondents rating this factor important, it can be **concluded** that the type of product or service is an important factor to the sample purchasing online.

As discussed in Section 4.8 of Chapter Four, the type of the product or service sold over the Internet depends to a large extent on the characteristics of such product or service (Phau and Poon, 2000: 104).   Also, according to Peterson and Balasubramanian (1997: 336), the more frequent the purchase and the smaller the cost, the less likely there is to be a good "fit" between the product or service and Internet based marketing.   This implies that the cheaper the product or service and the more frequently it is purchased, the less likely the item would be sold over the Internet.   This viewpoint can be collaborated by the 31% of respondents who rated the type of product or service as a neutral factor to them purchasing online.

Peterson and Balasubramanian (1997: 336), also state that the Internet can also serve as an effective segmentation mechanism when products and services are well differentiated.   This implies that a product or service may sell at a premium price.   This viewpoint can be collaborated by the 54% of respondents who rated the type of product or service as an important factor to them purchasing online.

7.2.8   The Availability of Online Information on the Product or Service

Figure 6.21 from Chapter Six showed that approximately 73% of respondents rated the availability of online information on the product or service as an **important factor**, while approximately 8% rated the availability of online information on the product or service as an **unimportant factor** to them purchasing online. With 73% of respondents rating this factor important, it can be **concluded** that the availability of online information on the product or service is an important factor to the sample purchasing online.

As discussed in Section 4.9 of Chapter Four, most, if not all consumers will search for information on a product or service during their first purchase. Almost forty-five years ago, Stiger (1961: 213) stated that an optimising consumer with imperfect information would continue to search for additional information on a product or service until the falling marginal search benefits equal the rising marginal search costs. This implies that a point will be reached when the additional effort required to search for more information will not reveal much more on that product or service and that all consumers will endeavour to meet that point. This viewpoint is collaborated by the 73% of respondents who rated the availability of online information as an important factor to them purchasing online.

7.2.9   The Method of Payment

Figure 6.22 from Chapter Six showed that approximately 60% of respondents rated the method of payment for the product or service as an **important factor** and approximately 29% rated the method of payment for the product or service as an **unimportant factor** to them purchasing online. With 60% of respondents rating this factor important, it can be **concluded** that the method of payment is an important factor to the sample purchasing online.

As discussed in Section 4.10 of Chapter Four, several companies have created new payment mechanisms to improve payment options and to combat the high rate of Internet fraud that is prevalent with the use of credits cards (FTC Publication, 2001: 11). According to the FTC Publication (2001: 11), these new payment mechanisms include thumbprint or retina scans, smart cards or keys and passwords. Assuming that these mechanisms are in place, the 29% of respondents who rated the method of payment as an unimportant factor to them when purchasing online can be collaborated, as these respondents will be confident that the mechanisms in place are tamperproof so the method of payment is not an issue to them purchasing online.

Even with the above mechanisms in place, Section 4.10 of Chapter Four showed that Internet fraud could still occur in the form of non-delivery of the product or service, overcharging and charges for unwanted goods and services (Shankar and Walker, 2001: 7). According to Shankar and Walker (2001: 7), non-delivery means that the merchant either does not deliver the correct item ordered or does not deliver the item at all; overcharging involves the merchant charging more than the agreed upon amount for the correct item purchased and charging for unwanted goods and services is usually part of an ongoing scam, where

consumers are simply fraudulently billed or duped into paying extra charges. The 60% of respondents who rated the method of payment as an important factor to them when purchasing online can be collaborated if they were referring to this type of Internet fraud.

7.2.10 The Web site Security Features

Figure 6.23 from Chapter Six showed that approximately 89% of respondents rated the web site security features as an **important factor** and approximately 3% rated the web site security features as an **unimportant factor** to them purchasing online. With 89% of respondents rating this factor important, it can be **concluded** that the web site security features is an important factor to the sample purchasing online.

As discussed in Section 4.11 of Chapter Four, the immense popularity of the Internet in recent years has been fueled largely by the prospect of performing business online. Companies have setup corporate intranets, extranets and use the Internet to work collaboratively with their customers, suppliers and partners. However, the lack of security is one of the leading barriers to widespread commerce on the Internet (Wen and Tarn, 2001: 22 and *Manitoba E – Commerce*, 2005: 5). Furthermore, the Internet, by its very design is an open public communication forum. Thus, its strength actually creates its most severe weakness – security (Plonien, 1998: 82). As such, according to Plonien (1998: 82), hackers, corporate spies and white-collar criminals all see an unmatched opportunity for entry into this virtual cash register. The above viewpoints can be collaborated by the 89% of respondents who rated the web site security features as an important feature to them when purchasing online.

7.2.11 Other Factors

The survey also showed that factors not identified in the literature review were important to the sample purchasing a product or service online. These factors were: *(1)* **the availability of the product or service in South Africa**; *(2)* **the delivery time of the product or service**; *(3)* **feedback and upgrades of products and services purchased online**; *(4)* **free shipping**; *(5)* **high Telkom charges**; *(6)* **reliability of the web site and links that actually work** and *(7)* **trustable web sites**.

It can be **concluded** that there are factors, not covered in international literature that influenced the decision of the sample purchasing a product or service online. This implies that there were unique factors, which were relevant to the sample purchasing a product or

service online. Some recommendations for future research, relating to these factors are provided in Section 9.2 of Chapter Nine.

It can also be **concluded** that the primary research objective to identify factors that influence South African Internet users purchasing a product or service online was achieved.

7.3   The Significance of Each Factor

As stated in Section 5.4.5.2 of Chapter Five, the statistical test used to test the significance of the factors identified in Chapter Four was the *Chi – Square Test*. According to Wegner (2001: 257), the chi – square statistic can provide a measure of the goodness of fit between an observed frequency distribution of a random variable and an expected frequency distribution. For the purpose of this research study, the observations for the expected frequency distribution for each factor ranged from a minimum of 13 observations (i.e. 5% of a sample of 269) to a maximum of 67 observations (i.e. 25% of a sample of 269).

According to Mitchell and Jolley (2004: 211), a 0.05 level of significance (range in which you can be sure that the population means falls) should be used when comparing one variable, a 0.01 level of significance should be used when comparing five variables and a 0.001 level of significance should be used when comparing fifty or more variables. As there were a maximum of ten variables (i.e. ten responses to each question in Section Two of the questionnaire), a 0.005 level of significance was deemed to be appropriate.

The calculations for each hypothesis test are provided in **Annexure Two** and the calculated value and interpretation of each test are provided below.

(i)   *The price of the product or service being purchased*
   H_0:   A lower priced product or service does not influence the decision of an Internet user purchasing such product or service online.
   H_1:   A lower priced product or service does influence the decision of an Internet user purchasing such product or service online.

From *Table 7.1* of **Annexure Two**, the *calculated chi – square statistic* of 63.608 is greater than the *critical t value* of 21.955 and hence the null hypothesis can be rejected. It can therefore be **concluded** that a lower priced product or service **does** influence the decision of a respondent purchasing a product or service online. This finding compares favourably to Section 6.5.1 of Chapter Six, which found that approximately 70% of respondents rated the price of the product or service as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with the early literature viewpoint that the Internet intensifies price competition (Lal and Sarvary, 1999: 485; Alba and Lynch, 1997: 45 and Bakos, 1997: 1 689). This implies that the sample was still price conscious.

(ii) *The convenience of purchasing online*

H_0: The convenience of purchasing a product or service online does not influence the decision of an Internet user purchasing such product or service online.

H_1: The convenience of purchasing a product or service online does influence the decision of an Internet user purchasing such product or service online.

From *Table 7.2* of **Annexure Two**, the *calculated chi – square statistic* of 99.701 is greater than the *critical t value* of 21.955 and hence the null hypothesis can be rejected. It can therefore be **concluded** that the convenience of purchasing a product or service online **did** influence the decision of a respondent purchasing a product or service online. This finding compares favourably to Section 6.5.2 of Chapter Six, which found that approximately 80% of respondents rated convenience as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with the viewpoint of Keen *et al* (2004: 685) and Miles *et al* (2000: 135) that online consumer behaviour is centered on the desire for convenience and timesaving. This conclusion is also supported by research carried out by *Jupiter Research* and *Datamonitor* in 2002, as cited by Haeberle (2002: 74) and Laura (2002: 1), which found that convenience to Internet users was a leading reason why Internet users shopped online.

(iii)   *The experience of the Internet user*

H_0:   Longer experience as an Internet user does not influence their decision to purchase a product or service online.

H_1:   Longer experience as an Internet user does influence their decision to purchase a product or service online.

From *Table 7.3* of **Annexure Two**, the *calculated chi – square statistic* of 105.147 is greater than the *critical t value* of 23.589 and hence the null hypothesis can be rejected. It can therefore be **concluded** that longer experience as an Internet user **did** influence the decision of a respondent purchasing a product or service online. This finding compares favourably to Section 6.5.3 of Chapter Six, which found that approximately 50% of respondents rated experience as an Internet user as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with Windham and Orton (2000: 17) that the experience of an Internet user influences how they approach the Internet and what web sites they frequent when purchasing online. This implies that Internet users of different experience levels approach and use the Internet differently.

(iv)   *The web site layout*

H_0:   A well-presented web site layout does not influence an Internet users decision to purchase a product or service online.

H_1:   A well-presented web site layout does influence an Internet users decision to purchase a product or service online.

From *Table 7.4* of **Annexure Two**, the *calculated chi – square statistic* of 54.913 is greater than the *critical t value* of 20.278 and hence the null hypothesis can be rejected. It can therefore be **concluded** that a well-presented web site layout **did** influence the decision of a respondent purchasing a product or service online. This finding compares favourably to Section 6.5.4 of Chapter Six, which found that approximately 77% of respondents rated the web site layout as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with the viewpoint of Alex (2005: 17), McGovern (2002: 20) and Carr (2003: 11) in that confusing navigation and cluttered web

page layouts frustrate Internet users. This implies that the combination of text font, text size, text colour, background colour and image quality affects Internet users using such web site.

(v)   The ease of use of the web site

H_0:   An easy to use web site does not influence the decision of an Internet user purchasing a product or service online.

H_1:   An easy to use web site does influence the decision of an Internet user purchasing a product or service online.

From *Table 7.5* of **Annexure Two**, the *calculated chi – square statistic* of 86.682 is greater than the *critical t value* of 20.278 and hence the null hypothesis can be rejected. It can therefore be **concluded** that an easy to use web site **did** influence the decision of a respondent purchasing a product or service online. This finding compares favourably to Section 6.5.5 of Chapter Six, which found that approximately 84% of respondents rated the ease of use of the web site as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with the viewpoints of Lee (2004: 57), and Seyal and Pijpers (2004: 206) that a web site's perceived ease of use encourages Internet use. This implies that if Internet users perceive that a web site is easy to use, they will endeavor to use such a web site.

(vi)   The brand of the product or service being purchased

H_0: A well-known brand of the product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1: A well-known brand of the product or service does influence the decision of an Internet user purchasing such product or service online.

From *Table 7.6* of **Annexure Two**, the *calculated chi – square statistic* of 80.126 is greater than the *critical t value* of 20.278 and hence the null hypothesis can be rejected. It can therefore be **concluded** that a well-known brand of the product or service **did** influence the decision of a respondent purchasing a product or service online. This finding compares favourably to Section 6.5.6 of Chapter Six, which found that approximately 67% of respondents rated the brand of the product or service as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with the viewpoint of Chen (2001: 288) who also substantiates this viewpoint by stating that the brand of the product or service does influence the decision of an Internet user purchasing online and that the brand of the product or service was still considered important. Also, it can be **concluded** that the viewpoints of Sealey (1999: 171) and Sinha (2000: 43), as discussed in Section 4.7 of Chapter Four, that brands are no longer important on the Internet did not apply to the sample.

(vii)   The type of product or service being purchased

H_0: Tangible products (in terms of sight and sound) do not influence the decision of an Internet user purchasing such product or service online.

H_1: Tangible products (in terms of sight and sound) do influence the decision of an Internet user purchasing such product or service online.

From *Table 7.7* of **Annexure Two**, the *calculated chi – square statistic* of 90.006 is greater than the *critical t value* of 23.589 and hence the null hypothesis can be rejected. It can therefore be **concluded** that tangible products (in terms of sight and sound) **did** influence the decision of a respondent purchasing a product or service online. This finding compares favourably to Section 6.5.7 of Chapter Six, which found that approximately 54% of respondents rated the type of the product or service as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with the viewpoint of Peterson and Balasubramanian (1997: 335) and Phau and Poon (2000: 103) that the type of product or service sold over the Internet depends to a large extent on the characteristics of the products and services being sold. Also, in similar research carried out by *Ernst and Young* in 2001, approximately 24% of their sample of South African Internet users wanted to see and feel the item before making a decision to purchase (Ernst and Young, 2001: 114). This implies that items such as CDs and DVDs are more likely to be sold than fruit and vegetables.

(viii)   The availability of online information on the product or service

H_0: More online information on the product or service does not influence the decision of an Internet user purchasing such a product or service online.

H_1: More online information on the product or service does influence the decision of an Internet user purchasing such a product or service online.

From *Table 7.8* of **Annexure Two**, the *calculated chi – square statistic* of 65.315 is greater than the *critical t value* of 20.278 and hence the null hypothesis can be rejected. It can therefore be **concluded** that more online information on the product or service **did** influence the decision of a respondent purchasing such a product or service online. This finding compares favourably to Section 6.5.8 of Chapter Six, which found that approximately 73% of respondents rated the availability of online information on the product or service as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with Stigler (1961: 213) and Koch and Cebula (2002: 25) that, the more information that Internet shoppers have concerning homogeneous goods and services, the lower the prices that they will pay. This implies that as Internet users become more accustomed to using the Internet, they will find it easier to find information on the products and services that they want to buy.

(ix)   *The method of payment required for purchasing the product or service online*

H_0: Using a credit card for payment of a product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1: Using a credit card for payment of a product or service does influence the decision of an Internet user purchasing such product or service online.

From *Table 7.9* of **Annexure Two**, the *calculated chi – square statistic* of 72.701 is greater than the *critical t value* of 23.589 and hence the null hypothesis can be rejected. It can therefore be **concluded** that using a credit card for payment of a product or service **did** influence the decision of a respondent purchasing a product or service online. This finding compared favourably to Section 6.5.9 of Chapter Six, which found that approximately 60% of respondents rated the method of payment for the product or service as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with a finding of *Webcheck's Project SA Web User Survey 2004* sample of South African Internet users, that a credit card was still the most preferred way of paying for online purchases (Webcheck, 2005b: 11). This finding is also supported by *The 2003/2004 Study of Consumer Payment Preferences* conducted by *Dove Consulting* in conjunction with the *American Bankers Association,* which found that credit cards remain the predominate payment method for Internet purchases.

(x)   The web site security features

Ho: More web site security features do not influence the decision of an Internet user purchasing a product or service online.

H1: More web site security features do influence the decision of an Internet user purchasing a product or service online.

From *Table 7.10* of **Annexure Two**, *the calculated chi – square statistic* of 102.022 is greater than the *critical t value* of 21.955 and hence the null hypothesis can be rejected. It can therefore be **concluded** that more web site security features **did** influence the decision of a respondent purchasing a product or service online. This finding compared favourably to Section 6.5.10 of Chapter Six, which found that approximately 89% of respondents rated the web site security features as an **important factor** to them purchasing online.

It can also be **concluded** that the sample seemed to agree with Wen and Tarn (2001: 22) that the lack of security is one of the leading barriers to widespread commerce on the Internet. This view is also supported by Hoffman *et al* (1998: 80), who state that the reason online consumers have yet to shop online in large numbers, is because of the fundamental lack of faith that currently exists between most businesses and consumers on the Web.

In summarising this section, it can be **concluded** that the first secondary research objective to determine the significance of the identified factors that influence South African Internet users purchasing a product or service online was achieved.

7.4   The Relative Importance of Each Factor

Section Two of the questionnaire (as provided in **Annexure One**) investigated the factors influencing the sample's online purchase behaviour. The factors were those identified in Chapter Four. For each factor, the respondents rated how important the factor was to them in purchasing a product or service online. A scale of 1 – 10 was provided, where 1 equalled the factor being least important and 10 equalled the factor being most important. For discussion purposes, any factor rated **0 - 4** was considered **unimportant**, any factor rated **5 - 6** was considered **neutral** and any factor rated **7 - 10** was considered **important**. From the responses, the mean (i.e. average value) for each factor was calculated. *Table 7.11* shows the mean value for each factor.

Table: 7.11: The Relative Importance of Factors Influencing Purchasing Behaviour

Factor Influence Purchase Behaviour	N	Min	Max	Mean	Std Dev
Web site security features	269	2	10	8.833	1.759
Ease of use of web site	269	3	10	8.461	1.720
Web site layout	269	1	10	7.870	2.045
Convenience to Internet user	269	1	10	7.818	2.134
Availability of online information	269	3	10	7.773	2.149
Brand of product or service	269	3	10	7.379	2.087
Price of product or service	269	1	10	7.149	2.721
Type of product of service	269	1	10	6.528	2.288
Method of payment	269	1	10	6.364	3.088
Experience as Internet user	269	1	10	6.186	2.247

It can be **concluded** from *Table 7.11*, that with the highest mean value of approximately 8.833, **the web site security features** was the most important factor influencing respondents purchasing a product or service online. **The ease of use of the web site** and **the web site layout** were the next most important factors influencing respondents purchasing online.

It can also be seen from *Table 7.11* that seven of the ten factors i.e. **price of product or service, brand of product or service, availability of online information, convenience to Internet user, web site layout, ease of use of web site** and **web site security features** had a mean value of 7.149 or higher. This implies that the sample found that these factors were **important** factors to them when purchasing online.

The other three factors, namely, **experience as Internet, method of payment** and **type of product of service** had mean values between 6.186 and 6.528. This implies that the sample found that these factors were **neutral** factors to them when purchasing online.

The finding with regard to the web site security features is supported by the research conducted by *the Georgia Institute of Technology*. The research found that security concerns were the most important issue facing the Internet (Machlis, 1997: 1). This finding is also supported by a similar study carried out by *CommerceNet*, which also found that online security was consumers' biggest concern (Tweney, 1998: 66).

The finding with regard to the ease of use of the web site is supported by the research carried out by the *Eagleton Institute of Politics* in 2001, which found that approximately 77% of its sample of New Jerseyans rated the ease of use of the New Jersey Government web site as very important (Eagleton Institute of Politics, 2001: 19).

It can also be **concluded** that the second research objective to determine the relative importance of the identified factors that influence South African Internet users purchasing a product or service online was achieved.

7.5   Conclusions Based on the Other Main Findings

The following three sections draw conclusions, based on some of the other main findings of the study.   These main findings were not linked to the research objectives, but were considered important never - the - less.

7.5.1   Primary Use of the Internet

It can be **concluded** from *Figure 6.11* in Chapter Six that most respondents used the Internet for **e-mail** (approximately 31%) and for **general browsing** (approximately 24%). It can also be **concluded** from *Figure 6.11*, that from the 28% of respondents who selected "other", 46% used the Internet to search for **information**, 28% used the Internet for **work related purposes** and 16% used the Internet for **research**.

It can be **concluded** that the sample response for this question compared somewhat favourably with the research carried out by *Webcheck* in 2004 whereby the *Webcheck's Project SA Web User Survey 2004* sample of South African Internet users indicated that they used the Internet mostly for sending and receiving e-mails as well as searching for specific information (Webcheck, 2005b: 8). The findings of the *Webcheck* survey is supported by *The Harris Poll*, also conducted in 2004, which indicated that most US Internet users used the Internet to send and receive e-mails and for research for work and school (Harris Interactive Inc, 2004: 1).

It can also be inferred that should Question 1.5 of the questionnaire (i.e. *What is your primary use of the Internet*), included "specific information", "work related purposes" and "research" as options, many respondents would have selected such options. The respondents who

selected "work related purposes" as their primary use of the Internet would have been expected as all respondents have Internet access from their place of work. This implies that the response for Question 1.5 of the questionnaire may have compared more favourably with the above-mentioned research studies.

7.5.2 Expected changes in Online Shopping Behaviour

From the respondents who indicated that they **currently purchase on the Internet** *(48% from Graph 6.12* in Chapter 6*)*, approximately 95% indicated that they **would continue to purchase on the Internet in the future**, while 5% indicated that they **would no longer purchase on the Internet in the future**.

It can be **concluded** that the sample response for this question compared very well with the research carried out by *Webcheck's Project SA Web User Survey 2004* sample of South African Internet users also indicated that approximately 41% of their respondents had made online purchases. Furthermore, approximately 90% indicated that they expected to make an online purchase in the next twelve months (Webcheck, 2005b: 11).

However, this sample and the Webcheck sample did not compare favourably with international research. *The 2003/2004 Study of Consumer Payment Preferences* conducted by *Dove Consulting* in conjunction with the *American Bankers Association* found that 83% of Internet users in America currently purchased online and of these, 58% indicated that they would maintain their current level of purchases, while 36% indicated that they would increase their levels of purchase (Dove Consulting, 2003: 24).

7.5.3 Product Categories Purchased Online

It can be **concluded** from *Figure 6.13* in Chapter 6 that most respondents purchased books and CDs online (approximately 18% and 10% of respondents respectively).

When compared to research carried out by *Ernst and Young* in 2001, most respondents in their sample also purchased books and CDs online. The difference however, was in the percentages. Approximately 62% of their sample purchased books online and approximately 33% purchased CDs online (Ernst and Young, 2001: 113). The largest product categories purchased online is also supported by *Webcheck's Project SA Web User 1999B Study,* which

found that approximately 51% of their sample purchased books online and 32% purchased CDs online (Webcheck, 2000b: 1).

7.6   Summary

The primary research objective of the study was to determine the factors that influenced South African Internet users purchasing a product or service online and the secondary research objectives were to determine the significance and relative importance of the identified factors.

Based on the findings discussed in this chapter, it can be **concluded** that the primary research objective and both the secondary research objectives formulated for this study were achieved.

8. IMPLICATIONS AND RECOMMENDATIONS

8.1 Introduction

This chapter provides implications and recommendations for businesses intending to sell or selling to consumers on the Internet in South Africa. The implications and recommendations are based on the main findings of the study as discussed in the previous chapter.

8.2 Implications and Recommendations to Businesses

The implications and recommendations to businesses, based on the main findings of the study, as discussed in the previous chapter, are provided in the following sections.

8.2.1 Factors Influencing Purchase Behaviour

Section 7.1 of Chapter Seven concluded that the following factors were **important** to the sample's purchasing of products and services online: *(1)* **the price of the product or service being purchased,** *(2)* **the convenience to the internet user,** *(3)* **the experience as an internet user,** *(4)* **the web site layout,** *(5)* **the ease of use of the web site,** *(6)* **the brand of the product or service,** *(7)* **the type of product or service,** *(8)* **the availability of online information on the product or service,** and *(9)* **the method of payment.**

Section 7.1 of Chapter Seven also concluded that **there are factors, not covered in international literature that influenced the decision of the sample purchasing a product or service online.** These other factors were: *(1)* **the availability of the product or service in South Africa;** *(2)* **the delivery time of the product or service;** *(3)* **feedback and upgrades of products and services purchased online;** *(4)* **free shipping;** *(5)* **high Telkom charges;** *(6)* **reliability of the web site and links that actually work** and *(7)* **trustable web sites.**

The **implication** to businesses selling on the Internet in South African is that marketers cannot use international e-commerce strategies when selling to South African consumers online. This implies that businesses need to tailor their Internet offerings to meet the characteristics of South African Internet users.

It is recommended that marketers identify the additional factors, which are unique to South African Internet users purchasing online and thereafter tailor their Internet offerings so that such factors positively contribute to the decision of South African Internet users purchasing their product or service online. For example, businesses selling products on the Internet in South Africa may want to include the cost of shipping with the purchase price or businesses selling on the Internet may want to provide customer feedback in the form of FAQs, e-mail, telephone, etc.

8.2.2 The Significance of Each Factor

(i) The price of the product or service being purchased

Section 7.2(i) of Chapter Seven concluded that **a lower priced product or service did influence the decision of a respondent purchasing a product or service online**.

The **implication** to business is that marketers still need to focus on offering lower prices than their competitors on the Internet as lower priced products and services still seem to attract online consumers.

It is **recommended** that businesses selling on the Internet in South Africa may want to follow a low cost strategy. According to Porter (1980: 40), the objective of a low cost strategy would be to provide the lowest (best) prices compared to rivals offering products with comparable attributes. Porter (1980: 35) also describes this strategy as having two forms; the first could be a low cost provider strategy, which is based on appealing to a broad spectrum of customers based on being the overall low-cost provider of a product or service. The second form could be a focused (or market niche) strategy, which provides customers with more value for the money by incorporating product attributes at a lower cost than rivals.

(ii) The convenience of purchasing online

Section 7.2(ii) of Chapter Seven concluded that **the convenience of purchasing a product or service online did influence the decision of a respondent purchasing a product or service online**.

The **implication** to business is that marketers must realise that the Internet offers tremendous convenience to its users purchasing online and, as such, users have the opportunity to purchase products and services, at any time, without actually visiting a brick and mortar shop.

It is **recommended** that marketers prepare themselves for an increase in e-commerce transactions as more and more people realise the benefit of shopping online. This view is supported by research carried out by *Datamonitor*, which found that almost 80% of those surveyed cited factors such as the ability to shop at any time and the convenience associated with buying online as reasons why they prefer to use the Internet to shop (Laura, 2002: 5).

(iii)   The experience of the Internet user

Section 7.2(iii) of Chapter Seven concluded that **longer experience as an Internet user did influence the decision of a respondent purchasing a product or service online**.

The **implication** to business is that marketers must understand that as Internet users become more experienced in using the Internet, they will become more comfortable in purchasing online. This implies that marketers must consider the period of Internet usage (i.e. experience) of online consumers when developing e-commerce strategies that focus on selling products and services online.

It is **recommended** that marketers consider the experience level of Internet users when developing e-commerce strategies that focus on selling products and services online. For example, according to Windham and Orton (2000: 18), newcomers to e-commerce web sites pay attention to online advertisements, as they are interested in web sites that will help them reap their newly discovered benefits of the Internet, while highly experienced Internet users are more habitual in their behaviour and are more demanding of web site performance.

(iv)   The web site layout

Section 7.2(iv) of Chapter Seven concluded that **a well-presented web site layout did influence the decision of a respondent purchasing a product or service online**.

The **implication** to business is that if they intend selling their products and services on the Internet, their web site layout must be clear, well defined and not unnecessarily cluttered (Alex, 2005: 17).

It is **recommended** that businesses selling on the Internet should regularly maintain their web pages. According to *Manitoba E – Future Center* (2005: 3), web developers or programmers should be employed to create the functionality of the web site and web designers should be

employed to create the look of the web site. These types of people can address any criticisms received from Internet users about the web site and can also update the web site every time the businesses adds a new product or service to its product line.

(v) The ease of use of the web site

Section 7.2(v) of Chapter Seven concluded that **an easy to use web site did influence the decision of a respondent purchasing a product or service online**.

The **implication** to business is that if they intend selling their products and services on the Internet, their web sites must be easy to use i.e. an Internet user must be able to complete a transaction with relative ease.

It is **recommended** that businesses selling on the Internet in South Africa must ensure, by employing good web developers, that their web site is easy for Internet users to use. According to Lazar *et al* (2003: 19), this can be accomplished by providing multiple navigation techniques or paths to the same content. This implies that there must be more than one way that an Internet user can navigate the pages of a web site and complete a purchase transaction.

(vi) The brand of the product or service being purchased

Section 7.2(vi) of Chapter Seven concluded that **a well-known brand of the product or service did influence the decision of a respondent purchasing a product oriservice online**.

The **implication** to business is that the brand of a product or service is still considered important to consumers when purchasing online. As such, significant marketing effort must be made in developing and maintaining the brand of the product or service.

It is **recommended** that businesses intending to sell on the Internet decide whether to continue its traditional offline brand or start a new online brand. According to Rayport and Jaworski (2001: 194), the advantage of extending the businesses existing brand is that it will give instant creditability to the web site. This means that consumers would know that the web site is legal and valid and should therefore have no concerns purchasing on it. Also, according to Rayport and Jaworski (2001: 194), the disadvantage of extending the businesses

existing brand is that it may confuse consumers, as they would have two different channels from which to purchase the businesses products and services.

(vii)   The type of product or service being purchased
Section 7.2(vii) of Chapter Seven concluded that **tangible products (in terms of sight and sound) did influence the decision of a respondent purchasing a product or service online**.

The **implication** to business is that the characteristics of the product or service in terms of sight, sound, touch, feel and smell must be considered if that product or service is to be sold over the Internet. Marketers must ask themselves whether there is an online market for their products or services. Also, businesses must realise that some products and services, such as those that make use of the hypermedia advantages (i.e. sight and sound) may be more suitable for online trading than others (Phau and Poon, 2000:103).

It is **recommended** that businesses selling products on the Internet make use of the Internets hypermedia advantages. For example, businesses selling CDs/DVDs on the Internet may want to add short movie clips or audio tracks of the CD/DVD being sold.

(viii)   The availability of online information on the product or service
Section 7.2(viii) of Chapter Seven concluded that **more online information on the product or service did influence the decision of a respondent purchasing such a product or service online**.

The **implication** to businesses selling on the Internet is that Internet users will search for information on the product or service when purchasing such product or service online. This means that businesses selling on the Internet must provide as much information as possible on the item they are selling online.

It is **recommended** that businesses selling on the Internet provide sufficient explanatory information on the product or service to support and close the sale of such product or service. As Internet users cannot closely inspect, touch, smell and feel the product or service online, businesses must close this gap by providing detailed descriptions, imagery and sales information on such products and services (Manitoba E – Future Center, 2005:4).

(ix)   The method of payment required for purchasing the product or service online

Section 7.2(ix) of Chapter Seven concluded **that using a credit card for payment of a product or service did influence the decision of a respondent purchasing a product or service online**.

The **implication** to businesses selling on the Internet is that they must realise that using a credit card, as a method of payment, is still the preferred method for online consumers (AC Nielsen, 2005: 40).

It is **recommended** that businesses selling on the Internet must provide a credit card payment option to Internet consumers purchasing such product or service online.   Also, it is **recommended** that businesses improve on the credit card payment option by offering some form of authentication method for their online consumers e.g. thumbprints, passwords, tamperproof smart keys etc (Clark, 2000: 60).

(x)   The web site security features

Section 7.2(x) of Chapter Seven concluded that **more web site security features did influence the decision of a respondent purchasing a product or service online**.

The **implication** to businesses selling on the Internet is that they need to have security systems in place so that Internet users have an environment in which they feel safe and comfortable to purchase online.

It is **recommended** that businesses selling on the Internet in South Africa spend significant resources on enhancing their web site security features.   Furthermore, such security features must be communicated to Internet users so that they become more comfortable in purchasing online (Godinez, 2000: 24).

8.2.3   The Relative Importance of Each Factor

Table 7.11 from Chapter Seven showed that with the highest mean value of approximately 8.833, **the web site security features** was the most important factor influencing respondents purchasing a product or service online. **The ease of use of the web site** and **the web site layout** were the next most important factors influencing respondents purchasing online.

Table 7.11 from Chapter Seven also showed that seven of the ten factors identified in Chapter Four i.e. **the price of product or service, the brand of product or service, the availability of online information, the convenience to Internet user, the web site layout, the ease of use of web site** and **the web site security features** had a mean value of 7.149 or higher. This implied that the sample found that these factors were **important** factors to them when purchasing online. The other three factors, namely, **the experience as Internet, the method of payment** and **the type of product of service** had mean values between 6.186 and 6.528. This implied that the sample found that these factors were **neutral** factors to them when purchasing online.

The **implication** to businesses is that they must realise that there are many factors that affect the decision of South African Internet users purchasing a product or service online. However, some factors are more important than others as and such, more resources should be allocated to such factors.

With regards to the web site security features, it is **recommended** that businesses selling products and services on the Internet have a comprehensive Internet security programme. This may include the installation of a firewall (a programme that only allows your outbound request for information and the response from the server identified in your request (Colden, 2001: 13)) and reputable antivirus software. Colden (2001: 13) also recommends that antivirus software be updated at regular intervals.

With regards to the ease of use of the web site, it is **recommended** that web designers improve the user navigation of the web site. According to Lazar *et al* (2003: 24), transactional web pages should have minimal graphics or plug-ins so that they load faster and also web sites should have fewer levels with links at each level. This means that Internet users should not have to click through many levels on a particular web site to get to the information that they want. Parush *et al* (2005: 141) also support this viewpoint as they state that the principle of layering and separation is the basis for grouping information into blocks or distinct zones and is considered critical for achieving good page layout.

With regards to the web site layout, it is **recommended** that the terminology, layout, colour and fonts of the web site are consistent in all its web pages. This means that the visual look of each web page should be the same through the web site (McGovern, 2002: 20). Freitas and

Ferreira (2000: 2) also support this viewpoint of web site consistency as they state that there should be enough contrast between the background and the text colour of all pages of a web site and that the layout should be consistent through all the web pages of the web site.

8.3 Implications and Recommendations Based on the Other Main Findings

The following two sections provide implications and recommendations to businesses, based on some of the other main findings of the study. These main findings were not linked to the research objectives, but were considered important never - the - less.

8.3.1 Primary Use of the Internet

Section 7.4.1 of Chapter Seven concluded that most respondents used the Internet for **e-mail** and for **general browsing**.

The **implication** to business is that they must know how Internet users spend their time on the Internet so that they may find means to maximise their exposure to Internet users who are not visiting their web site. This implies that online businesses must find ways in which potential customers can easily find them.

It is **recommended** that business selling on the Internet provide as much advertising as possible on host e-mail web sites and search engines portals so that Internet users are exposed to their web offerings (Carr, 2003:12).

8.3.2 Expected changes in Online Shopping Behaviour

Section 7.4.2 of Chapter Seven concluded that **48% of respondents currently purchased online and from these approximately 95% indicated that they would continue to purchase online in the future**.

The **implication** to business is that they must understand that online retailing in South Africa is still in the early stages of development, when compared to other first world countries such as America, where 83% of Internet users currently purchase online (Dove Consulting, 2003: 24). This implies that the e-commerce strategies used by businesses selling over the Internet in South Africa cannot be the same as those used in other first world countries.

It is **recommended** that businesses selling on the Internet in South Africa continue to do so and those considering to sell on the Internet, make the decision to sell. Looking at the findings of *Webcheck's Project SA Web User Survey 2004* (as discussed in Section 7.4.1 of Chapter Seven) and the findings of this survey, in all likelihood, as the number of Internet users in South Africa grows, the number of Internet users converting to Internet shoppers will also grow.

The above viewpoint is also supported by Everett M. Roger's *Diffusion of Innovation Theory*, as cited by Breitenbach and Peterson (2000: 559), which explains the adoption process of a transactional web site. According to Clark (1994: 1), the diffusion of innovation theory is, "the process by which an innovation is communicated through certain channels over time among members of a social system". This implies that as the number of Internet users increases, according to the diffusion of innovation theory, such Internet users realise the benefit of the technology and naturally convert to Internet shoppers.

8.3.3   Product Categories Purchased Online

Section 7.4.3 of Chapter Seven concluded that **books and CDs were the most common product categories purchased online**.

The **implication** to business is that their marketers must realise that books and CDs are the most common product categories purchased online. This implies that it is important for brick and mortar stores and catalogue retailers to duplicate there in-store or catalogue offerings on the Internet.

It is **recommended** that existing brick and mortar stores selling books and CDs in South Africa duplicate their offering on the Internet. It is also recommended that businesses selling other types of products and services find innovative ways to market their products. For example, Schneider and Perry (2000: 268) suggest that online businesses selling clothes may want to send a fabric swatch on request to potential customers.

8.4   Summary

As stated in Section 1.3 of Chapter One, this Research Report aimed to add to the body of knowledge on online consumer behaviour theory and knowledge of South African Internet users by providing freely to South African marketers the factors that influence South African Internet users purchasing online.

The following factors were rated important to the sample purchasing online: *(1)* **the price of the product or service being purchased**; *(2)* **the convenience to the Internet user**; *(3)* **the experience as an Internet user**; *(4)* **the web site layout**; *(5)* **the ease of use of the web site**; *(6)* **the brand of the product or service**; *(7)* **the type of product or service**; *(8)* **the availability of online information on the product or service**; *(9)* **the method of payment**; and *(10)* **the web site security features**.

From the above factors, **the web site security features** was ranked as the most important factor influencing respondents purchasing a product or service online, **the ease of use of the web site** was ranked as the second most important factor and **the web site layout** was ranked as the third most important factor influencing respondents purchasing a product or service online.

Based on the conclusions discussed in the previous chapter and the implications and recommendations provided in this chapter, it could be concluded that the results from this study can contribute to the body of knowledge on online consumer behaviour theory and knowledge of South African Internet users.

9. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This chapter discusses the limitations of this research study and provides some recommendations for future research. The first part of this chapter discusses some of the research limitations experienced by the researcher during this research undertaking and the second part of the chapter provides some recommendations for future research.

9.1 Research Limitations

It is acknowledged that there were some limitations experienced by the researcher during this research undertaking. The limitations experienced are discussed below.

9.1.1 Sample Size Constraints

As stated in Chapter Two, the number of South African Internet users in 2005 was estimated to be approximately 4 780 000 (Computer Industry Almanac Inc, 2005: 1). A sample size of only 437 South African Internet users was used to undertake this research.

In view of the above, wherein the sample was small and chosen using a non-probability sampling technique, the findings cannot claim to be representative or generalistic of the South African Internet user population.

9.1.2 Sampling Frame

As stated in Chapter Four, the sampling frame was determined to comprise of Internet users employed at Ninham Shand (Pty) Ltd. Ninham Shand (Pty) Ltd is a firm of consulting engineers with approximately 500 employees and fifteen offices throughout South Africa. These offices are located in Bloemfontein, Cape Town, Centurion, Durban, East London, George, Harrismith, Kimberly, Klerksdorp, Pietermaritzburg, Polokwane, Port Elizabeth, Stellenbosch, Umtata and Welkom. The employees comprise of engineers, technicians, scientists, environmentalists, townplanners and administration staff

In view of the above, wherein the sampling frame was chosen from one organisation only and with offices in not all the major towns and cities in South Africa, the findings cannot claim to be representative or generalistic of the South African Internet user population and geography.

9.1.3   Sample Demographics

The sample demographics ranged from unbalanced (gender and household language demographics) to somewhat balanced (age, place of residence and population groupings demographics) when compared to other South African Internet consumer behaviour research studies or the South African population demographic profile.

In view of the above, the sample demographic profile cannot claim to be fully representative of the South African Internet user demographic profile.

9.1.4   Time Constraints

This research undertaking was conducted over a period of one year and as such, a longitudinal view of the sample could not be determined.

The short research period inhibited the researcher's ability to obtain a longitudinal view of the sample data, as the data received represented a snap shot of the views of a limited sample of South African Internet users during a specific time period.

9.1.5   Financial and Resource Constraints

As stated in Chapter Five, South African Internet research companies such as *Webcheck*, *World Wide Worx* and *eMarketer* generally charge between R6 000 and R14 000 (2005 Rand prices) for South African online shopping studies. In many cases, only a summary of the research data was freely available

Due to the high cost of these reports, the researcher had no access to the full reports and as such, the detailed observations did not form part of the Literature Review.

9.1.6   Participant Biasness

The researcher carried out the primary research by distributing the questionnaire via e-mail to the target sample. The respondents were requested to complete the questionnaire by a specific date and to submit it to a web server, which in turn e-mailed the completed questionnaire back to the respondent. Two reminder e-mails were also sent to the respondents urging them to complete the questionnaire.

Also, the sample was chosen from an organisation with a strict Internet usage policy, covering private use of the Internet from their place of work, so the response for certain questions might be skewed (i.e. questions 1.3 and 1.6.1 of Section One of the questionnaire). For example, 75% of respondents gained access to the Internet from their place of work. This 75% also had to answer questions relating to their Internet usage and their online buying behaviour.

A limited participant constraint may have occurred as the respondents may have been pressurized into completing the questionnaire. It is acknowledged that some of 75% who gained access to the Internet from their place of work may have "downplayed" their actual Internet usage and online buying behaviour. In view of this, some respondents may not have reflected his or her true responses.

9.2   Recommendations for Future Research

Some recommendations for future research can be made following the major findings, implications and conclusions for businesses. These recommendations are:

- A similar study can be conducted with a different or a larger sample of South African Internet users to determine if there are similarities with the findings of this study.

- A longitudinal study of the same sample can be carried out to determine whether and/or how the identified factors influencing purchase behaviour change over time.

- A study can be conducted to determine the significance and relative importance of the factors, not identified in the literature review but found to be important to the sample purchasing products or services online. These factors were: *(1)* **the availability of the product or service in South Africa**; *(2)* **the delivery time of the product or service**; *(3)* **feedback and upgrades of products and services purchased online**; *(4)* **free shipping**; *(5)* **high Telkom charges**; *(6)* **reliability of the web site and links that actually work** and *(7)* **trustable web sites.**

- A study can be conducted to determine whether demographic variables influence the decision of South African Internet users purchasing a product or service online.

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<div align="right">**ANNEXURE ONE A**</div>

From:	Ashwin Mohanlal
To:	ashwin.mohanlal@shands.co.za
Date:	2005-08-15 09:16:17 AM
Subject:	INTERNET BEHAVIOUR SURVEY

Reply requested when convenient

Ladies and Gentleman

My name is Ashwin Mohanlal and I work in the Pietermaritzburg office. I am currently completing my Master in Business Administration (MBA) degree from the University of KwaZulu Natal. For my dissertation, I am investigating the **Factors that Influence South African Internet Users Purchasing a Product or Service Online**.

I have chosen you to participate in my survey. It would be appreciated if you would complete the attached questionnaire. The questionnaire comprises of 24 questions and would take you approximately 8 - 10 minutes to complete. The questionnaire is in html format and should open (once you double click the icon) in Internet Explorer.

Once you have completed the questionnaire, please click the **Submit** button at the end of the questionnaire. You will then be taken to a website with some advertising on it. Once the web page loads, you may view it and then close it. Please note that Ninham Shand management has approved this data collection method.

Also, please note that by completing the attached questionnaire in its entirety, you stand a chance of winning one of three double movie tickets from Ster Kinekor.

I trust that you will complete the attached questionnaire at your earliest convenience.

Kind Regards,

Ashwin Mohanlal.

INSTRUCTIONS

This research questionnaire comprises of three sections, which investigate your Internet consumer behaviour and in particular the factors that affect your decision to purchase a product or service online.

Please note that by completing this questionnaire, all information supplied will be dealt with in the strictest confidence. All information supplied, will only be used for statistical analysis and no information will be interpreted in isolation or provided to any third party.

Also please note that by completing this questionnaire in its entirety, you stand a chance of winning one of three double movie tickets from Ster Kinekor.

SECTION ONE

1.1 Are you an Internet user?

○ Yes ○ No

1.2 How long have you been an Internet user?

Please Choose

1.3 How often do you use the Internet?

Please Choose

1.4 From where do you most frequently gain access to the Internet?

Please Choose

1.4.1 If **Other**, please specify

1.5 What is your primary use of the Internet?

Please Choose

1.5.1 If **Other**, please specify

1.6 Have you used the Internet to purchase a product or service online?

○ Yes ○ No

1.6.1 If **Yes**, what have you purchased online?

☐ Books	☐ CDs
☐ Clothes	☐ Collectors Items
☐ Computers/Peripherals	☐ DVDs/Videos
☐ Electronics	☐ Flowers
☐ Gifts	☐ Hobby Items
☐ Software/Games	☐ Sporting Goods
☐ Travel	☐ Other

1.6.1.1 If **Other**, please specify

1.7 Will you use the Internet in future to purchase a product or service online?

○ Yes ○ No

SECTION TWO

On a scale of 1 - 10, **where 1 equals least important and 10 equals most important**, please rate how important the following factors are to you when using the Internet to purchase a product or service online.

2.1 Lower priced products or servicesv

○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9 ○10

2.2 More convenience

○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9 ○10

2.3 Longer experience as an Internet user

○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9 ○10

2.4 A well-presented website layout

○1 ○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9 ○10

2.5 An easy to use website

◯1 ◯2 ◯3 ◯4 ◯5 ◯6 ◯7 ◯8 ◯9 ◯10

2.6 A well-known brand of product or service

◯1 ◯2 ◯3 ◯4 ◯5 ◯6 ◯7 ◯8 ◯9 ◯10

2.7 Tangible, in terms of sight and sound, products

◯1 ◯2 ◯3 ◯4 ◯5 ◯6 ◯7 ◯8 ◯9 ◯10

2.8 More online information on the product or service

◯1 ◯2 ◯3 ◯4 ◯5 ◯6 ◯7 ◯8 ◯9 ◯10

2.9 Using a credit card for payment

◯1 ◯2 ◯3 ◯4 ◯5 ◯6 ◯7 ◯8 ◯9 ◯10

2.10 More website security features

◯1 ◯2 ◯3 ◯4 ◯5 ◯6 ◯7 ◯8 ◯9 ◯10

2.11 Are there any other factors, not covered above, which are important to you in using the Internet to purchase a product   or service online?

◯Yes ◯No

2.11.1 If **Yes**, please specify

SECTION THREE

The information requested in this section will be treated as highly confidential and the answers will be used for statistical analyses only.

Please provide the following information about yourself:

3.1 Gender

◯ Male ◯Female

3.2 Age

Please Choose

3.3 Place of Residence

Please Choose

3.4 Household Language

Please Choose

3.4.1 If **Other**, please specify

3.5 Population Group

Please Choose

3.5.1 If **Other**, please specify

3.6 Marital Status

Please Choose

Thank you for the time taken in answering this questionnaire. If you wish to be eligible to win one of three double movie tickets from Ster Kinekor, please provide your name and contact telephone number below.

Name:

Contact Telephone No.:

Please click the **Submit** button below. You will be taken to a web page with some advertising on it. Once the web page loads, you may view it and then close it.

Submit | Reset

QUESTIONNAIRE

INSTRUCTIONS

This research questionnaire comprises of three sections, which investigates your Internet consumer behaviour and in particular the factors that affect your decision to purchase a product or service online.

Please note that by completing this questionnaire, all information supplied will be dealt with in the strictest confidence and will be regarded as highly confidential. All information supplied, will only be used for statistical analysis and no information will be interpreted in isolation or provided to any third party.

Also please note that by completing this questionnaire in its entirety, you stand a chance of winning one of three double movie tickets from Ster Kinekor.

SECTION ONE

1.1   Are you an Internet user?
☐ Yes   ☐ No

1.2   How long have you been an Internet user?
☐ less than 1 year   ☐ 1-2 years   ☐ 2-3 years
☐ 3-4 years   ☐ 4-5 years   ☐ more than 5 years

1.3   How often do you use the Internet?
☐ less than 1 hour per month   ☐ 1-3 hours per month   ☐ 3-5 hours per month
☐ 5-8 hours per month   ☐ 8-12 hours per month   ☐ more than 12 hours per month

1.4   From where do you most frequently gain access to the Internet?
☐ home   ☐ work   ☐ Internet café   ☐ other

1.4.1   If **other**, please specify

....

1.5   What is your primary use of the Internet?

☐ chat room   ☐ e-mail   ☐ games   ☐ general browsing

☐ music   ☐ news   ☐ shopping   ☐ other

1.5.1   If **other**, please specify

....

1.6   Have you used the Internet to purchase a product or service online?

☐ Yes   ☐ No

1.6.1   If **Yes**, what have you purchased online?

☐ Books   ☐ CDs   ☐ Collectors Items

☐ Computers/Peripherals   ☐ DVDs/Videos   ☐ Electronics

☐ Flowers   ☐ Gifts   ☐ Hobby Items

☐ Software/Games   ☐ Sporting Games   ☐ Travel

☐ Other

(multiple answers possible)

1.1.6.1 If **Other**, please specify

....

1.7   Will you use the Internet in future to purchase a product or service online?

☐ Yes   ☐ No

SECTION TWO

On a scale of 1 – 10, **where 1 equals least important and 10 equals most important**, please rate how important the following factors are to you when using the Internet to purchase a product or service online.

2.1   Lower priced products or services

☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

2.2 More convenience

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.3 Longer experience as an Internet user

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.4 A well-presented website layout

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.5 An easy to use website

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.6 A well-known brand of product or service

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.7 Tangible, in terms of sight and sound, products

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.8 More online information on the product or service

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.9 Using a credit card for payment

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.10 More website security features

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2.11 Are there any other factors, not covered above, which are important to you in using the Internet to purchase a product or service online?

☐ **Yes,** ☐ **No**

2.11.1 If **Yes**, please specify

....

SECTION THREE

The information requested in this section will be treated as highly confidential and the answers will be used for statistical analyses only.

Please provide the following information about yourself:

3.1   Gender

☐ Male,   ☐ Female

3.2   Age

☐ 18-24,   ☐ 25-34,   ☐ 35-44,   ☐ 45-55,   ☐ 55-65

3.3   Place of Residence

☐ Limpopo Province,   ☐ North West Province,   ☐ Gauteng Province,

☐ Mpumalanga Province,   ☐ Free State Province,   ☐ KwaZulu Natal Province,

☐ Northern Cape,   ☐ Western Cape,   ☐ Eastern Cape]

3.4   Household Language

☐ Afrikaans,   ☐ English,   ☐ isiXhosa,   ☐ isiZulu,   ☐ Ndebele,

☐ North Sotho,   ☐ Sesotho,   ☐ Setswana,   ☐ Siswati,   ☐ Tshivhenda,

☐ Xitsonga,   ☐ Other]

3.4.1 If **other**, please specify

....

3.5   Population Group

☐ African,   ☐ Coloured,   ☐ Indian,   ☐ White,   ☐ Other

3.5.1 If **other**, please specify

....

3.6   Marital Status

☐ Single,   ☐ Married,   ☐ Divorced,   ☐ Widowed

Thank you for the time taken in answering this questionnaire. If you wish to be eligible to win one of three double movie tickets from Ster Kinekor, please provide your name and contact telephone number below.

Name: ....

Contact Telephone No.: ....

(i)   *The price of the product or service being purchased*

H_0:   A lower priced product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1:   A lower priced product or service does influence the decision of an Internet user purchasing such product or service online.

Table 7.1: Chi – Square Calculation for the Price of the Product or Service

Rating	Observed	Expected		$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
		%	f_e		
1	17	5%	13	13	0.937
2	0	5%	13	181	13.450
3	18	5%	13	21	1.539
4	22	5%	13	73	5.435
5	21	5%	13	57	4.238
6	4	5%	13	89	6.640
7	31	15%	40	87	2.167
8	55	20%	54	1	0.027
9	32	20%	54	475	8.833
10	69	15%	40	821	20.343
Total	**269**	**100%**	**269**	X^2_{calc} =	**63.608**
				df =	8
				X^2_{crit} =	21.955
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(ii)   *The convenience of purchasing online*

H_0:   The convenience of purchasing a product or service online does not influence the decision of an Internet user purchasing such product or service online.

H_1:   The convenience of purchasing a product or service online does influence the decision of an Internet user purchasing such product or service online.

Table 7.2: Chi – Square Calculation for the Convenience of Purchasing Online

Rating	Observed	Expected		$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
		%	f_e		
1	6	5%	13	56	4.127
2	7	5%	13	42	3.093
3	0	5%	13	181	13.450
4	8	5%	13	30	2.208
5	16	5%	13	7	0.483
6	17	10%	27	98	3.643
7	31	15%	40	87	2.167
8	70	10%	27	1858	69.056
9	48	15%	40	59	1.450
10	66	25%	67	2	0.023
Total	**269**	**100%**	**269**	X^2_{calc} =	**99.701**
				df =	8
				X^2_{crit} =	21.955
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(iii) *The experience of the Internet user*

H_0: Longer experience as an Internet user does not influence their decision to purchase a product or service online.

H_1: Longer experience as an Internet user does influence their decision to purchase a product or service online.

Table 7.3: Chi – Square Calculation for the Experience of the Internet User

Rating	Observed	Expected		$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
		%	f_e		
1	12	5%	13	2	0.156
2	11	5%	13	6	0.446
3	9	5%	13	20	1.472
4	18	5%	13	21	1.539
5	48	5%	13	1194	88.751
6	37	20%	54	282	5.246
7	64	25%	67	11	0.157
8	27	10%	27	0	0.000
9	25	15%	40	236	5.839
10	18	5%	13	21	1.539
Total	269	100%	269	X^2_{calc}	= 105.147
				df	= 9
				X^2_{crit}	= 23.589
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(iv) *The website layout*

H_0: A well presented website layout does not influence an Internet users decision to purchase a product or service online.

H_1: A well presented website layout does influence an Internet users decision to purchase a product or service online

Table 7.4: Chi – Square Calculation for the Website Layout

Rating	Observed	Expected		$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
		%	f_e		
1	6	5%	13	56	4.127
2	0	5%	13	181	13.450
3	0	5%	13	181	13.450
4	11	5%	13	6	0.446
5	28	5%	13	212	15.740
6	15	5%	13	2	0.179
7	27	10%	27	0	0.000
8	52	15%	40	136	3.364
9	68	20%	54	202	3.748
10	62	25%	67	28	0.410
Total	269	100%	269	X^2_{calc}	= 54.913
				df	= 7
				X^2_{crit}	= 20.278
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(v)   *The ease of use of the website*

H_0:   An easy to use website does not influence the decision of an Internet user purchasing a product or service online.

H_1:   An easy to use website does influence the decision of an Internet user purchasing a product or service online.

Table 7.5: Chi – Square Calculation for Ease of Use of the Website

Rating	Observed	Expected %	f_e	$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
1	0	5%	13	181	13.450
2	0	5%	13	181	13.450
3	4	5%	13	89	6.640
4	4	5%	13	89	6.640
5	14	5%	13	0	0.022
6	14	5%	13	0	0.022
7	34	15%	40	40	0.999
8	38	15%	40	6	0.137
9	58	20%	54	18	0.328
10	103	20%	54	2421	44.993
Total	269	100%	269	X^2_{calc} =	86.682
				df =	7
				X^2_{crit} =	20.278
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(vi)   *The brand of the product or service being purchased*

H_0:   A well-known brand of the product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1:   A well-known brand of the product or service does influence the decision of an Internet user purchasing such product or service online.

Table 7.6: Chi – Square Calculation for the Brand of the Product or Service

Rating	Observed	Expected %	f_e	$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
1	0	5%	13	181	13.450
2	0	5%	13	181	13.450
3	10	5%	13	12	0.885
4	21	5%	13	57	4.238
5	33	5%	13	382	28.417
6	23	5%	13	91	6.781
7	37	10%	27	102	3.792
8	51	15%	40	113	2.811
9	39	20%	54	219	4.071
10	55	25%	67	150	2.231
Total	269	100%	269	X^2_{calc} =	80.126
				df =	7
				X^2_{crit} =	20.278
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(vii)   *The type of product or service being purchased*

H_0:   Tangible products (in terms of sight and sound) do not influence the decision of an Internet user purchasing such product or service online.

H_1:   Tangible products (in terms of sight and sound) do influence the decision of an Internet user purchasing such product or service online.

Table 7.7: Chi – Square Calculation for the Type of Product or Service

Rating	Observed	Expected %	Expected f_e	$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
1	9	5%	13	20	1.472
2	14	5%	13	0	0.022
3	7	5%	13	42	3.093
4	10	5%	13	12	0.885
5	35	15%	40	29	0.709
6	48	20%	54	34	0.625
7	53	25%	67	203	3.020
8	46	5%	13	1060	78.773
9	14	5%	13	0	0.022
10	33	10%	27	37	1.383
Total	**269**	**100%**	**269**	X^2_{calc} =	**90.006**
				df =	9
				X^2_{crit} =	**23.589**
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(viii)   *The availability of online information on the product or service*

H_0:   More online information on the product or service does not influence the decision of an Internet user purchasing such a product or service online.

H_1:   More online information on the product or service does influence the decision of an Internet user purchasing such a product or service online.

Table 7.8: Chi – Square Calculation for the Availability of Online Information

Rating	Observed	Expected %	Expected f_e	$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
1	0	5%	13	181	13.450
2	0	5%	13	181	13.450
3	12	5%	13	2	0.156
4	12	5%	13	2	0.156
5	31	5%	13	308	22.900
6	18	5%	13	21	1.539
7	30	10%	27	10	0.357
8	46	15%	40	32	0.791
9	34	20%	54	392	7.287
10	86	25%	67	352	5.228
Total	**269**	**100%**	**269**	X^2_{calc} =	**65.315**
				df =	7
				X^2_{crit} =	**20.278**
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

(ix)   *The method of payment required for purchasing the product or service online*

H_0:   Using a credit card for payment of a product or service does not influence the decision of an Internet user purchasing such product or service online.

H_1:   Using a credit card for payment of a product or service does influence the decision of an Internet user purchasing such product or service online.

Table 7.9: Chi – Square Calculation for the Method of Payment

Rating	Observed	Expected		$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
		%	f_e		
1	36	5%	13	509	37.807
2	11	5%	13	6	0.446
3	18	5%	13	21	1.539
4	13	5%	13	0	0.015
5	20	5%	13	43	3.190
6	9	5%	13	20	1.472
7	25	10%	27	4	0.134
8	61	15%	40	426	10.568
9	29	20%	54	615	11.432
10	47	25%	67	410	6.098
Total	**269**	**100%**	**269**	X^2_{calc}	= 72.701
				df	= 9
				X^2_{crit}	= 23.589
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

x)   The website security features

H_0:   More website security features do not influence the decision of an Internet user purchasing a product or service online.

H_1:   More website security features do influence the decision of an Internet user purchasing a product or service online.

Table 7.10: Chi – Square Calculation for the Website Security Features

Rating	Observed	Expected		$(f_0 - f_e)^2$	$(f_0 - f_e)^2 / f_e$
		%	f_e		
1	0	5%	13	181	13.450
2	4	5%	13	89	6.640
3	3	5%	13	109	8.119
4	4	5%	13	89	6.640
5	4	5%	13	89	6.640
6	15	5%	13	2	0.179
7	12	5%	13	2	0.156
8	46	15%	40	32	0.791
9	35	20%	54	353	6.570
10	146	30%	81	4264	52.839
Total	**269**	**100%**	**269**	X^2_{calc}	= 102.022
				df	= 8
				X^2_{crit}	= 21.955
Result: $X^2_{calc} > X^2_{crit}$ therefore **reject** H_0					

****** Method 1 (space saver) will be used for this analysis ******

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RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients

N of Cases = 269.0

N of Items = 10

Alpha   = 0.7221

****** Method 1 (space saver) will be used for this analysis ******