UNIVERSITY OF
KWAZULU-NATAL

FACTORS OF USER INTERFACE DESIGN THAT INFLUENCE USAGE OF E-BANKING WEBSITES

By

Ravi Ogutu

212557622

Research Paper Submitted in fulfilment of the requirements of the degree of

Master of Commerce in Information Systems and Technology

School of Management, Information Technology and Governance

Discipline of Information Systems & Technology

In the 2016 Academic Year

Supervisor: Mr. M Marimuthu

SUPERVISOR'S PERMISSION TO SUBMIT FOR EXAMINATION

Date:

Student Name: Ravi Ogutu

Student Number: 212557622

Thesis Title: Factors of user interface design that influence usage of e-banking websites

As the candidate's supervisor, I agree to the submission of this thesis for examination. To the best of my knowledge, this thesis is primarily the student's own work and the student has acknowledged the reference sources.

Name of Supervisor: Mr. Mudaray Marimuthu

Signature:

Date:

DECLARATION

I, Ravi Ogutu, declare that the study **"Factors of user interface design that influence usage of e-banking websites"**, which is submitted to the School of Management, Information Technology and Governance, Discipline of Information Systems & Technology, is my own work and that:

1) The research reported in this study, except where otherwise stated, is my original research.
2) This study has not been submitted for any other examinations at any other university.
3) This study does not contain personal information and data unless specifically acknowledged as being sourced from other sources.
4) The study does not contain another person's writing unless specifically stated and acknowledged as being from other researchers. When exact words have been used they will be paced inside quotation marks and referenced.
5) All tables, figures and graphics from all sources will be acknowledged and the references detailed in the References Section

Name: Ravi Ogutu
Student Number: 212557622
Signature:
Date:

ACKNOWLEDGEMENTS

First and foremost, I have to thank my parents, Prof and Mrs Afullo for their love and support. I extend my gratitude to my siblings who supported me during the writing of this thesis. I would like to acknowledge the moral support of my siblings, Rama Ochieng' and Raja Afullo, for their unwavering support.

Gratitude to colleagues and peers in the School, especially Patrick Ndayizigamiye, for assistance with editorial and technical review of the draft.

I would like to sincerely express my deepest appreciation to my supervisor. Without his contribution, suggestions and encouragement, this thesis would not have been possible.

ABSTRACT

The aim of this research is to investigate factors of users' interface design that influence the usage of e-banking websites in South Africa. The advent of electronic banking (e-banking) has brought about a change in which both the banking institution and customers do their transactions. In most cases, customers are no longer required to be at the physical premises of banking institutions to receive some services as banking institutions' online presence has become as important as their physical location. Therefore, the study onto the usage of e-banking websites warrants a systematic approach that compares customers' perceptions of e-banking websites against what banking institutions are actually offering through such medium. A literature search reveals that there are a number of studies that deals with IT adoption factors pertaining to user's perception, perceived ease of use and usability of information systems for business-related purposes. This research specifically analyses how the current e-banking websites is aligned with the 7Cs of E-Commerce customer interface theoretical framework (Rayport and Jaworski, 2000), how users perceive the current user interface design of the banking websites and also how the perception of the user matches the theoretical framework constructs. A 10-factor checklist was designed to compare the various design elements of the different South African banks' websites, specifically the elements that pertain to user interface design. The Technology Acceptance Model (TAM) was also adopted in this study to ascertain the relationship between the 7 theoretical framework constructs and Perceived Ease of Use (PEOU) and Perceived Usefulness of banking websites. The research adopted a quantitative methodology which involves the use of questionnaire as the instrument for data collection. Findings reveal that elements of the 7Cs framework and TAM help in the designing of the user interface and if present they help the customer to be more at ease with the website. This subsequently leads to customer satisfaction. It was also found that there were some elements of the 7Cs of e-Commerce Customer Interface framework that were under-represented, and in some cases left out altogether, when the design of some of the e-banking websites was being done. This in turn led to some of the features needed by customers not being available. The insight offered therein, will hopefully, contribute substantially to the overall user satisfaction in the complex and challenging world of e-commerce.

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

LIST OF COMMONLY USED ACRONYMS

ICT – Information and Communication Technology

TAM - Technology Acceptance Model

B2B - Business-to-Business

B2C - Business-to-Consumer

P2P - Peer-to-Peer

C2B - Consumer-to-Business

PCA – Principal Component Analysis

CHAPTER 1: INTRODUCTION

1.1 Introduction
There is substantial growth in the South African banking sector with increases in loans, portfolio diversification and asset bases (WorldWideWorx 2012). A large number of these services are being offered through Information Communication Technology (ICT) specifically through Internet banking (Brown and Molla 2005). As a result, the bank websites have the dual role of increasing business for banks and helping the customers transact. At the forefront of all of this is the design of the website that a customer interacts with, the user interface (Meyer 2008). User interfaces are there to help the customer in their interaction with a particular website, online store or in this case online banking (Alafeef et al 2012). The purpose of this study is to determine whether the factors of the 7Cs framework are incorporated into banking websites and their influence on perceived usefulness and perceived ease of use. According to Bringula and Basa (2011) usability and the user interface design of a website affect the usage of a website. This is also supported by Mehmood et al. (2014) who observed that that the graphical user interface is a major factor when it comes to adoption and usability.

1.2 Background
In the past, the only way to do any form of banking was to visit the traditional brick-and-mortar bank branches. Brick-and-mortar bank branches are the physical office branches in which banks offer face to face services to their customer. The widespread use of the Internet brought about a change in the way banking is done. According to World Wide Worx (2012) the broadband data subscriptions in South Africa grew from 3.6 million at the end of 2010 to an estimated 8.2 million by the end of 2012, a 128% growth. This lead to a gradual transition to online banking with the presentation of the websites with appeal, ease of navigation and use being paramount (Meyer 2008). This transition from brick and mortar to online banking made it even more important for the website developers to try and understand the needs, wants and requirements of users. E-banking, sometimes referred to as online banking, allows for financial transactions to be performed on a secure online platform by the customers of a bank (Meyer 2008).

Najjar (2011) observed that perceived ease of use led to the more customers using the e-banking websites. The reasoning behind this is that people found it easy to utilise and try a product that looks easy to use. The perception of ease of use and the appearance of the website can determine the amount of usage and traffic that the website gets. This can be brought about by the design of the website. Word of mouth and advertisement can have a large role in this perception due to potential users being influence by what their peers, friends, families and advertisements are saying, this therefore means perception goes a long way into getting the people to start using it (Jahangir and Begum 2008). Liao and Chung (2001) found that the perceived ease of use of technology was a major factor when it came to acceptance of the technology.

Evidence show that "expectations of accuracy, security, network speed, user-friendliness, user involvement and convenience were the most important quality attributes underlying perceived usefulness" Liao and Chung (2001, 283).

Medyawati, Christiyanti and Yunanto (2011) found that "experience of computer use, relevance, security and privacy significantly influence the perceived ease of use". Perceived ease of use also influences the attitude and behaviour of the user. Jahangir and Begum (2008) found that perceived ease of use plays a major role in the adoption of e-banking as a technology. Among the findings of Medyawati et al. (2011) was that exposure to a certain technology does not necessarily translate to perceived ease of use. Perceived usefulness was also another variable regarded as important to the adoption of technology and it is defined as the degree to which a person believes that the usage of a particular system would enhance his or her job performance (Kripanont 2007). Perceived ease of use and perceived usefulness are major variables that affect the acceptance and subsequent usage of a particular technology. In Jordan, a study by El-Qirem (2012) observed that the intention of people to accept and actually use a technology is mainly based on perceived usefulness and perceived ease of use.

From a South African perspective, Brown and Molla (2005) found that more South African banks are deriving a sizeable portion of their revenue through the use of online services. A study by Columinate in 2012 through their Internet Banking SITEisfaction survey found that more and more South Africans are using their mobile phones to access e-banking facilities. Among the findings was that mobile phone banking has increased from 42% in 2011 to 54% in 2012. This included both the traditional usage of the mobile phones browsers and apps designed specifically for access by the various banks.

1.3 Problem Statement
The design of a website can influence the usability and the adoption of the website. Studies showed carried out showed that the lack of 7Cs component implementation affected usage and satisfaction and this research wanted to determine whether similar issues are faced by users of South African banking users. Ranawaka (2008) compared the user interface design of the various banking institutions that were found in Sri Lanka and found that a majority of the banking institutions (72%) had a web presence that they maintained through frequent updates. Ranawaka (2008) also found that some elements of the 7Cs' theoretical framework (context, content, community, customisation, communication, connection and commerce) were not being implemented in some of the banks in Sri Lanka thus leading to lower user satisfaction. Owing to the fact that previous studies like Meyer (2008) and Ranawaka (2008) found that not all the elements of the 7Cs framework were being implemented, this study will explore how the omission of the 7Cs' elements affects user satisfaction on South African banking websites. Furthermore, Ranawaka (2008) identified a need to

explore the actual functionality of these websites and the correlation between customer (web user) satisfaction and web-interface design, which this study explores.

1.4 Focus of the study
This study will focus on the user interface factors that affect the usefulness and ease of use of banking websites. Therefore, the target population are people who have used e-banking websites.

1.5 Research questions
The following research questions are set out in this study:

1.5.1 Which components of the 7Cs framework are incorporated into the design of South African banking websites?
Ranawaka (2008) compared the user interface design of the various banking institutions that were found in Sri Lanka. The paper found that a majority of the banking institutions (72%) had a web presence/website that they maintained in terms of updating and adding new features. Ranawaka (2008) also found that some elements of the 7Cs' theoretical framework were not being implemented in some of the banks in Sri Lanka thus leading to lower user satisfaction. Meyer (2008) concluded that since e-commerce is increasingly becoming more efficient as it helps customers and consumers to make purchases without having to visit the traditional brick-and-mortar buildings. This saves time and money for both the bank and customer. Getting the attention of the customer, ease of navigation and appealing design of the user interface are among the factors that need to be considered and are important for the business (Meyer 2008). Meyer (2008) also found that some elements of the 7Cs' theoretical framework were not being utilised by some e-commerce websites and this resulted in low user satisfaction. Therefore, this study wants to determine which of these components are lacking in South African website and their impact on user satisfaction

1.5.2 How do users perceive the current banking websites from an ease of use and usefulness perspective?
According to Ranawaka (2008) since some elements of the 7Cs framework were not present, this impacted on the user satisfaction of the customers who were using the websites. User satisfaction will be measured by investigating the perception of e-banking users with regards to the ease of use of banking websites and usefulness. The perceived ease of use and perceived usefulness are components of the TAM (Technology Acceptance Model) that were used to help in answering this question as they also impacted actual usage of the website together with the user satisfaction that is derived from it.

1.5.3 Which 7Cs framework components correlate with perceived ease of use and perceived usefulness TAM factors ?
Ranawaka (2008) also found that some elements of the 7Cs' theoretical framework were not being implemented in some of the banks in Sri Lanka leading to lower user satisfaction. This means that according

to Ranawaka (2008) user perception matched with the 7Cs' framework. Rayport and Jaworski (2000) developed the 7Cs' framework with the intention of quantifying what elements are required by users in order to help them use and navigate a websites' user interface. Therefore, this study correlates factors from the 7Cs' framework with perceived ease of use and perceived usefulness which was a literature gap identified by Ranawaka (2008).

1.6 Objectives of the study

This study is an attempt to determine if there is a relationship between the user interface design of an e-banking website and user satisfaction. To achieve the research questions the following objectives were established:

- To determine if South African banking websites are designed according to the 7Cs' Framework
- To determine if users' perceptions of the current user interface design of South African banking websites influence their decision to use the websites
- To determine if the users' perception of the 7Cs' framework constructs affect the P.E.U. and P.U. of the websites?

1.7 Summary outline per chapter

The chapters available in this study are as follows:

1.7.1 Chapter 1: Introduction

This includes the introduction and background of the thesis together with the research questions that will be attempted to be answered by the end. It also includes the reason for the study and the structure of the thesis.

1.7.2 Chapter 2: Literature Review

This chapter includes similar studies that have been carried out in order to give the study a basis and a foundation. This chapter critiques, investigates and analyses previous work that has a relation to the topic of the thesis in order to get grounding. Theoretical frameworks and theorems are also included in this chapter to give the reader an understanding of the frame of thought that was undertaken in the study. References from this chapter will be used when doing the analysis.

1.7.3 Chapter 3: Research Methodology

This explains the processes that are undertaken during the study. This entails the selection of the research topic, the sampling technique, the sample size, the recruiting of the representative sample, the design of the questionnaire and the distribution of the questionnaire. Additional aspects include the method of capture and interpretation of the data.

1.7.4 Chapter 4: Findings and Analysis

In this chapter the analysing of the data collected from the representative sample is done. The main intention of this chapter is to attempt to answer the research questions that formed the basis of the study. Findings from the analysis are further analysed and interpreted.

1.7.5 Chapter 5 Conclusions and Recommendations

This final chapter presents the conclusions derived from the findings and analysis will be done in the earlier chapter (chapter 4). Recommendations for future studies are also presented.

1.8 Rationale and Significance of the Research

The findings from this study can aid designers and programmers in implementing websites that may have a higher level of adoption. This study will make recommendations on which components are missing during the design of e-banking websites and which components play a role in increasing the usefulness and ease of use of e-banking websites

1.9 Conclusion

Information Technology has led to a number of benefits in the world we live in today. IT has made activities that were time inducing like snail mail and made it faster through sending the same letter as it were through email. The banking sector has also benefitted similarly from IT association. This study will therefore be showing these benefits from the user interface perspective as it pertains to both the banks and the customers.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This literature review was undertaken in order to investigate the factors of user interface design that influence the usage of e-banking websites. The focus was on the factors affecting the usage of e-banking in general with subsequent focus on the South African context. User interface as with any other design based technology focuses on a consumer and has a way of shaping the perception of the target user, be it in a negative or positive way. Additional topics such as user interface design, online Internet usage, barriers to usage of IT, TAM (Technology Acceptance Model), 7Cs E-Commerce Customer Interface framework, perception of e-banking and usage of e-banking were also part of the literature review.

2.2 E-Commerce

E-commerce is defined by Singh (2005:16) as "as any business activity or practice conducted by using the Internet as a medium of communication". It can also be defined as the buying and selling of goods and services using the Internet as a medium of communication and transaction. A chunkier definition of e-commerce would be "the sharing of business information, maintaining business relationships, and the conducting of business transactions by means of telecommunications networks" (Gao 1999).

The four (4) types of e-commerce are:

1. **Business-to-Business (B2B)**

This refers to transactions between two organisations and describes commerce transactions between businesses, such as between a manufacturer and a wholesaler, or between a wholesaler and a retailer (Singh 2005).

2. **Business-to-Consumer (B2C)**

This describes the business interaction between a business organisation and a consumer. It is not only restricted to physical goods but also includes the sale and provision of services. Since it is business to consumer commerce, its transactions in terms of monetary value and volume of product or service is smaller than the Business-to-Business e-commerce (Singh 2005).

3. **Peer-to-Peer (P2P)**

This involves the transactions among and between consumers (Singh 2005). It can include direct purchase through a personal website or through a third-party website like eBay, OLX and Gumtree.

4. **Consumer-to-Business (C2B)**

This refers to a group of consumers banding and collaborating with each other in order to sell to a business (Singh 2005). Alternatively, it can be designed as a type of e-commerce whereby the consumers create value (be it a service or product) and the business consuming this value.

2.2.1 Benefits of E-Commerce
E-commerce is beneficial to both the individual customer and to the business that is running the e-commerce website.

2.2.1.1 Individuals
Convenience, ease of use, saving on shopping time and money (being able to look for bargains) and compare prices are an immediate benefit (Purwati 2011). All the information that a user will require would be readily available on the Internet. Individual customers utilising e-commerce will also benefit because there is a wide selection of goods and products and not just limited to the stock of a particular physical store (Pather 2006). Instead the whole catalogue of the company is available for the customer to make a purchase from (Pather 2006). The only downside from an individual perspective is the fact that access to the Internet is a requirement.

2.2.1.2 Businesses
The business benefits from the implementation of e-commerce because new markets and products can be readily accessed and advertised as they become available (Pather 2006). The marketing of new products through strategically placed adverts can increase the profit margin of the company. There is faster transaction time which also benefits the customer and can mean less cost to the business (Purwati 2011). In order to get the benefits of e-banking it means that the business must invest in infrastructure that not only keeps its website running smoothly but also maintain it regularly (Pather 2006).

2.2.3 E-Commerce in South Africa
The growth of e-commerce in South Africa is a common occurrence (Meyer 2008). Pather (2006) observed that 9.9% of the South African population i.e. 4 780 000 are Internet users. This was backed up with a more recent study by World Wide Worx (2012) in which it was found that the broadband data subscriptions in South Africa grew from 3.6 million at the end of 2010 to an estimated 8.2 million by the end of 2012, a

128% growth. World Wide Worx also found that that a total of 7.9 million South Africans access the Internet on their cell phones. This shows that there is penetration in terms of Internet access in South Africa. Pather (2006) found that South Africa had a worldwide ICT infrastructure ranking of 23rd which means that e-commerce can be conducted as long as the citizens are aware and have access to this technology.

2.3 E-Banking

In the past, the only way to do any form of banking was to visit the traditional brick-and-mortar bank branches. Brick-and-mortar bank branches are the physical office branches in which banks offer face to face services to their customer. Ultimately the widespread use of the Internet brought about a change in the way banking could be done.

The definition of electronic banking varies among researchers, because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Al-Smadi 2012). Electronic banking (E-banking) is the usage of electronic media to effect banking transactions through the Internet. Internet banking can also be defined as a remote home and/or office banking service that is offered to a bank's personal customers, to perform routine banking transactions through the Internet. According to Hoppe et al. (2001) and Meyer (2008), Internet banking is synonymous with e-banking. E-banking allows customers to access their accounts from anywhere in the world as long as they have Internet connectivity and the right credentials to access the account.

This helps the customers in terms of providing convenience because they do not have to be physically present in their bank branches, and can do their transactions at their own convenience. It would be reasonable to assume that the design of an e-banking website plays a major role in terms of service delivery and user satisfaction. The development and design of the website will have to incorporate various elements in order to cater to both novice users and the experienced users. Most banks that offer Internet banking services allow consumers to check the balances in their accounts, transfer funds, and order electronic bill payments, with the even more sophisticated Internet banking systems allowing customers to apply for loans, trade stocks or mutual funds and even view actual images of their checks or deposit slips.

Hoppe et al. (2001) and Meyer (2008) observed that through the increased use of the Internet, banking institutions have created products that their customers would be able to use. This means that the global banking market would have increased competition since they would have to offer online products that must be appealing to both their current customers while also attracting potential customers. Banking is a highly information-intensive industry, meaning that customers demand accurate information regarding their accounts and this information needs to be easily accessible. As a result, information technology is

extensively used in the collection, processing and output of information to users and customers (Ranawaka 2008).

This transition from brick-and-mortar to online banking made it even more important for the website developers to try and understand the needs, wants and requirements of users. E-banking allows for the financial transactions on a secure online platform by the customers of a bank (Meyer 2008). The use of the Internet for the provision of services by financial institutes allows them to be more cost effective therefore increasing their profit margins.

Affordability of banking is an issue that needs to be looked into in order for a large number of people to be able to access the technology and its benefits. The pricing of the products and services offered by the financial institutions come into play. This is so because the products have to be catered to the market segment to which it is targeted. Cracknell (2004) approached it from the perspective of affordability to the poor in terms of both access and awareness. The functionality of electronic cards, pricing of electronic solutions, the segmentation of different products for different client groups and possible partnerships all need to be taken into account when deciding the services and the products that are being offered.

The environment in which a user resides (in terms of infrastructure and utility access) determines a lot of the aforementioned factors (Cracknell 2004). E-banking by its premise is a means of offering the customer a cheaper alternative to traditional brick-and-motar banking and is also supposed to make the banking experience more efficient, effective and user friendly (Cracknell 2004).

Cracknell (2004) was of the opinion that the reason e-banking is becoming wide spread is due to the reduction in the cost of technology. This is true because more bank customers are finding it easier to do paperless transactions as it is more convenient and does not involve the traditional queuing to get services. Security checks have also been introduced to make sure that the online e-banking transactions are done in the most secure environment possible. E-banking is supposed to provide the most convenient transaction platform.

As mentioned above, e-banking's major attraction is that it does not require the customer to visit a bank branch physically but can do their banking at their own convenience. Other advantages are:

Time saving, ease of accessibility (if you have access to the Internet) and safety (one does not carry cash) and obtaining a quick financial overview of accounts. There are also fewer charges than the traditional face to face transactions. Transactions are done in real time and updates are available almost immediately after the transaction (Meyer 2008).

The client must have access to the Internet. Cash deposits or withdrawals are not feasible. There are some complex financial transactions that cannot be done through e-banking and have to be done face to face at the bank branch. Phishing scams can be directed at customers and there is always a chance of account hacking taking place (Meyer 2008).

2.3.3 Factors affecting e-banking usage

Cracknell (2004) listed factors that are necessary in order for the customer who is not accustomed to the usage of online banking to be more convinced in its usage. Some of these factors are:

- FEATURES: E-banking should be designed to be the most effective way possible to bank. Additional value services like loyalty points, airtime top up, bill payment, *et cetera*, are additional features that would be enticing enough to both potential customers and veterans of the technology.

- ACCEPTABILITY: It stands to reason that before a person can use a certain technology, they have to accept it for the purpose it was designed and built for (Cracknell 2004). Hence it needs to be useful in order for the technology to be accepted.

- ACCESSIBILITY: The usage of e-banking has to be convenient. There would be no reason for customers to walk or drive many kilometres just to access the service. E-banking has the potential to provide accessible, convenient financial services because it no longer requires a bricks-and-mortar infrastructure, operated by the permanent staff of a financial institution (Cracknell 2004). If a technology is inconvenient, very few customers will be convinced to use it.

- AFFORDABILITY: Transactions should be affordable. Charging through a fee per transactions rather than a percentage per transaction would go a long way in helping consumers to consider e-banking as an alternative and complementary to their monetary transactions.

- EASE OF USE: Systems should be user friendly, have a quick transactions period and easy to use. The service should also be standardised so that a customer should be able to utilise it once they get used to the system. User support (customer care) should also be available just in case there are problems along the way.

Lightner (2003) also found that age, level of education and the demographics had an impact on what the users of an e-commerce website would want and expect in the design. Among the major findings was that the more experienced the user of the e-commerce site the less "flashy' the website had to be in order for them to decide whether to use the site or not. In other words, they only searched for specific aspects of the

design and if they were found they had no problem with it. The main aspect that they focused on was the suitability and the reputation of the vendor. This aspect could also be implemented in the study that is to be undertaken. Regardless of how aesthetically pleasing the user interface design is, the customer will only use it (under normal circumstances) if they are convinced that they can trust the vendor or firm offering the service.

The main premise behind e-banking is to migrate the customer away from physical cash to electronic, cashless transactions. While this is a nice feature to have, cash and carrying cash is a convenient and easy medium of purchase. Therefore, in order for the customers to be convinced to use e-banking facilities, the services have to be convenient, secure, accessible and affordable.

2.3.4 E-Banking in South Africa

From a South African perspective, Brown and Molla (2005) found that more South African banks are deriving a sizeable portion of their revenue through the use of online services. A study by Columinate (2012) through their Internet Banking SITEisfaction survey, found that more and more South Africans are using their mobile phones to access e-banking facilities. Among the findings was that mobile phone banking has increased from 42% in 2011 to 54% in 2012. This included both the traditional usage of the mobile phones browsers and apps designed specifically for access by the various banks. Columinate (2012) also showed that among the South African e-banking users surveyed, 60% had used e-banking to buy airtime, 29% had used it to by data bundles, and another 19% had used the e-banking services to purchase lotto tickets.

A study by Hoppe et al. (2001), identified factors affecting adoption of e-banking in South Africa. Major emphasis was placed on attitudinal, social and perceived behavioural control factors. Among the findings was that attitudinal behaviours and user perception greatly influenced the adoption of e-banking among the citizens of South Africa. Ranawaka (2008) and El-Qirem (2012) also reported similar findings.

Green and Van Belle (2003) observed that the Internet fundamentally changed the banking industry in South Africa by giving customers greater control of their finances. They found that the Internet has brought about changes in the form of converging services of banking into a singular platform, empowered customers and personalised a customer's banking experiences. As a result of Internet banking, customer expectations in terms of convenience and time saving are being met. On the other hand, cases of cost (due to Internet inaccessibility, especially in rural areas) and lack of personalisation of some websites, could be hindrances towards the adoption of Internet banking. Changing consumer needs, innovative financial products, changes in the industry structure and a mix of delivery channels are reshaping the banking industry (Green and Van Belle 2003). The presence of various physical and online banking institutions in South Africa means that

the various banks will need to have a mixture of convenience, usability and affordability in order keep their current customers while also attracting new customers interested in their services.

A South African study by Singh (2005) focused on the relationship between user interface and user satisfaction in relation to e-commerce websites. The findings showed that the design of the user interface influences how the customer interacts with e-commerce website. It would seem that user interface issues such as page layout and navigation are some factors influencing the overall ease of use and perceived usefulness of websites.

Although Hoppe et al. (2001) focused on factors affecting e-banking adoption they did not approach the study from the perspective of user interface design. The studies by Green and Van Belle (2003) and Singh (2005) focused on perception in relation to user satisfaction. This study relates the design elements of the 7 C's user interface framework to the ease of use and perceived usefulness of e-banking websites in South Africa.

2.4 User Interface

Singh (2005) defines the user interface as "everything designed into an information device with which a human being may interact. This may include the display screen, keyboard, mouse, light pen, and the appearance of a desktop, illuminated character, help messages, and how an application program or a Web site invites interaction and responds to it."

The user interface is the only communication medium between the user and the e-commerce website. This therefore means that its design, ease of use, and ease of navigation will also affect the perception of its usability by the customer. According to Holden and Rada (2011) user acceptance, satisfaction and perceive usability go a long way in helping with the adoption of a technology. Hence, its design will have to incorporate features that the customer might need in order to feel comfortable enough to complete his/her transactions (Ranawaka 2008). User interfaces should be designed in such a way that they cater for the skills and the experience of a range of users who might be interested in utilising the service. This could be general e-commerce websites or in the case of this study e-banking websites (Singh 2005).

Usability refers to the ease of use of a technology, be it hardware or software. Hollowgrass (2008) defines usability as "The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use." Zviran et al. (2005) defined usability as ''the extent to which intended users of a product achieve specified goals in an effective, efficient and satisfactory manner within a specified context of use.'' The usability of a product or service is always

determined after a customer has used it and whether they found any value in it. This is also supported by Mehmood et al. (2014) who observed that that the graphical user interface is a major factor when it comes to adoption and usability.

The usability of a product is determined if the design meets the criteria that has been laid down in terms of user interaction, robustness, learnability and flexibility. Other ways of gauging usability include "the dependence on product characteristics such as consistency, user control, appropriate presentation and error handling" Zviran et al. (2005). Usability is "the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use"

Ranawaka (2008) compared the user interface design of the various banking institutions that were found in Sri Lanka and found that a majority of the banking institutions (72%) had a web presence that they maintained through frequent updates. The design of a banking website plays a major role in delivering customer service and customer satisfaction. Layout, navigation mechanisms, graphic appeal and clarity may be quite influential in delivering a better service perception to users of a website. Therefore, a web developer has to consider these factors when trying to design a website. Factors such as functionality, usability, reliability and efficiency are features that a website design has to achieve, not only to be more productive but also help the customer be able to do their transactions more effectively, leading to customer satisfaction.

Maldonado and Resnick (2002) approached the website user interface design from the aspect of navigation. Their study "investigated the effects of these design patterns on users' quantitative performance and subjective preference for e-commerce web sites." Among the findings was that users required simplicity in the design so that they would be able to use the website and respondents were frustrated due to the lack of technical support for some of the functionalities in e-commerce websites

Kim and Lee (2002) observed that product-related information, depth, variety of the system structure, variety of list view for products, consistency of product and background presentation, and variety of presentation for product information was all found to be closely related to the perceived quality level. Poorly designed e-commerce websites can thus lead to loss of productivity and revenue (Ivory and Hearst 2002). They define the user interface as a complex mix of text, links, graphic elements, formatting, and other aspects that affect the site's overall quality. There are three main design categories that were identified by Ivory and Hearst (2002), namely, Navigation Design, Graphic design (the visual presentation of the websites), and Information Design.

The user interface is important since it is the main medium of communication between a customer and an e-commerce website (Purwati 2011). Frustration of a customer when they try to use a website can lead to

the loss of potential business opportunities. Customers want a user interface that is both easy to use and straight forward. The enormous task faced by website user interface designers revolves around having an interface that is easily used by both the frequent users and the intermediates. This balancing act allows for user satisfaction to be realised. This ease of use and navigation also helps the business because if customers are able to access what they need with ease; the same e-commerce website is the one they will turn to when they want to make future purchases (Purwati 2011). In e-commerce, the website is the firm's interface with the customer, and its usability is crucial to the success of the business venture.

Laing and Copeland (2008) were of the opinion that user interfaces should intuitively map to a user's needs, be they novice or expert users. Ozok (2010) looked at the issue of user interfaces from the perspective of recommender tabs. These are tabs that recommend to users of an e-commerce site that there are products or services offered that are similar to the products or services that they have shown interest in, whether through browsing or making purchases. One such tool is the Recommender System, through which the shopping page recommends products to the shoppers using their past Web shopping and product search behaviour (Ozok 2010). It was found that users preferred that the Recommender System be brief and to the point and long worded recommenders was not attractive to users.

Sommerville (2004) observed that user interfaces should be designed to match the skills and expectation of its users. The user interfaces are the first point of contact between the user and the company and as such are partly the reason users would choose to use a website or look for alternatives. Designers of websites should thus be mindful of how they design their user interfaces taking into account the various levels of user expertise.

Sommerville (2004) also laid out the following principles of user interface design:

- User familiarity: The interface should use terms and concepts which are drawn from the experience of the people who will make most use of the system (Sommerville 2004).
- Consistency: The interface should be consistent in that, wherever possible, comparable operations should be activated in the same way (Sommerville 2004).
- Minimal surprise: Users should never be surprised by the behaviour of a system (Sommerville 2004).
- Recoverability: The interface should include mechanisms to allow users to recover from errors (Sommerville 2004).
- User guidance: The interface should provide meaningful feedback when errors occur and provide context-sensitive user help facilities (Sommerville 2004).

- User diversity: The interface should provide appropriate interaction facilities for different types of system users (Sommerville 2004).

Good user interface designs are those that are easy to use, meet the user's needs, and support the users in their preferred activities. In addition, there are factors that influence, and are attributed to, usability. These are:

- Learnability: The time from first introduction of a user to the system until a time in which the user can utilise the system without the need of help (Sommerville 2004).
- Adaptability: Can the system conform to different stimuli from the expected and in built ones?
- Recoverability: Can the system recover and "backspace" user errors? (Sommerville 2004).
- Robustness: Is the system tolerant when it comes to user errors in terms of input and wrong commands? (Sommerville 2004).
- Speed of Operation: System response to the user's pace of work i.e. response to the users input (Sommerville 2004).

Lee and Benbasat (2004) focused on the customer user interface from the perspective of mobile commerce (m-commerce). They also made use of the 7Cs' theoretical framework that was designed by Rayport and Jaworski (2000). The study by Lee and Benbasat (2004) was undertaken in South Korea where they observed that there are 29 million mobile phone owners in the country and 18 million Internet subscribers. Among their findings was that some elements of the 7Cs' framework were not present in the various user interfaces that they encountered. As a result of this they felt that users were not being given the ultimate level of satisfaction due to these shortcomings.

Alafeef et al. (2012), in a study that was carried out in Jordan, highlights the vulnerabilities of previous adoption studies, with the objective of the study being to find out whether the user interface influences the adoption of mobile banking. They decided to use the Technology Acceptance Model (TAM) instead of the 7Cs' theoretical framework that was utilised by Lee and Benbasat (2004), Meyer (2008) and Ranawaka (2008) in their respective studies. Among their major findings was that there is a correlation between the demographics of a particular area and the user interface design of a website application, a factor which influences the adoption of the technology.

Although Alafeef et al. (2012) focused on mobile banking, user interface designs and interface of websites whether accessed through mobile devices (mobile phones, tablets) or through more traditional means (laptops and desktops), it was also noted that "Having a good interface design such as presentation, format

and processing efficiency will enhance the formation of trust, where trust is an important factor in influencing the adoption level" (Alafeef et al. 2012).

Among the results was that the demographics of the area of origin has an influence on the users of the e-banking website. This was due to the fact that if a person hails from an impoverished area, they might not have been exposed to e-banking technology. Lack of awareness and exposure to the specific technology has a huge bearing on whether or not the technology can be adopted.

2.4.1 User Interface Design in E-Commerce

The success of the e-commerce website is due to a number of factors and key among them is the design of the user interface. A simple (or easy to use) and consistent layout would help the customers navigate the website and find areas that are of interest to them. According to Purwati (2011), the success of an e-commerce company is determined by the design of its website. When an e-commerce website user interface is easy to use, it does have an impact on the commercial enterprise's sales and profits (Sommerville 2004).

Singh (2005) emphasized that the success of an e-commerce website will heavily depend on how the user interacts with it; this means that the user interface has to be spot-on in order for the customer to return or even consider reusing the same website in the future. The success of an e-commerce website depends on a number of factors including usability, layout, ease of navigation and the content that is contained within the website.

Singh (2005) also found that beginners, novice and intermediate users of the e-commerce websites could not navigate the websites without assistance. The opposite was true with the more experienced users as they were able to navigate their way through the websites with little or no help. This also goes to show that accessibility and ease of use are major factors in the usage of the e-commerce website (this also relates to both the content and the user interface). Other findings by Singh (2005) were that "novice and intermediate group participants required repeated assistance in order to complete the same task, even on the same e-commerce website." It was also discovered that the graphical design of the e-commerce website, in terms of colour and themes, did not affect the participants' perception of ease of use.

Egger (2001) found that consumer acceptance and trust are important issues that must be addressed by the company that is doing design and eventually deploying the website to the consumer. Consumer needs must be met in order for the customers to enjoy the benefits, subsequently return to the website again for further transactions.

Gehrke and Turban (1999) found that refreshing rate, content, ease of navigation, security and consumer focus are five key factors in website user interface design. They also realised that simplicity was also a

factor that is paramount to customers' satisfaction. This takes the form of ease of navigation and straight forward usage of the website. Content and services provided are what the customers want whenever they visit a webpage for e-commerce services. Website design should thus be tailored towards speed, navigation, efficiency, simplicity, and elegance with an emphasis on customer focus and security.

Ranawaka (2008) found that when some elements of user interface design (context, content, community, customisation, communication, connection and commerce) were not implemented in some of the banks in Sri Lanka, lower user satisfaction was noted. Ranawaka (2008) did the study based on the 7Cs' framework and as such developed a ten-factor checklist in order to compare the design elements of the sites and rank the sites according to the elements used in designing the user interface of each site analysed. Among the findings of the study was that lisensed commercial banks made better use of the 7Cs design variables in comparison to other financial institutions. Since previous studies like Meyer (2008) and Ranawaka (2008) found that not all the elements of the 7Cs' framework were being implemented, this study will explore whether the omission of the 7Cs' elements affects user satisfaction of South African banking websites.

Meyer (2008) concluded that since e-commerce is increasingly becoming more efficient and it helps customers to make purchases without having to visit the traditional brick-and-mortar buildings. This in turn saves both the banks and customer time and money. Getting the attention of the customer, ease of navigation, and an appealing design of the user interface, are among the major factors that need to be considered as they are important for the business (Meyer 2008). This is so because when the aforementioned variables are incorporated into the e-banking websites, it appeals to both potential and recurrent customers, thus they find it easier to transact their businesses. The interface design is important as it enables both the frequent customers and potential customers to interact with the company. The buyer-seller interaction usually forms the basis of success for an e-commerce website, meaning that ease of navigation and ease of use are paramount in determining whether the customer will return to the website in the future Purwati (2011).

2.5 Theoretical Frameworks

Two theoretical frameworks were used in order to help accomplish the objectives that this study set out to achieve. The 7Cs' of E-Commerce Customer Interface framework focused on the layout of the website, specifically the user interface, and how it relays information to the user. The Technology Acceptance Model (TAM) will be used to find out how users accept or reject a technology, and also their perception towards the use of the aforementioned technology. The usage of these two theoretical frameworks will combine the strength of each framework to make the study more comprehensive.

These two frameworks were chosen for this study because among the objectives was to find out the correlation between the elements of the user interface design and the perceived ease of use and perceived usefulness.

Nielsen (1995), 10 usability heuristics framework for user interface design was also researched as a possible framework to use in this study. However the 7C's framework was chosen instead since the factors of this framework were compartmentalised better to easily measure both user face and usefulness issues.

The UTAUT (Unified Theory of Acceptance and Use of Technology) framework was researched as a possible complement to the 7Cs in this study. Even though it quantified elements like social influence, performance expectancy, effort expectancy etc. these elements were not equivalent to the perceived ease of use and perceived usefulness that was present in the TAM model. On this basis, the TAM model was selected as the second theoretical framework as it was more aligned to measure perceived ease of use and perceived usefulness. Therefore, the 7Cs of E-Commerce Customer Interface framework and the TAM frameworks were adopted for this study.

2.5.1 7Cs of E-Commerce Customer Interface

Rayport and Jaworski (2000) developed the 7Cs framework with the intention of quantifying which elements are required by users to help them use and navigate through a website. This study's objective was to determine the factors of user interface design that influence usage of banking websites.

Among the reasons for choosing to use the 7Cs framework of e-commerce Customers Interface framework is that, during the literature review, it was found that Meyer (2008), Lee and Benbasat (2004) and Ranawaka (2008) used it in a similar study investigating e-commerce website design parameters in relation to the popularity of a website. Ranawaka (2008) also used the 7Cs framework in the study that entailed the comparison of various user interface designs for different banking institutions in Sri Lanka. Thus, with the 7Cs framework being used in relating website design to user satisfaction, it was felt that it is appropriate for this study.

Context	Aesthetically Dominant	Functionally Dominant		Integrated
Content	Product Dominant	Information Dominant		Service Dominant
Community	Non-Existent	Limited		Strong
Customisation	Generic	Moderately Customised		Highly Customised
Communication	One-to-many, non-responding user	One-to-many, responding user	One-to-one, non-responding user	One-to-one, responding user
Connection	Destination	Hub		Portal
Commerce	Low	Medium		High

Figure 2.1: The 7Cs Framework

2.5.2 Variables of the 7Cs Framework

a) Context: This refers to the delivery method of the website for its intended purpose (Lee and Benbasat 2004) and captures the layout and the design of the website (e-banking website in this case). According to Meyer (2008) it also includes "aesthetic and functional look and feel" in addition to the presentation of the website. The context is about how the website is delivered to the end user. The two main elements are the aesthetics and the functionality:

- Functionality refers to layout of pages and means of navigation;
- Aesthetics refers to visual characteristics and themes e.g. font size and type, colour schemes and animations

b) Content: This is the presentation of information with regard to text, image, sounds and videos (Meyer 2008). This variable focuses on what the website has to deliver to the customer and what is being presented on the website (Lee and Benbasat 2004). Content is divided into four categories, namely:

- Offering mix: mixture of the services or product information in a website
- Appeal Mix: the promotional and communication messaging of a website e.g. customer support.
- Multimedia Mix: the choice of media output in terms of sounds and videos.
- Content type: This refers to "the degree of time sensitivity" e.g. the scroll speed of illustrative pictures that are accompanied by narration or a voice over (Lee and Benbasat 2004).

c) Community: This refers to the sense of belonging among the users of the interface specifically user-to-user interaction (Lee and Benbasat 2004). This also includes the level of involvement and sense of belonging among the users of the services. Community is divided into two aspects namely:

- Interactive Communication which includes instant messaging and member-to member mailing lists, and
- Non-Interactive Communication.

d) Customisation: This refers to the ability of a website to be able to customize and tailor itself for a user (Meyer 2008). Customisation is defined as the ability of a website to tailor itself according to the users' preference (Lee and Benbasat 2004).

e) Communication: This refers to a dialogue between the websites and the users. According to Lee and Benbasat (2004) the viability of communication comes in three forms, namely:

- Broadcast: "one-way information exchange from an organization to users, e.g., email notification" (Lee and Benbasat 2004)
- Interactive: "two-way communication between an organization and a user, e.g., customer service request"
- Hybrid: This is a combination of broadcast and interactive communication.

f) Connection: Connection is the link between one website and another (Lee and Benbasat 2004). This is mainly through the number of external sources and content that is linked from another source.

g) Commerce: According to Meyer (2008) this variable of the framework refers to the ability of the website to make sales or sell through the Internet.

The 7Cs of E-Commerce Customer Interface framework is relevant to this study due to the fact that the variables covered in the framework are areas which cover the scope of this study. Another reason for using the framework is that it was used by Ranawaka (2008) while undertaking a similar study among the banking websites in Sri Lanka.

2.5.3 TAM (Technology Acceptance Model)
The Technology Acceptance Model (TAM) is one of the most widely used theoretical frameworks in the field of Information Technology. The TAM model gauges and quantifies the perception of the usage both towards the usage of the technology and the technology itself as a means of helping the user achieve the goals that they want to achieve, in this case use the resources and functionalities of e-banking system. The TAM model attempts to predict the user acceptance of end-user applications by specifying causal relationships among external variables, belief and attitudinal constructs, and actual usage behaviour (Hubbona and Kennick 1996).

According to Hubbona and Kennick (1996), TAM predicts the user acceptance of end-user applications by specifying causal relationships among selected belief and attitudinal constructs that mediate the influence of external variables on usage behaviour. This therefore is an indication that the end-user satisfaction from the use of the user interface will be able to be quantified, and will thus be a major focus point in this study. Perceived ease of use, perceived usefulness, and actual use, are facets that this study will attempt to answer due to the fact that the perception of technology or any other tool will enhance the chances that a user or specific individuals or groups will use it.

Najjar (2011) found that perceived ease of use led to more customers using the e-banking websites. The reasoning behind this is that people found it easy to try a product that looks relatively easy to use. Thus, the perception of ease of use and the appearance of the website can determine the amount of attention that the website gets. Word of mouth and/or advertisement might have a major role in this perception due to potential users being influenced by the messages their peers, friends, families, advertisement, *et cetera*, spread. Thus, perception goes a long way in getting people to start trying their hands on a technology. Liao and Chung (2001) observed that the perceived ease of use of technology was a major factor when it came to acceptance of the technology, in this case e-banking. Evidence shows that "expectations of accuracy, security, and network speed, user-friendliness, user involvement and convenience were the most important quality attributes underlying perceived usefulness" Liao and Chung (2001).

A study by Park (2009) found that one's actual use of a technology system is influenced directly or indirectly by the user's behavioural intentions, attitude, perceived usefulness of the system, and perceived ease of the system. The TAM model's main basis is that the perception and attitude of the users will influence that use of a certain technology. This will help in finding out the factors of user interfaces that influence the use of e-banking websites. The justification of having a second theoretical framework is in order to answer the second research question, that is, what are the users' perceived ease of use and perceived usefulness of the current design of banking websites.
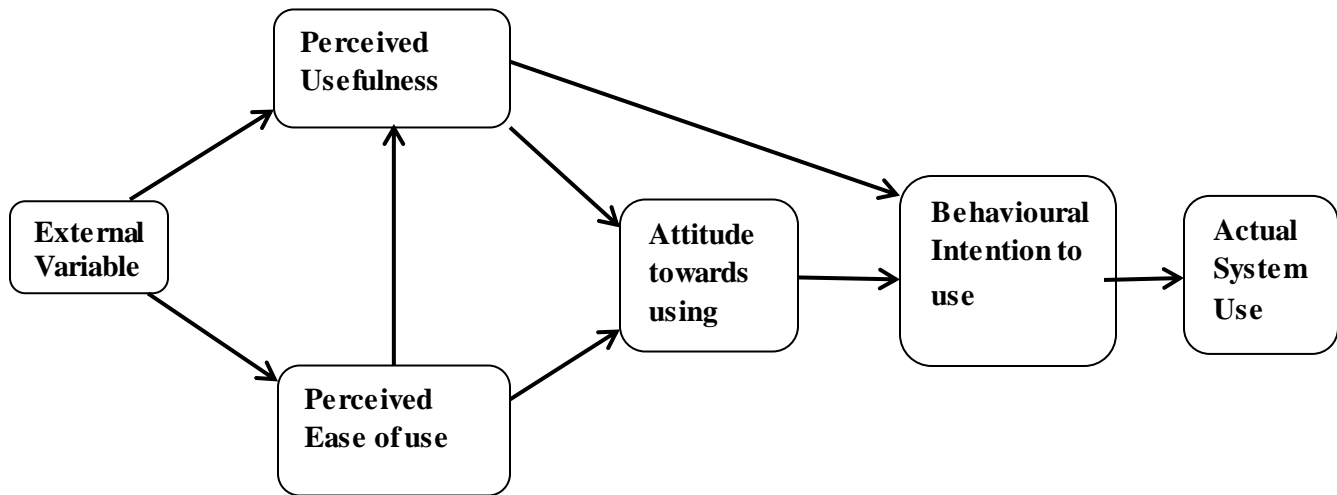
Figure 2.2: The TAM (Technology Acceptance Model) Framework

The various parts of the TAM framework, as shown in Figure 2, are explained below:

a) **External variables:** These refer to the variables that influence the perception of a user towards certain technology. These include: age, level of education and employment status (Park 2009).

b) **Perceived Usefulness:** This is the degree to which a person believes that using a particular system would enhance his or her job performance (Kripanont 2007). This is a factor that determines whether a potential user would give the system a go. It is assumed that people will only be interested in technology that would be useful to them (Park 2009).

c) **Perceived ease of use:** This refers to the degree to which a person believes that using a particular system would be free of effort (Kripanont 2007). According to Hubbona and Kennick (1996), ease of use is also defined "the ability of a user to readily and successfully perform a task with a product without the need for an advanced explanation and the instruction manual." Ease of use in itself refers to the amount of effort that a consumer of customer would require in order to utilise a technology. It stands to reason that the more a technology is perceived to be easy to use the more the consumers will be inclined make use of it. As a scale of measurement that a product or services is said to conform to the concept of ease of use, is when the design of the product is closely matched with the goal of the user. This means that ease of use and, to some extent usability, is determined by how the product, service or technology helps a user achieve their intended goals with as little effort as possible (Park 2009).

d) **Attitude towards using:** This is influenced by perception both in terms of ease of use and usefulness. This is a predisposition to react whether positively or negatively towards the technology while using it (Park 2009).

e) **Actual system use:** This refers to 'how often' and the volume of system use (how much') by the user (Park 2009).

2.6 Conceptual Framework
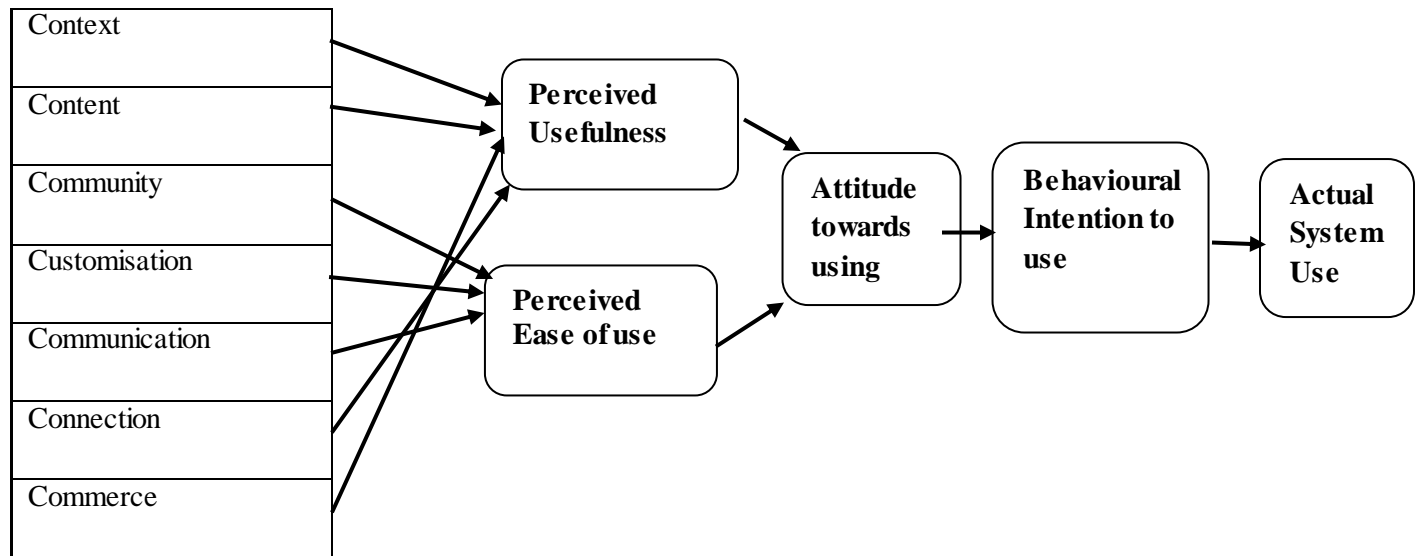
Figure 2.3: Conceptual Framework used in this study

The above figure shows the conceptual framework that was used in the study. It is a combination of the 7Cs elements and the TAM theoretical framework with focus on Perceived Usefulness and Perceived Ease of Use. The two theoretical frameworks are to complement each other when it comes to answering the Research Questions of this study.

2.7 Conclusion

This chapter presents a summary of studies that have taken place in other countries that pertain to e-banking and e-commerce. In particular, there have been relevant studies based on the 7Cs framework, as well as the TAM framework. The main focus of the next chapters will be to borrow from the above studies to map the corresponding perceptions in South Africa in general and eThekwini Municipality in particular.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology adopted in this study. This chapter describes the survey instrument design (i.e. structure and design of questionnaire), data collection and analysis processes, ethical considerations and the limitations of the study. It further covers the study's sampling techniques and sample size determination, and the pilot test.

This chapter also clarifies the alignment between the research questions and the questions within the survey instrument.

The study's key research questions are:

1) Which components of the 7Cs framework are incorporated into the design of South African banking websites?
2) How do users perceive the current banking websites from an ease of use and usefulness perspective?
3) Which 7Cs framework components correlate with perceived ease of use and perceived usefulness TAM factors?

3.2 Research Approach (Quantitative vs. Qualitative)

There are two main types of research approach, quantitative and qualitative. According to Aliaga and Gunderson (2000), quantitative research is defined as "explaining phenomena by collecting numerical data that are analysed using mathematically based methods with emphasis on statistics". This essentially means that numbers, figures, frequency and other statistical analyses are used to deduce conclusions that could be generalised to the entire research population. Qualitative research, on the other hand, involves interviews and focus groups, whereby probe questions or observations are formulated throughout the interview process. The main difference between the two approaches, apart from the usage of statistics versus conducting interviews, is that the quantitative approach can be used to cover a large sample size in a short period of time, while the qualitative approach is usually reserved for cases whereby the sample size is small and in-depth analysis is required (Aliaga and Gunderson 2000).

A quantitative research approach was adopted in an attempt to quantify factors that affect website usability and usage. The examples of studies that took this approach are Ranawaka (2008) and Meyer (2008). All of

these factors are already documented in the literature and therefore the quantitative approach was most appropriate.

3.3 Population and Sample size

3.3.1 Population

According to the South African Census of 2011, there are approximately 3,442,361 economically active people in the eThekwini Municipality area (Census 2011 Statistical release – P0301.4). This is the total population from which the sample size of this study was derived. The reason the eThekwini Municipality area was chosen was due to the fact that the researcher was from this location thus making data collection easier.

3.3.2 Sampling Techniques

There are various types of sampling techniques, some of them are:

- Convenience sampling means that the potential respondents are selected due to close proximity.
- Simple Random Sampling: all the members of the target population are included in the list of potential participants, followed by a random selection of the desired number of subjects (Latham 2007).
- Ad hoc quotas sampling: A sample quota is selected, thereafter the researcher is free to choose from the target sample until the quota is reached (Kripanont 2007).
- Snowball sampling: In this case, the first respondent refers a friend who can potentially participate in the study. The friend also refers a friend, and the process continues that way (Latham 2007).
- Purposive sampling: The selection of the sample is left to the discretion and the judgment of the researcher (Latham 2007).
- Stratified Random Sampling: involves dividing your population into homogeneous subgroups and then taking a simple random sample in each subgroup (Latham 2007).
- Multi-Stage Sampling: It is a form of cluster sampling in which the target population is divided in to units and samples are then derived from the units (Latham 2007).

Owing to the large scope of eThekwini Municipality and the difficulty in obtaining creating a sampling frame, the type of sampling that was used was convenient sampling. Care was taken to ensure that a large amount of the respondents did not come from the same area. This was achieved by actively taking measure

of how many questionnaires were distributed to a specific area. If this was to have happened it would have meant that the data collected would have been biased. It is due to the sampling technique rather than the sample size,that the results cannot be generalised to be a representative of the whole eThekwini Municipality.

3.3.3 Sample size
According to Sekaran and Bougie (2010:262) determining a sample size is "governed by the extent of precision and confidence desired". According to Sekaran & Bougie (2010), for a population size of above 1000000, the subsequent sample size is 384. There are 3,442,361 people in the eThekwini Municipality area, which is within the range of the 384-sample size minimum set by Sekaran and Bougie (2010). Thus, the target sample size of this research is 384 (confidence interval of 95% and a 5% margin of error. The chosen sample covers a diverse population both in terms of their work places and also residential areas. Data was collected through questionnaires that were dispensed both physically as hardcopies and also through email. This meant that the author walked with physical questionnaires in hand to distribute to the target sample population.

3.3.4 Sampling technique and sampling types
A sample by its very definition is a portion of the population that has been chosen as the target for the study. Through sampling, the findings of the study are meant to be representative of the entire population.

3.3.4.1 Types of Sampling
There are two types of sampling techniques namely:

    a) **Probability Sampling:** In this sampling process, the sample is chosen by following   a process that gives all the individuals in the population equal chances of being selected as part of the sample size (Kripanont 2007).

    b) **Non-probability Sampling:** This is the opposite of probability sampling. In this instance, the sample selection process does not give all the elements within the population a similar chance of being selected. This would therefore mean that one cannot count on a non-probability sampling t to produce a representative sample. In other words, the results accrued from a non-probability based sampling technique would not be generalised to the entire population (Kripanont 2007).

3.4 Regular users of e-banking instead of experts in field
The survey instrument   was designed in a way that determines whether a person had actually used the e-banking websites and also the websites that were used. The websites' analysis (to evaluate them according to the 7 Cs framework) was done by people who are frequent users of e-banking websites. This decision

stems from the fact that people who use e-banking websites more frequently were more knowledgeable of the strengths and weaknesses of the services offered by the websites. In addition, by the virtue of being registered to use e-banking services, the chosen study's participants are able to access sections of the website that other non-registered persons cannot. Hence, from their past experience with e-banking websites use, they would have forged certain perceptions during their interaction with the e-banking websites and therefore, would be able to give a more accurate assessment of the services being offered both from a technical stand point and also personal perspective. This study's adopted approach is similar to Ranawaka's (2008) and Meyer's (2008) approaches to their respective studies.

3.5 Data Collection

A questionnaire was used as the data collection instrument. Data collection was done through both online platform (Google Docs and email) and physical hand-outs. Participants' responses were collected anonymously (i.e. respondents did not have to disclose their names on the questionnaire), This was essential as the study entailed participants disclosing institutions they are banking with. Hence, anonymity had to be preserved. A further aim was to ensure that respondents are as honest as possible, with any fear of adverse consequences. Thus, it is believed that preserving respondents' anonymity encouraged them to be more open, truthful and honest, thus adding credibility to the study   The use of questionnaires enabled the researcher to collect a respondents' perceptions faster compared to other data collection means such us interviews. Since questionnaires are less direct compared to face-to-face interviews, participants can answer the questions with greater freedom. The questionnaire was designed using close ended questions.

3.5.1 Advantages of Questionnaires

There are various advantages of using questionnaire, among them being:

- It takes a few minutes to fill it in and responses can be easily quantified and analysed (Phelas, Bloch and Seale 2011).
- Information can be collected from a large number of people in a short period of time (Phelas, Bloch and Seale 2011).
- Data collection can be carried out by the researcher or by any number of people with limited effect on its validity and reliability (as long as it is well captured) (Phelas, Bloch and Seale 2011).
- The questionnaires' responses can usually be analysed quickly and easily through the use of a software package (Phelas, Bloch and Seale 2011).

- Responses in the questionnaire can be analysed more objectively with less intrusion from the researcher. In addition, since questionnaires are standardised, the responses can objectively be analysed (Phelas, Bloch and Seale 2011).

- When collected data has been quantified, it can be used to compare and contrast with other research findings (Phelas, Bloch and Seale 2011).

- Since the questionnaires are standardised, (Phelas, Bloch and Seale 2011).

- The use of a questionnaire as a data collection instruments minimises the researcher's interference since the respondents can take their time to respond to the questions, (Phelas, Bloch and Seale 2011).

- Questionnaires can be efficient if applied correctly and there is a probability of a high response rate (if followed up) (Phelas, Bloch and Seale 2011).

- Questionnaires can be mailed to respondents (although this approach may lower the response rate) (Phelas, Bloch and Seale 2011).

- Questionnaires ensure anonymity, which increases the rate of response while also increasing the likelihood that responses are honest (Phelas, Bloch and Seale 2011).

3.5.2 Disadvantages of Questionnaires

- It is difficult to tell the truthfulness of a respondent's answer (Phelas, Bloch and Seale 2011).

- There is no way of telling how much thought a respondent has put in answering the questions. A respondent may answer a questionnaire just for the sake of filling in the blanks rather than giving thoughtful, honest answers (Phelas, Bloch and Seale 2011).

- There can be situations whereby, no matter how well the researcher thinks he has phrased the questions, they might still be interpreted differently by different respondents (Phelas, Bloch and Seale 2011).

- It may be difficult to obtain a good response rate due to potential respondents either forgetting the questionnaire or in the worst case, ignoring it altogether (Phelas, Bloch and Seale 2011).

3.5.3 Questionnaire Layout and Design

The questionnaire used in this study consisted of mainly close ended questions which required the respondents to make a choice among a given set of options. The Likert scale was used to design most of the questions (from 'Strongly Disagree' to 'Disagree', 'Neutral', 'Agree' and 'Strongly Agree') making it a 5 point Likert scale questionnaire. In addition to the closed ended questions, there were a number of open ended questions especially at the end of some sections. These questions were used to help the respondent

make some observations or suggestions that could not have been captured through the closed ended questions.

The Questionnaire was divided into 4 sections. The sections are described below:

3.5.3.1 SECTION A: Biographical Details
The essence of this section was to capture the general biographical details of the respondents i.e. gender, race, age range, employment status. This section enables the identification of both users and non-users of e-banking websites. Thus, in the subsequent questions, respondents were directed to specific questions depending on whether they are users of e-banking websites or not.

3.5.3.2 SECTION B: Banks and E-Banking
This is the section that captures thee 7Cs theoretical framework's constructs. The respondents were asked to select the institutions they are banking with and then proceed onto answering questions related to them. In this study the respondents'' banks names are not explicitly mentioned in the findings and analysis chapter (Chapter 4) and are referred to as 'Bank A', 'Bank B' and so forth.

3.5.3.3 SECTION C: E-Banking Continued
he TAM model constructs are introduced in this section to test the influence of various variables pertaining to the TAM's constructs (i.e. perceived ease of use and perceived usefulness). The functions of the e-banking websites and the platforms used to access them are indicated in this section.

3.5.3.4 SECTION D: Factors Affecting Adoption of E-Banking
This section contains questions for the respondents who have not yet used e-banking services. Questions in this section attempt to find the reasons why they have not used e-banking or any of its services. Thus, this section is reserved for respondents who have answered 'no' (in section A) to the question pertaining to whether they have used e-banking services before or not.

3.6 Pilot Testing of Questionnaire
A pilot test was conducted. It involved issuing questionnaires to 15 participants who were part of the representative sample. The respondents who were selected for the pilot study were not selected for the final data collection. The pilot test assisted in determining whether the questions (within the questionnaire) were understandable and valid in order to reduce ambiguity in the final set of questions. It was indeed found that some questions were a bit ambiguous and had to be rephrased in order to be more specific. This helped in the final preparation of the questionnaire that was eventually used in this study (Arain et al. 2010). This pilot study was also undertaken to ascertain the content validity of the research instrument, in this case the questionnaire.

The pilot study enabled the researcher to estimate the approximate time it will take respondents to complete the questionnaire.

3.7 Data Capture and analysis

Collected data was captured through the Statistical Package for Social Science software. Descriptive statistics in the form of frequencies and cross tabulation were computed. Regression analysis, factor analysis, correlation analysis and ANOVA tests were also amongst the tests that were undertaken in an attempt to answer the study's research questions. Collected data was stored into a password-protected computer and archived within the university premises as per the University of KwaZulu-Natal regulations. To ensure the accuracy of data, instruction in the questionnaire stated that all questions should be answered. If a questionnaire has some compulsory sections missing, such questionnaire was discarded.

3.8 Ethical Considerations

This study fully complied with the ethical requirements of the School of Management, IT and Governance and the University of KwaZulu-Natal as a whole. The research proposal, draft research instrument, and letter of informed consent were submitted to the school's ethical clearance committee, along with an ethical clearance application form, for approval.

All responses and any personal data linked to the respondents' responses were kept securely and were not be used for any other reason than that which is related to this specific study, and will thereafter be submitted to the School of Management, IT and Governance for archiving purposes.

3.9 Conclusion

This chapter described the methodology adopted in this study. It was highlighted that predominantly quantitative research methodology was adopted in the study. The survey instrument design was discussed in this chapter in addition to the rationale behind the choice of the sampling technique and the sample size. It further discussed the data capturing and analysis processes with subsequent highlights on the study's ethical considerations and limitations. The following chapter discusses the findings from the data collection process.

CHAPTER 4: FINDINGS AND ANALYSIS

4.1 Introduction

This chapter details the results of the research undertaken in this study. The results include the categorization of the respondents in terms of age, gender, employment status, and race. Also considered are levels of exposure and usage of e-banking. The results of the 7Cs and TAM frameworks are also presented.

4.1.1 Data collection

4.1.1.1 Description of the data collection method selected

According to the formula by Sekaran and Bougie (2010) presented in Chapter 3, this study had a target of 384 respondents as its sample size. The actual number of responses that were collected for this study was 386. Since the number of respondents of the other banks were few only the top 3 banks were analysed individually.

4.2 Descriptive Analysis

4.2.1 Usage of E-Banking

The question of usage of e-banking was one that was posed in the questionnaire. It formed the basis of on how the questionnaire was answered (either "YES I have used e-banking" or "NO I have not used e-banking") determined which subsequent questions the respondent would proceed to answer. In the analysis of the data collected it was discovered that 162 (42%) of the respondents indicated that they had used e-banking before, while 224 (58%) of the respondents indicated that they had not used e-banking services before. This means that either the level of exposure was not adequate or the respondents were aware but decided to only use traditional forms of banking.

Table 4.1:Respondents' Usage of e-banking

Used e-banking	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	162	42.0	42.0	42.0
No	224	58.0	58.0	100.0
Total	386	100.0	100.0	

Those who have been exposed to e-banking services are 320 (82.9%) while only 162 (42%) from these respondents use e-banking. This could be interpreted as meaning that usage and exposure are not necessarily

correlated. Just because a person is aware of a technology does not mean that they will be automatically inclined to use the technology. This finding in itself justifies the usage of these two theoretical frameworks to complement each other. The 7Cs looks at the technical aspects of the user interface design while the TAM looks at the human aspect – that is, perceived ease of use, perceived usefulness, actual usage among other variables. This helps determine which other factors apart from just awareness are required for a user or potential user to make use of e-banking websites.

4.2.2 Gender

Table 4.2 shows the gender distribution of the respondents to the questionnaire. In the study the number of female respondents was 148 (38.3% of the sample size), while the male respondents were 238 (61.7% of the sample size).

Table 4.2: Gender of Respondents

Gender	Frequency	Percent
Female	148	38.3
Male	238	61.7
Total	386	100.0

4.2.3 Ages of Respondents

The ages of the respondents also varied. As shown in the table below 58.8% (227) were of the age range of between 18-25 years old. The next age group of 26-35 years had 32.4% (125) of the respondents. The 36-49 age group had 7.5% (29) respondents. The 50 and above age group had only 1.3 % (5) of the respondents. This goes to show that although the questionnaires were answered by mainly people below 35 years of age, there was a range in the ages of the respondents. This shows that the study capture the views of people across diverse ages with majority being between the ages of 18 and 35.

Table 4.3:Age range of the Respondents

Age Range	Frequency	Percent	Valid Percent
18-25	227	58.8	58.8
26-35	125	32.4	32.4
36-49	29	7.5	7.5
50 and above	5	1.3	1.3
Total	386	100.0	100.0

4.2.4 Racial Grouping of Respondents

Table 4.4:Racial Grouping of Respondents

Race	Frequency	Percent	Valid Percent	Cumulative Percent
Black	140	36.3	36.3	36.3
White	87	22.5	22.5	58.8
Indian	95	24.6	24.6	83.4
Coloured	62	16.1	16.1	99.5
Other	2	.5	.5	100.0
Total	386	100.0	100.0	

As can be seen in table 4.4, this paper covered a wide range of respondents across the racial divide. Thirty-six percent (140) were black, 22.5 % (87) White, 24.6 % (95) were Indian while 16.1 % (62) identified themselves as coloured. There was a provision for 'Other' which catered to respondents who felt that their racial heritage is covered among the options given. The 0.5 % (2) who selected 'Other' indicated that they were of Chinese descent.

4.2.5 Employment Status

Table 4.5:Employment Status of respondents

Employment Status	Frequency	Percent	Valid Percent
Working	261	67.6	67.6
Not Working	84	21.8	21.8
Other	41	10.6	10.6
Total	386	100.0	100.0

Statistics were also taken from the respondents about their employment status. Two hundred and sixty-one (67.6%) of the respondents indicated that they were working. Eighty-four (21.8%) said that they were not currently under any form of employment be it temporary or permanent. Forty-one (10.6%) of the respondents indicated that they fell under the 'Other' category. This category had the option of the people selecting it to state what they meant. Among the responses was that some were under internships, some stated that they were under short term contracts and they did not believe that they qualified as being called employed or in this case working

The reason the employment status was felt to be an important biographical detail was because there was an assumption that people who are in employment are more aware of e-banking services and therefore more likely to use e-banking services.

4.2.6 Level of Exposure to E-Banking
Table 4.6: Level of exposure to e-banking

Exposure Level		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Weak	5	1.3	1.3	1.3
	Weak	23	6.0	6.0	7.3
	Somewhat	38	9.8	9.8	17.1
	Strong	89	23.1	23.1	40.2
	Very Strong	231	59.8	59.8	100.0
	Total	386	100.0	100.0	

The level of exposure to e-banking was also quantified from the responses from the questionnaire. The main aim of this question was to not only know whether the respondents were aware of e-banking services but also to quantify the level of exposure they have to e-banking. Among the findings was that 5 respondents representing 1.3% of the total sample indicated that they had a very weak exposure to e-banking services. This could mean that the respondents were not aware of e-banking either as a service or technology. Lack of Internet connectivity and the usage of traditional brick and mortar banking services could be a further explanation for a lack of exposure. Twenty-three (6%) indicated that they had a weak level of exposure. Thirty-eight (9.8%) provided a neutral response. Three hundred and twenty (82.9%) indicated either a strong or a very strong level of exposure. This high percentage rate means that a high number of respondents were aware of the e-banking services. This shows that the exposure to e-banking is quite high.

4.2.7 Employment vs. Usage

Table 4.7: Employment status versus exposure to e-banking

		Has Respondent used e-banking before		Total
		Yes	No	
Employment status of the Respondents	Working	148	113	261
	Not Working	13	71	84
	Other	1	40	41
Total		162	224	386

The level of employment versus the usage of e-banking was one of the factors that were investigated. It is assumed that people who are employed (by virtue of needing a bank account for their salaries) would be more prone to be exposed to e-banking services. In the cross tabulation of people employed versus usage of e-banking it is seen that 148 (38.34%) of the respondents fall under this category. On the other hand there are 113 (29.27%) of the respondents who indicated that they are working but have not used e-banking services. This trend is also among the other groups. Thirteen respondents who are not working have used e-banking while 71 from the same group have not used e-banking. The conclusion that can be drawn from this finding is that employment while it increases the chances of e-banking usage does not necessarily mean that the employed people will use the services. This backs up the findings of Peter (2015) who observed that employment levels are likely to determine the users of e-banking i.e. the people who are employed or run a business are more likely to not only be exposed to e-banking but a section of them will also use it.

4.2.8 Employment vs. Level of Exposure

Table 4.8: Employment versus level of exposure to e-banking

		Level of Exposure of respondents to e-banking					Total
		Very Weak	Weak	Somewhat	Strong	Very Strong	
Employment status of the Respondents	Working	2	6	12	61	180	261
	Not Working	3	16	21	22	22	84
	Other	0	1	5	6	29	41
Total		5	23	38	89	231	386

From the above table, it can be seen that even though the people who are employed are more exposed to e-banking services (180 participated who were working indicated that they had a very strong level of exposure to e-banking services), the people who indicated either 'not working' or 'other' also had a relatively high level of exposure to e-banking services. This could be interpreted to mean that exposure to e-banking services relies on a number of factors not just necessarily being employed. The factors could range from the company that a person keeps (they could be tech savvy) to the advertisements that are run through the media or even on billboards. Al-Smadi (2012) observed that people who are employed are more exposed to e-banking and its facilities. This is more so if the method of salary payment is through sending the money to the employees account.

4.2.9 Employment vs. Age Range

Table 4.9:Employment status versus Age

		Age range of the Respondents				Total
		18-25	26-35	36-49	50 and above	
	Working	158	76	22	5	261
Employment status of the Respondents	Not Working	42	35	7	0	84
	Other	27	14	0	0	41
Total		227	125	29	5	386

Table 4.9 shows that the age of the respondent is not the only defining factor when it comes to their employment status. This is so because it was seen that within all the age ranges there were both employed and non-employed people. As can be seen from the cross tabulation of employment status and age, the ratio of working and not working across the age ranges are similar. It can be deduced that people who are employed are more likely to be exposed to e-banking websites (Peter 2015), Assumptions can then be made that the people who are of employment age are more exposed to e-banking websites.

4.2.10 Level of Exposure vs. Actual Usage

Table 4.10:Level of Exposure versus usage of e-banking

		Has Respondent used e-banking before		Total
		Yes	No	
	Very Weak	1	4	5
	Weak	0	23	23
Level of Exposure of respondents to e-banking	Somewhat	0	38	38
	Strong	38	51	89
	Very Strong	123	108	231
Total		162	224	386

This cross tabulation also shows that being exposed to e-banking services does not necessarily mean that you will use the technology. The fact that a person is exposed to a particular technology just means that they are aware of it. According to the above table, the usage of a technology depends on a number of

factors including the actual need to use the technology. In the case of e-banking a potential client might know about the technology but if they are content with traditional brick-and-mortar bank transactions they would not have an urgent requirement to use e-banking (Meyer 2008).

4.3 Which components of the 7Cs framework are incorporated into the design of South African banking websites?

4.3.1 Reliability test

Reliability test refers to the testing of the consistency of the results that have been calculated to ensure their reliability. Reliability analysis allows you to study the properties of measurement scales and the items that make them up. The most common method of testing reliability is using Cronbach's Alpha. The Reliability Analysis procedure calculates a number of commonly used measures of scale reliability and also provides information about the relationships between individual items in the scale. Cronbach's Alpha coefficient ranges from 0 to 1, with the higher the value attained the more reliable (thus better) the instrument in this case questionnaire is.

Table 4.11: Reliability Test for 7C's framework

Variable	No. of Items (Questions)	Cronbach's Alpha
Context	4	.738
Content	6	.769
Community	2	.652
Customisation	4	.730
Communication	5	.753
Connection	3	.686
Commerce	3	.581

As can be seen most of the variables are above the .600 mark which is regarded as the acceptable point value for a reliability test (Tavakol and Dennick 2011). According to Tavakol and Dennick (2011) the ideal Cronbach's Alpha value should fall between 0.6 and 0.9 but an exception can be made if it falls below 0.6 but not less than 0.5 i.e. between 0.5 and 0.6. This essentially means that if the questionnaire was to be redistributed or the research ran again, the outcomes would have a chance of having similar results.

4.3.2 7Cs User Interface Availability Ranking System

This ranking system is derived from a similar one that was used by Ranawaka (2008) to compare the user interface design of the various banking institutions that were found in Sri Lanka. To make it a round number, each facet of the component was derived out of 1 (one) therefore making the total number to be out of 10. This is so because some of the components had subcomponents that had to be accounted for in order to make the analysis more valid.

Table 4.12: Breakdown of the 7Cs User Interface Component Availability scorecard

7Cs User Interface Component/Element	Sub Component	Component Availability Score
Context	Linking between pages (C1.1)	1
	Aesthetics (Colour/graphics/ani mation) (C1.2)	1
Content	Offer mix Information (C2.1)	1
	Promotional Messages (C2.2)	1
	Evidence of Regular updating (C 2.3)	1
Community	Interactive user-to user communications (C 3)	1
Customisation	Ability of Tailoring	1

	and Personalization (C 4)	
Communication	Communication between site and user (C5)	1
Connection	Availability of links to other sites (C6)	1
Commerce	Ability of performing banking transactions online (C 7).	1
7Cs User Interface Component Availability Score Total		**10**

In order to facilitate a systematic analysis and interpretation, the 7Cs User Interface Component Availability Score (Ranawaka 2008) values ranging from 0 to 10 were placed on a scale with corresponding qualitative interpretations.

Table 4.13: Table with format used for the ranking and their interpretations

7Cs User Interface Component/Element Value Range	'Grade' Given	Description of 'Grade'
0 – 1.99	Very Poor	Availability of the user interface components is very poor, averaging less than 2 components available
2.0 – 3.99	Inadequate	User-interface components are inadequately available, averaging less than 4 but more than 2 components.

4.0 – 5.99 .	Moderate	User-interface components are moderately available, averaging less than 6 but more than 4 components
6.0 – 7.99	Good	User-interface components are adequately available, averaging less than 8 but more than 6 components.
8.0 – 10	Excellent	User-interface components are available at a very high level, averaging less than 10 but more than 8 components.

4.3.3. 7Cs total numbers from all the banks.

After receiving the results from the questionnaires, the data from the various banks were combined into total sums. In addition to the summation, the components/variables of the 7Cs were assigned as the top headings and the questions that were used to try and answered them were also place in table form. Below are the total tallies according to both variables being tested and the questions used.

Table 4.14: Combined Mean statistics from all banks sampled.

Variables	N of Items	Mean
Context	4	4.35
Content	6	3.96
Community	2	3.9
Customisation	4	4.03
Communication	5	3.92
Connection	3	3.98
Commerce	3	4.1
TOTAL MEAN	4.03	

From the above table, it can be seen that the reliability of the questions used in the study was satisfactory. The means were also within a similar range in response to the various variables of the 7Cs. The means of the questions pertaining to each element of the 7Cs theoretical framework was used to find and calculate the means of each element. Below is a breakdown of the questions relating to the banks analysed. From what can be seen from table 14 the variable with the highest mean was Context 4.35 and the one with the lowest was Communication with 3.92. The variable of context was dealing with issue regarding linkages between the pages and the aesthetics (colour scheme, graphics, the animations etc. while Communication was dealing with the communication between the e-banking website and the user.

Context
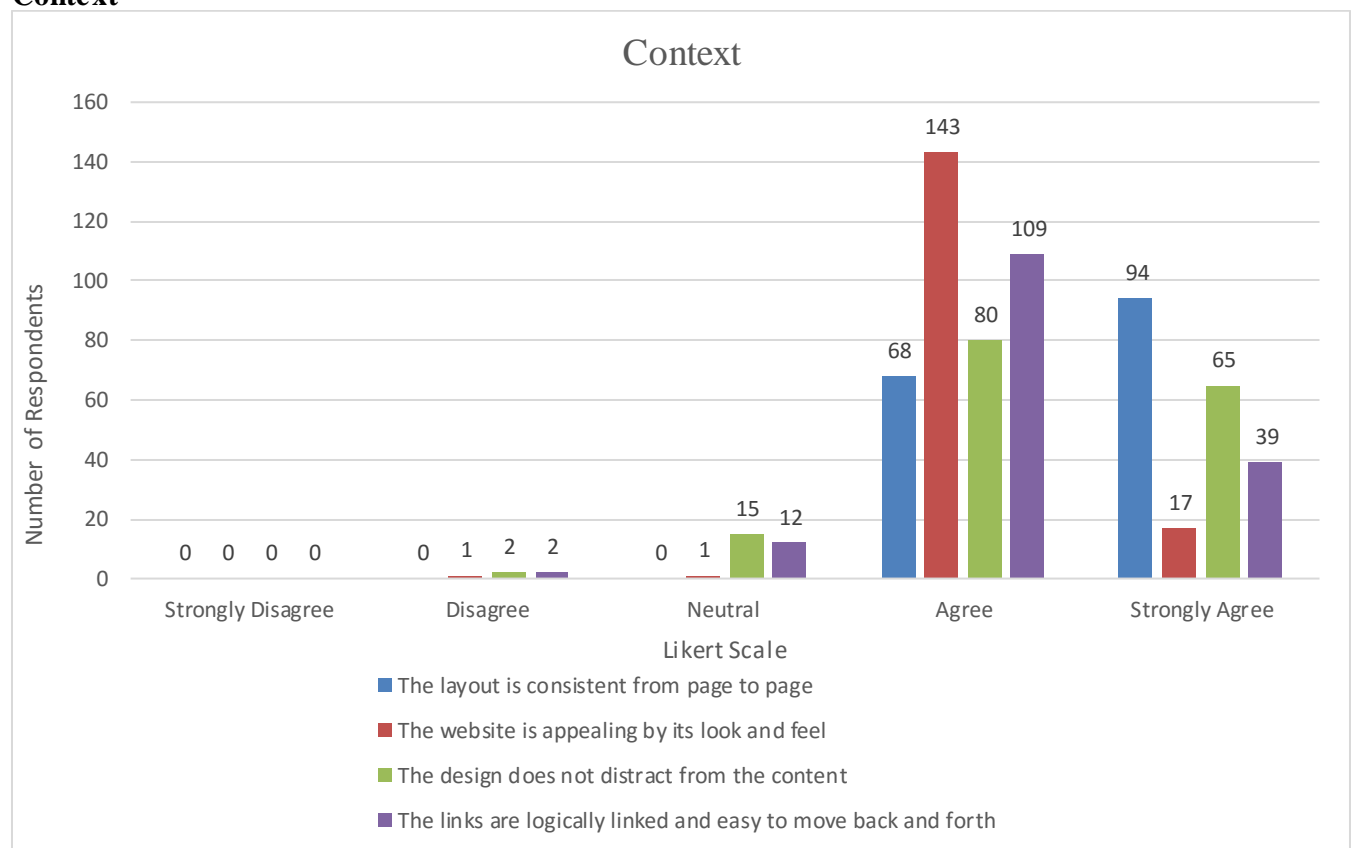
Figure 3.1: Combined Context response breakdown

The above figure shows the total frequency of the questions that deal with the element of Context. As can be seen most of the respondents were leaning towards positive responses (Agree and Strongly Agree). The above table shows the breakdown of the total responses to the questions dealing with the variable of context. The Mean was found to be 4.35. On the question "The layout is consistent from page to page" 68 (42%) respondents said that they agreed with the statement which 94 (58.02%) respondents who used the bank

strongly agreed. This showed that there was overwhelming agreement on the question. On the question of "The website is appealing by its look and feel" 1 (0.62%) disagreed, 1 (0.62%) were neutral, 143 (88.27%) were in agreement while 17 (10.49%) indicated that they strongly agreed. On the question "The design does not distract from the content" 2 (1.23%) disagreed, 15(9.26%) were of a neutral opinion, 80 (49.38%) agreed while 65 (40.12%) were in strong agreement. On the question "The links are logically linked and easy to move back and forth" 2 (1.23%) disagreed, 12(7.41%) were of a neutral opinion, 109 (67.28%) agreed with the question while 39(24.07%) strongly agreed. The high means indicated a high level of user satisfaction. These findings are similar to Ranawaka (2008) and Meyer (2008).

Content
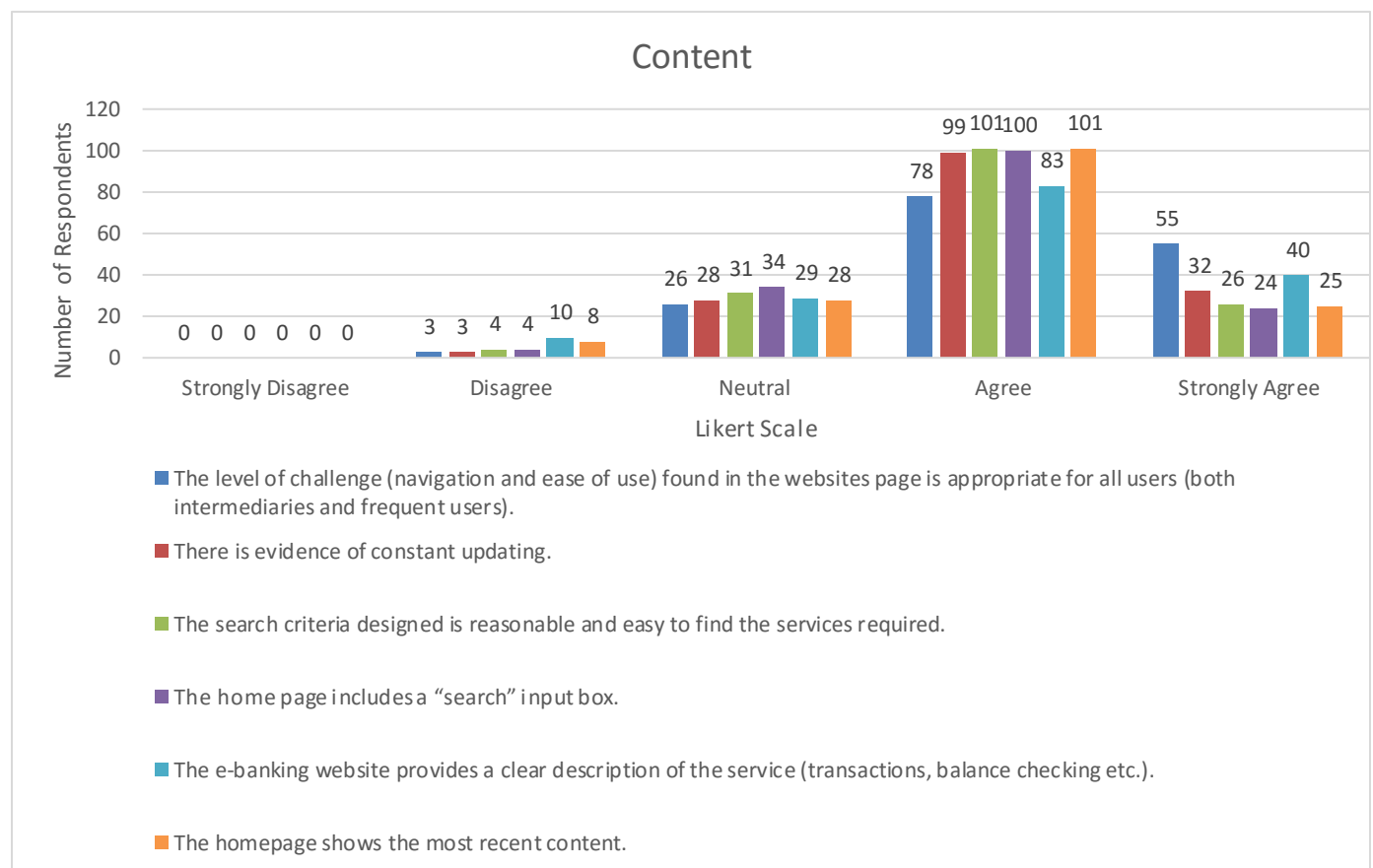
Figure 4.2: Combined content response breakdown

The above Graph shows the responses of the combined content variable. There were 6 questions that were designed to answer this element. Among the findings is that there was a mean of 3.96. On the questions "The level of challenge (navigation and ease of use) found in the websites page is appropriate for all users (both intermediaries and frequent users)",3(1.85%) disagreed, 26 (16.05%) were of a neutral

opinion while 78 (48.15%) respondents agreed with another 55 (33.95%) indicating that they strongly agreed. In response to "There is evidence of constant updating." 3(1.85%) disagreed, 28 (17.28%) were neutral, 99 (61.11%) agreed with the statement while 32 (19.75%) indicated that they strongly agreed. In the question "The search criteria designed is reasonable and easy to find the services required." 4(2.47%) disagreed, 31 (19.14%) were neutral. A further 101 (62.35%) agreed with the questions back up by 26 (16.05%) who were in strong agreement. On the question "The home page includes a "search" input box." 4(2.47%) disagreed, 34(20.99%) were neutral, 100 (61.73%) were in agreement with 24 (14.81%) strongly agreeing. On the question "The e-banking website provides a clear description of the service (transactions, balance checking etc.)." 10(6.17%) disagreed, 29 (17.9%) were neutral, a further 83(51.23%) agreed with 40 (24.69%) strongly agreeing. In response to the question "The homepage shows the most recent content." 8(4.94%) disagreed, 28 (17.28%) were neutral, 101 (62.35%) agreed while 25 (15.43%) Strongly Agreed. These findings are similar to Ranawaka (2008) and Meyer (2008).

Community
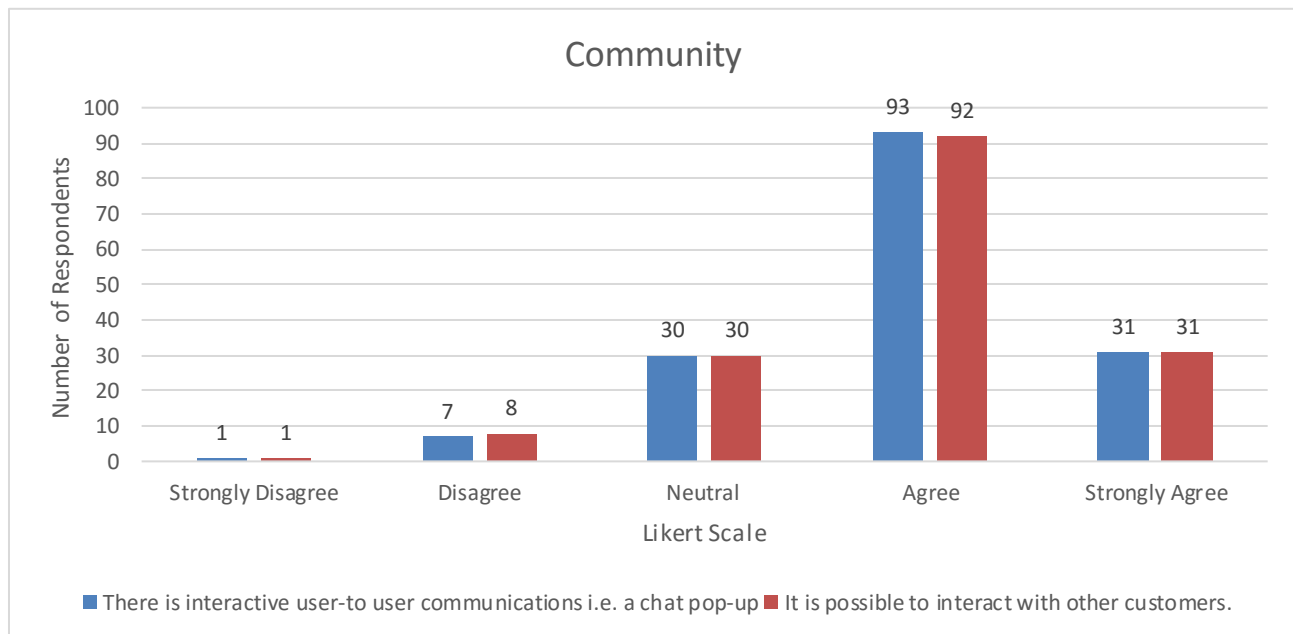
Figure 4.3: Combined community response breakdown

This section had a mean of 3.9. In response to the question "There is interactive user-to user communications i.e. a chat pop-up" 1 (0.62%) strongly disagreed, 7 (4.32%) disagreed, 30(18.52) were of

a neutral opinion, 93 (57.41%) agreed while 31 (19.34%) strongly agreed. The question "It is possible to interact with other customers." had 1 (0.62%) strongly disagree, 8(4.94%) disagreed, 30(18.52) were of a neutral opinion, 92 (56.79%) of the respondents agreed with the statement while 31 (19.34%) strongly agreed. These findings are different from Ranawaka (2008) that found the component of community in the banks to not be fully utilised or in some cases ignored.

Customisation
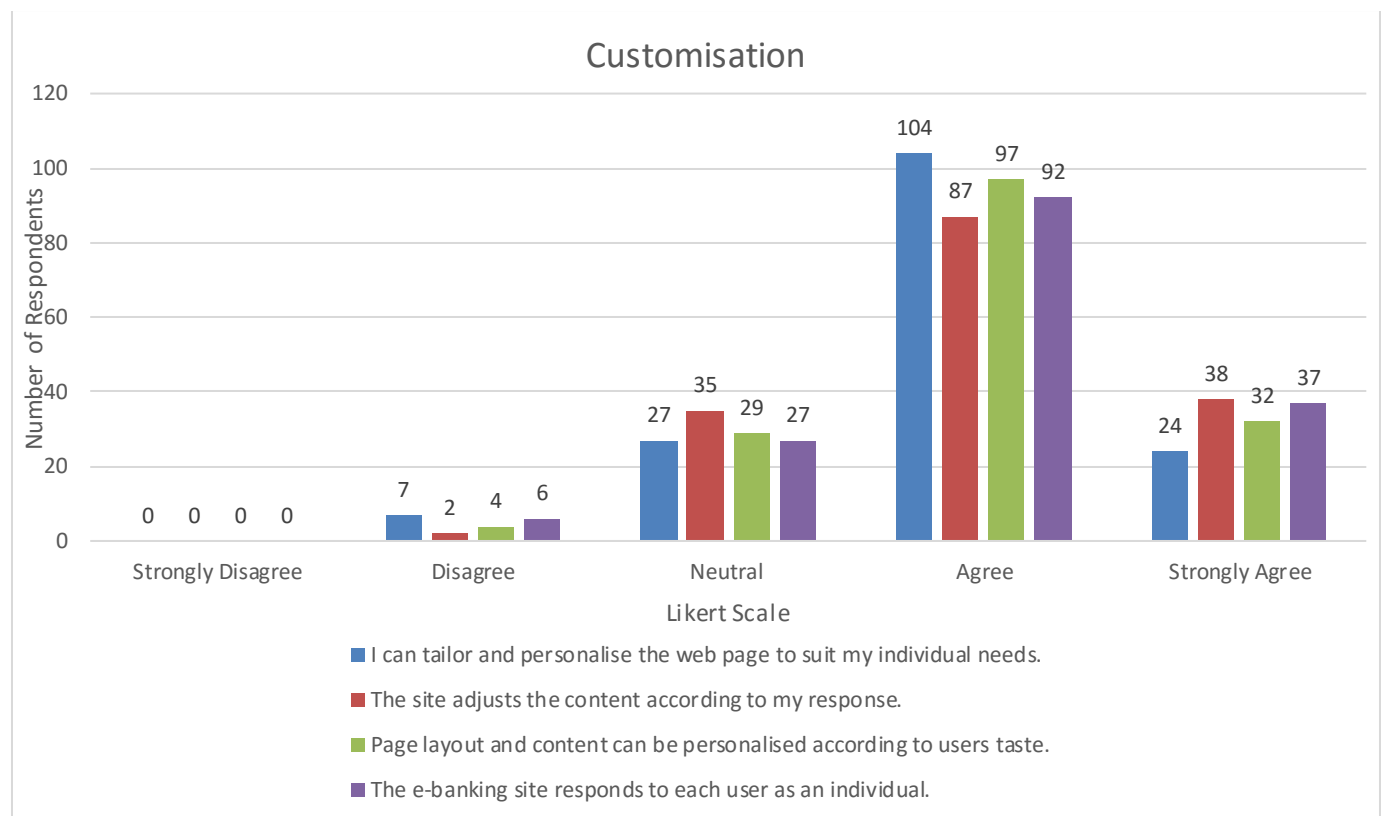
Figure 4.4: Combined customisation response breakdown

A Mean of 4.03 was result of the 4 questions. In response to "I can tailor and personalise the web page to suit my individual needs." 7 4.32%) disagreed with the statement with 27 (16.67%) maintaining a neutral view, 104 (64.2%) respondents agreed with the statement with a further 24 (14.81%) strongly agreeing. The question "The site adjusts the content according to my response." 2(1.23%) were in disagreement, 35 (21.6%) were neutral, 87 (57.3%) agreed and 38 (23.46%) strongly agreed. In response to "Page layout and content can be personalised according to users taste." 4 (2.94%) disagreed, 29 (17.9%) were neutral, 97 (59.88%) agreed while 32 (19.75%) strongly agreed. In response to "The e-banking site responds to each

user as an individual." 6 (3.7%) disagreed, 27 (16.67%) were neutral, 92 (56.79%) agreed and 37 (22.84%) strongly agreed. The high means indicated that the respondents were quite satisfied with the level of customisation of in the banks websites. These findings are different from Ranawaka (2008) that found the component of customisation in the banks to being underutilised.

Communication
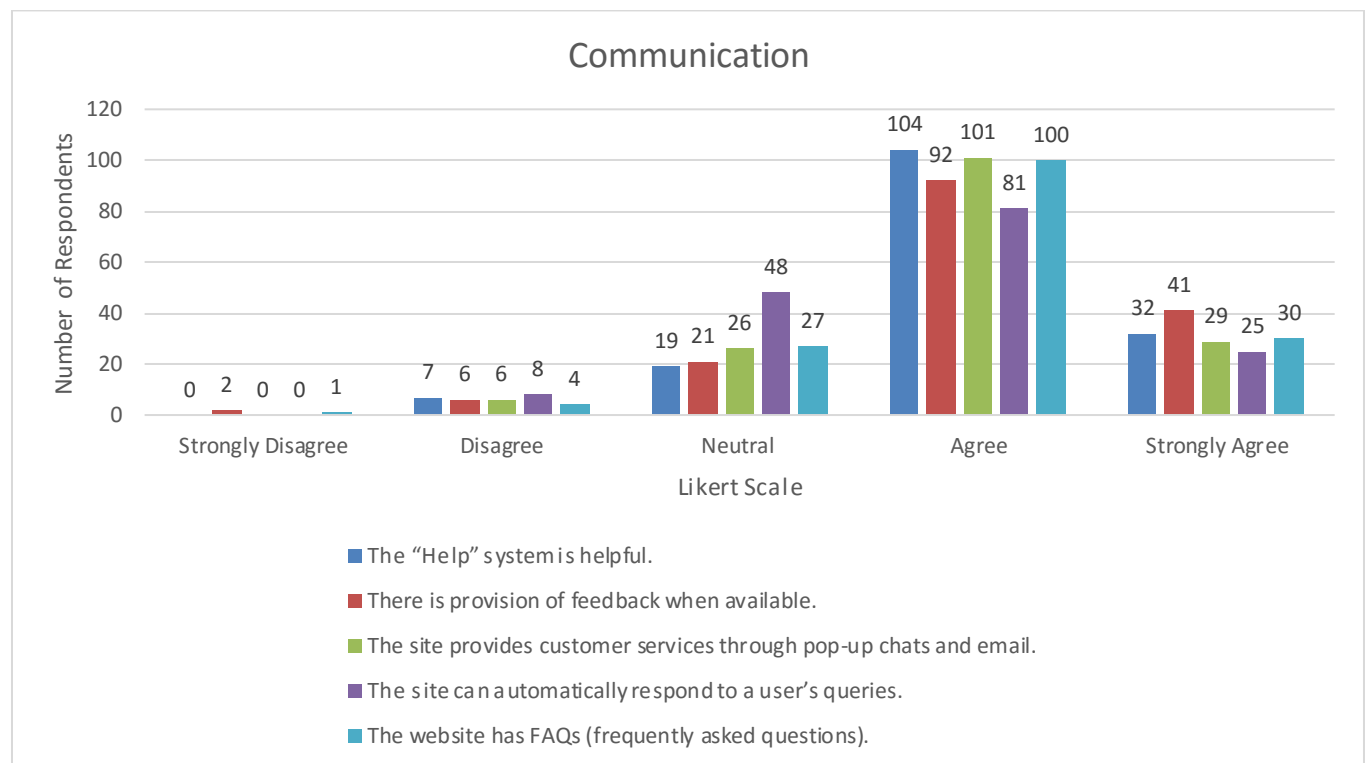
Figure 4.5: Combined communication response breakdown

A mean of 3.92 was calculated for this set of 5 questions used to the communication. In response to questions "The "Help" system is helpful," (4.32%) respondents disagreed, 19 (11.73%) were neutral, 104 (64.2%) agreed and 32 (19.75%) strongly agreed. In response to question "There is provision of feedback when available," 1(1.23%) strongly disagreed, 6 (3.7%) disagreed, 21 (12.97%) were neutral, 92 (56.79%) agreed, and 41 (25.31%) strongly agreed. To the question "The site provides customer services through pop-up chats and email," 6 (3.7%) disagreed, 26(16.05%) were neutral, 101 (62.35%) agreed, while 29 (17.9%) strongly agreed. In response to, "The site can automatically respond to a user's queries," 8(4.94%) disagreed, 48 (29.63%) were neutral, 81 (50%) agreed, with 25(15.43%) strongly agreeing. In response "The website has FAQs (frequently asked questions)," 1(0.62%) strongly disagreed, 4(2.47%) disagreed,

27 (16.67%) were neutral, 100 (61.73%) agreed and 30 (18.52%) strongly agreed. These findings are similar to Ranawaka (2008) and Meyer (2008) that found the variable of communication to be well represented.

Connection
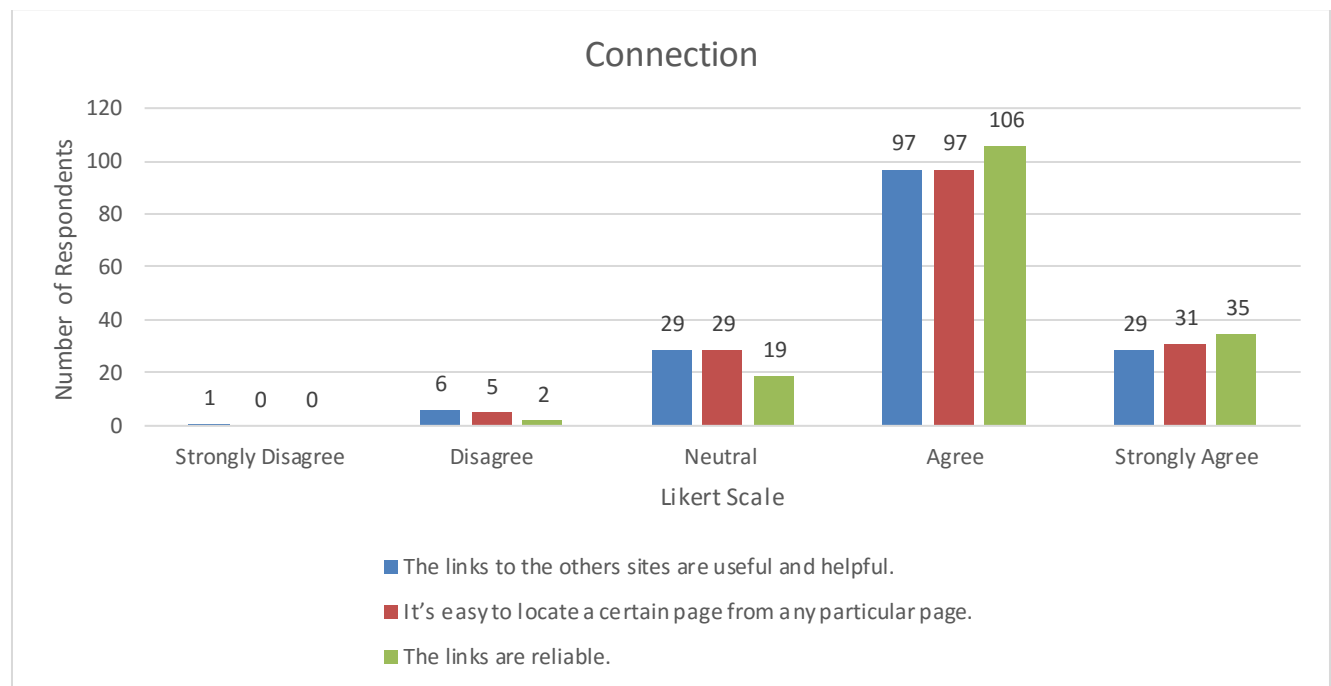
Figure 4.6: Combined connection response breakdown

A mean of 3.98 was calculated component. In response to "The links to the others sites are useful and helpful," 1(0.62%) strongly disagreed, 6(3.7%) disagreed, 29 (17.9%) were neutral, 97(59.88%) agreed, 29 (17.9%) strongly agreeing. To the question "It's easy to locate a certain page from any particular page." 5 (3.09%) were of a negative opinion, 29 (17.9%) took a neutral stance, 97(59.88%) agreed, while 31 (19.14%) strongly agreed. To the question "The links are reliable," had (1.23%) disagreeing, 19 (11.73%) were neutral, with 106(65.43%) agreeing and 35 (21.6%)" strongly agreeing. These findings are similar to Ranawaka (2008) and Meyer (2008) that found the variable of Connection to be well represented.

Commerce
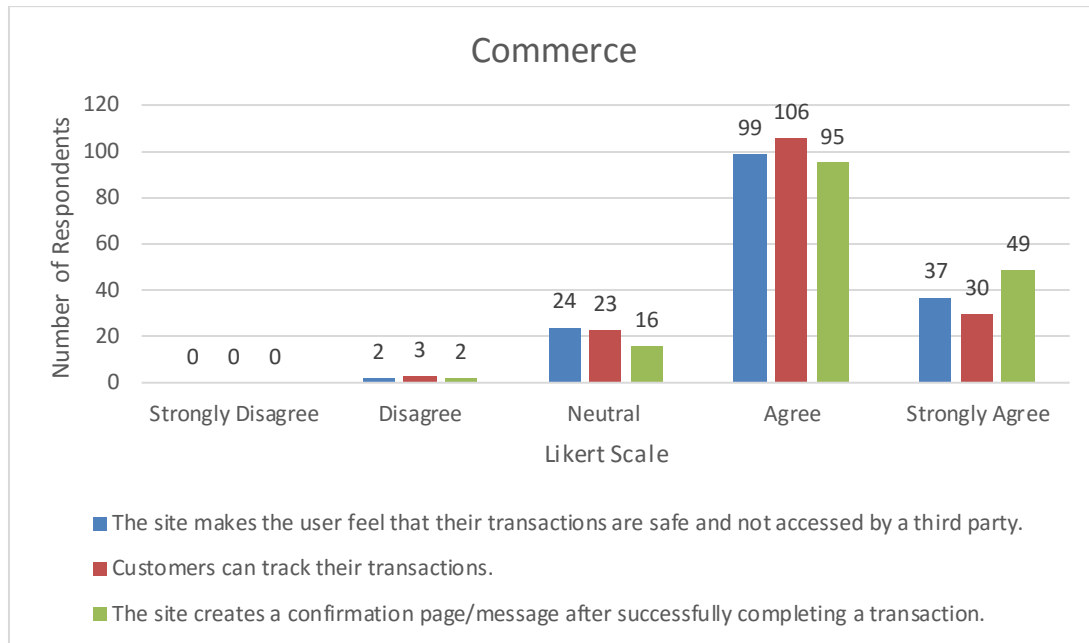
Figure 4.7: Combined commerce response breakdown

A mean of 4.1 for questions dealing with commerce component. On the question "The site makes the user feel that their transactions are safe and not accessed by a third party. 2 (1.23%) disagreed, 24 (14.81%) were neutral, 99 (61.11%) agreed while 37(22.84%) strongly agreed. In response to the question "Customers can track their transactions." 3 (1.85%) disagreed, 23(14.2%) were of a neutral opinion. There were 106 (65.43%) of the respondents who agreed with the statement with a further 30 (18.52%) strongly agreeing. "The site creates a confirmation page/message after successfully completing a transaction" had 2 (1.23%) of the respondents answering that they disagree with 16 (9.88%) being neutral. 95 (58.64%) were in agreement with another 49(30.25%) strongly agreed. These findings are similar to Ranawaka (2008) and Meyer (2008) that found the variable of Commerce to be strongly represented in their respective studies.

4.3.4 Final average scores derived from the banks represented in the study

Table 4.15: Combined user interface component availability

7Cs User Interface Component/Element	Sub Component	Component Availability score
Context	Linking between pages (C1.1)	0.91
	Aesthetics (Colour/graphics/animation) (C1.2)	0.96
Content	Offer mix Information (C2.1)	0.78
	Promotional Messages (C2.2)	0
	Evidence of Regular updating (C 2.3)	0.81
Community	Interactive user-to user communications (C 3)	0.76
Customisation	Ability of Tailoring and Personalization (C 4)	0.79

Communication	Communication between site and user (C5)	0.78
Connection	Availability of links to other sites (C6)	0.81
Commerce	Ability of performing banking transactions Online (C 7).	0.86
7Cs User Interface Component Availability Score Total		**7.46**

In deciding the criteria of computation, it was decided that the numbers from agree and strongly agree because it shows that the components are present. These components are the ones that were used to ascertain the average score of the banks in South Africa.

From all the banks that were evaluated a final average of 7.46 7Cs' User Interface Component Availability Score Total was achieved. The variable of context had the highest score in the combined banks. This was due to the fact that the respondents felt that the aesthetics in terms of colour, graphics and animation were well done in the various banking website. This satisfaction with this variable meant that the ease of navigation in the website was done to the users' liking. When a person can easily navigate a website it makes the usability easier and thus the customer is more likely to come and visit the website again. The aesthetics of the website also follows this path in the sense that the user will be more willing to come back to a website if they are able to visit it more easily.

The component of Communication had the lowest component rating. This was also found to be the case in Ranawaka (2008) and Meyer (2008). The reason could be that since the transactions are being done online, the user can find what they want without the need to communicate with either the site vendor or other users.

4.3.5 7C's variables results of the different banks

CONTEXT

Table 4.16: Analysis of individual 7Cs' factors according to banks (Bank A, B and C Context)

Question	Bank A	Bank B	Bank C
The layout is consistent from page to page	4.59	4.6	4.29
The website is appealing by its look and feel	4.12	4.1	4.18
The design does not distract from the content	4.3	4.32	4.24
The links are logically linked and easy to move back and forth	4.1	4.22	4.12
Overall Means	4.35	4.3	4.2075

The above table show the responses of the context variable. There were 4 questions that were designed to answer this element. The means of the banks are Bank A 4.35 Banks B 4.3 and Bank C 4.2075. These results show that the banks were very close to one another when it come to the facet/variable of context. The answers to most of the questions for context in each bank averaged a mean of over 4. This shows that the banks were quite good when it came to satisfying the user needs especially when it came to the variables of context and the questions/measurements relating to it.

Bank A Context

The above table show the breakdown of responses of Bank 'A' in relation to the questions dealing with the variable of context. The overall mean was found to be 4.35 and indicated that majority of the respondents agree that "Context" was well covered for in the website design for Bank A. On the question "The layout is consistent from page to page", 37 (22.84%) respondents who used 'Bank A' indicated that they agreed with the statement and 54 (%) respondents who used the bank strongly agreed. This showed that there was positive agreement that Bank A website had a layout that is consistent from page to page which is further indicated by a mean of 4.59. On the question of "The website is appealing by its look and feel," 80 (87.91%) were in agreement while 11(12.09%) indicated that they 'Strongly Agreed'. It had a mean of 4.12. On the question "The design does not distract from the content" 1(1.1%) Disagreed, 10 (11%) were of a neutral opinion 41 (45.05%) agreed while 39 (42.86%) were in strong Agreement. The mean of this question was 4.3. On the questions "The links are logically linked and easy to move back and forth" 1(1.1%) were of a

negative opinion while 8 (8.79%) were neutral. 62 (68.13%) Agreed with the question while 20 (22%) Strongly Agreed. The mean of this question was 4.1. The means of the individual questions relating to Context ranged from between 4.1 to 4.59 with the mean of the context variable being 4.35. Since a five point Likert scale was used in this study, it means that most of the respondents were leaning towards 'Agreed' and 'Strongly Agreed'. This means that from the perspective of bank A, the respondents found the design, linkages and layout of the bank acceptable.

Bank B Context

The above table show the breakdown of responses of Bank 'B' in relation to the questions dealing with the variable of context. The Mean was found to be 4.3. On the question "The layout is consistent from page to page" 14 respondents who used 'bank B' responded that they agreed with the statement which 23 respondents who used the bank strongly agreed. This showed that there was overwhelming agreement on the question especially when the individual mean of the question was 4.6. On the question of "The website is appealing by its look and feel" 35 (94.6%) were in agreement while 2 (5.4%) indicated that they strongly agreed with a mean of 4.1. On the question "The design does not distract from the content" 1 (2.94%) disagreed, 2 (5.4%) were of a neutral opinion 18 (48.65%) agreed while 16 (43.24) were in strong agreement. There was a mean of 4.32 found in this section. On the questions "The links are logically linked and easy to move back and forth" 3 (8.11%) were neutral, 23 (62.16%) agreed with the question while 11 (29.73%) strongly agreed. A 4.22 mean was calculated. The high means meant that the respondents essentially said that the context element of Bank B was satisfactory. This means that from the perspective of bank B responses, the respondents found the design, linkages and layout of the bank satisfactory.

Bank C Context

The above table shows the breakdown of responses of Bank 'C' in relation to the questions dealing with the variable of context. The mean was found to be 4.2075. On the question "The layout is consistent from page to page" 12 (70.59%) respondents who used 'bank C' responded that they agreed with the statement while 5 (29.41%) respondents who used the bank strongly agreed. This showed that there was overwhelming agreement on the question with a mean of 4.29. On the question of "The website is appealing by its look and feel" 1 (5.88%) were neutral, 12 (70.59%) were in agreement while 4 (23.53%) indicated that they strongly agreed with a mean of 4.18. On the question "The design does not distract from the content" 1 (5.88%) were of a neutral opinion, 11 (64.71%) agreed while 5 (29.41%) were in strong agreement with a mean of 4.24. On the questions "The links are logically linked and easy to move back and forth" 15 (88.24%) agreed with the question while 2 (11.76%) strongly agreed with a mean of 4.12. The high means indicated a high level of user satisfaction.

CONTENT

Table 4.17: Bank A, B and C content

Question	MEAN Bank A	MEAN Bank B	Mean Bank C
The level of challenge (navigation and ease of use) found in the websites page is appropriate for all users (both intermediaries and frequent users).	4.1	4.162	4.06
There is evidence of constant updating.	3.87	4.24	4.06
The search criteria designed is reasonable and easy to find the services required.	3.93	3.84	3.82
The home page includes a "search" input box.	3.77	3.95	4.18
The e-banking website provides a clear description of the service (transactions, balance checking etc.).	3.86	4.16	3.88
The homepage shows the most recent content.	3.79	4.24	3.76
Overall Means	3.89	4.1	4.05

The above table show the responses of the content variable. There were 6 questions that were designed to answer this element. The means of the banks are Bank A 3.89, Banks B 4.1 and Bank C 4.05. These results show that the banks were very close to each other when it comes to the facet/variable of content. These results show that the banks were very close to each other when it comes to the facet/variable of context. This shows that the banks were quite good when it came to satisfying the user needs especially when it came to the variables of content and the questions/measurements relating to it.

Bank A Content

The mean was 3.89. On the questions "The level of challenge (navigation and ease of use) found in the websites page is appropriate for all users (both intermediaries and frequent users)," 2 (2.2%) of the respondents, disagreed with the statement. A further 13 (14.29%) were of a neutral opinion while 49 (53.85%) respondents agreed with the statement. Another 27 (29.67%) indicated that they strongly agreed. There was a mean of 4.1 in relation to this question. This meant that most of the responses were leaning towards the positive side of the Likert scale i.e. 'Agree' and 'Strongly Agree". In response to "There is evidence of constant updating," 3 (3.3%) disagreed, 21 (23.08%) were neutral, 52 (57.14%) agreed with the statement while 15 (16.48%) indicated that they strongly agreed. This was also backed up by the mean for this question which indicated 3.87. To the question "The search criteria designed is reasonable and easy

to find the services required," 4 (4.4%) of the respondents to this question were of a negative opinion while 14 (15.38%) were neutral a further 57 (62.64%) agreed with the questions, backed by 16 (17.58%) who were in strong agreement. The individual mean to this question was 3.93 which indicated that most of the responses were leaning towards the right side of Neutral i.e. 'Agree' and 'Strongly Agree' On the question "The home page includes a "search" input box," 2 (2.2%) disagreed while 29 (31.87%) were neutral. 48 (52.75%) agreed, with 12 (13.19%) strongly agreeing and the mean being 3.86 and a mean of 3.77. On the question "The e-banking website provides a clear description of the service (transactions, balance checking etc.)." 8 (8.79%) disagreed, 17 (18.67%) remaining neutral. 46 (50.55%) agreed and 20 (22%) strongly agreeing and there was a mean of 3.86. In response to the question "The homepage shows the most recent content," 7 (7.69%) disagreed, 16 (17.58%) were neutral, 57 (62.64%) Agreed while 11 (12.09%) "Strongly agreed". The mean for this question was calculated to be 3.79. It was due to the mean being in the high (5 point Likert scale used in questionnaire) that most of the responses to the questions were positive. This meant that in relation to the content element of Bank A respondents were quite happy with the options that they got.

Bank B Content

The mean was 4.1. On the question "The level of challenge (navigation and ease of use) found in the websites page is appropriate for all users (both intermediaries and frequent users)." A further 7 (18.92%) were of a neutral opinion while 17 (45.95%) respondents agreed with the statement. Another 13 (35.14%) indicated that they strongly agreed. An individual question mean of 4.162 was also calculated for this question. In response to "There is evidence of constant updating." 2 (5.4%) were neutral, 24 (64.86%) agreed with the statement while 11 (29.73%) indicated that they strongly agreed, with a mean of 4.24. In the question "The search criteria designed is reasonable and easy to find the services required." 9 (24.32%) were neutral. A further 25 (67.57%) agreed with the questions back up by 3 (8.11%) who were in strong agreement. A mean of 3.84 was also calculated. On the question "The home page includes a "search" input box." 1 (2.94%) Disagreed while 5 (13.51%) were of a neutral opinion. The number of respondents who agreed was 26 (70.27%) with 5 (13.51%) strongly agreeing and a mean of 3.95. On the question "The e-banking website provides a clear description of the service (transactions, balance checking etc.)." 7 (18.92%) were neutral. A further 17(45.95%) agreed with 13(35.14%) strongly agreeing and a mean of 4.16. In response to the question "The homepage shows the most recent content." 2 (5.4%) were neutral, 24 (64.86%) Agreed while 11 (29.73%) Strongly Agreed. A mean of 4.24 was also calculated. The high means for the individual questions as well as the total mean meant that for the questions relating to content in Bank B the majority of the respondents indicated their satisfaction.

Bank C Content

The mean was 4.05. The above tables show the responses of the content variable. There were 6 questions that were designed to answer this element. Among the findings is that there was a Mean of 4.06, On the questions "The level of challenge (navigation and ease of use) found in the websites page is appropriate for all users (both intermediaries and frequent users)." 4 (23.53%) were of a neutral opinion while 8 (47.06%) respondents agreed with the statement. Another 5 (29.41%) indicated that they strongly agreed with a mean of 4.06. In response to "There is evidence of constant updating." 2 (11.76%) were neutral, 12 (70.59%) agreed with the statement while 3 (17.65%) indicated that they strongly agreed with a mean of 4.06. In the question "The search criteria designed is reasonable and easy to find the services required." 5 (29.41%) were neutral. A further 10 (58.82%) agreed with the questions back up by 2 (11.76%) who were in strong agreement. A mean of 3.82 was calculated. On the question "The home page includes a "search" input box." the number of respondents who agreed was 14 (82.35%) with 3 (17.65%) strongly agreeing. On the question "The e-banking website provides a clear description of the service (transactions, balance checking etc.)." 4 (23.53%) were neutral. A further 11 (64.71%) agreed with 2 (11.76%) strongly agreeing. In response to the question "The homepage shows the most recent content." 5 (29.41%) were neutral, 11 (64.71%) Agreed while 1 (5.88%) Strongly Agreed. From the table above it can be seen that the individual means of the questions were quite high leading to the conclusion that a high number of the respondents of Bank B, were satisfied with this that section of the Banks' website.

COMMUNITY

Table 4.18: Bank A, B and C community

Question	MEAN Bank A	MEAN Bank B	MEAN Bank C
There is interactive user-to user communications i.e. a chat pop-up	3.93	3.76	3.71
It is possible to interact with other customers.	3.9	3.84	3.88
Overall Means	3.9	3.8	3.795

The above table shows the responses of the community variable. There were 2 questions that were designed to answer this element. The means of the banks are Bank A 3.9, Banks B 3.8 and Bank C 3.795. These results show that the banks were very close to one another when it came to the facet/variable of community. This shows that the banks were quite good when it came to satisfying the user needs especially when it came to the variables of community and the questions/measurements relating to it.

Bank A Community

This section had mean of 3.91. In response to the question "There is interactive user-to user communications i.e. a chat pop-up," 4 (4.4%) disagreed, 16 (17.58%) were neutral, 53 (58.24%) agreed while 18 (19.78%) strongly agreed with a mean calculated being 3.93. The question "It is possible to interact with other customers." had 6(6.59%) disagree, with 15(16.48%) respondents maintaining neutrality, 54 (59.34%) of the respondents agreed while 16 (17.58%) strongly agreed. The individual question mean for this question was 3.9. Owing to the individual means of the questions being high, it essentially means that most of the responses to the questions were positive in nature. It can also be interpreted to mean that the respondents of Bank A were satisfied with the level of customisation that was offered by the banks' website. These findings are different from Ranawaka (2008) and Meyer (2008) that found the component of community in the banks to not be utilised fully.

Bank B Community

This section had a mean of 3.8. In response to the question "There is interactive user-to user communications i.e. a chat pop-up" 2 (5.4%) disagreed, 10 (27.03%) were of a neutral opinion, 20 (54.05%) agreed while 5 (13.51%) strongly agreed with a mean of 3.76. The question "It is possible to interact with other customers." had 1 (2.94%) disagree with 10 (27.03%) respondents maintaining neutrality. 20 (54.05%) of the respondents who used bank 'B' agreed with the statement while 6 (16.22%) strongly agreed and mean of 3.84 was calculated. The high mean can be interpreted to mean that there was a high level of user satisfaction.

Bank C Community

This section had a mean of 3.8. In response to the question "There is interactive user-to user communications i.e. a chat pop-up" 1 (5.88%) strongly disagreed, 3 (17.65%) were of a neutral opinion, 12 (70.59%) agreed while 1 (5.88%) strongly agreed. The question "It is possible to interact with other customers." had 1 (5.88%) strongly disagree with 4 (23.53%) respondents maintaining neutrality. 7 (41.18%) of the respondents who used bank 'C' agreed with the statement while 5 (29.41%) strongly agreed. A mean of 3.71 and 3.88 was calculated for the above questions respectively. The mean is quite high especially when it is derived from a five point Likert scale. This level essentially indicated that that there was a high degree of satisfaction.

CUSTOMISATION

Table 4.19: Bank A, B and C Customisation

Question	MEAN Bank A	MEAN Bank B	MEAN Bank C
I can tailor and personalise the web page to suit my individual needs.	3.88	3.92	3.94
The site adjusts the content according to my response.	4.03	4.08	3.59
Page layout and content can be personalised according to users taste.	3.97	4.03	4.06
The e-banking site responds to each user as an individual.	3.98	4.08	3.82
Overall Means	3.965	4.0275	3.8525

The above table show the responses of the customisation variable. There were 4 questions that were designed to answer this element. The means of the banks are Bank A 3.965, Banks B 4.0275 and Bank C 3.8525. These results show that the banks were very close to each other when it came to the facet/variable of customisation. This shows that the banks were quite good when it came to satisfying the user needs especially when it came to the variables of customisation and the questions/measurements relating to it. The major differences came when it came to the question "The site adjusts the content according to my response". During this question Bank C performed poorer than the other two banks.

Bank A Customisation

A mean of 3.965 was the result of the four questions. In response to "I can tailor and personalise the web page to suit my individual needs." 4 (4.4%) disagreed with the statement, with 17 (18.68%) maintaining a neutral view, 56 (61.54%) respondents agreed with the statement, with a further 14 (15.38%) strongly agreeing. A mean of 3.88 was calculated for this individual question. To the question "The site adjusts the content according to my response," 1(1.1%) disagreed, 18 (19.78%) were neutral, 49 (53.85%) agreed and 23 (25.27%) strongly agreed with a mean of 4.03. In response to "Page layout and content can be personalised according to user's taste," 2 (2.2%) disagreed, 16 (17.58%) were neutral, 56 (61.54%) agreed while 17 (18.68%) strongly agreed and a mean of 3.97 was calculated. In response to "The e-banking site responds to each user as an individual." 3 (3.3%) disagreed, 17 (18.68%) were neutral, 50 (54.94%) agreed, while 21(23.08%) strongly agreed. The mean was found to be 3.98. As aforementioned these high mean

calculations showed that the respondents felt that Bank A's website was quite satisfactory when it came to the various elements of the variables, in this case customisation.

Bank B Customisation

A Mean of 4.0275 was the result of the 4 questions. In response to "I can tailor and personalise the web page to suit my individual needs." 1 (2.94%) disagreed with the statement with 6 (16.22%) maintaining a neutral view. 25 (67.57%) respondents agreed with the statement with a further 5 (13.51%) strongly agreeing and a mean of 3.92 was recorded. The question "The site adjusts the content according to my response." 6 (16.22%) were neutral, 22 (59.46%) agreed and 9 (24.32%) strongly agreed. A mean of 4.08 was calculated for this question. In response to "Page layout and content can be personalised according to users taste." 1 (2.94%) disagreed, 6 (16.22%) were neutral, 21 (56.76%) agreed while 9 (24.32%) strongly agreed and a mean of 4.03 was also calculated. In response to "The e-banking site responds to each user as an individual." 1 (2.94%) disagreed, 4 (10.81%) were neutral, 23 (62.16%) agreed, 9 (24.32%) strongly agreed and a mean of 4.08 was calculated. The high means indicated that the respondents were quite satisfied with the level of customisation in Bank B.

Bank C Customisation

A mean of 3.8525 was the result of the 4 questions. In response to "I can tailor and personalise the web page to suit my individual needs." 1 (5.88%) disagreed with the statement with 1 (5.88%) maintaining a neutral view. 13 (76.47%) respondents agreed with the statement with a further 2 (11.76%) strongly agreeing. To the question "The site adjusts the content according to my response." 1 (5.88%) disagreed, 7 (41.18%) were neutral, 7 (41.18%) agreed and 2 (11.76%) strongly agreed. In response to "Page layout and content can be personalised according to users' taste." 3 (17.65%) were neutral, 10 (58.82%) agreed while 4 (23.53%) strongly agreed. In response to "The e-banking site responds to each user as an individual." 6 (35.29%) were neutral, 8 (47.06%) agreed while 3 (17.65%) strongly agreed. The means for the questions was also quite high leading to the interpretation that there were a high number of respondents who were satisfied. These findings are different from Ranawaka (2008) and Meyer (2008) that found the component of customisation in the banks to not be utilised fully.

COMMUNICATION

Table 4.20: Bank A, B and C Communication

Question	MEAN Bank A	MEAN Bank B	MEAN Bank C
The "Help" system is helpful.	3.95	4.08	3.82
There is provision of feedback when available.	3.95	4.11	4
The site provides customer services through pop-up chats and email.	3.92	4.14	4
The site can automatically respond to a user's queries.	3.85	3.59	3.59
The website has FAQs (frequently asked questions).	4.11	3.7	3.94
Overall Means	3.956	3.924	3.87

The above table show the responses of the communication variable. There were 5 questions that were designed to answer this element. The means of the banks are Bank A 3.956, Banks B 3.924 and Bank C 3.87. These results show that the banks were very close to one another when it came to the facet/variable of communication. These results show that the banks were very close to each other when it come to the facet/variable of context. The answers to most of the questions for communication in each bank averaged a mean of around 4. This shows that the banks were quite good when it came to satisfying the user needs especially when it came to the variables of communication and the questions/measurements relating to it.

Bank A Communication

A mean of 3.956 was calculated for this set of 5 questions used to the communication component of Bank A. In response to questions "The "Help" system is helpful," 4 (4.4%) respondents disagreed, 12 (13.19%) were neutral, 62 (68.13%) agreed and 13 (14.29%) strongly agreed. An individual mean of 3.95 was derived for this question leading to the conclusion that since it is a high number for a five point Likert scale it meant that most of the respondents were in agreement with the question. In response to question "There is provision of feedback when available," 1(1.1%) strongly disagreed, 4 (4.4%) disagreed, 13 (14.29%) were neutral, 54 (59.34%) agreed, and 19 (20.88%) strongly agreed. A mean of 3.95 was calculated. To the question "The site provides customer services through pop-up chats and email," 3 (3.3%) disagreed, 14 (15.38%) were neutral, 61 (67.03%) agreed, while 13 (14.29%) strongly agreed and a mean of 3.92 was also calculated.

In response to, "The site can automatically respond to a user's queries," 5 (5.49%) disagreed, 22 (24.18%) were neutral 46 (50.55%) agreed, with 18 (19.78%) strongly agreeing. A mean of 3.85 was calculated for this question leading to the conclusion that a majority of the respondents were of a positive view. In response "The website has FAQs (frequently asked questions),"1(1.1%) disagreed, 11 (12.09%) were neutral, 60 (65.93%) agreed and 19 (20.88%) strongly agreed. A mean of 4.11 was calculated. Since the individual mean for each question were quite high in relation to the Likert scale used (5 Point) it is concluded that most of the respondents were essentially satisfied with the level of communication that was offered by Bank A.

Bank B Communication

A Mean of 3.924 was calculated for this set of 5 questions used to the communication component of bank B. In response to questions "The "Help" system is helpful." 1 (2.94%) disagreed, 4 (10.81%) were neutral, 23 (62.16%) agreed and 9 (24.32%) strongly agreed. A mean of 4.08 was calculated. In response to question "There is provision of feedback when available." 1 (2.94%) strongly disagreed, 5 (13.51%) were neutral, 20 (54.05%) agreed,11 (29.73%) strongly agreed with a mean of 4.11. The question "The site provides customer services through pop-up chats and email." 1 (2.94%) Disagreed, 5 (13.51%) were neutral, 19 (51.35%) agreed while 12 (32.43%) strongly agreed with a mean of 4.14. In response to "The site can automatically respond to a user's queries." 2 (5.4%) disagreed, 13 (35.14%) were neutral while a further 20 (54.05%) agreed with 2 (5.4%) strongly agreeing and a mean of 3.59 calculated. In response "The website has FAQs (frequently asked questions)." 1 (2.94%) strongly disagreed 2 (5.4%) disagreed, 10 (27.03%) were neutral, 18 (48.65%) agreed and 6 (16.22%) strongly agreed. A mean of 3.7 was calculated for this question meaning that the respondents are satisfied with the level of communication available in Bank B.

Bank C Communication

A Mean of 3.87 was calculated for this set of 5 questions used to the communication component of bank C. In response to questions "The "Help" system is helpful." 1 (5.88%) disagreed, 3 (17.65%) were neutral, 11 (64.71%) agreed and 2 (11.76%) strongly agreed. In response to question "There is provision of feedback when available." 1 (5.88%) disagreed, 1 (5.88%) was neutral, 12 (70.59%) agreed and 3 (17.65%) strongly agreed. The question "The site provides customer services through pop-up chats and email." 1 (5.88%) Disagreed, 1 (5.88%) neutral, 12 (70.59%) agreed while 3 (17.65%) strongly agreed. In response to "The site can automatically respond to a user's queries." 8 (47.06%) were neutral while a further 8 (47.06%) agreed with 1 (5.88%) strongly agreeing. In response "The website has FAQs (frequently asked questions)." 1 (5.88%) 2 (11.76%) were neutral, 11 (64.71%) agreed and 3 (17.65%) strongly agreed. The

individual means for the questions were quite high leading to the conclusion that the respondents felt that these were done satisfactorily.

CONNECTION

Table 4.21: Bank A, B and C Connection

Question	MEAN Bank A	MEAN Bank B	MEAN Bank C
The links to the others sites are useful and helpful.	4.02	3.95	3.53
It's easy to locate a certain page from any particular page.	3.96	3.89	3.76
The links are reliable.	4.1	4.08	4.12
Overall Mean	4.03	3.97	3.8

The above table shows the responses of the connection variable. There were 3 questions that were designed to answer this element. The means of the banks are Bank A 4.03, Banks B 3.97 and Bank C 3.8. These results show that the banks were very close to one another when it came to the facet/variable of connection. The answers to most of the questions for connection in each bank averaged a mean of almost 4. This shows that the banks were quite good when it came to satisfying the user needs especially when it came to the variables of connection and the questions/measurements relating to it.

Bank A Connection

A mean of 4.03 was found after doing the reliability test. In response to "The links to the others sites are useful and helpful," 1(1.1%) strongly disagreed, 1(1.1%) disagreed, 13 (14.29%) were neutral, 56 (61.54%) agreed with 20 (22%) strongly agreeing. A Mean of 4.02 was calculated. To the question "It's easy to locate a certain page from any particular page." 3 (3.3%) were of a negative opinion, 15(16.48%) took a neutral stance, 56 (61.54%) agreed, while 17 (18.68%) strongly agreed with a mean of 3.96. To the question "The links are reliable," had 1(1.1%) disagreeing, 10 (11%) were neutral, with 62(68.13%) agreeing and 18 (19.78%)" strongly agreeing. A mean if 4.1 was calculated for this question. Due to the high means derived, it meant that the respondents who have used Bank A were of the opinion that the connection variable of the bank's website was good.

Bank B Connection

A Mean of 3.97 was found after doing a reliability test. In response to "The links to the others sites are useful and helpful." 2 (5.4%) disagreed, 5 (13.51%) were neutral, 23 (62.16%) agreed with 7 (18.92%)

strongly agreeing and an individual question mean of 3.95 was also found. In the question "It's easy to locate a certain page from any particular page1 (2.94%) were of a negative opinion, 10 (27.03%) took a neutral stance. On the other end of the spectrum 18 (48.65%) agreed while 8 (21.62%) strongly agreed with a mean of 3.89. The question "The links are reliable." 6 (16.22%) were of a neutral opinion with 22 (59.46%) agreeing and 9 (24.32%)" strongly agreeing. A mean of 4.08 was calculated for this question. The high mean (5 point Likert scale) meant that there was customer satisfaction according to the respondents.

Bank C Connection

A Mean of 3.8 was found after doing a reliability test. In response to "The links to the others sites are useful and helpful." 2 (11.76%) disagreed, 5 (29.41%) were neutral, 9 (52.94%) agreed with 1 (5.88%) strongly agreeing. In the question "It's easy to locate a certain page from any particular page1 1 (5.88%) were of a negative opinion, 4 (23.53%) took a neutral stance. On the other end of the spectrum 10 (58.82%) agreed while 2 (11.76%) strongly agreed. The question "The links are reliable." 1 (5.88%) were of a neutral opinion with 13 (76.47%) agreeing and 3 (17.65%)" strongly agreeing. High individual means essentially interpreted as high level of user satisfaction.

COMMERCE

Table 4.22: Bank A Commerce

Question	MEAN Bank A	MEAN Bank B	MEAN Bank C
The site makes the user feel that their transactions are safe and not accessed by a third party.	4.1	4.05	3.94
Customers can track their transactions.	4.02	4.11	3.94
The site creates a confirmation page/message after successfully completing a transaction.	4.21	4.14	4.24
Overall Means	4.11	4.1	4.04

The above table show the responses of the commerce variable. There were 3 questions that were designed to answer this element. The means of the banks are Bank A 4.11, Banks B 4.1 and Bank C 4.04. These results show that the banks were very close to each other when it come to the facet/variable of commerce. The answers to most of the questions for commerce in each bank averaged a mean of over 4. This shows

that the banks were quite good when it came to satisfying the user needs especially when it came to the variables of context and the questions/measurements relating to it.

Bank A Commerce

A mean of 4.11 was among the outcomes of the reliability testing of the questions dealing with commerce. On the question "The site makes the user feel that their transactions are safe and not accessed by a third party. 2 (2.2%) disagreed, 13 (14.29%) were neutral, 53 (58.24%) agreed while 23 (25.27%) strongly agreed with a mean of 4.1 calculated. In response to the question "Customers can track their transactions." 2 (2.2%) disagreed, 10(11%) were of a neutral opinion. There were 63 (69.23%) of the respondents who agreed with the statement with a further 16 (17.58%) strongly agreeing. A mean of 4.02 was calculated. The site creates a confirmation page/message after successfully completing a transaction and had 2 (2.2%) of the respondents answering negatively with 8 (8.79%) being neutral. 50 (54.95%) were in agreement while 31 (34.07%) strongly agreed. A mean of 4.21 was calculated in this question. Owing to the high means derived for the question and also the high average mean for the variable of Commerce in Bank A it can be interpreted to mean that the respondents were quite satisfied with the feature and the functionalities dealing with commerce that were included in the website.

Bank B Commerce

A mean of 4.1 was among the outcomes of the reliability testing of the questions dealing with commerce. On the question "The site makes the user feel that their transactions are safe and not accessed by a third party. 6 (16.22%) were neutral, 23 (62.16%) agreed while 8 (21.62%) strongly agreed and a mean of 4.05 was calculated. In response to the question "Customers can track their transactions." 7 (18.92%) were of a neutral opinion. There were 19 (51.35%) of the respondents who agreed with the statement with a further 11 (29.73%) strongly agreeing and a mean of 4.11. The site creates a confirmation page/message after successfully completing a transaction 5 (13.51%) being neutral. 22 (59.46%) were in agreement while 10 (27.03%) strongly agreed with a mean of 4.14.

Bank C Commerce

A mean of 4.04 was among the outcomes of the reliability testing of the questions dealing with commerce. On the question "The site makes the user feel that their transactions are safe and not accessed by a third party (17.65%) were neutral, 12 (70.59%) agreed while 2 (11.76%) strongly agreed. In response to the question "Customers can track their transactions." 1 (5.88%) disagreed with another 1 (5.88%) being of a neutral opinion. There were 13 (76.47%) of the respondents who agreed with the statement with a further

2 (11.76%) strongly agreeing. Regarding the site creating a confirmation page/message after successfully completing a transaction, 13 (76.47%) were in agreement while 4 (23.53%) strongly agreed. A total mean of 4.04 and high individual question mean showed a high level of user satisfaction. These findings are similar to Ranawaka (2008) and Meyer (2008) that found the variable of commerce to have a high mean in terms of the responses.

7Cs from Bank A, B and C

Table 4.23: 7Cs from Bank A, B and C

7Cs User Interface Component/Element	Sub Component	Component Availability score		
		Bank A	Bank B	Bank C
Context	Linking between pages (C1.1)	0.9	0.92	1
	Aesthetics (Colour/graphics/ani mation) (C1.2)	0.96	0.97	0.96
Content	Offer mix Information (C2.1)	0.75	0.83	0.79
	Promotional Messages (C2.2)	0	0	0
	Evidence of Regular updating (C 2.3)	0.74	0.95	0.88
Community	Interactive user-to user communications (C 3)	0.77	0.69	0.74

Customisation	Ability of Tailoring and Personalization (C 4)	0.79	0.83	0.72
Communication	Communication between site and user (C5)	0.8	0.76	0.78
Connection	Availability of links to other sites (C6)	0.84	0.78	0.75
Commerce	Ability of performing banking transactions Online (C 7).	0.86	0.84	0.9
7Cs User Interface Component Availability Score Total		**7.41**	**7.57**	**7.52**

BANK A

The table above shows the availability score of the various components in the Bank A. The 7Cs User Interface Component Availability Score Bank A was 7.41 (out of 10). Most of the elements (components) were well represented apart from the 'promotional message' area. This meant that the bank was not looking to display messages and adverts that pertain to the user.

BANK B

The table above shows the availability score of the various components in the Bank B. The 7Cs User Interface Component Availability Score Bank B was 7.57 (out of 10). Most of the elements (components) were well represented apart from the 'promotional message' area. This meant that the bank was not looking to display messages and adverts that pertain to the user.

BANK C

The table above shows the availability score of the various components in the Bank C. The 7Cs User Interface Component Availability Score Bank A was 7.52 (out of 10). Most of the elements (components) were well represented apart from the 'promotional message' area. This meant that the bank was not looking to display messages and adverts that pertain to the user.

4.4 How do users perceive the current banking websites from an ease of use and usefulness perspective?

TAM data was collected from respondents that used E-banking (Appendix Section C of questionnaire) and those that did not use E-banking (Appendix Section D of questionnaire). Results presented in this section are only for respondents that used E-banking, since these results are aligned to the objectives of this study.

4.4.1 Reliability test

Reliability test refers to the test of consistency of the results. Reliability analysis allows you to study the properties of measurement scales and the items that make them up. The most common method of testing reliability is using Cronbach's Alpha. The Reliability Analysis procedure calculates a number of commonly used measures of scale reliability and also provides information about the relationships between individual items in the scale. Cronbach's Alpha coefficient ranges from 0 to 1, with the higher the value attained the more reliable (thus better) the instrument in this case questionnaire is.

Table 4.24: Reliability Test

Variable	No. of Items (Questions)	Cronbach's Alpha
Context	4	.995
Content	6	.994
Community	2	.985
Customisation	4	.992
Communication	5	.993
Connection	3	.991
Commerce	3	.990

As can be seen most of the variables are above the .600 mark which is regarded as the acceptable point value for a reliability test. This essentially means that if the questionnaire was to be redistributed or the research ran again, the outcomes would have a chance of having similar results.

4.4.2 Factor Analysis

For this study a five point Likert scale was used. A Likert scale is the most commonly used method when it comes to the summation scale. According to Cooper (2001) "Summated scales consist of statements that express either a favourable or an unfavourable response to the item of interest". The five-point used were "Strongly Disagree", "Disagree", "Neutral", "Agree" and "Strongly Agree". These five point Likert scale variables were used both in the 7Cs and the TAM related questions to streamline the scale across the study variables and for and also for it to be consistency during the analysis.

4.4.3 Hypotheses Testing: ANNOVA test

4.4.3.1 H1: Perceived ease of use positively influences the perceived usefulness of e-banking websites

Variable	Standardised coefficient β	Standard Error of β	t	p	R²
Perceived ease of use	.758	.072	4.668	P< 0.001	.979

Table 4.25: Independently, perceived ease of use explains.

4.4.3.2 H2: Perceived ease of use positively influences the attitude towards using of e-banking websites

Variable	Standardised coefficient β	Standard Error of β	t	p	R²
Perceived ease of use	.536	.026	5.231	P< 0.001	.892

Table 4.26: Attitude of user toward system.

4.4.3.3 H3: Perceived usefulness positively influences attitude towards using of e-banking

Variable	Standardised coefficient β	Standard Error of β	t	p	R²
Perceived usefulness	-.853	.006	31.206	P < 0.001	.727

Table 4.27: Perceived usefulness influences the attitude towards using.

4.4.3.4 H4: Perceived usefulness positively influences the actual system use of e-banking

Variable	Standardised coefficient β	Standard Error of β	t	p	R²
Perceived usefulness	.523	.050	2.454	P < 0.001	.913

Table 4.28: Perceived usefulness affects the actual system usage

4.4.3.5 H5: Attitude towards using positively influences to actual system use

Variable	Standardised coefficient β	Standard Error of β	t	P	R²
Attitude towards using	.621	.425	4.289	P < 0.001	.823

Table 4.29: Attitude towards using affects and influences actual system usage.
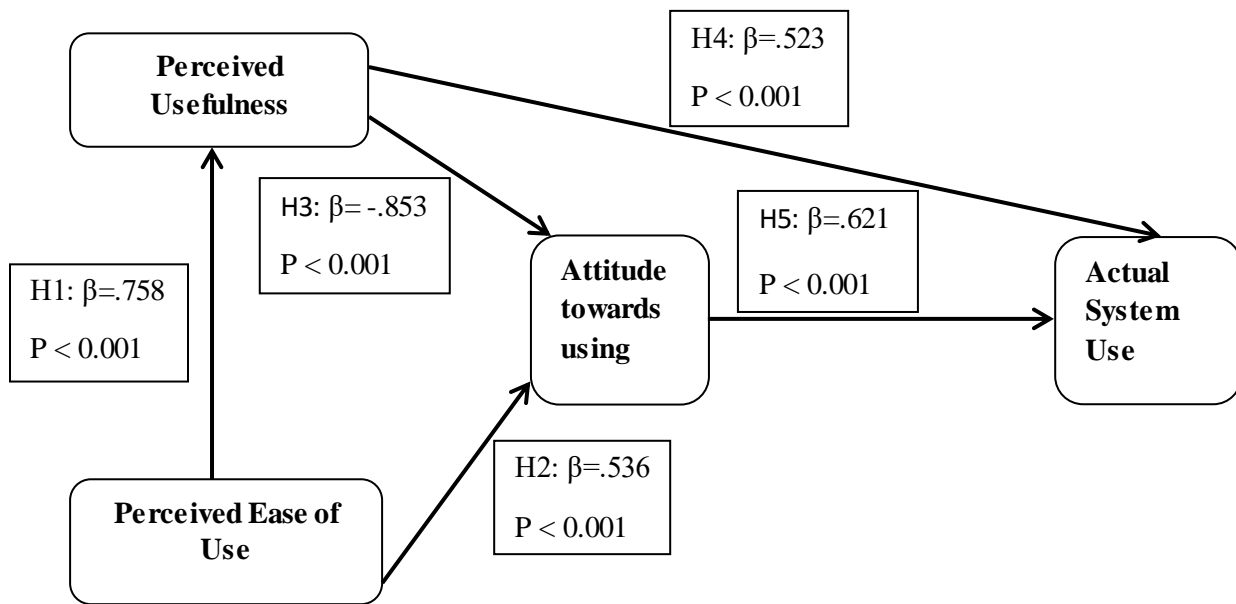
Figure 4.8: Hypotheses Testing: ANNOVA test

The hypothesis test above shows the relationship between the various factors that affect the actual usage of the e-banking websites. The hypothesis' rises from the research questions in addition to the literature review done.

H1: Perceived ease of use positively influences the perceived usefulness of e-banking websites

The R^2 value measures the closeness of the data presented to the regression line that has been plotted (Safeena et al. 2011). Essentially it shows the relationship between the variables with respect to the level of influence they have on another variable (Safeena et al. 2011). For example, the first hypothesis (H1) surmises that Perceived ease of use positively influences the perceived usefulness of e-banking websites. When the regression analysis is done the R^2 value found is .979. It can therefore be concluded that independently, perceived ease of use explains 97.9% of perceived usefulness of e-banking websites. This means that perceived ease of use positively affect the perceived usefulness. This can be further explained by saying that perceived ease of use influences to a large degree how people perceive the usefulness of e-banking.

H2: Perceived ease of use positively influences the attitude towards using of e-banking websites

The second hypothesis (H2) surmises that Perceived ease of use positively influences the attitude towards using of e-banking websites. When the regression analysis is done the R^2 value found is .892. Standardised coefficient β is .536, Standard Error of β .026, t 5.231 the p value being P<0.001. Attitude of user toward system explains 82.3% of actual system use, on its own.

H3: Perceived usefulness positively influences attitude towards using of e-banking

The third hypothesis (H3) surmises that Perceived usefulness positively influences attitude towards using of e-banking. When the regression analysis is done the R^2 value found is .727. Standardised coefficient β is -853, Standard Error of β .006, t value -31.206, the p value being P<0.001. During this test it was found that Perceived usefulness influences the attitude towards using e-banking at a rate of 72.7%

H4: Perceived usefulness positively influences the actual system use of e-banking

The fourth hypothesis (H4) surmises that perceived usefulness positively influences the actual system use of e-banking. When the regression analysis is done the R^2 value found is .913. Standardised coefficient β is -523, Standard Error of β .050, t value 2.454, the p value being P<0.001. The conclusion of this test is that Perceived usefulness affects the actual system usage at a rate of 91.3%

H5: Attitude towards using positively influences to actual system use

The fifth hypothesis (H5) surmises that Attitude towards using positively influences to actual system use. When the regression analysis is done the R^2 value found is .823 Standardised coefficient β is .621, Standard Error of β .425, t value 4.289, the p value being P<0.001. Attitude towards using affects and influences actual system usage at a rate of 82.3%

4.5. Which 7Cs framework components correlate with perceived ease of use and perceived usefulness TAM factors?

4.5.1 Principal Components' analysis
PCA is a data reduction technique that aims at maximising the value of data contained within constructs/variables. It creates scores that can then be used for further analysis such as correlation and regression analysis. The table below shows the computed scores. The rankings just depict the importance of each score in the determination of the overall score. Each score is a representation of how much each variable should be multiplied in the quest to determine the overall score for an entire construct. Thus, for instance, the overall PCA for the Context construct of the 7Cs' framework is obtained as follows: Variable 1x. 533+Variable 2x.798+Variable 3x.650+ Variable 4x.723. However, the PCA scores and subsequent correlation and regression analysis were performed only on data from those who indicated that they have already used e-banking. PCA was performed on variables pertaining to the 7Cs' framework as well as Perceived ease of use and perceived usefulness.

Table 4.30: Component analysis for Context

Context		
	Loadings/scores	Rankings
The Layout is consistent from page to page.	.533	4
The website has an appealing look and feel.	.798	1
The design does not distract from the content	.650	3
The links are logically linked and easy to move back and forth.	.723	2

Component analysis for the Context variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.31: Component analysis for Content

Content		
	Rankings/scores	Rankings
The level of challenge (navigation and ease of use) found in the websites page is appropriate for all users (both intermediaries and frequent users)	.691	1
There is proof of constant updating	.480	5
The search criteria designed is reasonable and easy to find the services required.	.422	6
The home page includes a "search" input box.	.490	4
The e-banking website provides a clear description of the service (transaction, balance checking etc.).	.622	2
The homepage shows the most recent content.	.513	3

Component analysis for the Content variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.32:Component analysis for Community

Community		
	Loadings/scores	Rankings
There is interactive user to user communication e.g. a pop-up chat.	.698	1
It is possible to interact with other customers.	.698	1

Component analysis for the Community variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.33: Component analysis for Customisation

Customisation		
	loadings	Rankings
Are you able to tailor and personalize the webpage to suit your individual needs?	.374	4
Can the site adjust the content according to your response?	.441	3
Page layout and content can be personalised according	.486	2
The site responds to each user as an individual	.517	1

Component analysis for the Customisation variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a

descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.34: Component analysis for Communication

Communication		
	Loadings/scores	Rankings
The "Help" system is useful.	.762	1
There is a provision for feedback	.668	3
The site provides customer services through pop-up chats and email.	.643	4
The site can automatically respond to a user's queries.	.710	2
The website has FAQs (Frequently asked questions).	.312	5

Component analysis for the Communication variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.35: Component analysis for Connection

Connection		
	Loadings/scores	Rankings
The links to other sites are useful and helpful	.490	3
It is easy to locate a certain page from any particular page.	.547	2
The links are reliable	.550	1

Component analysis for the Connection variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.36: Component analysis for Commerce

Commerce		
	Loadings/scores	Rankings
The site makes the user feel that their transactions are safe and not accessed by a third party.	.136	3
Customers can track their transactions.	.602	1
The site creates a confirmation page/message after successfully completing a transaction.	.548	2

Component analysis for the Commerce variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.37: Component analysis for Perceived ease of use

Perceived ease of use		
	Loadings/scores	Rankings
There is substantial support from e-banking services providers	.697	2
I know how to access e-banking services	.624	4
In my place of work, I am able to access e-banking websites.	.731	1

I can easily understand the process of e-banking services	.689	3

Component analysis for the Perceived Ease of Use variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components.

Table 4.38: Component analysis for Perceived usefulness

Perceived usefulness		
	Loadings/scores	Rankings
E-banking services are useful to me	.561	3
People who are important to me recommend the usage of e-banking services.	.574	2
Using e-banking services is a good idea.	.621	1

Component analysis for the Perceived Usefulness variable is shown in the above table. This is meant to show the correlation each variable has to the other variable. The ranking show that the analysis was done in a descending order. This is so because the highest ranked component is given a ranking of 1 with the next highest being given 2. Component analysis shows the relation between the components. The overall scores derived from the PCA were then used to establish the existence or non-existence of a correlation between the individual 7Cs constructs and the PEU and PU.

4.5.2. Correlation Analysis

Pearson product-moment correlation coefficient is a measure of the strength of the linear relationship between two variables (Lane, 2013). Pearson's coefficient r can range from -1 to 1. An r coefficient of -1 indicates a perfect negative linear relationship between variables while a coefficient of 0 indicates lack of linear relationship between variables. Conversely, if the r coefficient has a value of 1, the linear relationship between variables is perfectly positive. Cohen (1988) argues that a correlation coefficient of .10 depicts a weak association between variables, while a correlation coefficient of .30 is considered moderate. If r equals or is greater than .50, there is a strong correlation between the variables.

The results of the Pearson correlation analysis between the 7Cs constructs and PEOU and PE indicate that Context is positively but moderately correlated with PU (r=.314, p=.000). Although Content is positively related to PEOU, the relationship appears to be weak (r=.239, p=.004). Customisation is weakly correlated with PU (r=.202, p=.015) and PEOU (r=.216, p=.009). Connection is positively but weakly correlated with PU while Commerce is strongly and positively correlated PU. None of the 7Cs were negatively related to the TAM constructs. This means that in cases where there is a significant relationship, the increase in the perceptions that e banking websites have good context, customisation, connection and provide a platform to conduct business transactions, will trigger an increase in the perception of the Website Usefulness. Additionally, the increase in the perceptions that e banking websites have good content and customisation will contribute to the increase in the PEOU.

Correlation analysis between 7Cs Constructs and Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

Table 4.39: Correlation analysis between 7Cs Constructs and Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

		REGR factor score Perceived usefulness	REGR factor score Perceived ease of use
REGR factor score Context	Pearson Correlation	.314**	.126
	Sig. (2-tailed)	.000	.132
	N	145	145
REGR factor score Content	Pearson Correlation	.080	.239**
	Sig. (2-tailed)	.339	.004
	N	145	145
REGR factor score Community	Pearson Correlation	.131	.109
	Sig. (2-tailed)	.116	.192
	N	145	145
REGR factor score Customisation	Pearson Correlation	.202*	.216**

	Sig. (2-tailed)	.015	.009
	N	145	145
REGR factor score Communication	Pearson Correlation	.124	.144
	Sig. (2-tailed)	.139	.085
	N	145	145
REGR factor score Connection	Pearson Correlation	.278**	.144
	Sig. (2-tailed)	.001	.084
	N	145	145
REGR factor score Commerce	Pearson Correlation	.588**	.082
	Sig. (2-tailed)	.000	.327
	N	145	145
	N	145	145

Since the TAM's PEOU and PU have a significant influence in the adoption of e banking websites, thus, context, content, customisation, connection, commerce have an influence on the adoption of e banking websites (through the established correlations with the PEOU and PU). However, community and communication constructs do not have an influence on the adoption of e banking websites since there is no established correlation between them and the PEOU or PU.

Furthermore, the analysis reveals that the 7Cs constructs taken together as a whole (i.e. as one unit) are significantly correlated with Perceived Usefulness (r=.240, p=.004). Thus, in the overall analysis, the 7Cs contribute to perceptions that e banking websites are useful. The findings have implications for both business e banking website designers. E-banking website designers need to be cognisant of the 7Cs constructs and consider them when designing such websites. Particularly, customisation i.e. the ability to adjust and personalise a webpage to suit individual needs to be given considerable attention as it has a significant influence both on the PEOU and PU of the website.

Correlation between the 7Cs combined and PEOU/PU

Table 4.40: Correlation between the 7Cs combined and PEOU/PU

		REGR factor score_All 7Cs combined
REGR factor score_Perceived usefulness	Pearson Correlation	.240**
	Sig. (2-tailed)	.004
	N	145
REGR factor score_Perceived ease of use	Pearson Correlation	.083
	Sig. (2-tailed)	.323
	N	145

Table 4.40 indicates that all 7Cs taken as a single construct are significantly correlated with perceived TAM's usefulness. The results further demonstrate that, in the South African context, the 7Cs are perceived to add value to the e-banking users. The significant positive correlation means that an increase in the perception of the existence of the 7Cs in the websites' design increases the perception that such websites are useful. Hence, website designers need to adhere to the 7Cs framework particularly in order to add value (users' perception of the usefulness) to their websites. It is anticipated that once users perceive some value (as far as usefulness is concerned) associated with using e-banking, they will continue using them and probably refer them to their peers.

4.6 CONCLUSION

From the above analysis, it can be seen that perceived ease of use and perceived usefulness do affect the usage of e-banking websites. The findings also show that the more an individual feels that a technology is useful the easier it is for them to adopt and use it.

CHAPTER 5: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter discusses the findings as delineated in the previous chapter. Firstly, it provides a recap of the research objectives and questions. It further proceeds to discuss the findings in general and then in light of the research questions.

The research questions are as follows:

- Research question 1: Which components of the 7Cs framework are incorporated into the design of South African banking websites?
- Research question 2: How do users perceive the current banking websites from an ease of use and usefulness perspective?
- Research question 3: Which 7Cs framework components correlate with perceived ease of use and perceived usefulness TAM factors ?

The following section discusses the findings in relation to the research questions.

5.2. Discussion of results and recommendations in relation to the research questions

5.2.1. Research question 1: Which components of the 7Cs framework are incorporated into the design of South African banking websites?

The 7Cs Framework constructs as developed by Rayport and Jaworski (2000) are Context, Content, Community, Customisation, Communication, Connection and Commerce. In this research, such constructs were evaluated against e-bankers' perceptions. As far as context is concerned, respondents who use Bank A, B and C websites perceived that the design of the websites does not distract from the content, the links are logically linked, the layout is consistent from page to page and the websites are appealing by their look and feel. The overall means for the banks' context factor is skewed towards above 4 (in a Likert scale of 1 to 5 from strongly disagree to strongly agree) which means respondents who use the banks' website had a positive perception of the context in which the banks' online services are presented. In addition, the majority of e-bankers (from Bank A, B and C) either agree or strongly disagree that the websites' content such as navigation and ease of use are appropriate both to intermediaries and frequent users. In addition, they perceive evidence

of constant updating and a clear description of service provided through the websites. Furthermore, they perceive that the search criteria design is reasonable and makes it easy to find the required services and most of the websites' home pages display the most recent content and have a search input box.

As far as the community factor is concerned, e-bankers perceive that the websites have interactive user to user communication through a chat pop-up and made it possible to interact with customers. E-bankers further revealed that the websites could be customised to suit individual needs, and the websites could adjust their contents according to individuals' responses, the page layouts and contents could be personalised according to users' tastes and the e-banking websites responded to each user as an individual. They further reveal that, in terms of communication, the websites provided feedback, the websites' help system was useful, the websites provided chats and e-mail options and had an automated response to users' queries and they had the FAQs (Frequently Asked Questions) option. Connection as perceived by the websites users was satisfactory. The links from the banks' websites to other websites were assessed to be useful and helpful, the websites design made it easy to locate a specific page from any of the banks' web pages and also the links were deemed to be reliable. The commerce component was assessed to be satisfactory as well. Specifically, e-bankers felt safe when conducting transactions on the websites, customers could track their transactions and the website provided feedback after completing a successful transaction.

Hence, overall, respondents who are using banks' websites (e-bankers) perceived that all the 7Cs constructs (which were evaluated through the variables discussed above) were represented in the banks' websites (Bank A, B and C). This finding is in contradiction with Ranawaka (2008) as he alluded that some elements of the 7Cs constructs were not present within the banks' websites in Sri Lanka. This was also found to be the same case with Meyer (2008). Among the findings was that attitudinal behaviours and user perception greatly influenced the adoption of e-banking among the citizens of South Africa (El-Qirem 2012).

5.2.2. Research question 2: How do users perceive the current banking websites from an ease of use and usefulness perspective?

To answer this question, the Technology Acceptance Model (TAM) was used to test the following hypotheses:

H1: Perceived ease of use positively influences the perceived usefulness of e-banking websites.

H2: Perceived ease of use positively influences the attitude towards using of e-banking websites.

H3: Perceived usefulness positively influences attitude towards using of e-banking

H4: Perceived usefulness positively influences the actual system use of e-banking

H5: Attitude towards using e-banking websites positively influences to actual system use

The statistical ANNOVA analysis confirmed the hypotheses. Thus, from the perspective of e-bankers, perceived ease of use of e-banking websites influence the positive perception of such websites as being useful. In addition, perceived ease of use and perceived usefulness, respectively have a positive influence on the attitude towards using e-banking websites. Furthermore, the perception that e-banking websites are useful positively influence the actual use of e-banking websites. e bankers' attitude towards using e-banking websites positively influence their actual use of the websites. Hence, the findings pertaining to the TAM constructs can be depicted as follows:
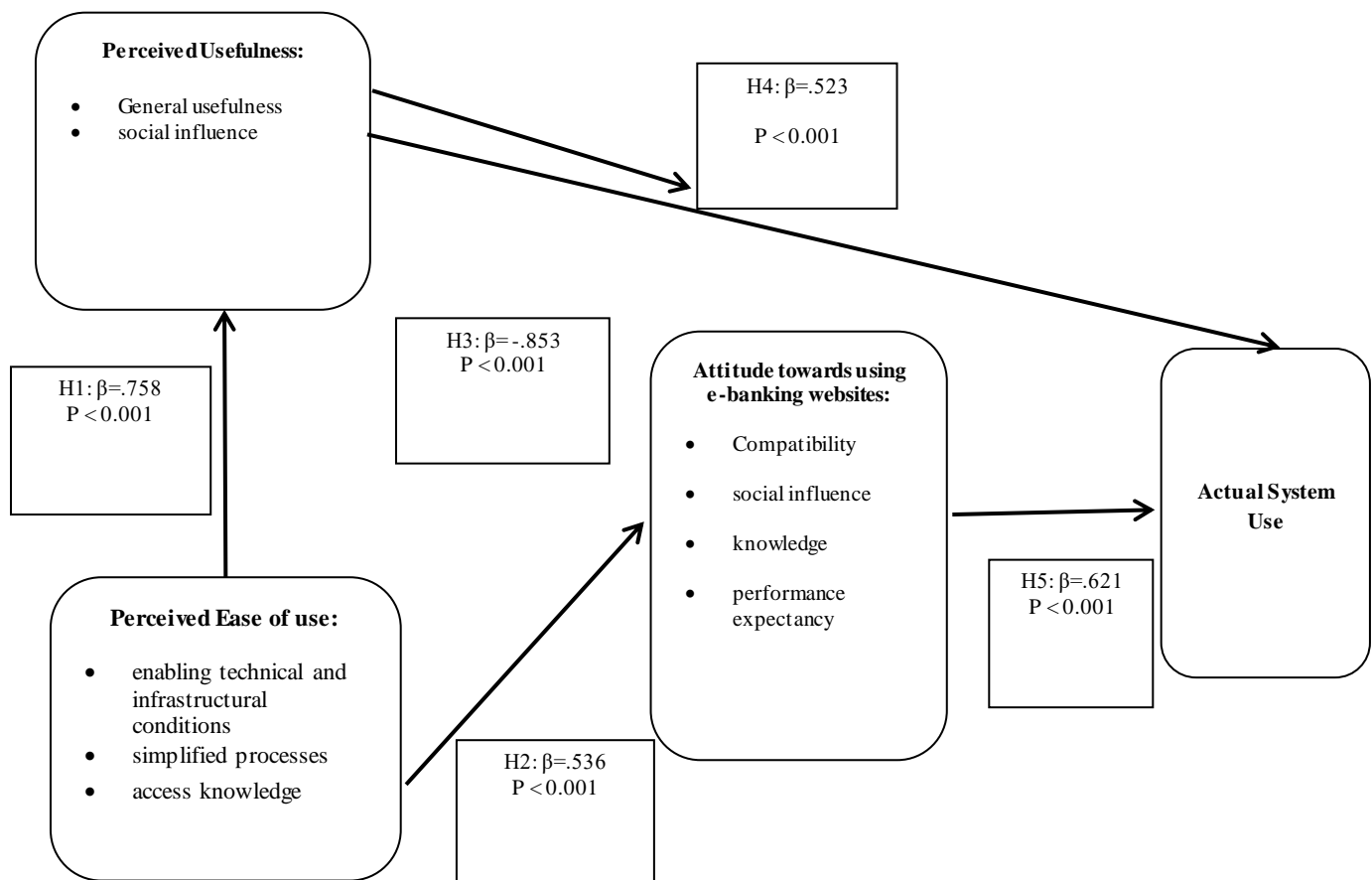
Figure 5.1: Hypothesis relations

These findings concur with Najjar (2011), Liao and Chung (2001) and Alafeef et al. (2012) who found that perceived ease of use is an important determinant towards the usage of e-banking websites. This finding was similar to the one El-Qirem (2012). These findings are also similar to Liao and Chung (2001) who

found that perceived usefulness is a major factor that influence the acceptance of a technology. Similar to the research findings, Park (2009) found that attitude towards the use of a technology influence the actual use of the technology. Perceived usefulness of e-banking websites was captured through the lenses of the following factors: General usefulness (E-banking services are useful to me), social influence (People who are important to me recommend the usage of e-banking services).

This research factors that form part of the perceived ease of use construct can be categorized as enabling technical and infrastructural conditions (there is substantial support from the e-banking service provider, in my place of work I am capable of accessing e-banking websites), simplified processes (I can easily understand the process of e-banking services) and access knowledge (I know how to access e-banking services.). This research incorporated variables pertaining to compatibility (e-banking services are compatible with my lifestyle.), social influence (I have a person I can contact in case of service problems affecting e-banking services, e-banking services usage is encouraged by the people I interact with,), knowledge (I have the necessary knowledge of how to access e-banking services), performance expectancy (e-banking services help me to finish tasks that I could have spent a lot of time doing faster) as part of the attitude constructs of the TAM model. Importantly, they perceive that e-banking websites are convenient ways to provide banking services than the brick-and-mortar traditional way of providing such services. They further alluded that e-banking is compatible with their life styles. This could mean that most of the e-bankers are tech savvy as there is an increasing number of people in South Africa that access the internet through the medium of cellphones and other mobile devices (World Wide Worx, 2012).

Therefore, there is a need for banking institutions to invest in consistent research to understand life styles within various group of customers in order to tailor their online products/services and the web interfaces to suit the customers' life styles. Furthermore, there is a need to identify opinion leaders and influential personalities that could be used to encourage e-banking adoption. Users' perception and factors influencing such perception is a common theme within the studies pertaining to the adoption of e-banking in South Africa and other parts of the world.

5.2.3. Research question 3: Which 7Cs framework components correlate with perceived ease of use and perceived usefulness TAM factors?

A Pearson correlation analysis reveal that some 7Cs framework constructs are correlated with the Perceived ease of use and perceived usefulness as depicted in the following figure:
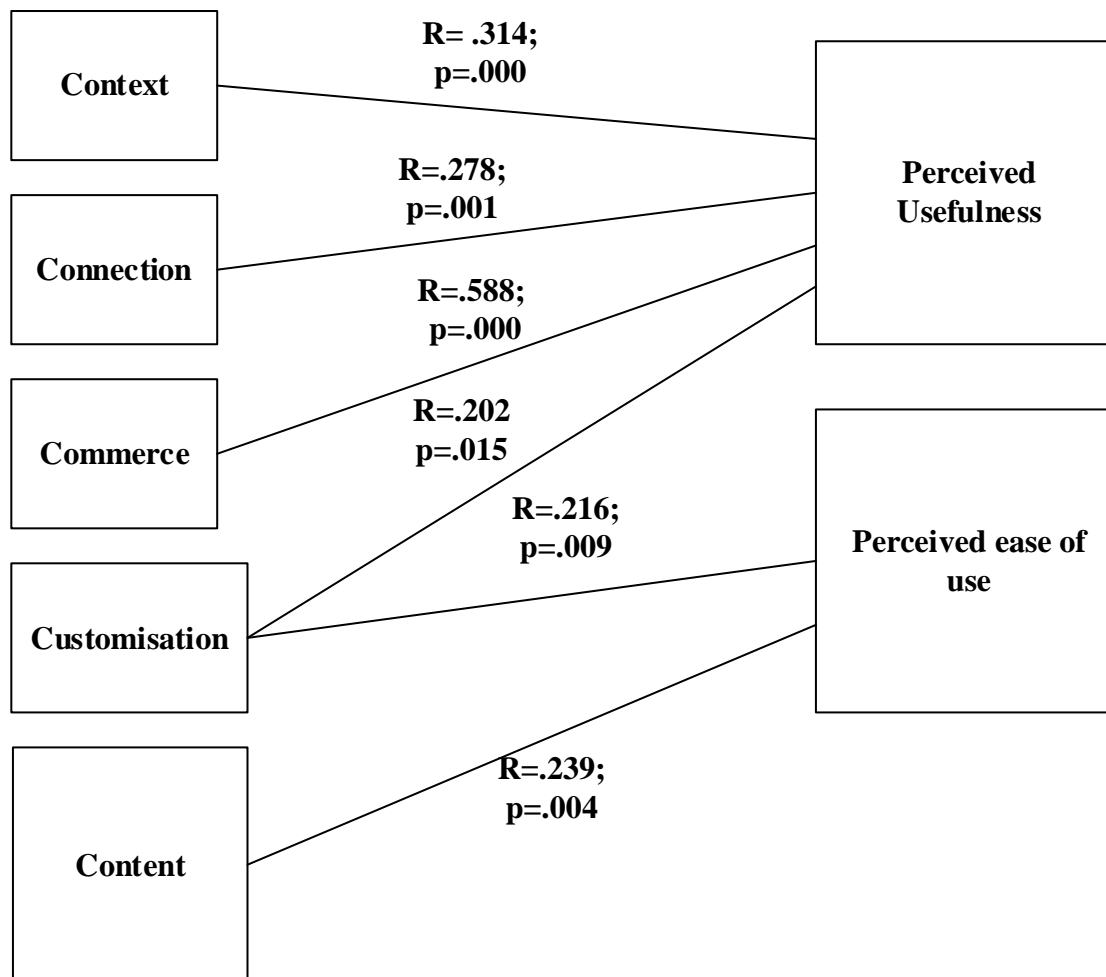
Figure 5.2: Relationship between 7Cs and TAM in relation to the variables of the study

The diagram above shows the relationship between the facets of 7Cs and Perceived usefulness and the perceived ease of use form the TAM theoretical framework.

From what can be seen form the above figure it was determined that the users' perception of the 7Cs framework constructs affect the P.E.U. and P.U. of the websites.

This study investigated the influence of factors related to the user interface design on electronic banking website use. To this end, this research firstly demonstrated that there is an increasing number of South Africans who conduct online transactions. This is mainly demonstrated through the increase in the B2C e-commerce as well as B2B. Hence, this research is particularly relevant in the South African context. Specifically, there is a need to know how existing and potential banks' customers perceive the kind of services provided by banking institutions. Most importantly, the online medium (i.e. website) through which such services are dispensed is an important component that may hinder or encourage people's use of banking websites.

Through a literature review, this research identified the benefits associated with e-commerce adoption. The benefits may be even more considerable as 4 780 000 were Internet users in 2006 (Pather, 2006). The figure is considered to be even higher which creates online business opportunities and reshaping the nature of customer-bank interaction. From a sample of 384 respondents conveniently sampled, the study employed a questionnaire as the instrument for data collection. This research investigated the implementation of the 7Cs' constructs within the South African banks' websites and the impact of the constructs on bank customers' perceptions of e-banking (through banks' websites). The findings reveal that not only the 7Cs' constructs are present in the investigated South African banks' websites but also there is a significant and positive correlation between some of the 7Cs constructs and customers' perceptions of the perceived ease of use and usefulness of the e-banking websites.

5.3. Limitations of the study

Due to the finite timeframe allocated for the study and difficulty in creating a sampling frame, performing this research within the entire sample space, using a stratified sampling technique presented a problem. This is so because in order to collect data according to such sampling, significant financial resources would be required. However, such resources were not at the researcher's disposal as this research was self-funded. Hence, financial resources were limited which then informed the decision to use a non-stratified sampling technique. This study could be replicated on a much larger scale with a larger sample size which would enable the results to be generalised by using random sampling techniques. The study could also be replicated using other theoretical frameworks like the Unified Theory of Acceptance and Use of Technology (UTAUT) which focuses more on the acceptance rather than the perception of a technology.

5.4. Recommendations

The study found that majority of the 7Cs components are implemented in South African banking websites and that perceived ease of use and perceived usefulness positively influenced attitude towards use and actual usage. Furthermore, perceived ease of use and usefulness correlated with 7Cs framework components. Hence, this study recommends that designers of e-banking use the 7Cs framework when designing website to increase the ease of use and usefulness of these website. The 7Cs component, Commerce had highest correlation with perceived usefulness and therefore designers and developers must implement sites that allow for secure transactions and the ability of users to track their transactions.

5.5. Conclusion

In conclusion, the factors affecting the use of e-banking websites are the perceived ease of use and the perceived usefulness. Potential users of the e-banking websites take into account how e-banking will help them to access the services in an easier way and it can be concluded that perception goes a long way into the adoption and usage of a technology. Therefore, in order to fully take care of the needs of the end user and to ensure the full functionality of the website, function and features added to the e-banking website will need to take into account the end users' needs.

REFERENCES

Arain M and Campbell M (2010), *What is a pilot or feasibility study? A review of current practice and editorial policy*, BMC Medical Research Methodology 2010, 10:67 http://www.biomedcentral.com/1471-2288/10/67

Al-Smadi M (2012), *Factors Affecting Adoption of Electronic Banking: An Analysis of the Perspectives of Banks' Customers*, International Journal of Business and Social Science Vol. 3 No. 17; September 2012

Alafeef M, Singh D and Ahmad K (2012), *the influence of Demographics Factors and User Interface on Mobile Banking Adoption: A Review*

Aliaga M. and Gunderson B. (2000) Interactive Statistics. Second edition, Prentice Hall

Bringula and Basa (2011), *Factors Affecting Faculty Web Portal Usability, Educational Technology & Society*, *14* (4), 253–265.

Barry,H(2014), Global social lender to rival SA banks. Available at http://www.moneyweb.co.za/archive/global-social-lender-to-rival-sa-banks-2/ [Date accessed: 13/08/2016].

Brown I and Molla A (2005), *Determinants of Internet and Cell Phone Banking Adoption in South Africa*

Cracknell S (2004), *Electronic banking for the poor – panacea, potential and pitfalls*, Small Enterprise Development Vol.15 No.4

DeLone W and McLean E (2003), *The DeLone and McLean Model of Information Systems Success: A Ten-Year Update,* Journal of Management Information Systems (19:4), Spring, pp 9-30.

Egger F,N (2001), *Affective Design of E-Commerce User Interfaces: How to Maximise Perceived Trustworthiness*, Helander, Khalid and Tham (Editors) Proceedings of the International Conference on Affective Human Factors Design Asean Academic Press, London, 2001

El-Qirem I, A (2012), *Critical Factors Influencing E-Banking Service Adoption in Jordanian Commercial Banks: A Proposed Model, International Business Research;* Vol. 6, No. 3; 2013 ISSN 1913-9004 E-ISSN 1913-9012 Published by Canadian Centre of Science and Education

Frost and Sullivan (2014), Future of B2B Online Retailing. Available at http://www.frost.com/sublib/display-report.do?searchQuery=6.7+billion&id=MA4E-01-00-00-00&bdata=aHR0cDovL3d3dy5mcm9zdC5jb20vc3JjaC9yXRhbG9nLXNlYXJjaC5kbz9zZWFyY2hUeXBlPXN1YiZyZF9zdWJtaXQ9R28mcXVlcnlUZXh0PTYuNytiaWxsaW9uJnNvcnRCeT1SCeT1SQH5AU2VhcmNoIFJlc3VsdHNAfkAxNDcxMTA2MjQxNjE3 [Date accessed: 13/08/2016].

Gao J (1999), *Introduction to E-commerce,* IEEE Industry Engineering Chapter at San Jose University

Gehrke D and Turban E (1999), *Determinants of Successful Website Design: Relative Importance and Recommendations for Effectiveness*, of the 32nd Hawaii International Conference on System Sciences – 1999

Green and Van Belle J, P (2003), *Customer Expectations of Internet Banking in South Africa*, Proceedings of the Third International Conference on Electronic Business (ICEB 2003), Singapore, 9-13 Dec 2003 pp. 283-285

Holden and Rada (2011), *Understanding the Influence of Perceived Usability and Technology Self-Efficacy on Teachers' Technology Acceptance,* Understanding the Influence of Perceived Usability and Technology Self-Efficacy on Teachers' Technology Acceptance JRTE | Vol. 43, No. 4, pp. 343–367 | ©2011 ISTE | iste.org

Hollowgrass R (2008), Web Architecture, School of Information UC Berkley

Hoppe R, Newman P and Mugera P (2001), *Factors Affecting the Adoption of Internet Banking in South Africa: a Comparative Study,* University of Cape Town 2001.

Hubbona G and Kennick E (1996), *The Influence of External Variables on Information Technology Usage Behaviour,* Proceedings of the 29th Annual Hawaii International Conference on System Sciences – 1996

IT News Africa, 2015. Study reveals that E-commerce is on the rise in South Africa. Available at http://www.itnewsafrica.com/2015/03/study-reveals-that-e-commerce-is-on-the-rise-in-south-africa/ [date accessed: 13/08/2016].

Ivory M and Hearst M (2002), *Improving Web Site Design*, IEEE INTERNET COMPUTING 1089-7801/02/$17.00 ©2002 IEEE

Jahangir N and Begum N (2008), *The role of perceived usefulness, perceived ease of use, security and privacy, and customer attitude to engender customer adaptation in the context of electronic banking,*

African Journal of Business Management Vol.2 (1), pp. 032-040, February, 2008 Available online at http://www.academicjournals.org/AJBM ISSN 1993-8233 © 2007 Academic Journals

Kim J and Lee J (2002), *Critical design factors for successful e-commerce systems*, BEHAVIOUR & INFORMATION TECHNOLOGY, 2002, VOL. 21, NO. 3, 185±199

Kripanont N (2007), *Examining a Technology Acceptance Model of Internet Usage by Academics within Thai Business Schools*, Victoria University Melbourne, Australia 2007

Laing T and Copeland T (2008), *User Interface Designs: Designs for an updated user interface, emphasizing simplicity and functionality with ease of use for multiple types of users*.

Latham B (2007), *Quantitative Research Methods,* ENGL 5377Spring 2007

Lee Y,E and Benbasat I (2004), *A Framework for the study of customer Interface Design for Mobile Commerce*, International Journal of Electronic Commerce, Vol. 8, No. 3, pp. 79–102.Copyright © 2004 M.E. Sharpe, Inc.

Liao Z and Chung M, T (2001), *Internet-based e-banking and consumer attitudes: an empirical study* Information & Management 39 (2002) 283–295

Lightner N, J (2003*), What users want in e-commerce design: effects of age, education and income*, ERGONOMICS, 2003, VOL. 46, NO. I - 3, 153- 168

Maldonado C and Resnick M (2002), *Do common user interface design patterns improve navigation, PROCEEDINGS of the HUMAN FACTORS AND ERGONOMICS SOCIETY 46th ANNUAL MEETING – 2002*

Mayhew, D.J.*(1992). Principles and Guidelines in Software User Interface*.Prentice-Hall, Englewood Cliffs,NJ.

Medyawati H, Christiyanti M and Yunanto M (2011), *e-banking adoption analysis using technology Acceptance model (tam): empirical study of bank Customers in bekasi city*, International Conference on Innovation, Management and Service IPEDR vol.14(2011) © (2011) IACSIT Press, Singapore

Mehmood et al. (2014), *The Factors Effecting E-banking Usage in Pakistan,* Journal of Management Information System and E-commerce June 2014, Vol. 1, No. 1, pp. 57-94 ISSN: 2373-7603 (Print), 2373-7638 (Online) Copyright © The Author(s). 2014. All Rights Reserved. Published by American Research Institute for Policy Development

Meyer N (2008), *E-commerce Interface Design Parameters and their relation to website popularity*, University of Pretoria

Najjar L, J (2011), *Designing e-commerce user interfaces*, In K-P. L. Vu & R. W. Proctor (Eds.), Handbook of human factors in Web design (Second edition) (pp. 587-598). Mahwah, NJ: Lawrence Erlbaum.

Nielsen, J. (1995). 10 usability heuristics for user interface design. *Fremont: Nielsen Norman Group.[Consult. 20 maio 2014]. Disponível na Internet*.

Ozok A,A (2010), *Design Guidelines for Effective Recommender System Interfaces Based on a Usability Criteria Conceptual Model: Results from a College Student Population*

Park S,Y (2009), *An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use e-Learning*. Educational Technology & Society, 12 (3), 150–162.

Pather S(2006), *E-commerce Information Systems Success: A South African Study*, Cape Peninsula University of Technology

Perkins and Annan (2013)*, Factors affecting the Adoption of Online Banking in Ghana: Implications for Bank Managers,* International Journal of Business and Social Research (IJBSR), Volume -3, No.-6, June, 2013

Peter A (2015), *Factors Affecting the Adoption of Internet Banking in Nigeria*, Eastern Mediterranean University July, 2015 Gazimağusa, North Cyprus

Phelas C, Bloch A and Seale C (2011), *Structured methods: interviews, questionnaires and observation*,

Purwati Y (2011), *Standard Features of E-Commerce User Interface for the Web*, International Refereed Research Journal www.researchersworlld.com Vol. – II, Issue –3, July 2011 [77]

Ranawaka, R.A.K (2008), *Comparing the User-Interface Design of Banking Websites: A Survey on the Sri Lankan Banking Sector*, IEEE. 2008

Rouse, M. user interface (UI). Available at http://searchsoa.techtarget.com/definition/user-interface [date accessed: 14/08/2016].

Sekaran U & Bougie R (2010), Research Methods for Business: A skill building approach

Singh A (2005), *A Guide to Improving the E-Commerce User Interface Design,* Durban Institute of Technology, Durban, South Africa 2005

Smith, S.L and Mosier, J.N., 1984. Design guidelines for user-system interface software. The Mitre Corporation, Bedford, MA.

Sommerville I (2004), *User Interfaces Design*, Software Engineering, 7th edition

South Africa Banking Sector overview (November 2012), the banking Association of South Africa.

South African E-banking Survey (Columinate 2012) Reveals Surge in Mobile Banking (accessed 17th July 2013):http://paymentsafrika.com/payment-news/e-banking-survey-reveals-surge-in-mobile-banking/#sthash.TC1vUG2q.dpuf

Stefaner et al (2009), *Dynamic Taxonomies and Faceted Search Theory practice and experience,* The Information Retrieval Series , Vol. 25, 2009, XVII, 340 p., Hardcover, (c) Springer Science and Business Media, Inc.

Stewart C. (2016), How innovative companies should capitalise B2B ecommerce. Available at http://ventureburn.com/2016/02/innovative-companies-capitalise-b2b-ecommerce/ [Date accessed: 13/08/2016].

Tavakol M and Dennick R (2011), *Making Sense of Chronbach's Alpha,* International Journal of Medical Education. 2011; 2:53-55, ISSN: 2042-6372

Welie M and Trætteberg H (2000), Interaction Patterns in User Interfaces, PLoP 2000 conference

World wide worx (2012), *Executive Summary Internet Access in South Africa 2012*

Zviran M, Glezer C and Anvi I, (2005), *User satisfaction from commercial web sites: The effect of design and use*, Information & Management xxx (2005)

APPENDIX
QUESTIONNAIRE

University of KwaZulu-Natal
School of Management, I.T. & Governance
Discipline of Information Systems

Factors of user interface design that influence usage of e-banking websites

Masters of Commerce Research Project

Researcher: Ravi Ogutu (072876268, raviogutu@gmail.com)

Supervisor: Ashley Marimuthu (031 260 7444, Marimuthum@ukzn.ac.za)

Research Office: Ms. P Ximba (031 260 3587)

I, Ravi Ogutu, am an MCom student in the School of Management, I.T. & Governance at the University of KwaZulu-Natal. You are hereby invited to participate in a research project entitled: Factors of user interface design that influence usage of e-banking websites. The purpose of this study is to: Find the **factors of user interface design that influence the adoption and utilisation of e-banking websites**

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will be maintained by the researcher and the School of Management, I.T. & Governance and your responses will not be used for any purposes outside of this study.

If you have any questions or concerns about participating in the study, please contact me or my research supervisor at the numbers listed above. It should take you approximately 10 minutes to complete the questionnaire.

Yours sincerely

Ravi Ogutu

Instructions:

•   Please complete this voluntary questionnaire.

•   The answers given will be anonymous.

•   Please be honest in your responses.

•   There is no correct/incorrect answer.

•   If a question does not apply to you specifically, leave it blank.

*Note: E-banking services include checking account balances, checking statements and doing online banking transactions.

SECTION A: BIOGRAPHICAL DETAILS

Please indicate your response to the question by ticking (☐) the appropriate box

1. Your gender:
   ☐ Female   ☐ Male

2. Your racial grouping:
   ☐ Black   ☐White   ☐Indian
   ☐Coloured   ☐ Another group_____

3. What is your age Group
   ☐18-25   ☐   26-35   ☐   36-49   ☐ 50 and above

4. Employment status:
   ☐ Working   ☐Not Working   ☐Other

5. What is your level of exposure/awareness to e-banking services?
   ☐ Very Weak   ☐Weak   ☐Somewhat   ☐Strong   ☐Very Strong

6. Have you ever used e-banking services?
   ☐Yes (Please Continue) ☐No (Go to section D on page 9)

SECTION B: BANKS AND EBANKING
Please select the bank that you do your e-banking with

   ☐1. Standard Bank
   ☐2. First National Bank
   ☐3. Nedbank
   ☐4. Capitek Bank
   ☐5. Sasfin Bank Limited
   ☐6. African Bank Limited

☐7. First Rand Bank
☐8. ABSA
☐9. Development Bank of Southern Africa
☐10. Other

Please indicate your response to the question by ticking (☐) the appropriate box

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The layout is consistent from page to page.					
The website has an appealing look and feel.					
The design does not distract from the content.					
The links are logically linked and easy to move back and forth.					
The level of challenge (navigation and ease of use) found in the websites page is appropriate for all users (both intermediaries and frequent users).					
There is proof of constant updating.					
The search criteria designed is reasonable and easy to find the services required.					
The home page includes a "search" input box.					
The e-banking website provides a clear description of the service (transactions, balance checking etc.).					
The homepage shows the most recent content					
There interactive user-to user communications i.e. a chat pop-up.					
It is possible to interact with other customers.					
Are you able to Tailor and personalize the web page to suit your individual needs.					
The site adjusts the content according to your response.					
Page layout and content can be personalised according to your taste.					
The site responds to each user as an individual.					
The "Help" system is useful.					
There is provision of feedback when available.					
The site provides customer services through pop-up chats and email.					
The site can automatically respond to a user's queries.					
The website has FAQs (frequently asked questions).					
The links to the others sites are useful and helpful.					
It's easy to locate a certain page from any particular page.					
The links are reliable.					

The site makes the user feel that their transactions are safe and not accessed by a third party.					
Customers can track their transactions.					
The site creates a confirmation page/message after successfully completing a transaction.					
I Intend to continue using e-banking websites.					

SECTION C

E-banking continued....

1.   What do you use e-banking services for? (Please tick all that apply)

What do you use e-banking services for? (Please tick all that apply)
- ☐ Check Bank Balance
- ☐ To do transactions
- ☐ Checking Updates
- ☐ Money Transfers
- ☐ Check Statement
- ☐ Other (Please Specify): _____

2.   To what extent do you use the following avenues for e-banking services? (Please tick all that apply)

	Daily	A few times a week	Weekly	A few times a month	Less than a few times a month	Never
At work						
At home						
Cell phone						
From other mobile devices (smartphones, tablets, PDAs etc.)						

FACTORS THAT AFFECT ADOPTION

Select the ones that apply

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
E-banking services are useful to me.					
E-banking services help me to finish tasks that I could have spent a lot of time doing faster.					

E-banking services help me to improve my work productivity.					
I find e-banking services easy to use.					
I found it easy to learn how to use e-banking services.					
E-banking services are more convenient than traditional forms of service delivery.					
E-banking services usage is encouraged by the people I interact with.					
People who are important to me recommend the usage of e-banking services.					
In my place of work the usage of e-banking services has been encouraged					
There is substantial support from the e-banking service providers.					
In my place of work I am capable of accessing e-banking websites.					
I have the necessary knowledge of how to access e-banking services.					
I have a person I can contact in case of service problems affecting e-banking services.					
I like using e-banking services.					
E-banking services are compatible with my lifestyle.					
Using e-banking services is a good idea.					
I tested e-banking services first before deciding on using it.					
I saw a demonstration first on how to use e-banking.					
I know how to access e-banking services.					
I can easily understand the process of e-banking services.					
I Intend to use e-banking in the future					

Thank you very much for taking the time to complete this questionnaire!

SECTION D: FACTORS AFFECTING ADOPTION OF E-BANKING

FACTORS THAT MAY AFFECT ADOPTION

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
E-banking services could be useful to me.					
I might find e-banking services easy to use.					
I could easily learn how to use e-banking services.					
E-banking services could be more convenient than traditional forms of service delivery.					
E-banking services usage is encouraged by the people I normally interact with.					
People who are important to me recommend the usage of e-banking services.					
In my place of work the use of e-banking services has been encouraged.					
There is substantial support from the Internet service providers.					
E-banking services could increase my status.					
E-banking services could be compatible with my lifestyle.					
I could test e-banking services first.					
I could see a demonstration first.					
I can easily understand the process of e-banking service access.					
I can learn the process of e-banking services easily.					
I intend to use e-banking in the future					

Thank you very much for taking the time to complete this questionnaire!