

ACCEPTANCE OF THE ELECTRONIC METHOD OF FILING TAX RETURNS BY SOUTH AFRICAN TAXPAYERS

by

Mr. R.W.Jankeeparsad

11351862

Submitted in partial fulfilment of the requirements for the degree

M Com in Taxation

in the

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

at the

UNIVERSITY OF PRETORIA

Study leader:

Dr. Gerhard Nienaber

Date of submission:

13-11-2013

ABSTRACT

ACCEPTANCE OF THE ELECTRONIC METHOD OF FILING TAX RETURNS BY SOUTH AFRICAN TAXPAYERS

by

RAPHAEL WARREN JANKEEPSAD

STUDY LEADER: DR SG NIENABER

DEPARTMENT: TAXATION

DEGREE: MAGISTER COMERCII (TAXATION)

The South African government has benefited to date from information technology in many ways. The importance of understanding and influencing South African citizens' acceptance of E-Government services is critical, given the substantial investment in government communication, information system technology and the potential for cost saving. One of the most successful E-Government initiatives, the electronic filing system (eFiling), which allows tax returns to be filed electronically, has been available to taxpayers since 2006. Despite many taxpayers adopting this method, a large number are still using the traditional manual method of filing tax returns. Using behavioural intention to predict actual usage, this study utilised the decomposed theory of planned behaviour with factors adjusted specifically for South Africa as a developing country. This is done to identify the possible determinants of user acceptance of the eFiling system among South African taxpayers. Based on empirical data gathered from two questionnaire based surveys, perceived usefulness, perceived ease of use, compatibility, subjective norms, facilitating conditions, computer self-efficacy and trust proved to be significant determinants of behavioural intention. For taxpayers using the manual method, lack of facilitating conditions such as access to computer and internet resources was the most significant barrier to eFiling usage whilst taxpayers using the electronic method reported perceived usefulness as the primary determinant in their decision to use eFiling. Understanding these acceptance factors can extend our knowledge of taxpayers' decision making and lead to better

planning and implementation of future E-Government initiatives in South Africa and other developing countries.

Keywords:

E-Government

eFiling

Tax returns

Electronic filing system

ABSTRAK

AANVAARDING VAN DIE ELEKTRONIESE METODE VAN DIE INDIENING VAN BELASTINGOPGAWES DEUR SUID- AFRIKAANSE BELASTINGBETALERS

deur

RAPHAEL WARREN JANKEEPSAD

STUDIE LEIER: DR SG NIENABER

DEPARTEMENT: BELASTING

GRAAD: MAGISTER COMERCII (BELASTING)

Die Suid-Afrikaanse regering het tot op datum gebaat van inligtingstechnologie in baie opsigte. Die belangrikheid van begrip en om burgers se aanvaarding van E-Regeringsdienste te beïnvloed is van kritieke belang, gegewe die belegging in tegnologie en die potensiaal vir kostebesparing. Een van die mees suksesvolle E-Regeringsinisiatiewe, die elektroniese liasseerstelsel (eFiling), wat toelaat dat belastingopgawes elektronies ingedien is, is sedert 2006 vir belastingbetalers beskikbaar. Ten spyte van baie belastingbetalers se aanneming van hierdie metode, gebruik 'n groot aantal nog steeds die tradisionele handmetode van die indiening van belastingopgawes. Met behulp van gedragsvoorneme om werklike gebruik te voorspel, benut hierdie studie die ontbinde teorie van beplande gedrag met faktore wat spesifiek aangepas is vir Suid-Afrika as 'n ontwikkelende land. Dit word gedoen om die moontlike determinante van die gebruikers van die eFiling-stelsel onder Suid-Afrikaanse belastingbetalers te identifiseer. Gebaseer op empiriese data wat uit twee vraelys gebaseerde opnames gekry is, beskou nut, gemak van gebruik, verenigbaarheid, subjektiewe norme, die fasilitering van voorwaardes, rekenaar self-doeltreffendheid en vertrouwe het beduidende determinante van gedragsvoorneme bewys. Vir belastingbetalers wat die handmetode gebruik, is 'n gebrek aan fasiliteringstoestande soos toegang tot die rekenaar en internet bronne die

belangrikste struikelblok tot die gebruik van eFiling, terwyl belastingbetalers met behulp van die elektroniese metode berig beskou nut as die primêre bepaler in hul besluit om eFiling te gebruik. Begrip van hierdie faktore kan ons kennis van die belastingbetalers se besluitneming uitbrei en lei tot beter beplanning en implementering van toekomstige E-Regeringsinisiatiewe.

Sleutelwoorde:

E-Regeringsinisiatiewe

eFiling

Belastingopgawes

Elektroniese liasseerstelsel

ACKNOWLEDGEMENTS

It would not have been possible to write this dissertation without the help and support of the generous people around me, to only some of whom it is possible to give particular mention here.

- First and foremost, to my Lord and Saviour for the wisdom and persevering character that He has been bestowed upon me and for granting me so many opportunities in life;
- To my wife, Thanasha, thank you for your continuous support and understanding throughout my academic trajectory, especially when I was under pressure as I know my temper can be particularly trying. Your tolerance is a testament in itself of your unyielding devotion;
- To my parents, Anil and Arlene Jankeeparsad, thank you for instilling in me the importance of education and for constantly motivating and encouraging me to achieve more. It was under your guidance that I gained so much drive and an ability to tackle all challenges head on, for which my mere expression of thanks does not suffice;
- To my brother, Byron, thank you for always taking an interest in my studies and for your unequivocal support throughout;
- To my study leader, Dr Nienaber, thank you for your relentless efforts in guiding me through the conception, research and writing of this dissertation.

TABLE OF CONTENTS

CHAPTER 1.....	1
INTRODUCTION	1
1.1 BACKGROUND.....	1
1.2 PROBLEM STATEMENT	3
1.3 PURPOSE STATEMENT	3
1.4 RESEARCH OBJECTIVES / RESEARCH QUESTIONS	3
1.5 IMPORTANCE AND BENEFITS OF THE PROPOSED STUDY	4
1.6 DELIMITATIONS	4
1.7 DEFINITION OF KEY TERMS.....	5
1.8 CHAPTER OUTLINE	6
CHAPTER 2.....	8
LITERATURE REVIEW	8
2.1 INTRODUCTION	8
2.2 HISTORY OF EFILING.....	8
2.3 TECHNOLOGY ACCEPTANCE	9
2.4 TECHNOLOGY ADOPTION MODELS.....	11
2.4.1 Theory of Reasoned Action	11
2.4.2 Technology Acceptance Model	12
2.4.3 Theory of Planned Behaviour	14
2.4.4 Decomposed Theory of Planned Behaviour and Research model	15
2.5 RESEARCH MODEL CONSTRUCTS AND HYPOTHESES	17
2.5.1 Perceived usefulness (PU)	17
2.5.2 Perceived ease of use (PEOU)	18
2.5.3 Compatibility	18
2.5.4 Subjective Norms (SN)	19
2.5.5 Facilitating conditions	19

2.5.6	Computer Self-efficacy	20
2.5.7	Trust	21
2.6	CONCLUSION.....	23
CHAPTER 3.....		24
RESEARCH DESIGN AND METHODS.....		24
3.1	INTRODUCTION.....	24
3.2	DESCRIPTION OF INQUIRY STRATEGY AND BROAD RESEARCH DESIGN.....	24
3.2.1	A description of the proposed study's strategy of inquiry	24
3.2.2	A classification of the proposed study's overall research design.....	25
3.3	SAMPLING	26
3.3.1	Target population	26
3.3.2	Units of analysis	26
3.3.3	Sampling method and sample size.....	26
3.4	DATA COLLECTION	27
3.4.1	Survey method	27
3.4.2	Design of the questionnaire.....	28
3.4.3	Pilot test.....	29
3.5	DATA ANALYSIS	30
3.6	ASSESSING AND DEMONSTRATING THE QUALITY AND RIGOUR OF THE PROPOSED RESEARCH DESIGN.....	30
3.6.1	Minimising the impact of any bias.....	30
3.6.2	Validity and reliability of the study	31
3.7	RESEARCH ETHICS	32
3.7.1	Ethical clearance from the Research Ethics Committee at the Faculty of Economic and Management Studies at the University of Pretoria.....	32
3.7.2	Informed consent from each participant and ensuring anonymity of data collected	32

CHAPTER 4.....	34
ANALYSIS OF DATA.....	34
4.1 INTRODUCTION.....	34
4.2 SAMPLE DEMOGRAPHICS.....	34
4.2.1 Gender, age and educational profile of the respondents.....	34
4.2.2 Computer literacy of respondents, access to computer and internet facilities, and frequency of internet use	35
4.3 ANALYSIS OF THE RESEARCH MODEL CONSTRUCTS AND HYPOTHESES	39
Behavioural Intention.....	39
4.3.1 Perceived Usefulness.....	40
4.3.2 Perceived Ease of Use	41
4.3.3 Compatibility.....	43
4.3.4 Subjective Norms	45
4.3.5 Facilitating conditions	47
4.3.6 Computer self-efficacy.....	48
4.3.7 Trust	51
CHAPTER 5.....	53
CONCLUSION.....	53
5.1 INTRODUCTION	53
5.2 SUMMARY OF FINDINGS ADDRESSING THE RESEARCH OBJECTIVES	53
5.2.1 Manual tax filers	55
5.2.2 Electronic tax filers	56
5.3 IMPLICATIONS OF THIS STUDY	58
5.4 FUTURE RESEARCH	59
5.5 FINAL CONCLUSION	59
LIST OF REFERENCES.....	61

APPENDICES

APPENDIX A: 1 st draft of data collection instrument.....	67
APPENDIX B: Informed consent form.....	76
APPENDIX C: Graph depicting results for each construct.....	78
APPENDIX D: Results of each item in questionnaire.....	80

LIST OF FIGURES

Figure 1: Theory of Reasonable Action.....	11
Figure 2: Technology Acceptance Model (Davis <i>et al.</i> , 1989:985).....	12
Figure 3: Theory of planned behaviour (Ajzen, 1991:182).....	14
Figure 4: Research Model.....	17
Figure 5: Demographic differentiation.....	37

LIST OF TABLES

Table 1: Abbreviations used in this document.....	6
Table 2: Sample demographics.....	38
Table 3: Analysis of the Perceived usefulness construct.....	40
Table 4: Analysis of the Perceived ease of use construct.....	42
Table 5: Analysis of the Compatibility construct.....	44
Table 6: Analysis of the Subjective norm construct.....	46
Table 7: Analysis of the Facilitating conditions construct.....	47
Table 8: Analysis of the Computer self-efficacy construct.....	49
Table 9: Analysis of the Trust construct.....	52

ACCEPTANCE OF THE ELECTRONIC METHOD OF FILING TAX RETURNS BY SOUTH AFRICAN TAXPAYERS

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

User acceptance of electronic transactions has improved significantly over the past decade with more individuals using the internet as a medium of transaction. The results of an annual survey conducted by Mastercard report that the number of active internet users that engage in internet transactions has increased to 58 percent in 2012 from 44 percent in 2009 (Daniels, 2012:1).

Governments across the world have recognised the need to become an E-Government and migrate from traditional manual transactions to electronic transactions using the internet to provide services to its citizens. E-Government is defined as the process whereby government delivers information to citizens, business and public administration electronically (Lee, Irani, Osman, Balci, Ozkan, & Medeni, 2008:300). From the year 2000, the South African Government has taken steps to implement an E-Government across many spheres of government and has invested substantial amounts of money in implementing E-Government initiatives. In 2012, R405 million was spent in improving the South African government communication and information system (National Treasury Republic of South Africa, 2012:133). According to a survey performed by the United Nations, South Africa has been ranked as the third most developed E-Government in Africa (United Nations E-Government survey, 2012:15).

One of the most successful E-Government initiatives has been electronic filing (eFiling) which was introduced by the South African Revenue Services (SARS) in 2001. The official SARS eFiling website describes eFiling as a free, online process for the submission of tax returns and declarations and other related services. This free service allows taxpayers, tax practitioners and businesses to register free of charge and submit returns and

declarations, make payments and perform a number of other transactions with SARS in a secure online environment (SARS eFiling, 2013a).

Initially, eFiling was only used for the submission and payment of VAT and PAYE. The eFiling option was expanded in the 2006 tax season to include individuals who earned a basic salary and allowances. In the 2007 filing season, eFiling was made available to all individual taxpayers and this method allowed individuals to submit their tax returns without supplying supporting documents. To make use of eFiling, all taxpayers have to do is be a registered taxpayer, have a valid South African identity number and be registered on the SARS eFiling website. A username and password is then provided to gain secure access to the system (SARS eFiling, 2013b).

Over the past five years, SARS have made major improvements to the system in order to make the eFiling experience more user- friendly. Some of the initiatives undertaken by SARS include workshops to assist users in using the eFiling system, online videos detailing how to submit tax returns using eFiling, the introduction of a live online help facility and the release of an eFiling mobisite application which allows users to submit tax returns using their cellular telephones (South African Government News Agency, 2012).

Despite the technological advancement of the system and the initiatives undertaken to present eFiling as a more convenient and easier method to use during tax filing season, many South Africans have still not opted to use eFiling to submit returns. In the 2012 year of assessment, 4.9 million tax returns were assessed by SARS. Of these returns, 32 071 returns were submitted manually and 1.5 million taxpayers completed their returns at SARS branches (SARS, 2012:39). If SARS is to achieve their goal of paperless transactions and realise a return on their investment with the eFiling system, there is a need to understand the decision to accept the eFiling system by taxpayers and identify the factors that can affect their decision to use or not use this system.

Previous research conducted on the acceptance and adoption of electronic tax filing in other countries (e.g. Ramoo, 2006; Fu, Farn & Chao, 2006; Hung, Chang & Yu, 2006; Carter, Schaupp, Hobbs & Campbell, 2011), have found that there are various factors that can influence a taxpayer to make use of eFiling. Some of these factors include perceived ease of use, perceived risk, social influences, trust of the government, computer

self-efficacy and computer anxiety. To this researcher's knowledge, no such research has been conducted in South Africa to determine the factors that influence and deter South African taxpayers' from using eFiling.

1.2 PROBLEM STATEMENT

Although substantial investment has been made by SARS in implementing the eFiling system and various initiatives have been undertaken to make the eFiling experience as user friendly as possible, many South Africans have not bought into the eFiling concept. This is apparent from the number of manual returns submitted in the 2012 year of assessment (SARS, 2012:39). Whilst studies have been conducted in other developed countries, to this researcher's knowledge no such study has been conducted in South Africa. The studies that this researcher utilised contain factors that are applicable to their specific countries, however, there are many unique determinants specific to South Africa as a developing country that need to be researched. The research problem that this study therefore aims to address is the identification of the determinants of user acceptance of eFiling in South Africa by South African taxpayers.

1.3 PURPOSE STATEMENT

The main purpose of this research is to investigate the determinants of user acceptance of eFiling in South Africa by South African taxpayers.

1.4 RESEARCH OBJECTIVES / RESEARCH QUESTIONS

The objectives of this study are:

- To perform a literature review on past studies to identify possible determinants of user acceptance of the eFiling system among taxpayers in South Africa.
- To undertake a questionnaire based survey amongst South African taxpayers with a view to identifying the determinants of user acceptance of the eFiling system among taxpayers in South Africa.

1.5 IMPORTANCE AND BENEFITS OF THE PROPOSED STUDY

This study should contribute greatly to an academic understanding of the taxpayers' acceptance of eFiling in South Africa as this is an area that has not received much research attention in the past.

From a practical point of view, the results from this study can be used by SARS to either improve the current eFiling system or to find ways to attract new taxpayers to utilise eFiling which will lead to monetary and temporal cost savings for both the taxpayer and SARS. By understanding eFiling adoptions factors, SARS can extend and enhance their knowledge of South African taxpayers' decision making which could lead to better strategic planning.

The research conducted could identify specific demographics or groups of people with lower eFiling usage. Based on this, different advertising strategies could be targeted to this specific group of people which could increase the number of eFiling users.

The findings from this study may assist other governmental policy makers, governmental agencies, and system designers in improving future E-Government projects in South Africa.

1.6 DELIMITATIONS

The proposed empirical study has several limitations that need to be acknowledged:

- Firstly, the findings in this study cannot be generalised extensively to other countries around the world, as the scope of the study is confined to the cities of Durban and Pretoria in South Africa.
- Secondly, the findings in this study depend on the honesty of the respondents. Survey research is susceptible to participant bias as detailed in chapter three. It is generally believed that individuals tend to agree more with socially desirable answers and

disagree more towards socially undesirable answers rather than fully and truly express their own feelings and opinions (Ramoo, 2006:62).

- As survey research will be used to collect the data, the views of the participants will be those at the specific point in time of conducting the survey. The views of the greater taxpayer population may well differ when measured over a longer time period (Leedy & Ormrod, 2010:187).

1.7 DEFINITION OF KEY TERMS

This study involves a number of key concepts. The manner in which these key terms are defined for the purpose of this study is considered below:

Behavioural intention: refers to an individual's intention to use a specific information system for some purpose either presently or sometime in the future (Carter, Schaupp & Mcbride, 2011b:3).

Compatibility: “the degree to which an innovation is perceived as being consistent with the existing values, needs, and past experiences of potential adopters” (Moore and Benbasat, 1991:195).

Computer self-efficacy: refers to the judgment of one's ability to use a computer and information system (Wang, 2002:338).

Facilitating conditions: refers to the resource factors, such as computer equipment, and technology issues that may inhibit or promote usage (Fu, Farn and Chao, 2006:113).

Perceived behavioural control: the user's perception of his or her control over performance of a specific behaviour (Mathieson, 1991:175).

Perceived ease of use: the degree to which an individual believes that using a particular information system will be free of effort (Davis, 1989:320).

Perceived usefulness: the degree to which a person believes that using a particular information system would enhance his or her performance (Davis, 1989:320).

Subjective Norm: refer to an individual's perception of significant others' opinions on whether or not he or she should perform a particular behaviour (Chau & Hu, 2001:702).

The following is a list of the abbreviations used in this study:

Table 1: Abbreviations used in this document

Abbreviation	Meaning
Efiling	Electronic Filing
PBC	Perceived behavioural control
PEOU	Perceived ease of use
PU	Perceived usefulness
SARS	South African Revenue Services
SN	Subjective Norm
TAM	Technology Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasonable Action

1.8 CHAPTER OUTLINE

This study is structured as follows:

Chapter 1: Introduction to the study

Chapter one sets out the background and the rationale behind the current study. The problem statement is clearly articulated with the research objectives that best address the problem statement. The importance and benefits are high-lighted, the delimitations and assumptions are discussed. The chapter also includes a list of abbreviations used throughout this study.

Chapter 2: Literature review

Chapter two presents a brief history of eFiling followed by a literature review of previous studies relevant to the problem statement. It further provides theoretical background on the matter of tax eFiling acceptance. A research model is then developed and hypotheses formed.

Chapter 3: Research design and methods

Chapter three discusses the research design and methodology applied in this study. It provides a rationale for the research process adopted. The data analysis and collection process is outlined and explained. The quality and rigour of the study is visited as well as the ethical considerations involved in survey research.

Chapter 4: Analysis of data

In chapter four, the results are provided with a discussion on how the data addresses the research objectives and hypotheses tested.

Chapter 5: Conclusion

Chapter five concludes with a summary of the research on this study and is compared on a high level with results from several other studies. Implications for SARS and other governmental agencies are then discussed.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, the evolution of eFiling internationally and in South Africa will be traced and evaluated. Thereafter, in order to address the research objective of performing a literature review on past studies to identify possible determinants of user acceptance of the eFiling system among South Africa taxpayers, the role of technology acceptance with regard to the eFiling system will be analysed. Finally, a research model will be developed together with the necessary hypotheses.

2.2 HISTORY OF EFILING

The concept of submitting tax returns electronically dates back to 1986 when the United States of America (USA) first introduced a system that processed 25 000 refund-only tax returns (Carter *et al.*, 2011b:3). Over the years, other countries such as Taiwan, Sweden, Malaysia and Australia have developed advanced systems enabling taxpayers to submit and process their tax returns electronically.

In its inception phase, despite the various governments' investment in these systems, most taxpayers were unwilling to give up their manual paper returns, resulting in an under utilisation of these systems. In 2008, more than 20 years after the initial introduction of electronic tax filing in the USA, only 60 percent of taxpayers made use of the electronic system (Carter *et al.*, 2011b:3). In 2006, eight years after the roll out of the electronic tax filing system in Taiwan, only 40 percent of their taxpayers utilised the electronic system (Fu *et al.*, 2006:110).

Since its commencement, significant changes have been made to these eFiling systems by promoting usefulness, convenience and efficiency. The Swedish online tax system remains a pioneer in electronic tax filing offering taxpayers a variety of methods to submit their tax returns including the introduction of cellular phone submission in 2005.

Swedish taxpayers use their cell phones to sign a tax declaration that has already been prepared by the country's tax authority declaring that they agree with the calculations provided (Lewan, 2009:1).

In South Africa, eFiling was introduced by SARS in 2001 only for the submission and payment of VAT and PAYE. In the 2007 filing season eFiling was made available to all individual taxpayers. Returns could now be submitted electronically using the SARS eFiling website, or manually using the new 2-D barcode returns.

Like all the other countries that introduced an electronic tax system, many South African taxpayers continued to file their tax returns using the conventional manual method. Through various initiatives undertaken by SARS including workshops to assist users of the eFiling system and online videos detailing how to submit tax returns using eFiling, the number of taxpayers that used the system continued to grow. During the 2012 tax season, SARS rolled out two addition features, a live online help facility and an eFiling mobisite application which allows users to submit tax returns using their cellular telephones making the South African eFiling system one of the most advanced in the world.

However, despite these continuous improvements to the system, SARS have failed to achieve their goal of 100 percent paperless returns. Previous research into eFiling adoption suggests that technology acceptance and its various models provide an understanding of the factors that promote or hinder the use of an electronic tax system. This study posits that by understanding these factors, researchers, SARS and government policy makers can get a better understanding of a taxpayer's decision on whether to use the eFiling system or continue with the conventional manual tax return.

2.3 TECHNOLOGY ACCEPTANCE

Technology acceptance and usage is a key area of research in the field of information systems (Venkatesh, Morris, Davis & Davis, 2003:426). Technology acceptance refers to an individual's psychological state with regard to his or her voluntary, intended use of a specific technology (Fu *et al.*, 2006:111). The findings from previous technology user acceptance research in other countries suggest that when users are presented with a new

technology or software package, there are a number of factors that influence their decision about how and when they will use it (Hung, Chang & Yu, 2006:98). Research in this area has resulted in the development of several theoretical models with roots in information systems, psychology and sociology (Venkatesh *et al.*, 2003:425).

In the research on determining factors that influence information system usage, the effect of intention based models which use behavioural intention to predict actual usage has been explored. These models aim to identify factors that influence an individual's behavioural intention to adopt and use a specific technology. Considerable prior empirical research has reported a strong and significant causal link between intention and actual behaviour (Chau & Hu, 2001:701). These studies suggest that an individual's intention to use a specific system is positively correlated with their actual use of the system. Intentions are assumed to capture the motivational factors that influence an individual to perform a specific behaviour; they provide an indication of how hard people are willing to try, or how much of an effort they are planning to exert, in order to perform the behaviour (Ajzen, 1991:181). Szajna (1996) showed that in a situation where the technology being investigated has already been installed and is in use (like the eFiling system in South Africa), intentions are the preferred predictor of actual usage. Agarwal and Prasad (1999:367) argue that actual usage need not be measured where data is to be gathered at a single point in time and not longitudinally, and usage in a current time period would be based on beliefs and attitude in a preceding time period. Therefore, for the research design adopted in this study (as detailed in chapter three), intentions are more appropriate since they are measured contemporaneously with beliefs. Furthermore, "intention to use" has significant importance in the eFiling context, where taxpayers use is voluntary and essential to desired outcomes (Carter *et al.*, 2011b:4).

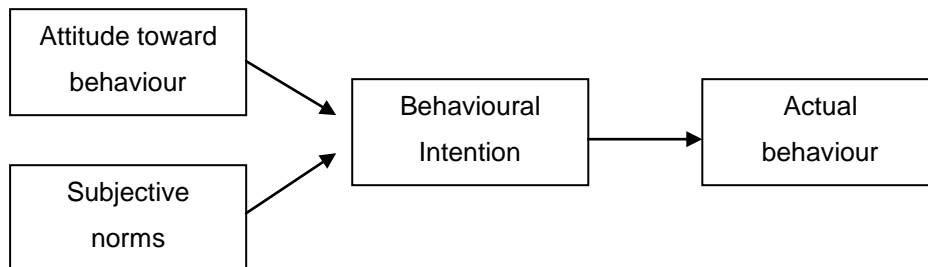
In order to achieve the objectives of this study, an eFiling adoption model using "intention to use" as a dependent variable will be developed to evaluate user acceptance of the eFiling system in South Africa. First, the different adoption models will be reviewed and, based on this, a model for taxpayers in South Africa for this specific study will be developed.

2.4 TECHNOLOGY ADOPTION MODELS

2.4.1 Theory of Reasoned Action

One of the earliest intention based models, the Theory of Reasoned Action (TRA), proposes that an individual's adoption behaviour is determined by his behavioural intention (Davis, Bagozzi and Warshaw, 1989:983). TRA (figure 1) suggests that an individual's behavioural intention depends on their attitude about the behaviour and subjective norms. Attitude about a specific behaviour refers to a person's feelings, which can be both positive and negative about engaging in a specific behaviour. Subjective norms refer to a person's perception that the people who are important to him think he should engage or abstain from performing a specific behaviour. Accordingly, TRA suggests that if an individual views the suggested behaviour as positive (attitude), and if they think that those individuals who are important to them will want them to perform the behaviour (subjective norm), this will result in a higher intention and they are more likely to perform this behaviour.

Figure 1: Theory of Reasonable Action



TRA is a very general model, and, as such, it does not specify the beliefs that are operative for a particular behaviour (Davis *et al.* 1989:984). Even though TRA was used to predict a wide range of behaviours, it was not tailored for information systems technology adoption and hence is not suitable for this specific study. However, its principles of attitude and subjective norms influencing behavioural intention which in turn positively correlates with actual behaviour, influenced the technology adoption models that were proposed thereafter.

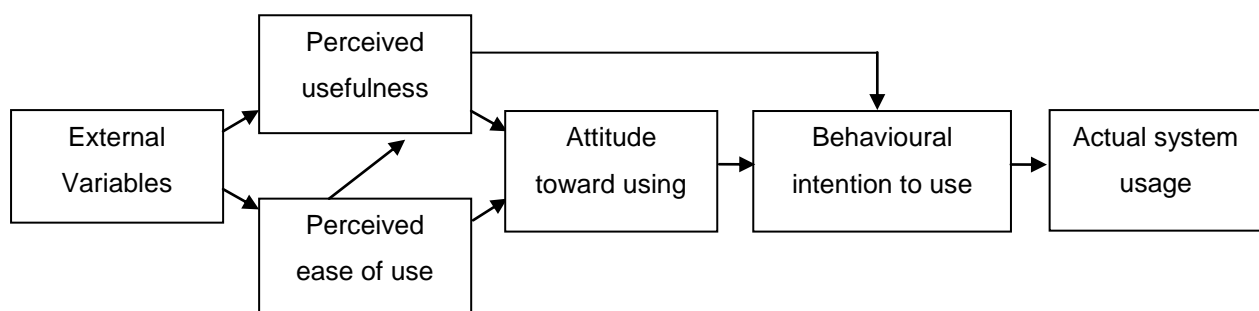
2.4.2 Technology Acceptance Model

The Technology Acceptance Model (TAM) developed by Davis (1989) is an adaptation of TRA and was tailored for information system contexts. According to Davis *et al.* (1989:985), the goal of TAM is to explain the determinants of computer acceptance in general and to explain user behaviour across a range of computing technologies and populations. TAM was designed to predict and explain information technology acceptance and usage on the job (Venkatesh *et al.*, 2003:428).

Similar to TRA, TAM (figure 2) suggests that information system usage is determined by behavioural intention, but differs from TRA in that behavioural intention is viewed as being determined by the person's attitude toward using the system and perceived usefulness. TAM posits that two particular beliefs, perceived usefulness and perceived ease of use, are of primary importance for information system technology acceptance behaviours. Both of these are influenced by external variables such as training, user support, documentation, prior experience and system features.

Thus in the eFiling context, perceived usefulness refers to the notion that the more a person believes that eFiling will enhance their efficiency, the greater the possibility of its use. In contrast to this, perceived ease of use postulates that the easier a taxpayer believes the eFiling system is to use, the more likely they are to use it. TAM also suggests that perceived usefulness is, to a certain extent, attributable to ease of use

Figure 2: Technology Acceptance Model (Davis *et al.*, 1989:985)



It is important to note that previous TAM research was focused on basic information technology usage such as personal computers and email usage. As such TAM has limitations in being applied beyond the workplace because its fundamental constructs of perceived usefulness and perceived ease of use do not fully reflect the variety of user task environment and constraints (Fu *et al.*, 2006:111). As Davis (1989:334) noted, future research is needed to address how other variables relate to usefulness, ease of use, and user acceptance. Therefore, additional constructs were needed to predict new information technology.

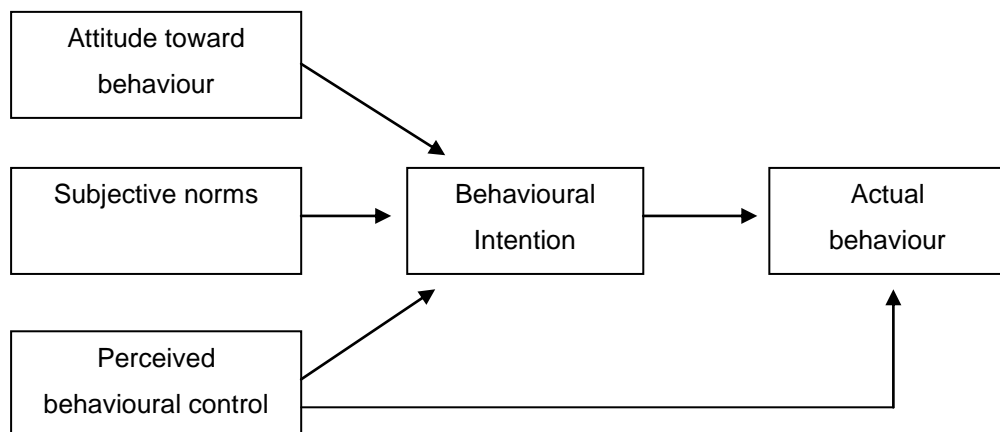
Research into eFiling adoption that used TAM to predict behavioural intention have adjusted the model by introducing new constructs and external variables to factor in changes in technology and the individual differences of the users of technology. Wang (2002) introduced perceived credibility as a new construct in addition to the existing two and used an individual difference variable, computer self-efficacy as the external variable. Wang (2002:339) argued that the behavioural intention of electronic tax filing systems could be affected by the taxpayers' perceptions of credibility regarding internet security and privacy of confidential, sensitive information.

Whilst Wang's study supported the hypotheses that all three constructs have a positive effect on behavioural intention, it is important to consider the environment in which the research was conducted. Wang (2002) conducted the study in Taiwan where electronic filing of tax returns was introduced in 1998, almost eight years before its introduction in South Africa thus illustrating the technological advancement of Taiwan in comparison to South Africa. Furthermore, Taiwan does not face the same facilitating challenges in terms resource (access to computer equipment and the internet) and technology (ability to use computers and the internet) as a developing country like South Africa. Therefore the use of TAM alone for this study is not appropriate in determining the factors affecting user acceptance and adoption of eFiling in South Africa because factors such as skills, resources and opportunities needed to use the eFiling system is not examined or considered.

2.4.3 Theory of Planned Behaviour

The theory of planned behaviour (TPB), proposed by Ajzen (1985), is an extension of the TRA and adds a new variable to the model in the form of perceived behavioural control (PBC). According to TPB (figure 3), an individual's actions are determined by their intentions and perceptions of control, while their intentions are influenced by attitudes towards behaviour, subjective norms, and perceptions of behavioural control (Hung *et al.*, 2006:100).

Figure 3: Theory of planned behaviour (Ajzen, 1991:182)



In the model, PBC refers to the internal and external constraints on the performing of the action. In an information system scenario this includes one's perceived ability to navigate and operate a computer system (self-efficacy) and access to the various resources required to access and use the system (facilitating conditions). Therefore in the eFiling context, TPB suggests that a taxpayer is more willing to file their tax return using eFiling if he or she has a positive attitude towards using eFiling, wants to conform with other important people's opinions on the use of eFiling, has access to the required resources to do so and has the necessary skills to use the system.

Research has been conducted in many fields on the accuracy of TPB in predicting intention and usage including information technology adoption in the work setting by

Venkatesh *et al.*(2003), acceptance of eGovernment services by Hung *et al.*(2006) and adoption of virtual banking Liao, Shao, Wang and Chen (1999). These studies have found that TPB predicts behavioural intention accurately.

2.4.4 Decomposed Theory of Planned Behaviour and Research model

In developing a model for eFiling adoption in South Africa, the constructs of both TAM and TPB will be used as neither of the two used independently have been found to provide consistently superior explanations or predictions of behaviour (Fu *et al.*, 2006:112). In a study by Mathieson (1991:187), a comparison was made between TAM and TPB to determine which model predicted user intention to use an information system more accurately. The results were that both explain intention quite well with TAM having a slight empirical advantage. Taylor and Todd (1995:166) found TPB to be a better predictor of intention than TAM. All studies comparing these two models have found the difference is not large enough to conclude that one model is better than the other.

The decomposed theory of planned behaviour (DTPB), which was proposed by Mathieson (1991) and tested initially by Taylor and Todd (1995), decomposes “attitude” using the PU and PEOU constructs from TAM. This has been supported both theoretically and empirically. Many studies have considered the role attitude has on intention to use information technology systems. For instance, Venkatesh and Davis (2000:188) removed the attitude construct from their model because attitude did not appear to fully mediate the effect of perceived usefulness and perceived ease of use on behavioural intention as was originally believed. Fu *et al.* (2006:113) also report that weak support of the relationship was found between attitudes toward a specific information system and behavioural intention.

This decomposed TPB model has advantages similar to TAM in that it identifies specific salient beliefs that may influence information systems usage but incorporates additional factors such as subjective norms and perceived behavioural control that are not present in TAM and hence should provide a more complete understanding of usage (Taylor & Todd, 1995:147). Taylor and Todd (1995:166) report that DTPB is a better predictor of intention

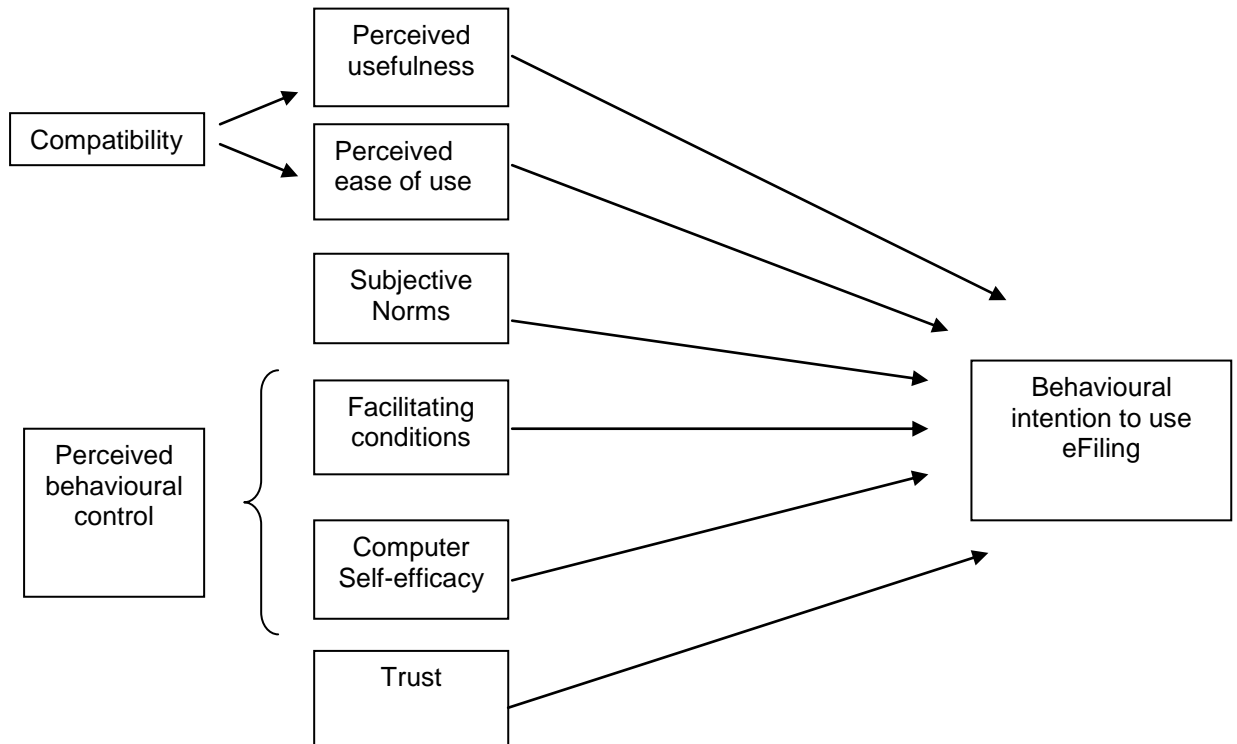
than TPB and TAM explaining 60% of the variance in intention. DTPB has been used by Chau and Hu (2001) and more recently Fu *et al.* (2006) in predicting users' intentions with regard to the use of technology.

The research model to be used in this study is the DTPB as appears in figure 4 on page 17 and includes a new construct in the form of "trust". In addition to this, "compatibility" will be used as an antecedent of PEOU and PU. The reasons for the use of the DTPB are as follows:

- The acceptance and use of the eFiling system is not entirely under taxpayer's control. The absence of facilitating conditions and individuals self-efficacy are possible adoption barriers;
- Interpersonal influences and social factors affect a taxpayer's decision in using the eFiling system;
- Perceptions regarding effort and skills required to use the system and benefit to be gained have a direct influence on the adoption of the eFiling technology;
- Trust of the internet as a whole as well as the eFiling system can play a significant role with regard to a taxpayer's decision to use eFiling as opposed to manual filing.

Each of the constructs will now be examined and hypotheses formed

Figure 4: Research Model



2.5 RESEARCH MODEL CONSTRUCTS AND HYPOTHESES

2.5.1 Perceived usefulness (PU)

Previous research into information systems adoption has found a positive correlation between PU and BI. Davis et al.(1989:997) report that PU is a major determinant of people’s intention to use a computer system. Chau and Hu (2001:712) concluded empirically in their research that perceived usefulness is the most significant factor for adoption of technology. This relationship has been validated further in the eFiling context by Wang (2002) in which it was determined that PU has a direct effect on BI. The ultimate reason that taxpayers will exploit the eFiling system is that they find the system useful to their tax return preparation and submission and will result in significantly less effort and time in completing the tax return task. Based on the effect that PU has on BI, this research tests the following hypothesis:

H1: Perceived usefulness will have a positive effect on behavioural intention to use the eFiling system.

2.5.2 Perceived ease of use (PEOU)

Like PU, research regarding information technology adoption has provided evidence of the significant effect PEOU has on BI. Agarwal and Prasad (1999:381) report that PEOU and PU exhibit roughly equivalent influence on BI. Wang (2002:344) observed that PEOU has a higher influence on BI than PU. Therefore in order for the eFiling system to be used more widely, users must perceive the system to be ea-sy to use and navigate through with as little software knowledge as possible. Information systems that are easier to use will be less threatening to the user (Moon & Kim, 2001:339). Based on the effect that PEOU has on BI, this research tests the following hypothesis:

H2: Perceived ease of use will have a positive effect on behavioural intention to use the eFiling system.

2.5.3 Compatibility

Compatibility has been chosen as the antecedent to both PU and PEOU in the DTPB. Compatibility refers to the degree to which the technology fits the potential adopter's previous experience, work practice and needs (Fu *et al.* 2006:113). The practice of tax filing for many individuals in South Africa involves the completion of a manual return. Over time, the taxpayer becomes accustomed to this method of filing returns and is unlikely to adopt new technology that is incompatible with his or her work practices and past experiences. This is more prevalent in taxpayers who do not use information systems in their day to day activities.

Considerable research has indicated that compatibility has a significant effect on technology adoption. Chau and Hu (2001) examined the effect of compatibility on PU and PEOU in technology acceptance amongst physicians and found that its effect is greater on PU than PEOU. Fu *et al.* (2006:119) concluded that compatibility is a significant

determinant of both PU and PEOU in the acceptance of eFiling in Taiwan. Based on the effect that compatibility has on PU and PEOU, this research tests the following hypothesis:

H3: Compatibility will have a positive effect on behavioural intention to use the eFiling system

2.5.4 Subjective Norms (SN)

A potential eFiling adopter will be more likely to use the eFiling system if those important to him (e.g. supervisors, mentors, friends, family etc.) have adopted the use of the eFiling system (Carter *et al.*, 2011b:5). In general, the role of SN on BI is unclear. Previous research has revealed mixed results. While some studies have shown no significant relationship between SN and BI (Davis *et al.*, 1989; Mathieson, 1991; Chau and Hu, 2001), other studies have found a significant relationship between SN and BI (Taylor and Todd, 1995; Venkatesh and Davis, 2000).

Taylor and Todd (1995:150) report that the inconsistency in the research with regard to the relationship between SN and BI may be due to the differences in the target behaviour being studied. In the context of eFiling adoption, taxpayer's will be influenced to use the system if their significant others are using the system and have reported good experiences with regard to efficiency and effectiveness. Hung *et al.* (2006:113) determined that with electronic filing, SN significantly affects non-users' intention to use. Therefore, this research tests the following hypothesis:

H4: Subjective Norms will have a positive effect on behavioural intention to use the eFiling system.

2.5.5 Facilitating conditions

Facilitating conditions such as access to resources and technology are particularly important for South Africa as a developing country. The challenges faced by South Africans in terms of access to computer equipment, software and the internet connectivity necessary to use eFiling can be a significant barrier to usage and intention to use. Fu *et*

al. (2006:121) determined that the absence of facilitating conditions constrained manual taxpayers' behaviour while Hung *et al.*(2006:112) found that facilitating conditions are a significant determinant of BI for electronic filing users.

If more taxpayers in South Africa have access to computer equipment, internet connectivity, training and the necessary access to support services regarding eFiling, there will be a positive effect on BI to use and actual usage. SARS have taken steps to educate and train taxpayers on the eFiling system and have made it possible to file returns using a mobile device such as a smartphone or tablet. Therefore, this research tests the following hypothesis:

H5: Facilitating conditions will have a positive effect on behavioural intention to use the eFiling system.

2.5.6 Computer Self-efficacy

The social cognitive theory which has been researched extensively in the past has been used in psychology, education and more recently information systems adoption. This theory postulates that an individual's beliefs about outcomes may be insufficient to influence actual behaviour if they doubt their own abilities to successfully undertake and perform certain behaviours or actions. This theory argues that self-efficacy is a direct determinant of an individual's behaviour.

Regarding the decision to use eFiling, taxpayers who consider computers too complex to use and believe that they will never be able to control these computers or use the necessary software and interface will prefer to avoid them and are less likely to use them to conclude the transaction in question.

Several research conclude that self-efficacy plays a critical role in understanding individuals' responses to information systems. Igbaria and livari (1995:598) determined empirically that self-efficacy is positively correlated with information system usage and observed that experience was the key determinant of self-efficacy followed by system support. In the same study, it was determined that self-efficacy has a positive direct effect

on reducing computer anxiety which refers to the fear an individual has when using a computer system.

Fu *et al.*(2006:121) determined that self-efficacy was higher for electronic filers than manual filers and concluded that individuals with higher self-efficacy in information systems have more options available and therefore feel free to choose whatever they want. The study on the acceptance of eFiling conducted by Wang (2002:344) revealed that the total effect computer self-efficacy has on behavioural intention was 0.28. More recently, Carter, Schaupp, Hobbs and Campbell (2011a:312) observed that self-efficacy has a significant influence on taxpayers intention to use a electronic system to file tax returns.

Based on these studies, a taxpayer who has confidence in his ability to use computer systems and various software applications will be more willing to use the eFiling system. This confidence is most likely to grow based on the taxpayer's past experiences with computers and information systems. Therefore, this research tests the following hypothesis:

H6: Computer self-efficacy will have a positive effect on behavioural intention to use the eFiling system.

2.5.7 Trust

The final construct of the model, trust, includes both trust of the government and trust of the internet.

Taxpayers must believe that the government has deployed the necessary resources and possesses the knowledge, skills and ability to deliver reliable and secure internet-based services. Users of E-Government services must satisfy themselves that the service providers such as SARS will implement security measures such as authentication and encryption and will monitor any potential threats to the integrity of the data being transmitted. Trust in the government agency providing the electronic service (SARS) hinges upon the belief that it is capable of providing electronic tax services effectively and

confidentially (Carter *et al.*, 2011b:6). Most users who decline to provide personal information over the internet report that they do not trust those who are collecting the data (Wang, 2002:336). Thus, taxpayers' perception of the extent to which the eFiling system is able to ensure that transactions are conducted without any breach of security or compromise of personal information is an important consideration that might affect the use of the eFiling system.

Trust of the internet refers to an individual's perception about transmitting sensitive information over the internet as well as conducting transactions using the internet. An individual's perception of the internet as a secure means of concluding transactions is a direct determinant of financial risk. March (2006:747) states that financial risk can be incurred when a customer's financial circumstances are damaged, for example, due to credit card fraud when conducting an online transaction. A typical online transaction requires providing access to or confirming personal, sensitive details such as physical address, bank details and contact details. Such access may be the source of worry for some consumers, especially if they are concerned about potential internet fraud or suffering financial loss (March, 2006:748). Similarly, the use of the internet to submit a tax return requires a taxpayer to submit very personal and sensitive information via the internet. There is the potential that this information could be intercepted and manipulated (Carter *et al.*, 2011a:308). The fear of such interception or manipulation could affect the use of the eFiling system by taxpayers.

Since the inception of eFiling in South Africa there has been an increase in email scams and phishing attacks in which the SARS brand is being manipulated and misused. Taxpayers are emailed with false emails made to look as if these were sent from SARS and includes the SARS letterhead and logo but are in fact fraudulent emails aimed at enticing unsuspecting taxpayers to part with sensitive information such as bank account details and identity numbers. The perpetrators also use mainstream bank names and logos as a facade in the emails in order to look as authentic as possible. SARS have released many press statements regarding this and continue to notify taxpayers via their website when new scams are identified. With the increase of internet fraud in the form of fabricated emails and general computer hacking, a risk averse person will opt not to use

eFiling in order to mitigate the risk of falling victim to these scams. This research tests the following hypothesis:

H7: Trust will have a positive effect on behavioural intention to use the eFiling system.

2.6 CONCLUSION

It is evident from the above mentioned studies conducted on the acceptance of eFiling that there are various factors that affect taxpayers' intention to use eFiling. These factors are dependent on the general attitude of the taxpayers, their influences as well as the absence of facilitating conditions necessary to use eFiling in South Africa. Taking these factors into account, the Decomposed Theory of Planned Behaviour is best suited to this study as the constructs are relevant to taxpayers in South Africa. The inclusion of the "Trust" construct provides a complete analysis of the specific factors that influence an individual to use eFiling as opposed to the traditional manual method of filing tax returns.

CHAPTER 3

RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

This chapter details the broad research design selected for this study including the specific inquiry strategy chosen, the sampling method, target population and units of analysis. Discussed thereafter are the data collection plan and the means by which the data was analysed.

At the end of this chapter, the methods used to ensure the quality and rigour of the research design, and the ethics applied to this study are delineated.

3.2 DESCRIPTION OF INQUIRY STRATEGY AND BROAD RESEARCH DESIGN

3.2.1 A description of the proposed study's strategy of inquiry

This is an empirical study in which new data was collected relating to the problem statement and research objectives identified in chapter one. The inquiry strategy that was used to obtain the data necessary for this study is that of survey research. In general, a survey involves the collection of information from individuals about themselves or a specific phenomenon being investigated (Forza, 2002:155). Survey research entails obtaining data about the attitudes and opinions of a sample of individuals, with the objective of extrapolating their responses to that of a greater population (Leedy & Ormrod, 2010:187).

Theory testing survey research involves the existence of a pre-existing theoretical research model, collection of data to test this model, the data analysis process and finally the interpretation of the results and concluding on the findings (Forza, 2002:155). For this study, which seeks to determine the factors that influence the acceptance of eFiling by South African taxpayers and uses a theoretical model to test hypotheses developed in chapter two, a survey based inquiry strategy was considered the most appropriate.

A study of this nature involves the willingness of taxpayers to voluntarily provide responses to questions that test the hypotheses developed. Due to many factors that affect a taxpayer's willingness to assist, such as time constraints, general attitude and interest in the problem being researched, a quantitative survey based research strategy was utilised to obtain data. This choice is supported by previous explanatory empirical studies that have also used quantitative survey approaches to determine factors that influence taxpayer's intention to use the eFiling method of submitting tax returns (Fu *et al.*, 2006:113; Ramoo, 2006:30; Hung *et al.*, 2006:101).

3.2.2 A classification of the proposed study's overall research design

The following are appropriate descriptors that best describe the broad research design of the proposed study:

- Empirical Research: The study involved the collection and analysis of data to be used specifically for this study and hence is classified as empirical (Saunders, Lewis & Thornhill, 2009:588).
- Cross sectional: This study is referred to as cross-sectional because the information that is gathered represents what is going on at only one point in time (Olsen & George, 2004:7). Data was collected during tax filing season in the months of August and September 2013.
- Primary data: Data was collected specifically for this research project and hence is classified as primary data (Saunders *et al.*, 2009:598).
- Quantitative: As the data was collected by using a survey based research design that generated numeric data, the study will be a quantitative study (Saunders *et al.*, 2009:598).
- Explanatory study: This type of study takes place when knowledge of a specific phenomenon has been articulated in theoretical form using well defined concepts, research models and propositions. Data collection is carried out with the specific

aim of testing the hypotheses developed in relation to the phenomenon (Forza, 2002:155). As this study aims to test the hypotheses developed which will explain and provide insight into the variables that affect a taxpayer's intention to use eFiling, this study will be classified as explanatory.

3.3 SAMPLING

The study focussed on taxpayers in Durban and Pretoria in South Africa. The findings of the study can, therefore, not be generalised to taxpayers in other countries as some of the hypotheses tested apply specifically to South Africa as a developing country.

3.3.1 Target population

The target population consisted of taxpayers located in Durban and Pretoria during the period 1 August 2013 to 1 October 2013. This period has been specifically chosen as it is tax filing season. The aim was to identify taxpayers who use the manual method to file tax returns as well as those who use the eFiling method.

3.3.2 Units of analysis

The units of analysis of a particular study refer to the representatives which the researcher wishes to draw conclusions about (Terre Blanche & Durrheim, 2004:37). The units of analysis in this study consists of taxpayers who are natural persons.

3.3.3 Sampling method and sample size

A purposive, snowball sampling technique was used. In attempting to study hidden populations for whom adequate lists and consequently sampling frames are not readily available, snowball sampling methodologies may be the only feasible method (Faugier & Sargeant, 1997:792).

A list of taxpayers who utilise the manual or electronic method of filing tax returns could not be obtained from SARS and hence there was no other way of determining what

method a taxpayer uses. This sampling method therefore is considered to be the most logical and feasible manner by which to identify the target population and units of analysis for this study.

A sample of 50 taxpayers who file manually and 50 who file electronically completed the survey.

3.4 DATA COLLECTION

3.4.1 Survey method

Data for this study was collected through two structured questionnaires, one for manual filers and the other for taxpayers who file electronically. The reason for using this method is:

- Questionnaires are one of the most widely used techniques to collect data in the survey strategy (Saunders *et al.*,2009:361);
- Questionnaires are considered appropriate data collection method for explanatory studies (Saunders *et al.*,2009:362);
- Previous research conducted on the acceptance of eFiling in other countries also made use of questionnaires as their data collection method.

The questionnaires were physically distributed to taxpayers. A structured, face-to-face interview was then conducted based on the questions in the questionnaire and taxpayers chose the most appropriate option to convey their feelings and opinions.

It was not appropriate to use electronic means of distributing the survey as it is likely that manual tax filers will not have access to e-mail or will not provide responses based on security and privacy concerns. Furthermore, lack of access to facilitating conditions to complete an electronic survey could deter individuals from participating.

Other means such as telephone or postal questionnaires could not be utilised as there was no method of identifying taxpayers and obtaining their contact information.

Empirical research into the benefits of the various data collection methods show that face to face surveys result in the highest response rate with slightly more responses to open ended questions when compared to telephone and mail surveys (De Leeuw, Mellenburgh & Hox, 1996:444).

3.4.2 Design of the questionnaire

In the construction of the questionnaire, the questions used to observe and test the constructs of each investigated variable were designed based on relevant previous studies on the acceptance of eFiling and technology. These questions were then adapted and reconstructed to suit the objectives of this study.

The cover page of the questionnaire consisted of an informed consent form (Appendix B on Page 76). This declared that participation in this survey by the taxpayer is voluntary, and that the responses will be kept anonymous. Each participant was required to accept these terms before proceeding with the questionnaire.

The first part of the questionnaire (Section one – questions one to seven) deals with establishing the demographic and educational profile of the target group and consists of questions regarding computer and internet use:

- Gender;
- Age
- Highest level of education;
- Computer literacy;
- Access to computer and internet at home and work;
- Frequency of internet use.

Section two of the questionnaire (questions eight onward) tests each construct from the research model developed in chapter two. Items measuring behavioural intention,

compatibility, perceived usefulness and ease of use were adapted from Hung *et al.*(2006:115) and Davis (1989:324). Subjective norms and perceived behavioural control were adapted from Taylor and Todd (1995:174) and Fu *et al.* (2006:122). Trust was adapted from Carter *et al.*(2011b:18).

Since taxpayers were divided into two groups, those who use manual filing and those who use eFiling, half of the items were worded with proper negation and all items in the questionnaire were randomly sequenced to reduce the potential ceiling effect, which induces monotonous responses to the items for measuring a particular construct (Hung *et al.*, 2006:102).

Appropriate modifications to make questionnaire items specifically relevant to the target population was carried out resulting in a total of 30 questions for manual filers and 29 questions for eFilers.

All items in Section 2 were measured using a five-point Likert-type scale with anchors on “strongly agree” and “strongly disagree”.

3.4.3 Pilot test

In order to establish whether or not participants would experience any problems in interpreting and completing the questionnaire, a pilot study was conducted.

The questionnaire was critically evaluated by Dr. Rajie Tudge, a former lecturer from the University of Kwa-Zulu Natal. All suggested amendments were considered and effected. Dr Tudge then concluded that the questionnaire was well worded and addressed the research objectives effectively.

The questionnaire was then pre-tested by two taxpayers, one who used the eFiling system and one who did not. No changes were recommended.

3.5 DATA ANALYSIS

The data collected was analysed using statistical methods. Numerical codes were assigned to each question. Once all questionnaires had been completed these numerical codes were entered onto the coding boxes of each questionnaire. The coded responses were analysed by means of the Statistical Analysis Software (SAS) package. The analysis was carried out by Mrs Rina Owen, an independent research consultant employed by the Faculty of Economics and Management Sciences at the University of Pretoria. Chapter four provides the detailed data analysis.

Constructs that have the most influence on a taxpayer's intention to use eFiling were then determined.

3.6 ASSESSING AND DEMONSTRATING THE QUALITY AND RIGOUR OF THE PROPOSED RESEARCH DESIGN

The quality and rigour of the proposed design were ensured by employing strategies to minimise the impact of any bias and ensure the validity of the survey based questionnaire.

3.6.1 Minimising the impact of any bias

Survey research may contain an element of participant bias which could compromise the reliability of the data being collected. It is known that some individuals would agree more on socially desirable answers and disagree more towards socially undesirable answers rather than fully and truly express their feelings and opinions (Ramoo, 2006:62). Participants may also hesitate to provide honest answers due to fear of their responses being revealed to SARS. In addition to this, one of the constructs refers to trust of the government and participants may be inclined to provide dishonest responses due to the sensitivity of this issue.

To address these concerns, participants were assured of the anonymity of the data collected by signing an informed consent form which specifies this. The actual

questionnaire also reiterates that all responses will be anonymous and that there is no way of tracing responses back to the respective respondents.

In addition to this, questionnaires were completed in the presence of the researcher so the participants could ask questions if they were unsure of anything thus enhancing the accuracy of the data.

3.6.2 Validity and reliability of the study

Leedy and Ormrod (2010:199) refer to validity as the extent to which the data collection method accurately measures what it intends to measure. In addition to this, content validity refers to the extent to which the questions in the questionnaire provide adequate coverage of the investigative questions (Saunders *et al.*, 2009:373). In other words, content validity is a function of how well the dimensions and elements of a concept have been delineated (Ramoo, 2006:37).

The specific investigative questions used in the questionnaire for this study have been identified and formulated after a thorough review of similar studies conducted in the past 10 years. This would ensure that the variables are measured correctly and at the same time the respondents understood the clarity, wordings, interpretation and appropriateness of the questions (Ramoo, 2006:37).

Reliability refers to the accuracy or precision of a measuring instrument (questionnaire). This refers to the extent to which the respondent can answer the same or approximately the same questions the same way each time and interpret each question as intended (Ramoo, 2006:37).

In addition to the pilot study conducted, the questionnaire was reviewed by Mrs Rina Owen and feedback regarding each question was obtained in terms of its clarity and intended objective. Through this review, Mrs Owen assisted in limiting any misinterpretation of the questionnaire and determined whether or not the questionnaire addressed the research objectives effectively. All suggestions to improve the questions were considered, and the questions were modified accordingly.

3.7 RESEARCH ETHICS

Research ethics complied with in this dissertation included:

- Obtaining ethical clearance from the Research Ethics Committee at the Faculty of Economic and Management Studies at the University of Pretoria;
- Ensuring that each participant signs an informed consent form prior to collecting data;
- Ensuring the anonymity of the data collected.

3.7.1 Ethical clearance from the Research Ethics Committee at the Faculty of Economic and Management Studies at the University of Pretoria

An application for ethical clearance was submitted to the Research Ethics Committee of the Department of Taxation at the University of Pretoria and subsequently approved. The application included the following:

- Problem statement and research objectives;
- Summary of the research design and techniques;
- A copy of the questionnaire;
- Procedures followed to ensure confidentiality and anonymity of respondents.

Collection of data commenced after the approval of the Research Ethics Committee has been obtained.

3.7.2 Informed consent from each participant and ensuring anonymity of data collected

Each participant was informed of the following by way of an informed consent form at the beginning of the questionnaire (Appendix B):

- The survey is anonymous as the individual's name does not appear on any document;

- Individual answers are treated as confidential and a person can in no way be identified by the answers provided;
- Participation was voluntary and individuals could have withdrawn from the survey at any time; and
- Information obtained was used for academic purposes only and may be published in an academic journal.

The participants were requested to sign the informed consent form to acknowledge that they had read the form and understood the information provided therein.

CHAPTER 4

ANALYSIS OF DATA

4.1 INTRODUCTION

In applying the research design and methods, relevant data was gathered on which the researcher concludes in this chapter. The data gathered was analysed by using the Statistical Analysis Software (SAS) package. The researcher provides an analysis of the results that emerged from the data gathered in this explanatory study.

4.2 SAMPLE DEMOGRAPHICS

4.2.1 Gender, age and educational profile of the respondents

The survey was completed by 100 respondents consisting of two groups:

- 50 taxpayers who use eFiling; and
- 50 individuals who do not use eFiling.

The analysis as detailed in Table 2 on page 38 revealed that there was no bias toward a specific gender. Each group consisted of 29 males and 21 females. Thus, it can be concluded that the decision to use or not use eFiling is not dependent on a specific gender as there was no significant difference in gender distribution between the two groups.

An important finding from the analysis revealed that the taxpayers in the sample who use eFiling were considerably younger than those who do not use eFiling. The average age of the users of eFiling was 34 years in comparison with an average age of 48 years for manual filers.

Furthermore, the educational profile of manual tax filers were significantly lower than those who use eFiling with 36 percent of the manual filers having only a secondary education in comparison with two percent of electronic filers. 98 percent of the group using eFiling had tertiary education. Therefore, there is a strong correlation between age and education

profile amongst the two groups, with majority of the electronic tax filers being younger and having a higher education profile.

4.2.2 Computer literacy of respondents, access to computer and internet facilities, and frequency of internet use

The study revealed that 34 percent of manual tax filers do not consider themselves to be computer literate, while in stark comparison, all respondents who use eFiling consider themselves to be computer literate. Therefore a comparison can be made between the highest education level and computer literacy with the majority of respondents with tertiary education being computer literate.

Of the manual filers sampled, 34 percent have no access to computer or internet facilities at home while 100 percent of the electronic filers have access to computer and/or internet facilities at home as illustrated in Table 2.

With the advancement of cellular phone technology, most cellular phones are capable of accessing and browsing the internet. When conducting the face to face surveys, the researcher informed respondents that question five in the questionnaire referring to “access to the internet only” will include the fact that access can be obtained with the use of most cellular phones. After making respondents aware of this, 40 percent of manual filers responded that they do have access to internet facilities via their cellular phones but the majority of them did not know this or make use of it, which correlates directly with the “frequency of internet use” results discussed below.

The researcher concluded that it was important to mention that the internet can be accessed via cellular phones as SARS have introduced a cellular phone application allowing taxpayers to file their tax returns by using their cellular phones (South African Government News Agency, 2012). Upon informing respondents of this, the majority of the taxpayers in both groups were unaware of this mobile avenue to file tax returns.

With regard to access to a computer or internet at work, 46 percent of the manual filers sampled have no access to either of these while 34 percent have access to a computer

only. Only 12 percent of the manual filers had access to both computer and internet facilities while 68 percent of electronic filers had access to both of these resources.

All respondents who used eFiling reported that they access the internet once a week or more while 40 percent of manual filers report that they never access the internet at all.

Based on these findings it is clear that those taxpayers' for whom these computer and internet facilities are readily available, either at home or at work, use the internet more often and also use the eFiling method of submitting tax returns.

Figure 5 on page 37 shows a comparison between users of eFiling and manual tax filers differentiating between their education profile, computer literacy, access to computer and internet resources as well as frequency of use of the internet.

Figure 5: Demographic differentiation

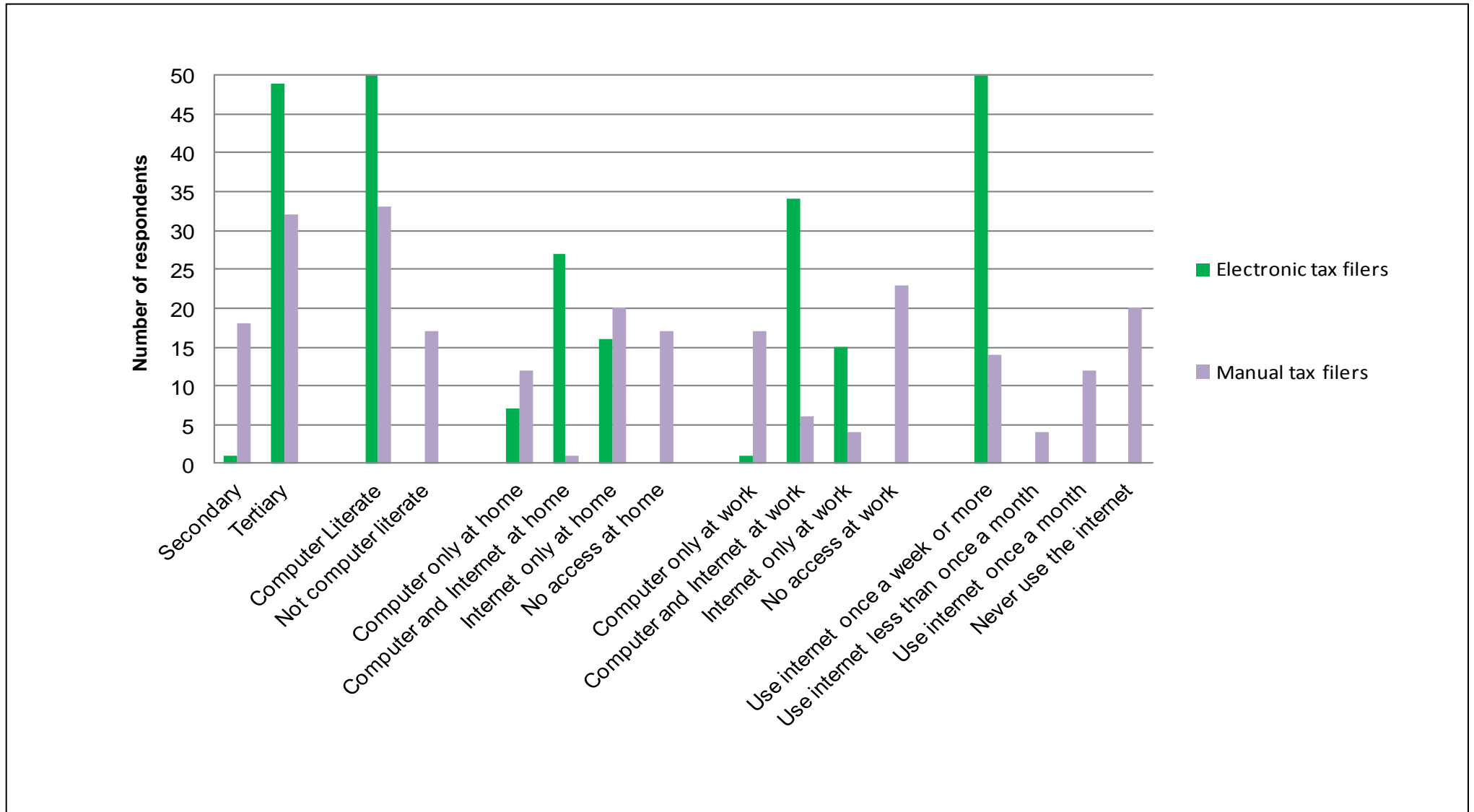


Table 2: Sample demographics

	Users of eFiling		Manual tax filers	
	<i>Count</i>	<i>Percentage</i>	<i>Count</i>	<i>Percentage</i>
Age				
20 – 30 years	21	42%	1	2%
31 – 40 years	20	40%	10	20%
41 – 50 years	5	10%	15	30%
51 – 60 years	4	8%	23	46%
Above 60 years	-	-	1	2%
Average age	34 years		48 years	
Gender				
Male	29	58%	29	58%
Female	21	42%	21	42%
Highest Education				
Secondary	1	2%	18	36%
Tertiary	49	98%	32	64%
Computer Literate				
Yes	50	100%	33	66%
No	-	-	17	34%
Access to computer and internet at home				
Computer only	7	14%	12	24%
Computer and internet	27	54%	1	2%
Internet only	16	32%	20	40%
No access	-	-	17	34%
Access to computer and internet at work				
Computer only	1	2%	17	34%
Computer and internet	34	68%	6	12%
Internet only	15	30%	4	8%
No access	-	-	23	46%
Frequency of internet use				
Once a week or more	50	100%	14	28%
Less than once a month	-	-	4	8%
Once a month	-	-	12	24%
Never	-	-	20	40%

4.3 ANALYSIS OF THE RESEARCH MODEL CONSTRUCTS AND HYPOTHESES

The first test carried out on the data was the reliability test on the multiple item construct. The Cronbach's alpha value was used to test the reliability of the items for the various constructs. It is a reliability measure coefficient that reflects how well items in a set are positively correlated to one another. Cronbach alpha values greater than .70 indicates inter- item consistency.

Thereafter, the T Test procedure was used to compare the results of each construct between the two groups. Probability values (Pr) of <.0001 suggest that both groups differ significantly on a specific construct.

Behavioural Intention

The research model developed in chapter two, aims to determine the effect that the seven constructs have on behavioural intention to use eFiling. The results of the analysis revealed that current users of eFiling have a strong intention to continue using this system to submit their tax returns. A mean of 4.56 was returned indicating that current users of the system are happy with their choice of tax filing method as it is beneficial and useful in filing their returns.

In contrast to this, taxpayers who do not use eFiling have a strong intention to continue using their current manual method of filing returns. A mean of 1.98 was returned suggesting that non users of the eFiling system have no intention of adopting eFiling for their future tax returns.

The effect of each of the constructs investigated in this study will now be analysed and conclusions of their effect on behavioural intention will be drawn.

4.3.1 Perceived Usefulness

Perceived usefulness refers to the notion that the more a person believes that eFiling will enhance their efficiency, the greater the possibility of its use.

The hypotheses being tested is:

- *Perceived usefulness will have a positive effect on behavioural intention to use the eFiling system.*

The following items from each questionnaire tested the perceived usefulness construct:

Questionnaire for taxpayers who use eFiling:

- Q8: *eFiling is beneficial to me*
- Q14: *Using eFiling enhances my effectiveness in preparing my tax return resulting in fewer errors*
- Q17: *Using eFiling enhances the speed at which my tax return is processed*

Questionnaire for taxpayers who use manual filing:

- Q8: *eFiling will be of no benefit to me*
- Q14: *Using eFiling would enhance my effectiveness in preparing my tax return resulting in fewer errors*
- Q17: *Using eFiling would improve the speed at which my tax return is processed*

The Cronbach alpha value for the three items testing this construct returned a value of 0.76 indicating strong internal consistency.

Table 3 illustrates the results of the questionnaire.

Table 3: Analysis of the Perceived usefulness construct

Group	N	Mean	Std Dev	Std Error	Minimum	Maximum
eFilers	50	4.54	0.4200	0.0594	3.6667	5.0000
Manual filers	50	2.86	0.4156	0.0588	2.0000	4.0000

Results for the users of the eFiling system

The mean for users of the eFiling system as illustrated in Table 3 above was 4.54 indicating that the sample considered the eFiling system to be useful and beneficial to them by enhancing their effectiveness in preparing their tax returns and increasing the speed at which their tax returns are processed.

Results for manual tax filers

The mean for manual filers was significantly lower at 2.86. This suggests that non users of the eFiling system do not perceive the eFiling system to be useful in preparing and processing their annual tax return.

Result of T Test

The T Test returned a Pr of $<.0001$ which suggests that each group differs significantly in their views on the perceived usefulness of the eFiling system.

Conclusion

Based on these findings, it is clear that perceived usefulness has a strong positive correlation with behavioural intention thus supporting the hypothesis being tested. Users of the eFiling system perceive the system to be useful resulting in their tax returns being filed electronically and manual filers do not consider the system to be useful thereby resulting in a behavioural intention to continue using the traditional manual method of filing returns.

4.3.2 Perceived Ease of Use

Perceived ease of use postulates that the easier a taxpayer believes the eFiling system is to use, the more likely they are to use it.

The hypotheses being tested is:

- *Perceived ease of use will have a positive effect on behavioural intention to use the eFiling system.*

The following items from each questionnaire tested the perceived ease of use construct:

Questionnaire for taxpayers who use eFiling:

- Q9: *Learning how to use the eFiling system was easy for me*
- Q20: *I find it easy to submit my tax return using eFiling*
- Q23: *It was easy for me to become skilful at using the eFiling system*

Questionnaire for taxpayers who use manual filing:

- Q9: *Learning how to use the eFiling system will be easy for me*
- Q20: *I will find it easy to submit my tax return using eFiling*
- Q23: *It will be easy for me to become skilful at using the eFiling system*

Regarding reliability, the items had strong internal consistency as a Cronbach alpha value of 0.92 was returned.

Table 4 illustrates the results of the questionnaire.

Table 4: Analysis of the Perceived ease of use construct

Group	N	Mean	Std Dev	Std Error	Minimum	Maximum
eFilers	50	4.29	0.4978	0.0704	3.0000	5.0000
Manual filers	50	2.55	0.8535	0.1207	1.0000	4.6667

Results for the users of the eFiling system

This sample perceived the eFiling system to be easy to use as a mean of 4.29 was returned as documented in Table 4. This correlates with the findings regarding computer literacy, access to resources and frequency of internet use illustrated in Table 2. As these users have access to the necessary resources and use the internet more frequently than the manual filers sampled, it is more probable that they will find the system easier to use and navigate through thereby justifying the results.

Results for manual tax filers

The mean for this group was significantly lower at 2.55 suggesting that manual filers did not perceive the eFiling system to be easy to use. This correlates with the computer

literacy percentage of this group with 34 percent not being computer literate and 40 percent not accessing the internet at all.

Result of T Test

The T Test returned a Pr of $<.0001$ which suggests that each group differs significantly in their views on the perceived ease of use of the eFiling system.

Conclusion

These findings conclude that perceived ease of use has a positive effect on behavioural intention to use the eFiling system, confirming the hypothesis being studied. Users of the eFiling system find the system easy to use and become skilful, resulting in this group continuing to file their tax returns via the eFiling system. Manual filers do not perceive the eFiling system to be easy to use and hence this group has no intention to submit future returns using the eFiling system.

4.3.3 Compatibility

Compatibility refers as the degree to which the eFiling technology fits the potential adopter's previous experience, work practice and needs.

The hypotheses being tested is:

- *Compatibility will have a positive effect on behavioural intention to use the eFiling system*

The following items from each questionnaire tested the compatibility construct:

Questionnaire for taxpayers who use eFiling:

- Q10: *Using eFiling suits my occupation*
- Q16: *Using the eFiling system is compatible with my day to day activities*
- Q26: *Using the eFiling system fits well into my lifestyle*

Questionnaire for taxpayers who use manual filing:

- Q10: *Using eFiling suits my occupation*
- Q16: *Using the eFiling system will be compatible with my day to day activities*
- Q26: *Using the eFiling system will fit well into my lifestyle*

The Cronbach alpha value for the three items testing this construct returned a value of 0.94 indicating strong internal consistency.

Table 5 illustrates the results of the questionnaire.

Table 5: Analysis of the Compatibility construct

Group	N	Mean	Std Dev	Std Error	Minimum	Maximum
eFilers	50	4.5	0.4726	0.0668	3.6667	5.0000
Manual filers	50	2.4	0.7657	0.1083	1.0000	4.000

Results for the users of the eFiling system

These respondents found the eFiling system to be extremely compatible with their occupation and day to day activities as the analysis returned a mean of 4.5. This corresponds with the results in Table 2 as all respondents in this group have access to computer or internet facilities at home or at work. While conducting this survey, the researcher noted that the majority of respondents in this group had office jobs and filing tax returns any other way except electronically will be extremely inconvenient. Therefore the eFiling system suited their lifestyle and occupation, resulting in this system being used to file tax returns.

Results for manual tax filers

This group found using the eFiling system incompatible with their occupation and day to day activities. A mean of 2.4 was generated as illustrated in Table 5 correlating with the results in Table 2 which shows that 46 percent of the respondents have no access to the necessary resources at work and 34 percent have no access at home. Combining this with the computer literacy rate in this group confirms that these taxpayers are comfortable with their current manual method of filing returns.

Result of T Test

The T Test returned a Pr of $<.0001$ which suggests that each group differs significantly in their views on the compatibility of the eFiling system.

Conclusion

Compatibility is therefore a significant determinant of behavioural intention to use eFiling, confirming the hypothesis tested. Taxpayers who spend more time using a computer and the internet find using eFiling more compatible as compared to the traditional manual method of filing tax returns.

4.3.4 Subjective Norms

This refers to a taxpayer's perception of the opinions of relevant others on whether or not he or she should use eFiling to submit their tax returns.

The hypotheses being tested is:

- *Subjective norms will have a positive effect on behavioural intention to use the eFiling system*

The following items from each questionnaire tested the subjective norms construct:

Questionnaire for taxpayers who use eFiling:

- Q11: *My peers, friends and family encourage me to use eFiling*
- Q18: *People who influence me think that using eFiling is a good idea*
- Q22: *I use eFiling because it is advertised as being more effective and efficient than manual filing*

Questionnaire for taxpayers who use manual filing:

- Q11: *My peers, friends and family think that I should use eFiling*
- Q18: *People who influence me think that using eFiling is a good idea*
- Q22: *I would use eFiling because it is advertised as being more effective and*

efficient than manual filing

The Cronbach alpha value for the three items testing this construct returned a value of 0.77 indicating strong internal consistency.

Table 6 illustrates the results of the questionnaire.

Table 6: Analysis of the Subjective norm construct

Group	N	Mean	Std Dev	Std Error	Minimum	Maximum
eFilers	50	3.6	0.7095	0.1003	2.3333	5.0000
Manual filers	50	2.7	0.5986	0.0847	1.6667	4.0000

Results for the users of the eFiling system

The mean for this group was 3.66 as documented in Table 6 suggesting that subjective norms such as family, friends and advertising do have a positive influence on their behavioural intention to use eFiling.

Results for manual tax filers

The manual filers sampled revealed that their interpersonal influences are a significant determinant of their behavioural intention to use manual filing as a mean of 2.7 was calculated. This means that peers or friends' opinions about eFiling influence their decision not to use the eFiling system.

Result of T Test

The T Test returned a Pr of <.0001 which suggests that each group differs significantly in their views that subjective norms have on their decision to use or not use the eFiling system.

Conclusion

External influences such as friends, family and advertising significantly influence both adopters of the eFiling system and non adopters. The hypothesis tested is therefore confirmed.

4.3.5 Facilitating conditions

Access to facilitating conditions such as computer resources and the internet are particularly important as these are required in order to use the eFiling system.

The hypotheses being tested is:

- *Facilitating conditions will have a positive effect on behavioural intention to use the eFiling system*

The following items from each questionnaire tested the facilitating conditions construct:

Questionnaire for taxpayers who use eFiling:

- Q12: *Resources required to use eFiling are readily available to me*
- Q19: *It is easy for me to get technical support when using the eFiling system*

Questionnaire for taxpayers who use manual filing:

- Q12: *Resources required to use eFiling are readily available to me*
- Q19: *It will be easy for me to get technical support when using the eFiling system*
- Q29: *I would like to use eFiling but have no access to the resources required to do so**

*In order to compare the two groups, Q29 was removed from the analysis.

The Cronbach alpha value for the items testing this construct returned a value of 0.6. Due to only two items testing this construct, there is sufficient internal consistency to conclude that the items are positively correlated to each other.

Table 7 illustrates the results of the questionnaire.

Table 7: Analysis of the Facilitating conditions construct

Group	N	Mean	Std Dev	Std Error	Minimum	Maximum
eFilers	50	3.88	0.6354	0.0899	3.0000	5.0000
Manual filers	50	2.18	0.6528	0.0923	1.0000	4.0000

Results for the users of the eFiling system

These respondents returned a mean of 3.8 as noted in Table 7 above suggesting that the resources necessary to use the eFiling system are readily available to them and it is easy for them to get technical support if ever required. All the taxpayers who use eFiling sampled in this study have access to the computer and internet either at work or at home and therefore have the necessary tools to file their tax returns electronically.

Results for manual tax filers

These taxpayers do not have the resources to use eFiling readily available to them. A mean of 2.18 was calculated suggesting that a lack of facilitating conditions have a direct impact on their decision not to use eFiling. From this sample, 34 percent do not have the necessary expertise and skill to operate a computer system and 46 percent of the respondents have no access to the necessary resources at work while 34 percent have no access at home. These results therefore correlate with their decision to use manual filing as these taxpayers perceived much less technology and resource support than the other groups, and thus facilitating conditions did constrain manual taxpayers' behaviour.

Result of T Test

The T Test returned a Pr of <.0001 which suggests that each group differs significantly in their responses regarding access to facilitating conditions.

Conclusion

Access to facilitating conditions plays a significant role in taxpayers' behavioural intention to use eFiling. Those taxpayers who have the necessary resources readily available will be more inclined to submit their tax returns using the eFiling system while taxpayers with no access to these resources will prefer the manual method. The hypothesis tested is therefore supported.

4.3.6 Computer self-efficacy

Taxpayers' who consider computers too complex and believe that they will never be able to control these computers or use the necessary software and interface will prefer to avoid

them and are less likely to use them. The opposite can be said of taxpayers with a high computer self-efficacy as they will feel confident in using these resources.

The hypotheses being tested is:

- *Computer self-efficacy will have a positive effect on behavioural intention to use the eFiling system.*

The following items from each questionnaire tested the self-efficacy construct:

Questionnaire for taxpayers who use eFiling:

- Q13: *I feel comfortable using the eFiling system on my own*
- Q25: *I am able to teach others how to use the eFiling system*
- Q28: *I am able to use the eFiling system without any technical support or learning tutorials*

Questionnaire for taxpayers who use manual filing:

- Q13: *I will feel comfortable using the eFiling system on my own*
- Q25: *I will be able to teach others how to use the eFiling system*
- Q28: *I will be able to use eFiling without any technical support or learning tutorials*

The Cronbach alpha value for the three items testing this construct returned a value of 0.92 indicating strong internal consistency.

Table 8 illustrates the results of the questionnaire.

Table 8: Analysis of the Computer self-efficacy construct

Group	N	Mean	Std Dev	Std Error	Minimum	Maximum
eFilers	50	4.2	0.6385	0.0903	1.6667	5.0000
Manual filers	50	2.4	0.7447	0.1053	1.0000	4.0000

Results for the users of the eFiling system

Users of the system report strong self-efficacy in their computer skills and navigation of the eFiling system. A mean of 4.2 was computed per Table 8 above suggesting that these users are comfortable in using computers in general as well as applications such as the eFiling system. It seems likely that individuals with higher self-efficacy in information technology have more options available and feel free to choose either method of filing their tax returns. Computer self-efficacy therefore has a positive effect on their behavioural intention to use the eFiling system.

Results for manual tax filers

The majority of these taxpayers lack the necessary skills to operate a computer and computer systems and hence have a low self-efficacy. A mean of 2.4 was returned which correlates with the results obtained in Table 2. Another contributing factor to the low self-efficacy of these taxpayers is the lack of computer and internet resources. Previous research in information technology usage suggests that the more an individual uses a system, the more confident they become. Chan and Lu (2004:25) concluded that individuals with high computer self-efficacy are expected to be able to competently use different software packages and computer systems while those with low self-efficacy would perceive their capabilities as limited.

Result of T Test

The T Test returned a Pr of $<.0001$ which suggests that each group differs significantly in their responses regarding computer self-efficacy.

Conclusion

Computer self-efficacy is a significant contributing factor in a taxpayer's behavioural intention to use eFiling. Individuals with high self-efficacy will be more likely to use the eFiling system while those with low self-efficacy will opt for the manual method of filing tax returns. The hypothesis being tested is therefore confirmed.

4.3.7 Trust

Trust refers to both trust of the government and trust of the internet. Taxpayers must believe that the government has deployed the necessary resources and possesses the knowledge, skills and ability to deliver reliable and secure internet-based services. Trust of the internet refers to an individual's perception about transmitting sensitive information over the internet as well as conducting transactions using the internet.

The hypotheses being tested is:

- *Trust will have a positive effect on behavioural intention to use the eFiling system.*

The following items from each questionnaire tested the trust construct:

Questionnaire for taxpayers who use eFiling:

- *Q15: I trust the eFiling system with my personal information*
- *Q21: I trust the eFiling system but I am afraid of hackers and other internet threats*
- *Q24: I do not trust the internet with any of my personal and financial information*
- *Q27: I am confident the necessary safeguards have been put into place to protect my confidential information*

Questionnaire for taxpayers who use manual filing:

- *Q15: I trust the eFiling system with my personal information*
- *Q21: I trust the eFiling system but I am afraid of hackers and other internet threats*
- *Q24: I do not trust the internet with any of my personal and financial information*
- *Q27: I am confident the necessary safeguards have been put into place to protect my confidential information*

Regarding reliability, the four items did not have strong internal consistency as a Cronbach alpha value of 0.27 was returned. Question 24 was therefore omitted from the analysis resulting in a Cronbach alpha value of 0.81 suggesting strong internal consistency amongst the remaining three items.

Table 9 illustrates the results of the questionnaire.

Table 9: Analysis of the Trust construct

Group	N	Mean	Std Dev	Std Error	Minimum	Maximum
eFilers	50	3.96	0.5270	0.0745	2.6667	5.0000
Manual filers	50	2.58	0.9679	0.1369	1.0000	4.3333

Results for the users of the eFiling system

These taxpayers had more trust in the internet and the eFiling system than the manual taxpayers. This is expected based on the frequency of internet use as illustrated in Table 2. A mean of 3.9 was returned suggesting that the majority of the respondents in this group consider the perceived risk to be at an acceptable level.

Results for manual tax filers

The respondents in this group had less trust in the internet and the eFiling system. A mean of 2.5 was computed per Table 9 suggesting that the majority of these users perceive the risk of using the internet to file tax returns as high. This correlates directly with the frequency of internet use as determined in Table 2 which also suggests that these users do not perform any transaction electronically via the internet.

Result of T Test

The T Test returned a Pr of $<.0001$ which suggests that each group differs significantly in their responses regarding trust of the internet and the eFiling system.

Conclusion

Trust is a significant construct in the decision to use eFiling. Taxpayers who use the internet more frequently and also perform other electronic transactions will be more comfortable with submitting their personal tax information using eFiling, therefore supporting the hypothesis being tested. Taxpayers who have less trust in the eFiling system and the internet as a whole will probably submit their tax returns manually in order to mitigate the risks inherent in internet use.

CHAPTER 5

CONCLUSION

5.1 INTRODUCTION

This explanatory study set out to determine the possible determinants of user acceptance of the eFiling system among taxpayers in South Africa. This study can provide SARS, government policy-makers, government agencies and E-Government system designers in South Africa with a better understanding of taxpayers' decision to accept eFiling. This may shed light on interesting and subtle differences between the two categories of taxpayers. The study also has the merits of conducting an investigation into technology acceptance in a real-world tax-filing setting involving individual taxpayers and the two tax-filing methods. Such a setting should increase the relevance and reliability of the results. This chapter summarises the findings and draws conclusions from the research objectives.

5.2 SUMMARY OF FINDINGS ADDRESSING THE RESEARCH OBJECTIVES

This study was conducted with the following research objectives:

- To perform a literature review on past studies to identify possible determinants of user acceptance of the eFiling system among taxpayers in South Africa;
- To undertake a questionnaire based survey amongst South African taxpayers with a view to identifying the determinants of user acceptance of the eFiling system among taxpayers in South Africa.

In chapter two, a detailed literature review was performed on past studies to determine what factors influence user acceptance of the eFiling system. The focus of the literature review was technology acceptance by analysing a taxpayer's behavioural intention to use the eFiling system. A research model and hypotheses were developed and in order to test the research model, two structured questionnaires were used, one for current users of eFiling and the other for manual tax filers.

Through the structured questionnaires that were distributed to the two groups of taxpayers, this study identified key factors that influence behavioural intention to use eFiling to submit tax returns. These factors included:

- Perceived usefulness,
- Perceived ease of use,
- Compatibility,
- Subjective norms,
- Facilitating conditions,
- Computer self-efficacy, and
- Trust

From the results of the T Tests, all the seven constructs investigated proved to have a significant effect on behavioural intention to use the eFiling system. Results of each item testing a construct appear in Appendix D.

Therefore, the results of the questionnaire conclude that each hypothesis tested is valid:

- Perceived usefulness has positive effect on behavioural intention to use the eFiling system;
- Perceived ease of use has a positive effect on behavioural intention to use the eFiling system;
- Compatibility has a positive effect on behavioural intention to use the eFiling system
- Subjective Norms have a positive effect on behavioural intention to use the eFiling system;
- Facilitating conditions have a positive effect on behavioural intention to use the eFiling system;
- Computer self-efficacy has a positive effect on behavioural intention to use the eFiling system;
- Trust has a positive effect on behavioural intention to use the eFiling system.

5.2.1 Manual tax filers

The manual taxpayers' sampled were significantly older, had a lower education profile, had less computer and internet experience, had less access to computer resources, and were online less frequently than the electronic filers.

Of all the constructs tested, facilitating conditions such as access to computer resources and technology had the most significant effect on these taxpayers' behavioural intention as it returned the lowest mean as illustrated in Appendix C on page 78. The challenges faced by these taxpayers in terms of access to computer equipment, software and internet connectivity necessary to use eFiling proved to be a significant barrier to usage and intention to use. These findings are consistent with the study conducted by Fu *et al.* (2006:121) who determined that the absence of facilitating conditions constrained manual taxpayers' behaviour and therefore the eFiling method may not reach the entire population, and a "digital divide" may exist. In order to overcome this barrier of lack of facilitating conditions, SARS has launched a mobi site to submit tax returns which can be accessed by cellular phones. However, none of the respondents interviewed were aware of this new technology.

As a result of the lack of facilitating conditions and a high percentage of respondents not being computer literate, computer self-efficacy was found to be a significant determinant of behavioural intention. Confirming the conclusions with the study by Wang (2002:345), the lower a taxpayer's computer self-efficacy, the less likely he will be pursuing electronic means to file tax returns.

Perceived usefulness and perceived ease of use both have a positive effect on behavioural intention to use eFiling as the respondents in this group did not believe that the system will be useful to them or easy to use. Similar to the study conducted by Wang (2002:345), perceived ease of use had a stronger effect on intention to use than usefulness. This correlates with the taxpayers' computer experience and access to resources, as the lack of use of the internet and computers in general resulted in these taxpayers perceiving the eFiling system to be generally difficult to use. The results are also consistent with Carter *et al.* (2011b:11) who concluded that taxpayers who believe an

electronic option will help them file their taxes more quickly and efficiently than traditional alternatives are more likely to adopt the eFiling system. The taxpayers sampled did not believe that the system could enhance their effectiveness in preparing their returns and neither did they believe it will increase the speed at which their returns will be processed.

The study revealed that compatibility of the eFiling system with a taxpayer's occupation and day to day activities is a crucial antecedent to their behavioural intention to use the system. Of the respondents in this group, 46 percent did not utilise information systems in their employment, correlating with their intention to use manual filing. Consistent with the findings by Fu *et al.* (2006:121) and Hung *et al.* (2006:110), compatibility is a significant determinant in a taxpayer's intention to use eFiling.

Regarding subjective norms, taxpayers with family, friends and others who influence and encourage the use of eFiling, are more likely to use this option. The results for this group revealed that their respective family, friends and influences did not encourage the use of the eFiling system thereby directly influencing their decision to file manually. This finding is consistent with those of Tan and Foo (2012:68).

Finally, trust of the internet and the eFiling system had a significant impact on their intention to use manual filing. This correlates with how often the users use the internet and whether or not they conclude any other transaction electronically using the internet. The respondents did not believe that SARS have put in the necessary safeguards to maintain the integrity of personal information being submitted via the eFiling system.

5.2.2 Electronic tax filers

The respondents in this group were significantly younger, had a higher education, had access to the necessary resources to use eFiling and used the internet more frequently than the manual filers.

Perceived usefulness and compatibility were the strongest determinants of behavioural intention to use eFiling per the results in Appendix C and is consistent with the results of the study by Fu *et al.* (2006:119). The ultimate reason these taxpayers exploit the eFiling

system is that they find the system useful to their tax return preparation and submission and will result in significantly less effort and time in completing the tax return task. Using the internet more frequently, these taxpayers find using the eFiling system more convenient than filing manually and anticipate faster processing times from SARS.

These taxpayers found the eFiling system relatively easy to use and also demonstrated a higher computer self-efficacy. This is due to their computer literacy levels being high and their regular internet use. Therefore, consistent with the findings by Hung et al. (2006:111), both perceived ease of use and computer self-efficacy have a positive impact on behavioural intention to use the eFiling system.

The role that facilitating conditions have on behavioural intention also proved to be significant for users of the eFiling system. Computer and internet resources were readily available to all the respondents in this group making it easy to use the electronic method of filing tax returns.

The family, friends and others who influence and encourage the use of eFiling recommend using this method and hence have a positive impact on behavioural intention to use. This is consistent with findings by Wang (2010:1) that most people prepare their tax returns the way their parents did. 70 percent of these taxpayers also responded that part of the reason they use eFiling is because it is advertised as being more effective and efficient than manual filing. It can be concluded then that adopters of eFiling pay more attention to such advertisements than non adopters.

These respondents concluded that they have the necessary level of trust in the internet and eFiling system to warrant the use of eFiling. This is in direct correlation with frequency of internet use and use of information systems at work. These users have confidence that SARS have implemented the necessary safeguards and access controls to protect sensitive information being transmitted online.

5.3 IMPLICATIONS OF THIS STUDY

Although the majority of South African taxpayers have bought into the eFiling concept, there is a significant percentage that still prefers the manual method of filing tax returns preventing SARS from achieving their target of paperless tax filing. This study presented a comprehensive yet parsimonious view of eFiling adoption by South African taxpayers. By understanding the adoption factors investigated, SARS can extend their knowledge of taxpayers' decision making which will lead to better future strategies.

Seven constructs were tested and from the population surveyed, 50 users of eFiling and 50 non users, all the constructs proved to be significant determinants of behavioural intention to use the eFiling system.

- Facilitating conditions and computer self-efficacy were the strongest factors influencing the use of manual filing and therefore in order to encourage these taxpayers to use eFiling, SARS needs to make the necessary avenues available. Steps have been taken by SARS to improve and assist in the eFiling process by introducing a mobi site and a Help-you-eFile service that allows a SARS agent to assist a taxpayer in real time when completing his tax return. However, none of the respondents in this study were aware of these two available services. SARS therefore has to improve on their advertising strategy so that more taxpayers are aware of these new developments and will be willing to try the eFiling method.
- Subjective norms are another major motivating factor to encourage taxpayers to use eFiling. In order to achieve its target of full adoption, SARS should raise the awareness of uninformed and inexperienced users in the use eFiling by partnering with employers to educate the public.
- In order to retain current users of the system, SARS must make it easier to get technical support by employing more customer-service agents during filing season as the lowest response from users of the eFiling system related to obtaining technical support from SARS agents regarding the system.

- For the South African governmental policy makers responsible for future strategic planning and implementation of E-Government services, this study suggests that the constructs investigated should be monitored to evaluate the performance of E-Government services. In addition to this, security mechanisms, technical assistance and ease of use of these E-Government services must be continuously appraised and improved.

5.4 FUTURE RESEARCH

Continued research is needed to improve this study and to address its limitations. Some of the avenues that can be pursued include:

- Carrying out a similar study in other areas of South Africa to determine if the results are consistent with this study;
- Investigating the challenges faced by current users of the eFiling system and ways that the system can be improved;
- Investigating the obstacles faced by older taxpayers in obtaining technical assistance from SARS call centre agents regarding eFiling;
- Conducting further research to determine whether this study can be replicated in other E-Government services in South Africa.

5.5 FINAL CONCLUSION

This explanatory study set out to determine the possible determinants of user acceptance of the eFiling system among taxpayers in South Africa. All the seven constructs investigated proved to have a significant effect on behavioural intention to use the eFiling system. For manual tax filers, facilitating conditions such as access to computer resources and technology had the most significant effect on their behavioural intention to continue using the conventional manual method. Being a developing country, access to such resources are not readily available to the majority of the population and this proved to be a significant barrier to eFiling usage. For the users of the eFiling system, perceived

usefulness and compatibility were the strongest determinants of behavioural intention to use eFiling. Continued research into eFiling is needed to improve this study and to address its limitations. As such, it is hoped that this study will provide insight and understanding of the taxpayers' acceptance of eFiling in South Africa.

LIST OF REFERENCES

Agarwal, R. & Prasad, J. 1999. Are individual differences germane to the acceptance of new information technologies? *Decision Sciences*, 30(2):361-391. [Online] Available from Wiley online library: <http://0-onlinelibrary.wiley.com.innopac.up.ac.za/doi/10.1111/j.1540-5915.1999.tb01614.x/pdf> [Downloaded: 2013-03-02].

Ajzen, I. 1991. The theory of planned behaviour. *Organisational behaviour and human decision processes*, 50(1):179-211. [Online] Available from: <http://xa.yimg.com/kq/groups/78997509/701520272/name/Oct+19+Cited+%231+Manage+THE+THEORY+OF+PLANNED+BEHAVIOR.pdf> [Downloaded: 2013-02-01].

Carter, L., Schaupp, L.C., Hobbs, J. & Campbell, R. 2011a. The role of security and trust in the adoption of online tax filing. *Transforming Government: People, Process, Policy*, 5(4):303-318. [Online] Available from: Emerald: <http://0-www.emeraldinsight.com.innopac.up.ac.za/journals.htm?issn=1750-6166&volume=5&issue=4&articleid=1954317&show=pdf> [Downloaded: 2012-12-04].

Carter, L., Schaupp, L.C. & McBride, M.E. 2011b. The U.S. e-file initiative: an investigation of the antecedents to adoption from the individual taxpayers' perspective. *E-Service Journal*, 7(3):2-19. [Online] Available from: Jstor: <http://www.jstor.org/stable/pdfplus/10.2979/eservicej.7.3.2.pdf?acceptTC=true> [Downloaded: 2012-12-04].

Chau, P.Y.K., & Hu, P.J.W. 2001. Information technology acceptance by individual professionals: a model comparison approach. *Decision Sciences*, 32(4):699-719. [Online] Available from: Wiley online library: <http://0-onlinelibrary.wiley.com.innopac.up.ac.za/doi/10.1111/j.1540-5915.2001.tb00978.x/pdf> [Downloaded: 2013-03-02].

Chan, S.C. & Lu, M.T. 2004. Understanding internet banking adoption and user behaviour: A Hong Kong perspective. *Journal of Global Information Management*, 12(3):21-43. [Online] Available from: Proquest: <http://0-search.proquest.com.innopac.up.ac.za/docview/195151617/fulltextPDF/14111EDF7587BE2BFDF/4?accountid=14717> [Downloaded: 2013-10-12].

Daniels, H. 2012. *MasterCard survey: online shopping increases in South Africa*. [Online] Available from http://www.techsmart.co.za/features/news/MasterCard_Survey:_Online_shopping_increases_in_South_Africa.html [Accessed 2013-02-04].

Davis, F.D. 1989. Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, 13(3):319-340. [Online] Available from: Jstor: <http://0-www.jstor.org.innopac.up.ac.za/stable/pdfplus/249008.pdf> [Downloaded: 2013-01-22].

Davis, F.D., Bagozzi, R.P. & Warshaw, P.R. 1989. User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8):982-1003. [Online] Available from: Jstor: <http://0-www.jstor.org.innopac.up.ac.za/stable/pdfplus/2632151.pdf> [Downloaded: 2013-01-22].

De Leeuw, E.D., Mellenbergh, G.J. & Hox, J.J. 1996. The influence of data collection method on structural models: a comparison of a mail, a telephone and a face-to-face survey. *Sociological Methods and Research*, 24(4):443-472. [Online] Available from: <http://igitur-archive.library.uu.nl/fss/2010-0602-200208/JH-smr96.pdf> [Downloaded: 2012-12-24].

Faugier, J. & Sargeant, M. 1997. Sampling hard to reach populations. *Journal of Advanced Nursing*, 26: 790-797. [Online] Available from: http://hbanaszak.mjr.uw.edu.pl/Snowball%20Sampling/FaugierSargeant_1997_Sampling%20hard%20to%20reach%20populations.pdf [Downloaded: 2013-10-12].

Forza, C. 2002. Survey research in operations management: a process-based perspective. *International Journal of Operations & Production Management*, 22(2):152-194. [Online] Available from: <http://www.ingesfor.com/BA537/Cases/Case%2022/case%2022.pdf> [Downloaded: 2013-05-12].

Fu, J.R., Farn, C.K. & Chao W.P. 2006. Acceptance of electronic tax filing: a study of taxpayer intentions. *Information & Management*, 43:109-126. [Online] Available from: <http://nas.takming.edu.tw/michaelwang/%C4%AC%AC%AC&%A7d%AC%FC%AA%E2/Acceptance%20of%20electronic%20tax%20filing%A2w%20A%20study%20of%20taxpayer%20intentions.pdf> [Downloaded: 2012-12-22].

Hung, S.Y., Chang, C.M. & Yu, T.J. 2006. Determinants of user acceptance of the e-government services: the case of online tax filing and payment system. *Government Information Quarterly*, 23(1):97-122. [Online] Available from: http://0-ac.els-cdn.com.innopac.up.ac.za/S0740624X05000948/1-s2.0-S0740624X05000948-main.pdf?_tid=ba9d3c88-7e80-11e2-ad93-00000aacb35d&acdnat=1361710392_fb806b4022861f0c91cdbc2658cec3d8 [Downloaded: 2012-12-15].

Igbaria, M. & livari, J. 1995. The effects of self efficacy on computer usage. *Omega*, 23(6):587-605. [Online] Available from: http://0-pdn.sciencedirect.com.innopac.up.ac.za/science?_ob=MiamilImageURL&_cid=271690&_user=59388&_pii=0305048395000356&_check=y&_origin=search&_zone=rslt_list_item&_coverDate=1995-12-31&wchp=dGLbVIBzSkzk&md5=097b007349d82b798ebad8310586f442&pid=1-s2.0-0305048395000356-main.pdf [Downloaded: 2013-02-25].

Lee, H., Irani, Z., Osman, I.H., Balci, A., Ozkan, S. & Medeni, T.D. 2008. Research note: toward a reference process model for citizen-oriented evaluation of e-government services. *Transforming Government: People, Process, Policy*, 2(4):297-310. [Online] Available from: Emerald: <http://0-www.emeraldinsight.com.innopac.up.ac.za/journals.htm?issn=1750-6166&volume=2&issue=4&articleid=1748098&show=pdf> [Downloaded: 2013-02-04].

Leedy, P.D. & Ormrod, J.E. 2010. *Practical Research Planning and Design*. 9th ed. Upper Saddle River, New Jersey: Pearson Education.

Lewan, M. 2009. *Filing taxes via cell phone: not just a dream*. . [Online] Available from: http://news.cnet.com/8301-1035_3-10219457-94.html [Accessed 2013-11-04].

Liao, S., Shao, Y. P., Wang, H., & Chen, A. (1999). The adoption of virtual banking: an empirical study. *International Journal of Information Management*, 19(1):63–74. [Online] Available from: https://valueland.ca/download/Articles/The_adoption_of_virtual_banking_1999.pdf [Downloaded: 2013-03-04].

March, S.H. 2006. Can the building of trust overcome consumer perceived risk online. *Marketing Intelligence and Planning*, 24(7):746-761. [Online] Available from <http://dx.doi.org/10.1108/02634500610711897> [Downloaded: 2012-12-02].

Mathieson, K. 1991. Predicting user intentions: comparing the technology acceptance model with the theory of planned behaviour. *Information Systems Research*, 2(3):173-191. [Online] Available from Jstor: <http://0-www.jstor.org.innopac.up.ac.za/stable/pdfplus/23010882.pdf> [Downloaded 2013-03-26].

Moon, J.W. & Kim, Y.G. 2001. Extending TAM for a world-wide-web context. *Information & Management*, 38:217-230. [Online] Available from: ftp://163.25.117.117/ckuo/MScIM_101_1/Paper/Ch7_Moon2001_mid.pdf [Downloaded 2013-03-16].

Moore, G.C. & Benbasat, I. 1991. Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, 2(3):192-222. [Online] Available from Jstor: <http://0-www.jstor.org.innopac.up.ac.za/stable/pdfplus/23010883.pdf> [Downloaded 2013-03-26].

National Treasury. 2012. *Estimates of national expenditure 2012*. Pretoria: Government Printer.

Olsen, C. & George, D.M.M. 2004. Cross sectional study design and data analysis. *YES*, 3-53. [Online] Available from: http://www.collegeboard.com/prod_downloads/yes/4297_MODULE_05.pdf [Downloaded 2013-03-12].

Ramoo, V. 2006. *Determinants of perceived ease of use of e-filing*. Unpublished master's dissertation. Malaysia: Universiti Sains Malaysia.

SARS eFiling, 2013a. *What is eFiling?* [Online] Available from: <http://www.sarseFiling.co.za/AboutPage.aspx> [Accessed 2013-01-03].

SARS eFiling, 2013b. *Frequently asked questions.* [Online] Available from <http://www.sarsefiling.co.za/FAQs.aspx> [Accessed 2013-01-03].

Saunders, M, Lewis, P, Thornhill, A 2009. *Research Methods for Business Students.* 5th ed. Harlow, Essex: Pearson Education.

South African Government News Agency, 2012. *Taxpayers can use cellphones to file returns.* [Online] Available from: <http://oldsanews.gcis.gov.za/news/12/12092808551001> [Accessed 2012-12-10].

South African Revenue Services. 2012. *Annual Report 2011-2012.* [Online] Available from: <http://www.sars.gov.za/home.asp?pid=4150&tid=65&s=pubs&show=1045> [Accessed 2012-12-14].

Szajna, B. 1996. Empirical evaluation of the revised technology acceptance model. *Management Science*, 42(1):85:92. [Online] Available from EbscoHost: <http://0-web.ebscohost.com.innopac.up.ac.za/ehost/pdfviewer/pdfviewer?vid=4&sid=8c96144d-ba35-4168-8d38-eeecf148e000%40sessionmgr112&hid=113> [Downloaded: 2013-03-19].

Tan, T.H. & Foo, Y.F. 2012. Predicting taxpayers intentions' of adopting electronic tax-filing (E-Filing) in Malaysia. *Journal of Accounting – Business & Management*, 19(2):59-71. [Online] Available from EbscoHost: <http://0-web.ebscohost.com.innopac.up.ac.za/ehost/viewarticle?data=dGJyMPPp44rp2%2fdV0%2bnjjsfk5le46a9JsK60SrGk63nn5Kx95uXxjL6nrkevqa1KrqexOLWwrlG4prA4v8OkjPDX7lvf2fKB7eTnfLujr0%2burK9Qtq2zTKTi34bls%2bOGpNrgVeDr5j7y1%2bVVv8SkeeyztkquqLZQrq%2bkfu3o63nys%2bSN6uLyffbq&hid=108> [Downloaded: 2013-10-01].

Taylor, S. & Todd, P.A. 1995. Understanding information technology usage: a test of competing models. *Information Systems Research*, 6(1):144-176. [Online] Available from Jstor: <http://0-www.jstor.org.innopac.up.ac.za/stable/pdfplus/23011007.pdf?acceptTC=true> [Downloaded: 2013-03-30].

Terre Blanche, M. & Durrheim, K. 2004. *Research in practice: applied methods for the social sciences*. Cape Town: University of Cape Town Press.

United Nations E-Government Survey. 2012. *E-Government for the people*. [Online] Available from: <http://www.un.org/en/development/desa/publications/connecting-governments-to-citizens.html> [Accessed 2013-01-13].

Venkatesh, V. & Davis, F. 2000. A theoretical extension of the technology acceptance model: four longitudinal field studies. *Management Science*, 46(2):186-204. [Online] Available from: <http://www.jstor.org.ezproxy.ukzn.ac.za:2048/stable/pdfplus/10.2307/2634758.pdf?acceptTC=true> [Downloaded 2013-02-13].

Venkatesh, V., Morris, M.G., Davis, G.B. & Davis F.D. 2003. User acceptance of information technology: toward a unified view. *MIS Quarterly*, 27(3):425-478. [Online] Available from: https://docs.google.com/viewer?a=v&q=cache:Erb3OWJFOPIJ:citeseerx.ist.psu.edu/viewdoc/download%3Bjsessionid%3D4D8A074FFC4029AFFBF306475CEBB469%3Fdoi%3D10.1.1.197.1486%26rep%3Drep1%26type%3Dpdf+&hl=en&gl=za&pid=bl&srcid=ADGEEShddrsDNMvftWRM0de7OX2Dwz4GC5dwKNCpH5GjW8bq5iNzNASx_5J0Fh8fTmGmRiZ6W7r6Q_QUuNUBSz3kKAHCJWHKI0KEL1z60GG3KZNN6Sifk6KvWrKX5Htw3D9ckd6tGQY&sig=AHIEtbT8IT0vh5anQ30mfXWNCNyQ99PFVg [Downloaded: 2012-02-21].

Wang, J. 2010. Your take: how do you prepare your taxes? [Online] Available from: <http://www.bargaineering.com/articles/your-take-how-do-you-prepare-your-taxes.html> [Accessed 2013-10-03].

Wang, Y.S. 2002. The adoption of electronic tax filing systems: an empirical study. *Government Information Quarterly*, 20(1):333-352. [Online] Available from: <http://lib.ncue.edu.tw/exam/93/Td/be08.pdf> [Downloaded: 2012-02-01].

APPENDIX A

Final questionnaires used to collect data for this study

Questionnaire

(Taxpayers who use e-filing)

Respondent number

--	--	--

ACCEPTANCE OF THE ELECTRONIC METHOD OF FILING TAX RETURNS BY SOUTH AFRICAN TAXPAYERS

Dear respondent

Thank you for your willingness to complete this survey. The purpose of the survey is to investigate why you have chosen the eFiling option to submit your tax return. The survey should not take more than 10 minutes to complete. This is an anonymous and confidential survey. You cannot be identified and the answers you provide will be used for research purposes only.

Please answer all the questions. There are no right or wrong answers. We are interested in understanding your perceptions of the eFiling system and what factors may influence you or deter you from making use of the eFiling method to file tax returns.

SECTION 1: DEMOGRAPHIC PROFILE AND COMPUTER EXPERIENCE

Q1. Please indicate your gender (using a ✓)

Male	
Female	

V1

Q2: Please indicate your age in years. Example 40 years

V2

Q3: Please indicate your highest education level (using a ✓)

None	
Primary	
Secondary	
Tertiary	

V3

Q4: Do you consider yourself to be computer literate? (using a ✓)

Yes	
No	

V4

Q5. Please indicate your access to computer and internet facilities at home (using a ✓)

No access	
Have access to computer only	
Have access to internet only	

V5

Q6. Please indicate your access to computer and internet facilities at work (using a ✓)

No access	
Have access to computer only	
Have access to internet only	

V6

Q7. Please indicate your frequency of internet use (using a ✓)

Never	
Less than once a month	
Once a month	
Once a week or more	

V7

SECTION 2

Please read each statement **carefully** and then **circle** an appropriate number to indicate the extent to which you agree or disagree with the statement. Choose 1 if you “strongly disagree”; 2 if you ‘disagree’; 3 if you are ‘neutral’; 4 if you ‘agree’; 5 if you ‘strongly agree’.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	For office use only	
Q8	eFiling is beneficial to me	1	2	3	4	5	V8	
Q9	Learning how to use the eFiling system was easy for me	1	2	3	4	5	V9	
Q10	Using eFiling suits my occupation	1	2	3	4	5	V10	

Q11	My peers, friends and family encourage me to use eFiling	1	2	3	4	5	V11	
Q12	Resources required to use eFiling are readily available to me	1	2	3	4	5	V12	
Q13	I feel comfortable using the eFiling system on my own	1	2	3	4	5	V13	
Q14	Using eFiling enhances my effectiveness in preparing my tax return resulting in fewer errors	1	2	3	4	5	V14	
Q15	I trust the eFiling system with my personal information	1	2	3	4	5	V15	
Q16	Using the eFiling system is compatible with my day to day activities	1	2	3	4	5	V16	
Q17	Using eFiling enhances the speed at which my tax return is processed	1	2	3	4	5	V17	
Q18	People who influence me think that using eFiling is a good idea	1	2	3	4	5	V18	
Q19	It is easy for me to get technical support when using the eFiling system	1	2	3	4	5	V19	
Q20	I find it easy to submit my tax return using eFiling	1	2	3	4	5	V20	
Q21	I trust the eFiling system but I am afraid of hackers and other internet threats	1	2	3	4	5	V21	
Q22	I use eFiling because it is advertised as being more effective and efficient than manual filing	1	2	3	4	5	V22	

Q23	It was easy for me to become skillful at using the eFiling system	1	2	3	4	5	V23	
Q24	I do not trust the internet with any of my personal and financial information	1	2	3	4	5	V24	
Q25	I am able to teach others how to use the eFiling system	1	2	3	4	5	V25	
Q26	Using the eFiling system fits well into my lifestyle	1	2	3	4	5	V26	
Q27	I am confident the necessary safeguards have been put into place to protect my confidential information	1	2	3	4	5	V27	
Q28	I am able to use the eFiling system without any technical support or learning tutorials	1	2	3	4	5	V28	
Q29	I intend to continue using eFiling next year	1	2	3	4	5	V29	

**Thank you for completing the survey.
We appreciate your assistance**

Questionnaire

(Taxpayers who do not use e-filing)

Respondent number			

ACCEPTANCE OF THE ELECTRONIC METHOD OF FILING TAX RETURNS BY SOUTH AFRICAN TAXPAYERS

Dear respondent

Thank you for your willingness to complete this survey. The purpose of the survey is to investigate why you have not chosen the eFiling option to submit your tax return. The survey should not take more than 10 minutes to complete. This is an anonymous and confidential survey. You cannot be identified and the answers you provide will be used for research purposes only.

Please answer all the questions. There are no right or wrong answers. We are interested in understanding your perceptions of the eFiling system and what factors may influence you or deter you from making use of the eFiling method to file tax returns.

SECTION 1: DEMOGRAPHIC PROFILE AND COMPUTER EXPERIENCE

Q1. Please indicate your gender (using a ✓)

Male	
Female	

V1	<input type="checkbox"/>
----	--------------------------

Q2: Please indicate your age in years. Example 40 years

--	--

V2	<input type="checkbox"/>
----	--------------------------

Q3: Please indicate your highest level of education (using a ✓)

None	
Primary	
Secondary	
Tertiary	

V3	<input type="checkbox"/>
----	--------------------------

Q4: Do you consider yourself to be computer literate? (using a ✓)

Yes	
No	

V4	<input type="checkbox"/>
----	--------------------------

Q5. Please indicate your access to computer and internet facilities at home (using a ✓)

No access	
Have access to computer only	
Have access to internet only	

V5

Q6. Please indicate your access to computer and internet facilities at work (using a ✓)

No access	
Have access to computer only	
Have access to internet only	

V6

Q7. Please indicate your frequency of internet use (using a ✓)

Never	
Less than once a month	
Once a month	
Once a week or more	

V7

SECTION 2

Please read each statement **carefully** and then **circle** an appropriate number to indicate the extent to which you agree or disagree with the statement. Choose 1 if you “strongly disagree”; 2 if you ‘disagree’; 3 if you are ‘neutral’; 4 if you ‘agree’; 5 if you ‘strongly agree’.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	For office use only	
Q8	eFiling will be of no benefit to me	1	2	3	4	5	V8	
Q9	Learning how to use the eFiling system will be easy for me	1	2	3	4	5	V9	
Q10	Using eFiling suits my occupation	1	2	3	4	5	V10	

Q11	My peers, friends and family think that I should use eFiling	1	2	3	4	5	V11	
Q12	Resources required to use eFiling are readily available to me	1	2	3	4	5	V12	
Q13	I will feel comfortable using the eFiling system on my own	1	2	3	4	5	V13	
Q14	Using eFiling would enhance my effectiveness in preparing my tax return resulting in fewer errors	1	2	3	4	5	V14	
Q15	I trust the eFiling system with my personal information	1	2	3	4	5	V15	
Q16	Using the eFiling system will be compatible with my day to day activities	1	2	3	4	5	V16	
Q17	Using eFiling would improve the speed at which my tax return is processed	1	2	3	4	5	V17	
Q18	People who influence me think that using eFiling is a good idea	1	2	3	4	5	V18	
Q19	It will be easy for me to get technical support when using the eFiling system	1	2	3	4	5	V19	
Q20	I will find it easy to submit my tax return using eFiling	1	2	3	4	5	V20	
Q21	I trust the eFiling system but I am afraid of hackers and other internet threats	1	2	3	4	5	V21	
Q22	I would use eFiling because it is advertised as being more effective and efficient than manual filing	1	2	3	4	5	V22	

Q23	It will be easy for me to become skilful at using the eFiling system	1	2	3	4	5	V23	
Q24	I do not trust the internet with any of my personal and financial information	1	2	3	4	5	V24	
Q25	I will be able to teach others how to use the eFiling system	1	2	3	4	5	V25	
Q26	Using the eFiling system will fit well into my lifestyle	1	2	3	4	5	V26	
Q27	I am confident the necessary safeguards have been put into place to protect my confidential information	1	2	3	4	5	V27	
Q28	I will be able to use eFiling without any technical support or learning tutorials	1	2	3	4	5	V28	
Q29	I would like to use eFiling but have no access to the resources required to do so	1	2	3	4	5	V29	
Q30	I intend to use eFiling next year	1	2	3	4	5	V30	

**Thank you for completing the survey.
We appreciate your assistance**

APPENDIX B

Informed consent form



**Informed consent for participation in an academic
research study**

Dept. of Taxation

**ACCEPTANCE OF THE ELECTRONIC METHOD OF FILING TAX RETURNS BY
SOUTH AFRICAN TAXPAYERS**

Research conducted by:

Mr. R.W. Jankeeparsad (11351862)
Cell: 083 415 5784

Dear Respondent

You are invited to participate in an academic research study conducted by Raphael Warren Jankeeparsad, a Masters student from the Department of Taxation at the University of Pretoria.

The purpose of the study is to identify factors that influence and deter taxpayers from using the eFiling method to file tax returns.

Please note the following:

- This study involves an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
- Your participation in this study is very important to us. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer the questions in the attached questionnaire as completely and honestly as possible. This should not take more than 10 minutes of your time
- The results of the study will be used for academic purposes only and may be published in an academic journal. We will provide you with a summary of our findings on request.
- Please contact my supervisor, Mr G Nienaber (Gerhard.Nienaber@up.ac.za) if you have any questions or comments regarding the study.

Please sign the form to indicate that:

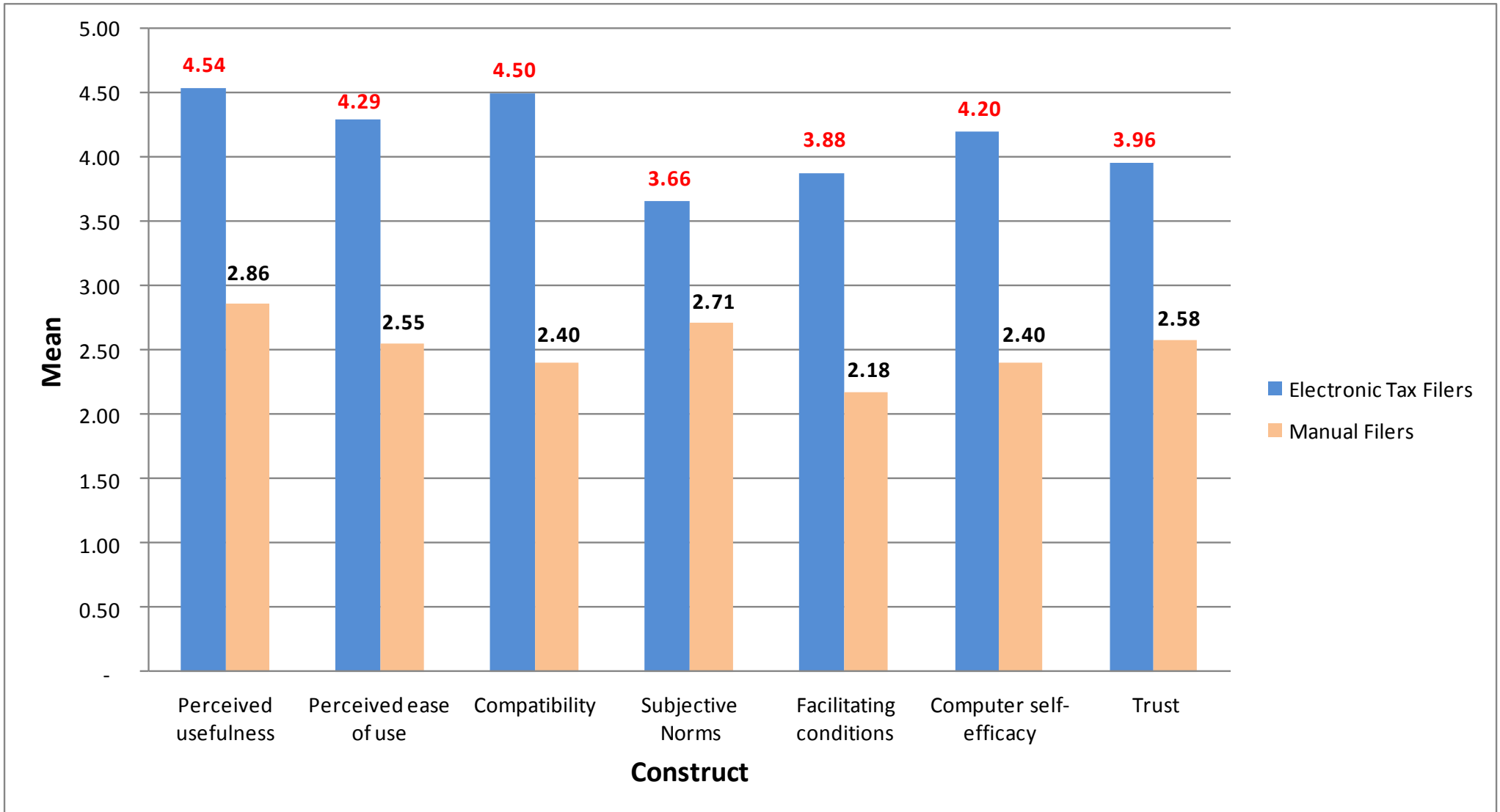
- You have read and understand the information provided above.
- You give your consent to participate in the study on a voluntary basis.

Respondent's signature

Date

APPENDIX C

Graph depicting results for each construct



APPENDIX D

Results of each item in questionnaire

<u>Group</u>	<u>Label</u>	<u>Mean</u>	<u>Std Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
eFilers	V2	33.5000000	7.9443216	22.0000000	55.0000000
eFilers	V8	4.7200000	0.4535574	4.0000000	5.0000000
eFilers	V9	4.3200000	0.6833292	2.0000000	5.0000000
eFilers	V10	4.5400000	0.5034574	4.0000000	5.0000000
eFilers	V11	3.5600000	0.8609440	2.0000000	5.0000000
eFilers	V12	4.5800000	0.4985694	4.0000000	5.0000000
eFilers	V13	4.5400000	0.6764252	2.0000000	5.0000000
eFilers	V14	4.2800000	0.7835034	2.0000000	5.0000000
eFilers	V15	4.3600000	0.6311635	3.0000000	5.0000000
eFilers	V16	4.5600000	0.5771146	3.0000000	5.0000000
eFilers	V17	4.6200000	0.6023762	3.0000000	5.0000000
eFilers	V18	3.9400000	0.9127219	3.0000000	5.0000000
eFilers	V19	3.1800000	1.1899237	1.0000000	5.0000000
eFilers	V20	4.3800000	0.6353530	3.0000000	5.0000000
eFilers	V21	3.5600000	1.1457107	1.0000000	5.0000000
eFilers	V22	3.5000000	1.0350983	2.0000000	5.0000000
eFilers	V23	4.1800000	0.6288960	3.0000000	5.0000000
eFilers	V24	2.6600000	1.0615737	1.0000000	5.0000000
eFilers	V25	3.9400000	0.7117096	2.0000000	5.0000000
eFilers	V26	4.4000000	0.6060915	3.0000000	5.0000000
eFilers	V27	3.9800000	0.7690439	2.0000000	5.0000000
eFilers	V28	4.1400000	0.9478224	1.0000000	5.0000000
eFilers	V29	4.5600000	0.6114553	2.0000000	5.0000000

<u>Group</u>	<u>Label</u>	<u>Mean</u>	<u>Std Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
Manual	V2	48.2800000	7.8585453	29.0000000	62.0000000
Manual	V8	3.6600000	0.9171829	2.0000000	5.0000000
Manual	V9	2.4400000	0.9930370	1.0000000	5.0000000
Manual	V10	2.3800000	1.0079278	1.0000000	4.0000000
Manual	V11	2.7800000	0.7899884	1.0000000	4.0000000
Manual	V12	2.3800000	1.1408912	1.0000000	4.0000000
Manual	V13	2.5000000	0.9741558	1.0000000	4.0000000
Manual	V14	2.3600000	0.8020382	1.0000000	4.0000000
Manual	V15	2.4800000	1.1292042	1.0000000	4.0000000
Manual	V16	2.4400000	0.9293403	1.0000000	4.0000000
Manual	V17	2.5600000	0.8369039	1.0000000	4.0000000
Manual	V18	2.8400000	0.7655863	2.0000000	4.0000000
Manual	V19	1.9800000	0.5146824	1.0000000	4.0000000
Manual	V20	2.4600000	0.8621284	1.0000000	5.0000000
Manual	V21	2.8200000	1.0437374	1.0000000	5.0000000
Manual	V22	2.5200000	0.7068181	1.0000000	4.0000000
Manual	V23	2.7600000	1.0012237	1.0000000	4.0000000
Manual	V24	4.0000000	0.8571429	2.0000000	5.0000000
Manual	V25	2.3800000	0.7795865	1.0000000	4.0000000
Manual	V26	2.4000000	0.8329931	1.0000000	4.0000000
Manual	V27	2.4600000	1.0343094	1.0000000	4.0000000
Manual	V28	2.3400000	0.7982123	1.0000000	4.0000000
Manual	V29	3.3000000	1.1823532	2.0000000	5.0000000
Manual	V30	1.9800000	0.7951383	1.0000000	62.0000000