

**THE IMPACT OF INFORMATION COMMUNICATION TECHNOLOGY ON
TAX ADMINISTRATION: A SYSTEMATIC REVIEW**

by

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Background: Information Communication Technology (ICT) continues to play a significant role in transforming the administration of tax. It improves interaction between government and its citizens, transactional and informational. A number of studies have focused on ICT and tax administration, however, the full extent of its impact from these studies remains relatively unknown. This study reviews the literature on tax administration and ICT in order to acquire a structured view of its impact.

Main purpose of study: To perform a systematic literature review of published articles to comprehend the impact of ICT on tax administration. This study provides a structured overview of the academic journal publications on ICT and tax administration.

Method: This study adopts a systematic literature review approach. Academic articles published between 2007 and 2017 are reviewed to assess the impact of ICT on tax administration. These academic articles were sourced from renowned databases, namely: Scopus, Web of Science and Proquest. Only highly rated ABDC journal articles were analysed for the purpose of this study.

Results: A total of 18 academic journals were sourced which specifically discuss ICT and tax administration. The study revealed that ICT positively impacts on tax administration. It creates an enabling environment for effective and efficient tax administration through simplification and continued audits through improved techniques and tools. Furthermore, taxpayer's perceptions improved as a result of reduced administration costs and increased voluntary compliance, improved governments decision-making strategies through increased revenue collection, tax planning and performance management. Moreover, it

improves exchange information between governments through ICT information sharing techniques.

Conclusions: The study revealed that ICT affects tax administration as follows: tax simplification, an audit tool, decision-making tool, impacts user perceptions and fairness towards compliance, and an information sharing tool with other tax agencies. However, it is recommended that additional studies should be undertaken from the policy perspective. The scope of this research article can be expanded to include articles published in journals other than the ABDC list and alternative years to that covered in this study.

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KEY TERMS

Table 1: Key terms used in this document:

<u>Key term</u>	<u>Description</u>
E- Governance	“A process of innovation of public administration, government and governance through the use of ICT” (OECD, 2017).
Electronic Filing	“A computer- based system for the storage, and retrieval of documents. It is central to the success of a comprehensive office automation system in that it provides the basic object management required to create, manipulate, and delete “office objects” which maybe any other information that may be stored in the computer system” (Oxford English Dictionary, 2017).
Information Technology	“Use of systems for storing, retrieving and sending information” (Oxford English Dictionary, 2017).
Tax Administration	“Action of dispensing, giving or applying something in the context of tax administration” (Oxford English Dictionary, 2017).
Tax Compliance	“Degree to which a taxpayer complies (or fails to comply) with the tax rules of his country, for example by declaring income, filing a return, and paying the tax due in a timely manner” (OECD, 2017).

LIST OF ABBREVIATIONS AND ACRONYMS

Table 2: Abbreviations and acronyms used in this document

<u>Abbreviation</u>	<u>Meaning</u>
ABDC	Australian Business Deans Council
ATO	Australian Tax Office
BEPS	Base Erosion and Profit Shifting
CAATTs	Computer Assisted Audit Tools and Techniques
CbC reporting	Country-by-Country Reporting
CPA	Chartered Public Accountant
E-Government	Electronic Government

E-Filing	Electronic Filing
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IT	Information Technology
OECD	Organisation for Economic Convention and Development
RCA	Revenue and Customs Authority
SARS	South African Revenue Service
TAA	Tax Administration Act No.11 of 2014
TAM	Technology Acceptance Model

CHAPTER 1 INTRODUCTION

1.1 BACKGROUND

With the advent of the internet and advanced telecommunications networks, the way people communicate, transact, learn and share ideas has changed as distance and time are no longer a barrier to communication. Online banking allows for twenty four hour banking; social networks allow for moments to be shared among a diverse group of people spanning various geographic areas; voting can be done electronically; medical consultations can be conducted through video calling and tax returns can now be submitted electronically (National Planning Commission, 2012). These are just a few examples of how information and communication technology (ICT) impacts on the lives of ordinary citizens and how both public and private sectors conduct business.

In a democratic society, ICT plays a significant role in mobilising transparency because government is able to transmit mandated information and provide services through electronic means which is more efficient in terms of speed of delivery and geographic coverage (Vasconcellos & Rua, 2005:49). Likewise, citizens are able to request government services, communicate with their political representatives as well as meet their legal obligations, such as pay taxes through various government communication channels made possible through ICTs (Jankeeparsad, Jankeeparsad & Nienaber, 2016:121).

From a tax administration perspective, ICT has been used to modernise tax administration procedures and improve revenue collection and tax compliance (Chatama, 2013:99). This can be summarised as reducing tax complexity to enhance voluntary and enforced compliance. However, how true this statement is, is a matter of debate because various studies with the advent of time, from different countries and perspectives of tax compliance and tax administration present varying results in terms of the impact ICT has had on tax administration. For example:

- Gcabo (2007:358) predicts that technology can be used to masquerade tax evasion as tax avoidance;
- Carter and Schaupp (2009:167) note that citizen adoption of e-filing is impeded by negative social influences and a lack of perceived usefulness of the service;
- Chatama (2013:91) attributes higher revenue collections to enhanced tax administration through the use of ICT; and
- While reviewing how five countries utilise computer assisted audit tools and techniques (CAATTs) to conduct tax audits, Darono and Ardianto (2016:519-522) accentuate that there is still room for improvement in each of the country's selected CAATTs. CAAT must comply within the confines of the country's legislation, human capital and ITC resources.

Differences in results is due to how each country's tax system is designed and administered, how technology is adopted within each economy (Bird & Zolt, 2008:792) and how the research questions for each study are formulated. Therefore, the need for a systematic review of the status of existing literature on the impact of ICT on tax administration to provide a structured overview of current literature is paramount.

1.2 ACADEMIC FRAMEWORK

This study aims to review a sample of the existing literature in order to determine the overall impact ICT has had on tax administration in general. Therefore, this section presents a synopsis of the theoretical framework that forms the basis of the study. It begins by presenting a framework of the existing literature that outlines and investigates the main theoretical constructs on the impact of ICT on tax administration. This is followed by providing the rationale for the study as well as stating the primary purpose of the study.

1.2.1 Literature overview

This section provides an overview of the relevant literature on impact of ICT in tax administration and the variables under investigation, which is followed by the results of the literature.

Most tax reform efforts have been aimed at making the tax system more accessible to taxpayers and administrators (Budak & James, 2016:427). However, reform efforts have often further added to the complexity of the tax system as the need for fairness often outweighs the need for simplicity (James, Sawyer, & Wallschutzky, 2015:281). One of the reform measures adopted globally has been the incorporation of ICT in the tax system to reduce administration costs, improve services and voluntary compliance by taxpayers (Wang, 2002:333; Bird & Zolt, 2008:793; James *et al.*, 2015:293). However, from a policy perspective, the adoption of ICT in tax administration has been impeded by a lack of appropriate political and institutional reforms that create an enabling environment for the effective and efficient functioning of ICT initiatives (Bird & Zolt, 2008:814).

The biggest reform took place during 1992 to 1993 when the self-assessment system of tax administration was introduced (Mousa, 2016:1). There have been major achievements in simplifying tax administration both in terms of limiting the number of tax returns issued in certain countries and in populating (pre-filling tax returns that are sent out). In the UK most taxpayers have not been required to complete a tax return since the introduction of Pay-as-you-earn system in 1944. New Zealand has also moved towards taxpayers not having to submit tax returns (Mousa, 2016:4).

From a taxpayer perspective, how taxpayers and tax practitioners view technological reforms in the tax system can be aligned to the Technology Acceptance Model (TAM) which states that behavioural intention determines information technology usage. The TAM model is one of the eight theoretical models of how and why individuals choose to adopt new technologies. Schaupp & Carter (2009:4) investigated seven independent variables, where performance, expectancy, social influence, facilitating conditions and perceived risks revealed to significantly influence intention to use, while trust of the e-file system revealed significant perceived risk influence. Furthermore, the TAM theory was further confirmed in the study by Azmi and Bee (2010:1). TAM proposes a model comprising of three constructs, which are perceived usefulness, perceived ease of use and perceived risk. The aforementioned variables significantly influences behavioural intention. The perceived construct has a negative association with the perceived usefulness constructs. However, there is no significant association between the perceived risk and perceived ease of use constructs (Azmi & Bee, 1).

Usage is in turn based on the perceived ease of use and perceived usefulness of the system. Furthermore, within a taxpayer context, other factors that contribute towards the adoption of electronic filing (eFiling) includes subjective norms (perception of how relevant others expect a person to behave), availability of facilitating conditions (computers and mobile phones, internet connectivity and training), computer self-efficacy (ability to use a computer and related information systems), and trust (in the government and the internet) (Jankeepsad *et al.*, 2016:123-126).

Borrego, Loo, Lopes and Ferreira (2015:341-344) state that there are both exogenous (age, gender, tax knowledge and size of customers' businesses) and endogenous factors (volatility of tax laws, tax law volume and density, reporting requirements, too many exceptions and transitional arrangements in tax laws and ambiguity in tax language) that could impact on tax practitioners perceptions of tax complexity.

Schaupp and Carter (2009: 11) developed another theory to test a model of e-file adoption that incorporates risk perceptions and optimism bias to explain e-file diffusion. In his model he developed theoretical development on technology adoption, perceived risk, and optimism bias. Multiple linear regression analysis was utilised to evaluate the relationships between adoption concepts and intention to use e-filing systems. The results revealed that five independent variables (effort expectancy, performance expectancy, social influence, perceived risk, and optimism bias) are significant predictors of intention to use an e-file system.

Kaisara and Pather (2011:211-221) posit that there are six service quality dimensions applicable in e-government evaluation:

- Website design, which asserts that the e-government portal should easily direct citizens to a department, and to a specific service, rather than to high-ranking officials, who will not respond to day to day queries.
- Access, another quality dimension is the extent to which users have equal access to the website. The study also revealed that in a country with socio-economic and cultural groupings as South Africa, accessibility is still not enjoyed by many.
- Communication simply implies being allowed to communicate in your own language, government officials responding to your emails in a timely manner, and government

websites making a clear posting of the service standards that one is entitled to as a citizen.

- Site aesthetics: website design should be simple and attractive.
- Information quality: the information on the website should be kept at a minimum, while security and the utilisation of websites instils feelings of trust in government.

In a more practical concept, Darono and Pangabbean (2015) assert CAATTs as a concept with many perspectives. It is about how to utilise various computer tools and techniques. For example, an auditor can conduct certain audit routines such as testing the correctness of the calculations, draw-up letters of confirmation and specify the audit sample. In summary, CAATTs are computer tools and techniques that an auditor utilises as part of their audit procedure to process electronic data automatically. Ardianto and Darono (2016:14) revealed in their study that CAATTs in taxation can be utilised for data extraction and as an analysis technique.

According to Lala, Gupta and Sharman (2014:50), IT auditors have been approached to play a key role in helping companies fight fraud. CAATTs provide unique opportunities for companies to expose gaps in existing traditional fraud detection methods. In terms of "TAA", SARS may select a person for inspection, verification or audit on the basis of consideration including a random or risk-assessment basis. Furthermore, CAATTs is an opportunity for SARS to fight fraud and increase revenue collection.

When information is available to conduct an audit on computer systems, one must have access to a computer. Therefore, to conduct an audit without using information technology is hardly an option (Sayana, 2003:1).

SARS has been under pressure in recent years to collect revenue and to meet targets as set out by National Treasury. Therefore, SARS is using increased powers in terms of "TAA" to achieve this objective by conducting additional audits in recent years. Furthermore, SARS can only conduct effective audits by utilising data extraction systems. An audit is the most efficient approach to acquire that revenue. Tax audits are concerned with and transforming evidence from multiple sources to conclude whether the audited taxpayer has complied with the law.

A total of 54% of the companies have a budget to manage tax disputes; 40% of the respondents revealed that their budget to manage tax disputes was more than 10 percent of the tax function's overall budget; 30% of the respondents utilise technology to monitor the number and nature of their organisations tax disputes globally; and only a quarter of the respondents utilise a dispute specific software platform (Khumalo, 2017).

Tax systems increases voluntary compliance in taxpayers. The theory discussed by Borrego, Loo, Lopes and Ferreira (2015:4) asserts that in recent decades tax systems have become more complex, particularly for many countries that have implemented the self-assessment systems. Under this system, taxpayers are given greater responsibility to manage their own tax affairs and complying with their tax liabilities. The government is expected to influence citizen's perception of the usefulness of e-filing to increase adoption of the system. Research suggests that trust is necessary when risk is prevalent. It would be interesting to establish how trust impacts on adoption when optimism bias is accounted for (Schaupp & Carter, 2009:11). In the case of the South African taxpayer, E-filing was introduced in 1997. The main of E-filing system is to facilitate the electronic submission of tax returns and payments by taxpayers and tax practitioners. E-filing is aimed at improving operational efficiencies in order to deliver improved and quicker service.

E-service quality directly influences the burden of complying with tax obligations. E-service quality provided by government and tax authorities in tax administration increases perceptions of taxpayers towards compliance, and further decreases the costs of the taxpayers to comply with their tax obligations (Stinglingh, 2014). According to the Inland Revenue Service (IRS), filing taxes is on average 8 hours and costs \$120 for each non-business return. Many taxpayers today employ tax practitioners to find some relief from their tax obligations. Factors influencing tax collection such as behavioural response have become a paramount for future policy-making (Gcabo & Robinson, 2007:3).

In South Africa, the National Treasury released on 23 December 2016 the long awaited regulations on country-by-country reporting (CBC reporting). This new reporting obligation which flows from the OECD BEPS project will have a significant impact on businesses. The release of the draft regulations follows legislative amendments made to the "TAA" during

2015, and closely follows the model legislation related to the CbC reporting per Action 13 in the initial OECD BEPS report.

The regulation is effective for tax years commencing on or after 1 January 2016. The CbC reports must be completed within 12 months of year-end. Once submitted the CbC report will be shared with other revenue authorities and it is expected that SARS and these revenue authorities share information to assess the risk of BEPS by the Group. This is likely to lead to queries on transfer pricing and other international tax related matters.

It is evident from these developments that ICT will play a significant role in providing the much needed information amongst government agencies and tax authorities. Without ICT, the project of this magnitude would be impossible.

The adoption and effective use of ICT has the potential to yield significant benefits in the least developed countries. ICT is an effective tool to assist governments in vulnerable developing countries to fight corruption, develop the much needed infrastructure for economic development and control high level unemployment. These factors contribute towards slowing down government's progress. Developing countries are the most vulnerable in the international community. The adoption and effective use of ICT in developing countries also has the potential to address deep-seated problems in public sector administration (Imran & Gregor, 2005:1).

ICT can modernise tax administration procedures and improve revenue collection (Chatama, 2013:2). SARS for the 2016/17 financial year processed 99,9% of all returns received electronically. SARS Commissioner Tom Moyane announced that that Service had collected over R1-trillion in tax for the 2016/17 financial year, and exceeded the revised target by R300 000. SARS is known to have built credibility as an organisation since the introduction of E-filing in 2006 and has gained the trust between itself and the South African citizens over the years (Nicolaedes, 2017).

The aforementioned reviewed literature review summarises the impact of ICT in tax administration; key features of the benefits of tax simplification; utilisation of CAATTs in the

tax audit environment; information of how technology assists companies in tax disputes; influence of ICT on taxpayer's perception with compliance and serve as a beneficial tool in sharing information with other tax agencies.

1.2.2 Rationale for the study

Yousafzai, Fozall and Pallister (2007: 251-280) conducted a meta-analysis of 145 published articles on the Technology Acceptance Model (TAM). Instead of being confined to a specific type of research, they adopted a comprehensive perspective and incorporated research pertaining to any of the methodological aspects of TAM. This study provided a structured overview of TAM which was most beneficial to the researchers. Currently, the full extent of the impact of ICT and tax administration is not known. Therefore, this study will provide a structured overview of the impact of ICT on tax administration. The methodology adopted for this study is a systematised review of academic research on the impact of information technology on tax administration, published in highly rated academic journals during 2007 to 2017.

1.2.3 Main constructs

The section clarifies the main theoretical constructs for this study namely: ICT and tax administration.

INFORMATION COMMUNICATION TECHNOLOGY

Heeks (2002:2) describes IT as an old model automating the internal workings of government by processing data. The new model is one of information technologies (ICT) supporting and transforming the external workings of governance by processing and communicating data. E-government maturity is mediated by ICT infrastructure and the utilisation thereof includes transforming government's internal and external relationships, while maintaining its functions and its responsibility to remain useful, legitimate, transparent and accountable (Singh, Das & Joseph, 2007:1).

OECD broadly defines e-government as a process of innovation of public administration, government and governance through the use of ICT's. The theory in E-government is found in New Public Management in Europe. It is a label which many academics have given to a series of reforms from the 1980's onwards to improve the efficiency and performance of western government and public organisations (Homburg, Pollitt, & Thiel, 2007:1). Since the early 1990's the reinventing movement of Osborne and Gaebler in 1992 called for a radical change from bureaucratic government towards entrepreneurial that is customer focused and result oriented (Dawes, 2008:1).

E-governance comprises the use of ICT's to support public services, government administrations, democratic processes, and relationship among citizens, civil society, the private sector, and the state (Dawes, 2008:1). Developed over more than two decades of technology innovation and policy response, the evolution of e-governance is examined in terms of five interrelated objectives:

- A policy framework
- Enabled public services.
- High quality and cost effective government operations.
- Citizen engagement in democratic processes.
- Administrative and institutional reform.

ICT enabled governance will continue to evolve for the foreseeable future providing a dynamic environment for ongoing learning and action.

TAX ADMINISTRATION

CIAT (2011:2) states that Tax Administrations administer taxes. They implement and enforce tax laws, as well as receive their mandates by law. The core business of Tax Administrations is the levying and collection of taxes imposed by law. It is important that Tax Administrations establish a clear definition of their core business from the outset and make it known to their stakeholders.

Administration of a tax Act includes the following (SARS, 2014):

- obtaining full information in relation -

- to anything that may affect the liability of a person for tax in respect of a previous, current or future tax period;
 - to a taxable event; or
 - to the obligation of a person (whether personally or on behalf of another person) to comply with a tax Act;
- Ascertaining whether a person has filed or submitted correct returns, information or documents in compliance with the provisions of a tax Act;
 - Establishing the identity of a person for purposes of determining liability for tax;
 - Determining the liability of a person for tax;
 - Collecting tax and refunding any tax overpaid;
 - Investigating whether a tax offence has been committed,
 - Enforcing SARS's powers and duties under a tax Act to ensure that an obligation imposed by or under a tax Act is complied with;
 - Performing any other administrative function necessary to carry out the provisions of a tax Act; and
 - Giving effect to the obligation of the Republic to provide assistance under an international tax agreement.

Improving tax administration has long been a matter of concern to tax agencies. Money alone is inadequate. However, it is necessary for any country to function, and the most reliable way is to implement an effective tax administration (Bird, 1992:4). Tax administration is becoming more adaptable to risk as it continues to move from being inward looking and procedure focused, to outward looking and taxpayer focused. Tax administrations have a wide range of compliance and customer service programmes that aim to change behaviour among taxpayers (Kerr, 2012: 4).

Successful tax administration requires skilled people with leadership skills, integrity, commitment and engagement (AO, 2015:4). A preeminent tax administration is a requirement for taxpayers to co-operate in the operation of a tax system rather than be forced to carry out every aspect of their tax obligations (James & Alley, 2004:1). Tax law has to be supported with supporting provisions, administrative procedures and decisions as

well as appeal arrangements. The tax system cannot work properly without a reasonable degree of willing compliance on the part of taxpayers themselves.

The pioneering effort of the OECD to collect comparative information about tax administrations in OECD member countries has been extended to a wider set of countries. Several recent empirical studies have appeared to draw on this new data base. The absence of sound comparative data did not limit the advice over the years from many sources of how to improve tax administration. Although this activity generated a huge volume of material, little was published and even less was systematically evaluated either by the providers themselves or by outside scholars (Bird, 1992: 1).

It seems reasonable to conclude that for tax administration to be successful, tax authorities should challenge themselves through a close working relationship with the communities and focus on compliance. Non-compliance is a serious challenge which diminishes income tax administration and tax revenue performance in countries.

1.3 RESEARCH QUESTION AND OBJECTIVES

Research activities in this study are guided by a non-empirical meta-analytical question, namely: What is the present status of highly rated academic journal articles related to the impact of ICT on tax administration.

The broad research objectives of the study include:

- to identify and substantiate academic research articles related to the impact of ICT on tax administration and adopt a research methodology to systematically explore recent journal publications;
- to assess the quality of journals in which the academic articles are published, by utilising the Australian Business Deans Council (ABDC) list;
- to systematically analyse the academic articles published in ABDC rated journals, utilising a taxonomy framework¹;

¹ Taxonomy framework provided in Annexure B of this study.

- to present and discuss the results from the systematic analysis of the highly rated academic articles; and
- to conclude on the study.

1.4 STRUCTURE OF THE MINI-DISSERTATION

The main outcomes of the study is presented in the format of a mini-dissertation. The structure of the study is explained and summarised below.

1.4.1 Chapter 1: Introduction

Chapter one provides the background and clarifies the rationale for the study. The objective of this chapter is delineated followed by the research problem and objectives, and the academic framework. The theory and a brief history of ICT and tax administration from published articles is presented.

1.4.2 Chapter 2: Research design and methodology

Chapter two discusses the research design and methodology adopted for the study. The chapter provides the rationale for the processes adopted and the gathered analysed data is explained.

1.4.3 Chapter 3: Data analysis and discussion

Chapter three explains the methods adopted to analyse the journals using the Qiqqa software. The chapter further addresses the criteria used to select journals for the study including the results thereof through the taxonomy framework. The chapter also briefly explains Qiqqa followed by the conclusion.

1.4.4 Chapter 4: Conclusion

Chapter four concludes the findings of the study, and formulates opinions for future improvement which can be implemented to administer tax technologically.

CHAPTER 2

RESEARCH DESIGN AND METHODOLOGY

2.1 INTRODUCTION

The purpose with this chapter is to expound upon the research design and methodology adopted for this study. The previous chapter provided the background, literature overview, rationale for the study, its main constructs, research question and objectives, including the structure of the study.

2.2 ORIENTATION OF THE RESEARCH DESIGN

The following are appropriate headlines that best describe the broad design elements of the study, namely: the philosophical and reasoning stance, nature, time horizon, unit of analysis, as well as the nature of the gathered data.

2.2.1 Philosophical stance

Holden and Lynch (2004:2) introduced researchers to the differences in philosophical perspectives and the major research which emanated from them. The study argued that research should not be methodologically led, but rather be consequential to the researcher's philosophical stance. Furthermore, they argued that only an intermediate philosophical approach allows the researcher to match philosophy. The study introduced the philosophers to the core assumptions underlying the subjectivist and the objectivist; subjectivist being interpretivist; while objectivist being positivist.

Positivist work seeks to identify qualitative data with propositions that can be tested or identified in other instances, while interpretive work seeks to combine the data into systems of belief whose manifestation are specific to a case (Lin, 1998:1).

This study falls within the ambit of interpretivist philosophical stance. The author had been subjective during the data collected through searches in databases, and conclusions formulated from the combination of data.

2.2.2 Nature of the study

Exploratory study is set to explore any phenomenon in the data which serves as a point of interest to the researcher whereas the descriptive study is set to describe the natural phenomenon which ensues from the data in question (Zainal, 2007:1). This study takes place when utilising ICT and tax administration keywords have been collected to formulate a framework of the results of data collected. Consequently, this study is classified as exploratory.

2.2.3 Method of reasoning

There are three methods of reasoning; abductive approach, inductive approach and deductive approach (Spens & Kovacs, 2005:132-144). The inductive approach is aimed at formulating theory, while the deductive approach is most suitable for testing existing theories and not creating new science. The abductive approach builds a framework to explore research approaches. This study, which endeavours to comprehend the role ICT has played in tax administration. The literature is drawn upon from published academic journals and follows a deductive approach.

2.2.4 Time horizon

There are two types of Time horizons, namely: cross-sectional and longitudinal. Cross sectional studies are primarily used to determine prevalence. Prevalence equals the number of cases in a population at a given point in time (Mann, 2003:54-60).

This study is referred to as cross-sectional; the publications gathered represents only what is happening at this point in time.

2.2.5 Unit of analysis

Unit of analysis is the element of the population the researcher intends to study (Holsti, 1969). The unit of analysis of this study encompasses quality published academic articles which meet the inclusion criteria of the literature under review.

2.2.6 Nature of the data

Data is collected from existing published literature and therefore, classified as secondary data.

2.3 RESEARCH METHODOLOGY

This study is presented in a form of a systematic literature review. Academic articles are searched from acknowledged databases, that is, Scopus, Web of Science and Proquest. The following step was to capture the articles on the data analysis software named Qiqqa which can be downloaded from the internet.

2.3.1 Research method

Qualitative data comprises any information that can be captured and not numerical in nature, whereas quantitative data is statistical in nature. This study adopted the qualitative research methodology using a systematic review as the research strategy.

2.3.2 Systematic review as a research strategy

Grant and Booth (2009:91-108) describe systematic review as an attempt to include elements of the process while not conducting a review. The study discusses the acceptability of the systematised review as a research strategy for a post graduate student, in acknowledgement that a post graduate student is not able draw upon the resources required for a full systematic review.

Perceived strengths of the systematic review include that the author might only search one or more databases and then code and analyse all retrieved results in a systematic manner.

The resulting output “models” the systematic review process and allows the author to demonstrate an awareness of the entire process and technical proficiency in the component steps. However, such a review does not necessarily claim the comprehensiveness fundamental to the systematic review method. Such reviews may form the basis for a more extensive piece of work either as a dissertation or fully funded project.

The perceived weaknesses include that systematised reviews do possess a greater likelihood of bias than those that adhere strictly to guidelines on the conduct of systematic reviews, while completion of the academic requirements for the review is prioritised over methodological considerations.

This study adopted a systematic review as a research strategy because only three databases are searched, coded and the retrieved results were analysed systematically.

2.4 IDENTIFICATION AND RECORDING OF ACADEMIC ARTICLES

The following section explains the inclusion and exclusion criteria of the articles captured in Qiqqa.

2.4.1 Inclusion and exclusion criteria

The search from the database yielded 48 articles. A total of 30 articles are included based on the following inclusion criteria:

- Articles published between 2007 and 2017.
- Articles with words “ICT”, Information Technology and “tax administration” in the title.
- Articles related to ICT and tax administration based on the abstract of the article.
- Peer- reviewed articles.

Table 3: Inclusion and exclusion criteria

Item	Inclusion criteria
Years	Academic articles published after 2007

Types of literature	Based on the title of the study
Relevance	Based on the abstract of the article
Quality	Peer-reviewed articles

2.4.2 Keywords

Table 4: Summary of keywords

<u>Initial keywords</u>	<u>Synonyms</u>	<u>Broader Terms</u>
Information communication technology	Computers and telecommunication	Use of systems for storing, retrieving, and sending information
Administration	Managing, Directing	Action of dispensing, giving, or applying something
Compliance	Yielding, acceptance	The ways in which state maintains order and compliance
Electronic Filing	E-Filing	A computer-based system for the storage, and retrieval of documents

Source: (Oxford English Dictionary, 2017)

2.4.3 Databases

30 articles which were analysed were found in the following well-recognised databases:

Table 5: Databases and the nature of literature items

<u>Database</u>	<u>Academic journal articles²</u>
Scopus	5
Web of Science	6
Proquest	16
Other	3
Totals	30

2.4.4 Recording of identified academic articles

Qiqqa can be downloaded for free at www.qiqqa.com. The software is used by academics, researchers and businesses. Qiqqa is an invaluable tool to work with many documents such as PDF's in a research project. The tool can search for, read and annotate PDF's, review ones work, write-up and create bibliographies instantly.

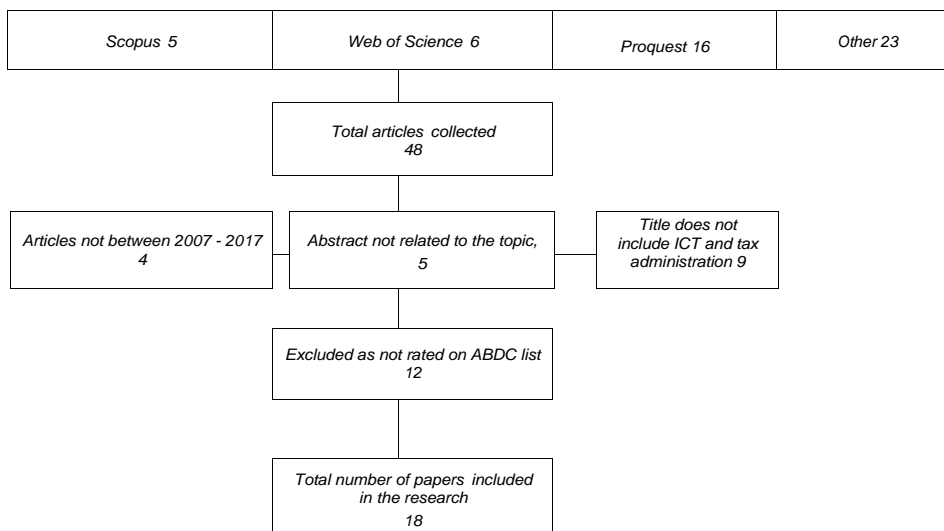
² Journal articles (Peer-reviewed academic articles).

2.5 QUALITY ASSESSMENT OF RECORDED ACADEMIC ARTICLES

This section explains the quality assessment of recorded academic articles captured in Qiqqa. Studies were assessed with reference to the Australian Business Deans Council (ABDC) list. ABDC is a subjective ranking of journal articles in terms of the quality with the highest quality journals being ranked A*, followed by A, B and C (Moosa, 2016:449-450). Therefore, only articles published in the ABDC journal list were included in the systematic review.

2.6 SUMMARY OF RESULTS

Figure 1: Quality assessment - summary of results



2.7 RESEARCH ETHICS

No ethical approval was needed to conduct this study because no human subjects were utilised.

2.8 CONCLUSION

In total, 48 studies were identified from the databases, namely: Scopus, Web of Science and Proquest. Of the 48 articles searched, 30 met the inclusion criteria as outlined in the chapter. Furthermore, 18 of the 30 articles that met the inclusion criteria are listed and rated on the ABDC list. The results of the 180 articles are outlined in the following chapter.

CHAPTER 3

DATA ANALYSIS AND PRESENTATION OF RESULTS

3.1 INTRODUCTION

The chapter utilised the Qiqqa software package to analyse and present the results revealed based on the gathered data.

3.2 ORIENTATION OF THE DATA-ANALYSIS TECHNIQUE

This study utilised a thematic technique. A taxonomy framework was used with an *a priori* structure, which entails (Creswell & Poth, 2017:185-186):

- data collection;
- coding the data utilising tags;
- code validation: double-check the tags for consistency and validity;
- generate themes from the patterns that emerge from the tags; and
- consolidate the themes by providing names and descriptions that communicate the meaning thereof.

Refer to Annexure B for a list of the various themes and related determinants which were considered for the study.

3.3 PRESENTATION OF RESULTS AND DISCUSSION

The results of this study are presented below under the following headings: rank the journals in which the selected articles were published; focus of the articles in terms of country; government; taxpayer; tax specialist perspectives followed by an analysis of the disciplines from which the articles originate as well as the tax research focus areas encompassed by the studies.

3.3.1 ABDC rating of journal articles

A total of 88% of the academic journal articles utilised in the study are rated A, 6% rated A* and 6% rated C per the ABDC list. The results of the rankings of the articles selected for this study are presented in Table 6 below.

Table 6: Quality of journal articles in terms of the ABDC list

Rating	2007	2009	2010	2012	2014	2015	2016	Total	%
ABDC: A*							1	1	6
ABDC: A		1	1	2	2	5	5	16	88
ABDC: C	1							1	6
Total	1	1	1	2	2	5	6	18	100
%	6	6	6	12	12	28	33	100	

3.3.2 Perspectives

3.3.2.1 Country perspective

The group of countries for the study are represented in nine countries. Australia and Multiple countries dominate the study with five articles each, followed by United Kingdom with three studies, and one paper each from Ethiopia, Malaysia, New Zealand, Portugal and United States. These results are presented in Table 7.

Table 7: Country perspectives of articles

Country	2007	2009	2010	2012	2014	2015	2016	Total	%
Australia				2	1	2		5	28
Ethiopia					1			1	6
Malaysia			1					1	6
Multiple						1	4	5	28
New Zealand						1		1	6
Portugal						1		1	6
United Kingdom	1						2	3	17
United States		1						1	6
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.2.2 Government perspective

Table 8 illustrates that 61% of the academic articles were conducted from a national government's perspective. A total of 27% were conducted from an Entities perspective and lastly 12% from the Local government's perspective. The results revealed that ICT closes any gaps between governments and its citizens through simple tax systems by improving the system (ICT) at a national level, thereby increasing compliance.

Table 8: Government perspectives of articles

Government	2007	2009	2010	2012	2014	2015	2016	Total	%
Entities				1	1	1	2	5	28
Local	1				1			2	12
National		1	1	1		4	4	11	61
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.2.3 Taxpayer perspective

A total of 44% of the studies were conducted from an individual taxpayer's perspective, and closely followed by 33% corporate, while the remaining 12% of the studies focused on multi-nationals. Non-taxpayers and small to medium enterprises totalled 6% each. This is illustrated in Table 9 below.

Table 9: Taxpayer perspectives of articles

Taxpayers	2007	2009	2010	2012	2014	2015	2016	Total	%
Corporate				1		3	2	6	33
Individuals		1	1	1	2	1	2	8	44
Multinational						1	1	2	12
Non-taxpayer	1							1	6
SME							1	1	6
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.2.4 Tax specialist perspective

The results reflect that 50% comprise a tax official perspective; 44% from the tax practitioners' perspective, while 6% from the CPA perspective. An understanding of e-service expectation of the tax practitioner/official is required as users evaluation of its quality is based on their underlying perceptions of the service.

Table 10: Tax specialist perspectives of articles

Tax specialists	2009	2010	2012	2014	2015	2016	Total	%
CPA	1						1	6
Tax Official		1	1	2	2	2	8	50
Tax Practitioner			1		3	3	7	44
Total	1	1	2	2	5	5	16	
%	6	6	12	12	31	31		100

3.3.3 Disciplines from which articles originate

As expected, due to the nature of the topic, a total of 33% of the articles originate from the public finance and business disciplines; 22% from the legal discipline; while 6 % each from auditing and statistics. Details of each study is illustrated in Table 11 below.

Table 11: Taxpayer perspectives of articles

Disciplines	2007	2009	2010	2012	2014	2015	2016	Total	%
Auditing				1				1	6
Business					1	4	1	6	33
Legal							4	4	22
Public Finance		1	1	1	1	1	1	6	33
Statistics	1							1	6
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.4 Tax research focus areas of the articles

All the selected studies focus on tax administration processes in information technology. More studies were conducted between 2015 and 2016 with five and six studies respectively. Details of each study are illustrated in Table 12 below. The approach of the impact of ICT differed across the studies which can be broadly separated into tax simplification. Five papers demonstrate that ICT in tax administration creates an enabling environment for the effective and efficient tax administration. Five studies were conducted to demonstrate that the use of ICT impacts on the perceptions of taxpayers towards compliance and fairness as a result of reduced administration costs and compliance burden. Two audit papers outline the benefits of using ICT as an audit technique and tool. One paper demonstrated that ICT

helps improve the decision-making tool through increased revenue collection, tax planning strategies and performance management. One study demonstrated the benefit of ICT in exchanging information with other government agencies. A paper rated A* in the ABDC list was included to demonstrate the utilisation of ICT in other fields excluding taxation while 2 papers were included to benefit future research.

Table 12: Tax focus areas of the articles

Determinants	2007	2009	2010	2012	2014	2015	2016	Total	%
Tax administration processes: Information Technology	1	1	1	2	2	5	6	18	100
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.5 Research designs and methodologies

3.3.5.1 Nature of the studies

On the nature of studies, 50% of the researchers followed the descriptive method. The data was gathered from the literature reviewed followed by either the qualitative or quantitative approach. A total of 38% of the researchers followed the exploratory method from the literature reviewed, followed by the qualitative approach. Thirdly, 12% of the researchers followed the causal approach during which variables which result in challenges were tested. Generally, a literature review is followed by quantitative methods. Details of each study are illustrated in Table 13 below:

Table 13: Nature of the studies

Nature	2007	2009	2010	2012	2014	2015	2016	Total	%
Causal	1						1	2	12
Descriptive			1	1	1	3	3	9	50
Exploratory		1		1	1	2	2	7	38
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.5.2 Reasoning stance in the studies

With respect to the reason approach, 50% of the research adopted the deductive reasoning stance during which the researcher typically tests the theory. This was followed by abductive

reasoning which yielded 44% of the kind of daily decision-making that attempts to manage the information at hand, which is often incomplete, while 6% pursued inductive reasoning during which the researcher generates theory. The conclusions drawn are neither logical necessities, nor are inductive arguments simply true. Details of each study is illustrated in Table 14 below:

Table 14: Reasoning stance in the studies

Reasoning stance	2007	2009	2010	2012	2014	2015	2016	Total	%
Abductive				1	1	1	5	8	44
Inductive						1		1	6
Deductive	1	1	1	1	1	3	1	9	50
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.5.3 Units of analysis in the studies

The unit of analysis investigated by the researchers is balanced at 50% company and individual level. The results conform to the nature of the literature review conducted as ICT in tax administration which affects both units. Details of each study is summarised in Table 15 below:

Table 15: Unit of analysis in the studies

Unit of analysis	2007	2009	2010	2012	2014	2015	2016	Total	%
Company				1		4	4	9	50
Individual	1	1	1	1	2	1	2	9	50
Total	1	1	1	2	2	6	10	18	
%	6	6	6	12	12	33	56		100

3.3.5.4 Research methods

The results of the studies below illustrate the research methods. A total of 67% of the studies measured the impact of ICT on tax administration using mixed methods based on both qualitative and quantitative data, while 33% of the researchers adopted the qualitative method. The details of each study are summarised in Table 16 below:

Table 16: Research methods in the articles

Research methods	2007	2009	2010	2012	2014	2015	2016	Total	%
Mixed	1		1	1		1	2	6	33
Qualitative		1		1	2	4	4	12	67
Total	1	1	1	2	2	5	6	18	
%	6	6	6	12	12	28	33		100

3.3.5.5 Data collection techniques

Data collection techniques comprised four techniques which are summarised below: 47% of the researchers explored questions utilising databases, while 21% of the researchers explored their studies using both focus groups and questionnaires. A total of 11% of the researchers explored questions through interviews. The data collection techniques comprised five techniques summarised in Table 17 below:

Table 17: Data collection techniques in the articles

Research methods	2007	2009	2010	2012	2014	2015	2016	Total	%
Database	1			1	1	2	4	9	47
Focus group						2	2	4	21
Interview				1			1	2	11
Questionnaire		1	1		1	1		4	21
Total	1	1	1	2	2	5	7	19	
%	5	5	5	11	11	26	37		100

3.3.5.6 Data analysis techniques

The data analysis techniques comprised 5 measurements summarised below. A total of 50% utilised descriptive statistics. The results revealed that 38% measured content analysis, while 6% of the studies utilised meta- and narrative analysis respectively.

Table 18: Data analysis techniques in the articles

Data analysis	2007	2009	2010	2012	2014	2015	2016	Total	%
Content Analysis				1		3	3	7	38

Descriptive statistics		1	1		2	2	3	9	50
Meta-analysis	1							1	6
Narrative analysis				1				1	6
Total	1	1	1	1	2	6	10	18	
%	6	6	6	6	12	33	56		100

3.3.5.7 Variables

3.3.5.7 Demographic variables

The approaches on demographics are relatively spread. Most papers focus on population (25), education (21), age, gender and income group each with (13), while nationality and occupation at (8).

Table 19: Demographic variables in the articles

Demographic variables	2007	2009	2010	2012	2014	2015	2016	Total	%
Age			1		1	1		3	13
Education		1	1		2	1		5	21
Gender			1		1	1		3	13
Income group					1	1	1	3	13
Nationality						1	1	2	8
Occupation						1	1	2	8
Population		1		2		1	2	6	25
Total	1	1	3	2	5	7	5	24	
%	4	4	13	8	21	29	21		100

3.3.5.8 Social variables

Social variables are also provided below. In relation to ICT and tax administration, the results revealed that morale as a dimension is significant among 60%, followed by culture and ethics at 17% each, and peers totalled 6%.

Table 20: Social variables in the articles

Social variables	2007	2009	2010	2012	2014	2015	2016	Total	%

Culture						2	1	3	17
Ethics				1		1	1	3	17
Morale	1	1	1	1	2	2	3	11	60
Peers						1		1	6
Total	1	1	1	2	2	6	5	18	
%	6	6	6	12	12	33	28		100

3.3.5.9 Other variables

A strong correlation indicates that 33,33% of the indicators below are associated with the constructs analysed by the researchers.

Table 21: Indicators in the articles

Other variables	2011	2014	2016	Total	%
Estimated Tax rate		1		1	33,3
Marginal tax rate			1	1	33,3
Preferred rate	1			1	33,3
Total	1	1	5	3	
%	33,3	33,3	33,3		100

3.4 CONCLUSION

The results above implies that a number of studies have been extremely stable in 2014 and 2016. Table 1 to table 21 reveals that many researchers were conducting studies on the ICT and tax administration from 2014 to2016. Furthermore, a relatively large number of articles improved and listed on the ABDC list in the most recent years. The results revealed that ICT has a positive impact on tax administration.

CHAPTER 4 CONCLUSION

4.1 INTRODUCTION

The purpose of the chapter is to summarise the findings and the conclusion as well as highlight the limitations that were encountered during the conclusion of the study. Furthermore, focus areas for future research are recommended followed by concluding remarks.

4.2 SUMMARY OF FINDINGS AND CONCLUSION

The purpose of the section is to identify the broad research objectives under section 2 above, and to discuss whether these were achieved.

- In identifying and recording academic research articles related to the impact of ICT on tax administration, a research methodology was adopted to systematically explore journal publications. A total of 48 journal articles were collected through the following database searches: Scopus, Web of Science and Proquest. However, 18 articles were excluded because these did not meet the inclusion criteria.
- The quality of the journals in which the academic articles were published was assessed utilising the Australian Business Deans Council (ABDC) list as criteria to rate quality. Of the 30 articles that met the inclusion criteria, 18 articles passed the quality assessment criteria because they were published in journals on the ABDC list.
- To systematically analyse the academic articles published in ABDC rated journals, the Taxonomy framework was analysed utilising the Qiqqa software as outlined in Annexure B below. The results revealed that research had been conducted on ICT and tax administration over a number of years. The analysis revealed that ICT has a positive impact on tax administration.
- The systematic analysis of the highly rated academic articles revealed that only 18 academic articles focused specifically on ICT and tax administration. The study revealed that utilisation of ICT impacts positively on tax administration through simplification. Furthermore, regular audits utilising improved techniques and tools,

taxpayer's perceptions improved, including government's decision-making strategies as well as information sharing techniques.

- In conclusion, the study revealed that the utilisation of ICT impacts on tax administration as follows: simplification of the process; an audit and decision-making tool; impacts taxpayer perceptions and fairness towards compliance; and serves as an information sharing tool with other tax agencies. However, the study revealed a number of limitations which are listed in the next section.

4.3 LIMITATIONS

- The study was limited from 2007 to 2017.
- The search was limited to peer-reviewed articles listed in the ABDC list.
- The security aspects of ICT in general was excluded from the research.

4.4 FUTURE RESEARCH

Continued research is required in the following focus areas:

- Expand the scope by including additional years into the research.
- Expand the research to articles listed under existing peer review lists. Avoid limiting to ABDC list.
- Conduct future research on how ICT impacts tax administration in developing countries.
- Limited research has been conducted in ICT as an information sharing tool and as a tax dispute tool. It is strongly recommended that additional research be conducted specifically in these two areas to contribute towards the existing literature.
- Security aspects of ICT in general was excluded from the research. Future studies should include the impact thereof on ICT and tax administration.

4.5 CONCLUDING REMARKS

The aim of this research was to provide a systematised review of academic research on the impact of information technology on tax administration, published in highly rated academic journals during years in the recent past. Although the study has addressed the results of the

main constructs addressed under chapter 1 above, continued research in ICT and tax administration is required to expand the literature review and address its limitations. The study revealed that ICT has an immense impact on tax administration. This study should form the foundation for future researchers who intend exploring tax administration.

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**APPENDIX A:
ARTICLES UNDER REVIEW**

Table 22: Journal articles analysed

<u>Title of article</u>	<u>Author(s)</u>	<u>Year published</u>	<u>Journal</u>	<u>ABDC rating</u>
The Implementation of informal selected African countries.	Dube, Casale	2016	Proquest	A
Modernising the Australian Taxation Office: Vision, people, systems and values.	Ao	2015	Proquest	A
Tax professionals' perception of tax system complexity: some preliminary empirical evidence from Portugal.	Borrego, Loo, Lopes	2015	Proquest	A
Tax simplification: A review of initiatives in Australia, New Zealand and the United Kingdom.	James, Sawyer, Wallschutzky	2015	Proquest	A
The use of CAATT's in tax audit-lessons from some international practices.	Darono, Ardianto	2016	Proquest	A
The evolution of electronic filing process at the UK's HM Revenue and Customs: The case of XBRL adoption.	Mousa	2016	Proquest	A
Factors influencing taxpayers' compliance with the tax system: An empirical study in Mekelle City, Ethiopia.	Engida, Baisa	2014	Proquest	A
Evaluating Australia's tax dispute resolution system: A dispute systems design perspective.	Jone	2015	Proquest	A
Information sharing by government agencies: The effect on the integrity of the tax system.	Bickers, Hopkins-Burns, Bennett, Namay	2015	Proquest	A
Tax return simplification: risk key engagement, a return to risk.	Kerr, Jason	2012	Proquest	A
Antecedents to e-file adoption: The US citizen's perspective.	Carter, Schaupp	2009	Proquest	A
Fairness perceptions and compliance behaviour: The case of salaried taxpayers in Malaysia after implementation of the self-assessment system.	Saad, Natrah	2010	Proquest	A
The applicability of the OTS Complexity index to comparative analysis between countries: Australia, New Zealand, Turkey, and the UK.	Budak, James, Sawyer	2016	Proquest	A
International experiences of tax simplification and distinguishing between necessary and unnecessary complexity.	Budak, James	2016	Proquest	A
Exploring innovations in tax administration: a Faucauldian perspective on the history of the Australian Taxation Office's compliance model.	Whait	2014	Proquest	A
Developing risk management strategies in tax administration: the evolution of the Australian Taxation Office's compliance model.	Whait	2012	Proquest	A
Optimal redistribution and monitoring of labor supply.	Zoutman, Jacobs	2016	Journal of Public Economics	A*

Commented [MKM1]: You will have to remove the articles which are not published in rated journals.

Technology acceptance: a meta-analysis of the TAM: Part 1.	Yousafzai, Foxall, Pallister		Journal of Modelling in Management	C
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**APPENDIX B:
TAXONOMY FRAMEWORK**

Table 23: Taxonomy framework

Category	<u>Determinants</u>
Journal information	ABDC rating: A*, A, C
Perspective	Country: Australia, Ethiopia, Malaysia, Multiple, New Zealand, OECD, Philippines, Portugal, Tanzania, United Kingdom, United States
	Government: Entities, Local, National
	Taxpayer: Corporate, Individuals, Multinational, Non-taxpayer, SME
	Tax specialist (Individuals): Accounting practice, Legal Practice
	Institutional and corporate tax bodies/entities: ATO, HM Revenue and Customs, Inland Revenue Board Malaysia, Inland Revenue in New Zealand, RCA, Tanzania Revenue Authority
Discipline	Social sciences : Auditing, Business, Legal, Political, Public finance
	Health sciences: Biochemistry
	Natural sciences
Tax governance	Basic principles of tax administration
	Tax administration processes: Information technology
	Tax (administration) operating costs
	Tax compliance
Research design	Nature of the study: Causal, descriptive, exploratory
	Reasoning stance: Abductive, inductive, deductive
	Unit of analysis: Company, household, individual
Research methodology	Research method: Mixed, qualitative
	Research strategy: Survey, analytical, case study
	Data collection: Database, focus group, interview, questionnaire, systematic review
Data analysis technique	Statistical analysis: Descriptive statistics, narrative analysis
	Thematic analysis: Content analysis, meta-analysis
Variables	Demographic variables: Age, education, gender, income group, nationality, occupation, population
	Social variables: Culture,, ethics, morale, peers
	Indicators : GDP
	(Measurable variables): Estimated tax rate, marginal tax rate, preferred rate
Limitations and future research	Limitations of study: Scope, data collection
	Recommendations for future research

**APPENDIX C:
DECLARATION OF PLAGIARISM**



FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

Declaration Regarding Plagiarism

The Faculty of Economic and Management Sciences emphasises integrity and ethical behaviour with regard to the preparation of all written assignments.

Although the lecturer will provide you with information regarding reference techniques, as well as ways to avoid plagiarism, you also have a responsibility to fulfil in this regard. Should you at any time feel unsure about the requirements, you must consult the lecturer concerned before submitting an assignment.

You are guilty of plagiarism when you extract information from a book, article, web page or any other information source without acknowledging the source and pretend that it is your own work. This does not only apply to cases where you quote the source directly, but also when you present someone else's work in a somewhat amended (paraphrased) format or when you use someone else's arguments or ideas without the necessary acknowledgement. You are also guilty of plagiarism if you copy and paste information directly from an electronic source (e.g., a web site, e-mail message, electronic journal article, or CD-ROM) without paraphrasing it or placing it in quotation marks, even if you acknowledge the source.

You are not allowed to submit another student's previous work as your own. You are furthermore not allowed to let anyone copy or use your work with the intention of presenting it as his/her own.

Students who are guilty of plagiarism will forfeit all credits for the work concerned. In addition, the matter will be referred to the Committee for Discipline (Students) for a ruling. Plagiarism is considered a serious violation of the University's regulations and may lead to your suspension from the University. The University's policy regarding plagiarism is available on the Internet at <http://www.library.up.ac.za/plagiarism/index.htm>.

For the period that you are a student in the Faculty of Economic and Management Sciences, the following declaration must accompany all written work that is submitted for evaluation. No written work will be accepted unless the declaration has been completed and is included in the particular assignment.

I (full names & surname):	Joyce Kgonare
Student number:	16115563

Declare the following:

1. I understand what plagiarism entails and am aware of the University's policy in this regard.
2. I declare that this assignment is my own, original work. Where someone else's work was used (whether from a printed source, the Internet or any other source) due acknowledgement was given and reference was made according to departmental requirements.
3. I did not copy and paste any information directly from an electronic source (e.g., a web page, electronic journal article or CD ROM) into this document.
4. I did not make use of another student's previous work and submitted it as my own.
5. I did not allow and will not allow anyone to copy my work with the intention of presenting it as his/her own work.

M.J.G. Kgonare

Signature

30 October 2017

Date