

**A SYSTEMATISED REVIEW OF THE LITERATURE RELATED TO DIGITALISATION
AND TAX ADMINISTRATION**

by

Tinyiko Shabangu
Student Number: 10001663

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Supervisor: Lungelo Motsamai

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“Fear not, for I am with you. Do not be dismayed, for I am your God. I will strengthen you, and help you. I will uphold you with my righteous right hand” – Psalms 41:10. Without God, this journey would have been impossible. When I was weak, that is when He made me strong. I would not have made it without Him.

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ABSTRACT

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by

NAME AND SURNAME: Tinyiko Shabangu

SUPERVISOR: Lungelo Motsamai

DEPARTMENT: Department of Taxation

DEGREE: MCom (Taxation)

COURSE CODE: 07250185

Background:

Tax administrations are faced with a challenge that has rapidly increased in magnitude over the last few years, termed digital disruption (Autio, 2017:1). This disruption has seen businesses digitally transform the way in which business is conducted and the underlying processes to business operations. Tax administrations' response to digitalisation could be seen as a means to remain relevant in a world that is going digital and reap the benefits of digitalisation.

Main purpose of study:

The purpose of this study is to perform a systematised review of the literature related to digitalisation and tax administration. This study looks at tax administrations and their reasoning for adopting digital platforms, the methods undertaken to transform digitally, and how the digitalisation can ease the tax compliance burden on taxpayers, more specifically Small, Medium and Micro enterprises (SMMEs).

Method:

A systematised review is performed on literature obtained from quality journals. The literature was obtained through a search in the university provided databases, namely ProQuest and EBSCOhost, using the main constructs of this study. The main constructs are digitalisation, tax administration and SMMEs. The search for the literature was limited to five years starting 2015 and ending 2019. The year 2020 was excluded from the search criteria as the research study commenced in February 2020. This posed a limitation on the number of published quality literature related to the study from the year 2020, thus the research study uses the years 2015 to 2019.

Results:

The search for literature using the main constructs and keywords formulated from the main constructs, from 2015 up until and including 2019, resulted in 64 articles. 35 articles were selected for use, as they were journal articles published in quality journals.

Conclusions:

The review indicated that there are a number of benefits associated with digitalising tax administrations. It was also noted that there are challenges with the current tax administration that are a hindrance to SMME tax compliance. These challenges should be addressed prior to moving to digital tax administration methods to ensure that they do not amplify the levels of non-compliance.

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LIST OF ABBREVIATIONS AND ACRONYMS

Table 1: Abbreviations and acronyms

ABDC	Australian Business Deans Council
ATO	Australian Tax Office
EY	Ernst & Young
HMRC	Her Majesty's Royal Commission
ICAEW	Institute of Chartered Accountants in England and Wales
MNE	Multinational Enterprise
MTD	Making Tax Digital
OECD	Organisation for Economic Co-operation and Development
SME	Small, Medium Enterprises
SMME	Small, Medium and Micro Enterprises
UK	United Kingdom

CHAPTER 1: INTRODUCTION

1.1. BACKGROUND

The growth of an economy factorises the country's tax base, which is the measure on which the assessment of tax liability or revenue is determined (Business Dictionary, 2020), and the taxpayers who are required to achieve the country's targeted growth and revenue collection objectives. An identifiable group that is a focus in both developed and developing countries to achieve growth in the tax base is Small, Medium and Micro Enterprises (SMMEs). Data from the World Trade Organisation suggests that SMMEs make up 90% of the business population, provide jobs to a range of 60 to 70% of the world's workforce and contribute to approximately 55% of the Gross Domestic Product in developed economies (Arnold, 2019).

Countries establish tax administrations to manage the tax process in the country, to achieve the economic growth targets set by the governments. Tax administration is defined as a system that has the aim to collect all taxes which are due to the country's government in a fair, efficient and effective manner. The process should not impose excessive resources and thereby, high costs on the taxpayer (ICAEW, 2019:6; OECD, 2019:31). The function of a tax administration is informed by the tax policy of a country, whereas the tax policy is informed by the economic policy in that particular country. The design of a tax policy should include the effects which taxation has on the economic growth (Bird & Wilkie, 2012:1).

The effectiveness of tax administration in any country depends on the tax revenues collected against the cost to collect those taxes (Serikova *et al.*, 2018:283) . An effective tax administration yields high tax revenue collections, which in turn stimulates the investment capabilities of the economy, and produces an environment with a greater tax base and more opportunities for tax revenue collection (Emmanuel, 2018:86).

It is important to understand the impact tax administrations have on SMMEs, and how the evolution of the tax administrator in light of technological advances, affects the tax behaviour of SMMEs. SMME tax behaviour has a significant impact on the tax

administrator achieving its tax revenue collection objective as the group makes up the majority of a country's corporate tax base.

The correct tax treatment and stimulation of SMMEs could have a positive impact on the tax base of the country, and assist in achieving the tax administrator's objectives (International Finance Corporation, 2007:5-6). A fair, efficient and effective approach in administering tax revenue collections is one of the key factors in observing a change in the compliance rate from SMMEs (International Finance Corporation, 2007:6). A simple tax administration also reduces the cost for the tax administrator in verifying the information and accuracy of the taxpayer submissions (Jacobs, 2017:26).

Tax administrations find themselves in the midst of a global surge and an increase in the use of new technologies, analytical tools as well as an increase in the amount of available data, which has been termed "big data" (Serikova *et al.*, 2018:284). This presents a unique problem for tax administrations to respond to global digitalisation, and to provide an effective response which will ensure that tax administration remains efficient and effective, and leads to an increase in tax revenue collection (Vuković, 2018:1).

Tax administrations, in response to the local and global economy, have found it useful to digitalise or consider the possibility of digitalising tax administrations. This entails replacing traditional methods of tax administration, which includes manual processes of filing tax returns and relying on a single source of data for completeness and verification. Traditional methods are being replaced with more digital methods which incorporate and use large amounts of data from information available from around the world, for a more effective and efficient tax administration system (Vuković, 2018:5). This is to assist in the objective of collecting taxes in a fair, efficient and effective manner (Vuković, 2018:3). A digitalised tax administration is enabled to collect real-time data of taxpayers from sources such as employers, other jurisdiction tax administrations and third parties, and conduct a detailed and almost transactional analysis on the data collected to determine the tax revenue which is due from the taxpayers (EY, 2017). An increased level of tax collections means the government has more resources available for government expenditure to boost the economy and invest in SMMEs.

Digitalisation of the tax administration process is a possible avenue to stimulate revenue and economic growth amongst SMMEs, and increase the accuracy of the amounts to be

collected by tax administrators from SMMEs (Jacobs, 2017:26). Tax administrations would also be in possession of enough data which would inform tax incentives, such as reduced tax rates, allowances on capital assets and cash flow relief offerings, that could be provided to SMMEs to ease the tax burden and encourage improved tax behaviours, this would contribute to consistent economic growth (Serikova *et al.*, 2018:283).

1.2. RATIONALE FOR THE STUDY

Digitalisation has become a relevant trend and topic amongst all business sectors (OECD, 2018:2). SMMEs are adjusting their businesses and business models to remain relevant and survive the spate of globalisation and automation (Autio, 2017:5). Digitalisation is a solution that business owners implore to reduce the burden of manual activities within the businesses core processes. As businesses digitalise their core processes, the requirements of compliance with laws and regulations have been slow in responding to the changes which arise due to globalisation and digitalisation (OECD, 2019:23).

This study aims to understand the reasoning and logic of tax administrations advancing to digital methods, the methods tax administrators have adopted to digitally transform tax administrations, and how these methods are supposed to ease the tax compliance burden on taxpayers, more specifically SMMEs.

Digitalisation of tax administrations affects the manner in which tax administrators carry out their functions in collecting tax revenues (Jacobs, 2017:2). The impact of digitalisation on businesses, more specifically SMMEs, has a direct impact on the administrators achieving their tax revenue collection objectives. Tax administrations' response should not increase the burden of administration and collecting taxes, but should be in line with the efficiencies obtained through the use of digitalisation (Green, 2018:57).

This study does not aim to provide a complete and detailed examination of the literature which is available on the topic of digitalisation and tax administration. The study is a limited review based on academic literature that is published, which could be used as a starting point to a more comprehensive review.

1.3. RESEARCH OBJECTIVES

The objective of this study is to explore the existing body of literature related to digitalisation and tax administration with the aim to:

- Understand the reasoning and logic of tax administrations adopting digital platforms;
- The methods undertaken to transform digitally; and
- How digitalisation can ease the tax compliance burden on taxpayers, more specifically SMMEs.

The study explores literature published over the past five years from 2015 to 2019.

The research objectives of this study are guided by the following:

- To identify, review and analyse quality articles and journals, which relate to digitalisation of the tax administration;
- Systematically analyse the selected literature for information applicable to the objectives of this study;
- Evaluate the results obtained from the systematic review; and
- Conclude the study based on the results obtained from the literature evaluation.

1.4. RESEARCH DESIGN AND METHODOLOGY

This study makes use of a qualitative research methodology. A systematic review approach is adopted to analyse and gather information obtained from published academic literature to support the conclusion presented. This study is exploratory in nature and adopts pragmatism as a philosophical stance. The time horizon for this study is longitudinal and existing academic literature from quality academic journals is used to address the research objectives. The study uses existing, published academic literature, which is considered as a secondary data source.

1.5. MAIN CONSTRUCTS OF THIS STUDY

From the title of this study, the following constructs were used as the main constructs of the research study: 'digitalisation' and 'tax administration. These constructs are discussed in detail below.

1.5.1 Digitalisation

Digitalisation is defined as the application and implementation of digital technologies to processes and frameworks in business and society (Autio, 2017:1). Digitalisation transforms business methods and business practices, which in turn, affects the economy. This is termed digital disruption, the resultant impact of digitalisation on the economy, business and society (Autio, 2017; Skog, Wimelius & Sandberg, 2018). Digitalisation is changing the economic landscape in that it has moved from digitalising business processes as a means of improvement for business, such as cost reductions and efficiency improvement, to cross-boundary technologies such as e-commerce, a digital disruptive technology (Li, Su, Zhang & Mao, 2018:1130).

Digitalisation brings about a transformation in the strategy and structure of the organisation and the information flow within and outside of the entity (Li *et al.*, 2018). This enables organisations, regulators and administrators to transform their processes to digital platforms for improved engagements with clients and stakeholders (James & Sawyer, 2018:1-2).

Further related terms to the construct of digitalisation are 'digital' and 'digitisation'. The term digital refers to the process of individuals and entities using data to make informed decisions and establish quick and efficient approaches to carry out tasks, improve customer service as well as related customer experience and also streamline company processes to realise higher efficiencies (Harsh, 2015). Digitisation, on the other hand, is the conversion of printed analogue to a computerised version that can be used by entities which are going digital (Swain & Panda, 2009).

1.5.2 Tax administrations

Tax administrations are the bodies put in place to administer taxes and are responsible for implementing and enforcing tax laws. Tax administrators are empowered by the laws of the country and the government to collect tax revenue and enforce tax compliance (Alink & Van Kommer, 2016:87). Tax administrations should cover taxation of all areas with economic activity efficiently to ensure that the objectives of the administration are met. Taxes are collected to fund government spending and meet the service delivery objectives for the people in the country.

A related construct for tax administration in an economy that is going digital, listed in point 1.5.1 above, is 'digital tax'. Digital tax is a process whereby tax administrators collect taxes digitally. Tax administrators are adopting the digital tax administration process as a tool to detect and minimise tax non-compliance, which includes tax evasion and tax avoidance (James & Sawyer, 2018:1). The United Kingdom (UK) have termed and adopted this administration as 'making tax digital' (MTD). MTD is a means to make the tax administration process more simple, ensure that taxes declared and submitted are accurate and that taxpayers are in a tax compliant status (HM Revenue & Customs, 2020). Economies are changing more rapidly than they have ever changed at any point in time in history. It is imperative that tax administrations and regulators respond, and adapt to the economical and societal changes, to ensure continued stability in the administration. It is, however, also important that the tax collection process meets the taxpayers' expectations in terms of efficiencies, and effectiveness and maintains the principles of a good tax administration system (Bentley, 2019:683).

1.6. OTHER CONSTRUCT(S)

In addition to the main constructs discussed in section 1.5 above, 'Small, medium and micro enterprise' was also identified as a further construct. This construct is discussed below.

1.6.1 Small, medium and micro enterprise

The definition of small business, or SMMEs as termed in South Africa, is dependent on the country and jurisdiction where the small business operates. A generally accepted universal definition is that a small business is a business that is limited in the number of people it employs (Oteniya, Sadiku & Musa, 2019:279), the revenue it generates within the industry of operations and the value of total assets the business has on hand (Berisha & Pula, 2015:19). Another term for the SMME main construct is small business and small- and medium-sized enterprises (SME). Even with no agreed-upon measure to use to define SMME or small business, the impact of SMMEs on the economy is notable and significant. Many researchers have not been able to agree on a definition for the term SMME, however, the majority agree on the principles, which include qualitative and quantitative measures used to classify a business as a SMME for research purposes (Berisha & Pula, 2015:17). Various industries and countries apply different measures for businesses to be classified as small-, medium-, or micro-sized business (Oteniya *et al.*, 2019:280).

SMMEs often contribute the most towards a country's Gross Domestic Product from all the sectors (Sadress, Bananuka, Orobia & Opiso, 2018:25) and are often the recipients of large investment capital which is to assist in the development and growth of the economy (Wadesango, Mutema, Mhaka & Wadesango, 2018a:1). Economic stimulation of SMMEs is important in that it ensures economic growth, innovation, job creation, and social integration. The continued economic activity of SMMEs contributes towards the tax base of the country, which in turn leads to the fulfilment of the Government's revenue objectives and increased tax collections for service delivery (Oteniya *et al.*, 2019).

1.7. STRUCTURE OF THE MINI-DISSERTATION

The results of the study conducted on digitalisation and tax administration are presented as a mini-dissertation. The format of the mini-dissertation is presented in the summary below.

Chapter 1: Introduction

The first chapter provides insight and the background of the research topic, digitalisation and tax administration. The chapter further discusses and provides clarity on the rationale of the study, research objective and the corresponding research question for the study. It

also introduces the main constructs and the research design and methodology of the research study.

Chapter 2: Research design and methodology

This chapter provides a detailed presentation of the research design and research methodology adopted in this study on digitalisation and tax administration. The research design is the planning stage, which addresses the viewpoint from which the study is conducted. The research methodology describes the methods adopted to answer the research question of the study, including the collection of data, as well as addressing the method of analysing the data to formulate a conclusion.

Chapter 3: Data analysis and presentation of results

This chapter details the method undertaken to analyse the information in the literature collected using the keywords for this study. It further presents and discusses the results of the data analysis, structuring the discussion and the results using the study's research questions.

Chapter 4: Conclusion

This is the final chapter and concludes the study. A summary of the findings from the data analysed in Chapter 3, a conclusion on the research study, any limitations identified and possible recommendations for future research are presented in detail in this chapter.

CHAPTER 2: RESEARCH DESIGN AND METHODOLOGY

2.1. INTRODUCTION

The previous chapter introduced digitalisation, tax administration and SMMEs as the main constructs. It also provided an explanation of the research rationale, and clarified the main research objectives and questions for this study. This chapter provides information on the orientation of the research design and methodology, the research classification and the research strategies adopted to collect data for the purposes of supporting this study. This chapter also provides the conclusion of the research methodology.

The main research objective of this study is to perform a systematic exploration of the existing body of literature related to digitalisation and tax administration with a focus on SMMEs, focusing on selected articles published in quality academic literature within the five-year period from 2015 to 2019.

2.2. RESEARCH DESIGN

This section sets out the research design which has been adopted for this study. This includes the philosophical viewpoint and nature of the study, the reasoning approach adopted, the time horizon used, the unit of analysis for the study, the data type selected for use and the sources of data for this present study. The comprehensive discussion on the research design elements is presented and discussed in the points that follow.

2.2.1. Philosophical stance of the study

A research study should have a philosophical stance, which guides the research analysis. A philosophical stance is a metaphorical position which determines how the researcher views and interacts with the data and the literature for the purposes of the study (Anderson, 2007:43). There are various types of philosophical stances which may be adopted for a research study which will inform the strategy and techniques of the research. These are distinguished between interpretivism, positivism, pragmatism and realism (Melnikovas, 2018:34) and are discussed below:

- Interpretivism is a stance which seeks to interpret elements of a research study and integrates human interest in the said study. The interpretivist appreciates differences in people and believes that access to reality is only through social interactions with humans. It is a subjective method of research which aims to understand the world from the viewpoint of people (Thomas, 2010:295-296).
- Positivism is a stance which only accepts scientifically verifiable information and data as a means of research analysis (Marsonet, 2019:5).
- Pragmatism is a stance which accepts that there are different ways in which an interpretation of a scenario can be made. This view accepts that there are different ways and methods to execute and analyse results, however, the most practical methods should be adapted (Legg & Hookway, 2019).
- Realism is the stance that there is a truth independent of human reality and experiences. Realists' research is based on a view which minimises error, bias and subjectivity (Vogt, 2011:265).

This study falls within the philosophical stance of pragmatism. This is based on the objective of the study, which is to gather data that will be used to understand the impact of digitalisation on tax administration. A pragmatic view allows different ways to interpret data and execute on the most practical method. A tax administration system should be efficient and adopt the most practical methods to enable ease and convenience for taxpayer tax compliance and tax revenue collection (OECD, 2019:88). This is aligned with the pragmatic philosophical viewpoint.

2.2.2. The nature of the study

The nature of research studies can be either exploratory, descriptive or causal (Boru, 2018:1). These are discussed below:

- Exploratory: exploratory studies are most useful for research areas where there are some known facts; however, there are also high levels of uncertainties present in that

research or study area. The main aim of this research is to determine and identify the possibilities of further research opportunities on a particular research topic (Swedberg, 2018:2). According to Swedberg (2018:2), exploratory research could result in innovative and interesting new information, or it could be found that there is no further exploration to be performed.

- Descriptive: descriptive studies are designed to gather information and data which pertains to predefined factors and characteristics. The goal of this study is to provide a comprehensive analysis and assessment of the collated results to enhance the insight and information which is already available (Lambert & Lambert, 2012:2).
- Causal: causal studies, also known as explanatory research, aim to identify any links between the data and the variances which pertain to the research. This study compares the information of different groups and aims to identify the root cause of the differences noted. Causal studies also highlight the reasons for an occurrence (Boru, 2018:2), which is a result of the two above-mentioned studies.

This study falls within the ambit of an exploratory study. This is because the goal of the present study is to provide an analysis and assessment of the collated data from academic literature regarding digitalisation and tax administration. The results and conclusion of this study, is determined by the information gathered and analysed from the selected academic literature. This study also aims to determine the possibilities of further research opportunities on the topic of digitalisation and tax administration.

2.2.3. Reasoning methods

Research reasoning method is the approach used by a researcher for a research study (OCAD University Library, 2019). It determines the approach taken by the researcher in formulating the research question and the theory applicable. Research is used to structure and inform theories, and theories are used to structure and inform research (Blackstone, 2012:19). The relationship between the research and the theory are different based on the reasoning method adopted. Research reasoning methods are classified into either inductive, deductive or abductive. The methods are discussed in detail below:

- Inductive method: the inductive method of reasoning begins with observations and ends with a formulation of theories which are proposed at the end of the research process. This type of reasoning follows the direction of general observations to a specific theory leading to the research question (Vogt, 2011:154). Considerable amounts of data which is relevant to the research topic is collected and observed for any identifiable patterns. From the observations made, a theory is formulated which supports the patterns observed (DeCarlo, 2018:153-154).
- Deductive method: the deductive method of reasoning is concerned with developing a theory from available information, and proceeding to design a research strategy to test the available theory. This method derives conclusions by reasoning rather than data gathered. A theory is initially formulated, then tested to deduce the research question or hypothesis (Vogt, 2011:83). Deductive research reverses the steps of the inductive research methods (DeCarlo, 2018:155).
- Abductive method: The inductive and deductive methods are different to each other, as they interact differently with data collection, but are complementary to each other (DeCarlo, 2018:156). Abductive reasoning is the best of both the inductive and the deductive method of reasoning. Abductive reasoning is set to address the inadequacies or weaknesses identified in either the inductive or the deductive method of reasoning. Undertaking an abductive reasoning approach allows the study to provide insight into the best reasoning for unexplained theories in the inductive or deductive methods of reasoning. The abductive method selects an existing hypothesis to explain the data better than other existing hypothesis thus, adding more to the investigation. This method discovers new concepts and explanations which are not explained in the existing body of knowledge (Kennedy & Thornberg, 2018:52).

This study falls within the ambit of an inductive reasoning method as the study gathers, collects and analyses quality academic literature related to digitalisation and tax administration with a focus on SMMEs.

2.2.4. Time horizon of the study

The research time horizon defines the period proposed for the research or study. The time horizon adopted for a research proposal could be classified either as cross-sectional or longitudinal (Melnikovas, 2018:34). The time horizon for the research is determined by the nature of the research question. The research question determines the type of information required and the period in which it should be collected, as discussed in detail below:

- **Cross-sectional:** the cross-sectional time horizon in a study, also known as short-term time horizon, involves collecting relevant research related data at a specific point in time (Melnikovas, 2018:34). Cross-sectional studies collect data from different groups at a single point in time which can be compared with each other. The advantage of a cross-sectional study is that it offers a snapshot in time, which allows a comparison to be made between multiple variables simultaneously. The negative point attributable to the cross-sectional study is that it does not take into account the effects on data before and after the snapshot data has been collected and used for analysis (Vu, 2015:2).
- **Longitudinal:** the longitudinal time horizon in a study collects research data repeatedly over a long period of time, which could be weeks, months or years, to observe the differences in the data over the specified period (Melnikovas, 2018:34). Unlike the cross-sectional study, the longitudinal study observes the cause and effect on the same subjects over a period of time (Vu, 2015:2).

Both time horizons are observational in nature, which means the results of the study are observed without manipulating the environmental conditions of the research subjects (Vu, 2015:2).

The time horizon used for the present study is longitudinal. The study focuses on quality academic literature published within the period 2015 to 2019. The study analyses articles written at predefined points in time, which are comparable to each other.

2.2.5. Unit of analysis

A research study has to clearly define the unit of analysis to be used for the research. Unit of analysis is what is considered to be the main focus of the study (DeCarlo, 2018:182). The unit of analysis answers the 'who' and the 'what' elements of the research study and is the focal point of data collection for the research (Kumar, 2018:71). Determining the unit of analysis plays a key role in the research process to ensure that the data which is selected for analysis, addresses the research question (Kumar, 2018:71).

The unit of analysis is determined by the research question and is the basis of the research project (DeCarlo, 2018:182). The unit of analysis can be on an individual level – people or a group of people; organisational level – companies, state organs or institutions; or items to be analysed – literature, environmental patterns (Kumar, 2018:72-73). The unit of analysis can be divided into individuals, groups, organisations and artefacts. Understanding the logic behind each unit of analysis increases the usefulness of the research study (Kumar, 2018:75).

Individuals as a unit of analysis are mainly used to understand behaviours, perceptions, attitudes or opinions. This information is vital in business research and understanding customer or consumer behaviours. As a unit of analysis, individuals are aggregates which can be studied and whose actions and behaviours are observed for research purposes. The aforementioned aggregates are groups or organisations. Groups are two or more people with common characteristics and relate to each other. These include families, siblings or business partners. Organisations are more structured and planned and include businesses, churches or shops. Artefacts are things to be analysed as part of the study which can be literature, man-made objects, representations, culture and expressions (Kumar, 2018:74).

The unit of analysis determines and defines the direction of the research. The researcher gathers and collects information and data for analysis based on the identified unit of analysis. The unit of analysis for this study is published journal articles, which relate to the construct of digitalisation of tax administration and SMMEs.

2.2.6. Types of data

Sufficient and appropriate research data should be collected in order to answer the research question. The data for the research study is collected using the selected unit of analysis, as discussed above in point 2.2.5, and should use either quantitative or qualitative data to support the research study and answer the research question. Quantitative and qualitative data is discussed in detail below:

- Quantitative data is data which is analysed numerically. Numerical analysis involves interpreting the resultant numbers from the quantitative data to support the research study. This method converts numbers collected into meaningful data (Chua & Mark, 2011:351). Quantitative data analysis provides the “what of the research question” (Kabir, 2016:203). Quantitative approaches are much cheaper to implement and allow for comparisons between data sets. The disadvantage of the quantitative data analysis is that it is usually limited in the information which it provides (Kabir, 2016:203).
- Qualitative data is the process of analysing non-numerical, empirical data, which could vary in nature. This form of data analysed is in words and sentences. This type of data can be obtained by using various methods such as interviews, experiments or focus groups. Qualitative data is used to answer the “why” and the “how” questions (Nishishiba, Jones & Kraner, 2014:284-285). An advantage of using the qualitative method for research is that it provides an opportunity to fully explore a topic and to observe the intended and unintended results and effect of the research. The disadvantage of using qualitative data for the research study is that the findings obtained from the research cannot be used to generalise to populations outside the research group, it is indicative and only applicable to the population involved in the research (Kabir, 2016:202).

A researcher can also use both quantitative and qualitative methods of data analysis to analyse the collected data for purposes of the research study.

The present study uses non-numerical and non-empirical data sources to gather information in support of the research objectives, it also uses numerical analysis to provide meaningful data. This study, therefore, makes use of a combined approach for data analysis. Published academic literature is collected from academic journals on the topic of digitalisation and tax administration with a focus on SMMEs.

2.2.7. Sources of data

The researcher gathers and makes use of data in order to support the research study and answer the research question. The data collected for the study is classified as either primary data or secondary data. Both primary and secondary data may be used in a research study. The type of research data used affects the manner in which the data is handled and managed (Macalester College, 2019). Primary and secondary data are discussed below:

- A primary data source provides original, first-hand information regarding a particular topic or event. In a research study, it provides first-hand information on the research topic. Typical primary data sources include legal documents, eye witness accounts, interviews, emails, surveys, results and observations of conducted experiments (Ajayi, 2017:3). This form of data is more reliable as it has not been published neither has it been processed first by another individual (Kabir, 2016:204).
- Secondary data sources evaluate and interpret primary data sources. Typically, secondary data sources discuss or evaluate work which has already been performed by someone else. This is more common in research studies that undertake systemised literature reviews. Secondary data is easily and more readily attainable. The most common forms of secondary data include publications, websites and journal articles (Ajayi, 2017:3).

This study makes use of a secondary data source in the form of existing, published academic literature. The selected data source is easily attainable and readily available in various high-quality academic journals. This source is considered secondary as the data in

the academic literature is processed and obtained from either primary or secondary sources.

2.3. RESEARCH METHODOLOGY

This section provides more information on the research methodology undertaken for this study. Research methodology is the research process which underpins the study and guides the research process (Igwenagu, 2016:5). The sections below provide more information on the research methodology, which includes methodological classification, research strategy, the methods to collect data, the quality assessment of the data and the academic article samples which have been selected for analysis in terms of this study's research objectives.

2.3.1. Methodological classification

The research method for the planned research study is decided based on the nature and the purpose of the study, as well as the goals for the research (Goertz & Mahoney, 2012:2). The main methodological classifications in conducting research are qualitative, quantitative, and mixed methods (Williams, 2007:65) which are discussed in detail below:

- **Qualitative:** according to Cresswell (2009:22), the qualitative research method is the approach used by researchers to explore and obtain an understanding of how individuals or groups respond to social and human problems. Qualitative research studies are suitable when the research question requires textual data (Williams, 2007:65). There are various data collection methods employed when the qualitative research method is selected, and the analysis of the data varies based on the method of collection selected. The four major methods used in qualitative research are observation, text and document analysis, interviews and focus groups, and audio and video recording (Silverman, 2006:18). Qualitative research studies mainly adopt the inductive method of reasoning, as the data collected is used to formulate a conclusion, and mainly adopts a philosophical stance of interpretivism (Thanh & Thanh, 2015:26).

- Quantitative: quantitative research is used to test objective theories by identifying and analysing the relationships amongst the variables in the data. The variables are measured by the researcher to produce numbered data which is statistically analysed (Cresswell, 2009:22). The method of reasoning adopted for quantitative research is mainly deductive reasoning. This is because theories are formulated prior to commencement of the research and the research study is directed at proving or disproving the objectively formulated theory. This method of research would most likely follow the philosophical stance of positivism or realism as the study is based on a view which minimises human error and bias (Welman, Kruger & Mitchell, 2013a:6) .
- Mixed method: This research method combines both the qualitative and quantitative research methods (Cresswell, 2009:23). The mixed methods approach is an alternative method for researchers to incorporate methods of collecting, integrating and analysing data from both the qualitative and quantitative methods in a single research study. This method is useful where the combination of the qualitative and quantitative data provides more holistic answers to the research question than had it been a single approach method (Creswell, Klassen, Plano Clark & Clegg Smith, 2011:6) A mixed methods approach follows a pragmatic viewpoint as information is obtained both qualitatively and quantitatively without bias (Cresswell, 2009:28).

This study adopts a qualitative research method and makes use of a systematic review as a research strategy, more specifically, a systematised review. The study analyses quality academic literature to formulate a theory and reach a conclusion based on the results of the analysis.

2.3.2. Systematised review of the literature

As mentioned previously, this study is conducted as a systematic review. It follows a systemised review strategy that is clarified in this section below.

A systematic review is undertaken with an aim to identify, critically analyse and integrate the findings of all the selected quality academic literature which addresses the research question (Siddaway, 2014:1). A systematic review adopts transparent and structured

approaches to search for and identify literature for the formal integration of the research findings (Bearman *et al.*, 2012: 625).

According to Siddaway (2014:1), a systematic review might attempt to establish the extent of progression for existing research. It could also identify correlations, differences and inconsistencies in the available existing literature and review and assess the reasons applicable for the said correlations and differences. At the end of a review a generalisation is formulated and a theory is developed or evaluated (Cooper, 2003:3-4).

There are various methods to conduct systematic reviews which include critical reviews, literature reviews, meta-analysis review, qualitative systematic review, rapid review and systematised review (Grant & Booth, 2009:93-104).

A systematised review method includes elements of a systematic review, but stops short of the full process of a systematic review. This method is usually adopted for postgraduate research studies. A systematised review is a limited systematic review which includes one or more elements of a systematic review process (Grant & Booth, 2009:102).

This study adopts a systematised review method, as the study is limited to a mini-dissertation, which is part of a postgraduate study (Grant & Booth, 2009:95). A systematised review takes into account that the student is limited to the resources they are able to explore and utilise as part of the research.

The advantages and disadvantages of using the systematised review are discussed below.

- Advantages

The advantages of a systematised review, as noted by Grant and Booth (2009:103), are that systematised reviews are much simpler to conduct as they include searching for literature on multiple databases, and collating the data to form a conclusion based on what is included in all the analysed literature. A systematised review can also be used as a basis to conduct further research into the study as a dissertation or a complete, fully funded research project.

- Disadvantages

A systematised review, however, could possibly contain some bias in the research process due to the limited amount of literature which is used and analysed to deduce an answer to the research question. The quality assessment of the literature is also less defined, in this instance relying on the grading of quality academic journals, which results in a less comprehensive result from the research study conducted (Grant & Booth, 2009:103).

This study is a systematised review, which is exploratory in nature and adopts a deductive reasoning method. Quality academic literature was collected and analysed to support the objectives of this study. The study used various databases and academic search engines to search for high quality academic literature. The databases used to collect the research literature were EBSCOhost and ProQuest. Google Scholar was used as an academic search engine for purposes of identifying academic literature. The next section details the process of identifying and recording the academic literature used in the study.

2.3.3. Data collection technique

This section details the process undertaken to identify and analyse the literature collected to conduct this study on digitalisation and tax administration, with a focus on SMMEs (small business). The study only uses academic journals listed on the databases provided by the University of Pretoria library as a means to systematically identify, select and record the relevant academic journals. The Google Scholar search engine was used to identify academic literature in the databases provided by the University of Pretoria library. The databases provided by the University of Pretoria, used for the purposes of this study are ProQuest and EBSCOhost. These databases provide peer reviewed literature based on the selected search criteria for the study.

The systematised review research follows structured logical steps, which are clarified in the following sections under the headings: keywords; search criteria; and recording of selected academic articles.

2.3.3.1. Keywords

To enable an efficient method of collecting articles which are relevant for this research study, keywords were formulated which are specific to the research conducted. This step details the keywords formulated and used to search for literature on the university-provided databases. The keywords were constructed using the research title, the main constructs of the research study and the objectives of the study. This was to ensure that the search for the articles was specific to the study, however, broad enough to enable a detailed search of literature applicable to the study. The keywords provided in Table 2 were used to search for the research literature.

Table 2: Keywords

Main Constructs	Expanded Terms	Search Terms
Digitalisation* Tax administration Small business**	Digitisation* Tax compliance Digital tax SMME SME Technology	Digitalisation and tax administration
		Digitisation and tax administration
		Small business and tax administration
		Small business and digitalisation
		Digital tax administration
		Digital tax systems

*The American version of the words digitalisation and digitise were also used for the search as digitalization and digitization.

**Small business was used in the search criteria to expand on the search universally. SMME is only specific to South Africa.

Table 2 details the phrases and the terms used in the search for academic literature for purposes of this study. Column 1 is a breakdown of the research title, which provides the main constructs of the research study. Column 2 provides the additional terms used to collect more articles within this topic. Digitisation and technology are a part of digitalisation, which creates a link between the title words and the expanded words for those terms. These terms are supporting constructs to digitalisation. Additional terms which broaden the search for literature within the research topic are ‘tax compliance’, ‘digital tax’, ‘Small Medium Entity (SME)’ and ‘Small, Medium and Micro Enterprises (SMME)’. Any literature with any of the aforementioned terms in the title, abstract or key words are included in the

search results. Column 3 details the main search terms which were used simultaneously with the expanded terms to ensure relevance of the articles used.

2.3.3.2. *Search criteria*

This section briefly explains the search criteria for identifying, selecting and recording of academic articles for this review:

- Only literature published in journals was considered. Textbooks, specialised books, dictionaries, publications (web and otherwise), entity and organisational reports, theses and dissertations research papers, conference papers, popular media, and work-in-progress unpublished papers were excluded from this review.
- Country-specific articles as well as articles limited to any specific country were not excluded.
- There was no limitation to any science specific literature and publications in journals from the social sciences, the formal sciences, the applied sciences and the natural sciences were considered.
- All articles, irrespective of the research design or methodology, were considered.
- Only publications in English are included in this review.
- Only articles published during the five-year period 2015 to 2019 were considered in this review.
- This review is limited to published academic literature available in electronic format through the University of Pretoria's Library, which includes EBSCOhost and ProQuest.

The next section explains the technique adopted to systematically record academic publications which were identified in terms of the criteria above.

Using the above-mentioned search criteria, 64 articles were identified for use in the study. These articles contain the keywords determined in section 2.3.3.1 either in the heading, or in the abstract. These articles were then stored and analysed. The process for selecting and storing the articles collected using the keywords in section 2.3.3.1 is discussed in the next step.

2.3.3.3. *Recording of selected academic articles*

This step details the process undertaken to collect, sort, store and analyse the academic literature obtained as per sections 2.3.3.1 and 2.3.3.2.

The literature obtained on digitalisation and tax administration was stored on Qiqqa, a software reference and research manager, used for storing and analysing literature for research purposes. This reference manager is used to search, analyse and annotate research literature. Qiqqa is also useful for collating and working with multiple portable document formats on a single study, and assists with in-text citations and bibliographies (Qiqqa, 2020).

Qiqqa was used for this study to store the selected literature. It was also used to add notes to the literature, tag similar documents in order for them to be grouped together for ease of analysis, and to assist with the literature referential information. Qiqqa automatically produces a bibliography from the data embedded in the literature.

From the 64 articles collected using the keywords and the search criteria, only 35 could be used for the current study.

The following inclusion criteria was applied to the search results to narrow down the literature to obtain more specific results for the study:

- Only include journal articles;
- Articles published within the five-year period 2015 to 2019 are included; and
- Journals, from which the articles are found, are included in either the Australian Business Deans Council (ABDC) journal quality list or SCOPUS-list.

All other literature that did not meet the above-mentioned criteria was excluded from the study. The articles collected for the study were assessed for quality by making use of the

ABDC- and SCOPUS-list. The quality assessment process is detailed in the following section.

2.3.4. Quality assessment of the data

The journals deemed applicable for the current study, as per the exclusion- and inclusion criteria were assessed against reputable journal ranking lists. The lists selected are the ABDC- and SCOPUS-lists.

The ABDC-list is the collective voice of all Australian University Business Schools (ABDC, No date). The ABDC-list aims to provide a list of journals which meet quality threshold standards, are peer reviewed and are not predatory. This ensures that the journals which are used are reliable and may be used as a source for research.

The SCOPUS list ranks journals based on citation data and compares journals within the same domain. This allows a user to determine the journal with the most reliable data based on the number of citations and references it has received from a variety of sources (SCImago, No date).

For the purposes of this study, articles published in journals which are rated on either the ABDC- or SCOPUS-list were selected. The ABDC-list rates journals into one of the following quality categories (Australian Business Deans Council, 2019:97):

- A* rated: This is the highest quality rating awarded to a journal. It represents the top 5-7% of the journals in their respective research fields.
- A rated: This category follows the A* category. It is the second highest quality category awarded to approximately 15-25% of the journals in their respective research fields.
- B rated: This is the third quality rating awarded to approximately 35% to 40% of the journals in their respective research fields.

- C rated: This is the fourth and last quality rating awarded to the remaining journals that are included in the ABDC list and are not rated A*, A or B.
- Unrated and unlisted journals: Journals that are not listed on the ABDC-list are deemed to not have reached the ABDC quality threshold level as a result of perceived predatory outlets. Journals are considered to be predatory when they request a fee from publishers and do not provide peer-review or editing services (Gann, 2019).

Table 3 is a summary of the quality assessment performed on articles stored from the search results conducted.

Table 3: Quality assessment results

Name of the Journal	A* Rated	A Rated	B Rated	C Rated	Not rated**	Total number
Academy of Accounting and Financial Studies Journal				1		1
Australian Journal of Political Science		1				1
British Journal of Management		1				1
Cesifo Forum					1	1
eJournal of Tax Research		11				11
European Research Studies Journal					1	1
Information systems journal	1					1
International Journal of Entrepreneurship					1	1
International Journal of Law and Management				1		1
International Review of Law and Economics			1			1
International Review of Sociology					1	1
International Tax and Public Finance			1			1
International Tax Review				7		7
Investment Management &				1		1

Financial Innovations						
Journal of Business and Management				1		1
Journal of Business Economics					1	1
Journal of Financial Crime				1		1
Journal of Legal, Ethical and Regulatory Issues					1	1
Melbourne Journal of International Law		1				1
Totals (In numbers)	1	14	2	12	6	35
Totals (In percentage)	3%	40%	6%	34%	17%	100%

**Journal articles that are not on the ABDC list, but are on SCOPUS are reflected as not rated in Table 3.

The next section provides an overview of the results from the data collection and quality assessment processes.

2.3.5. Summarised overview of data collected and quality assessment

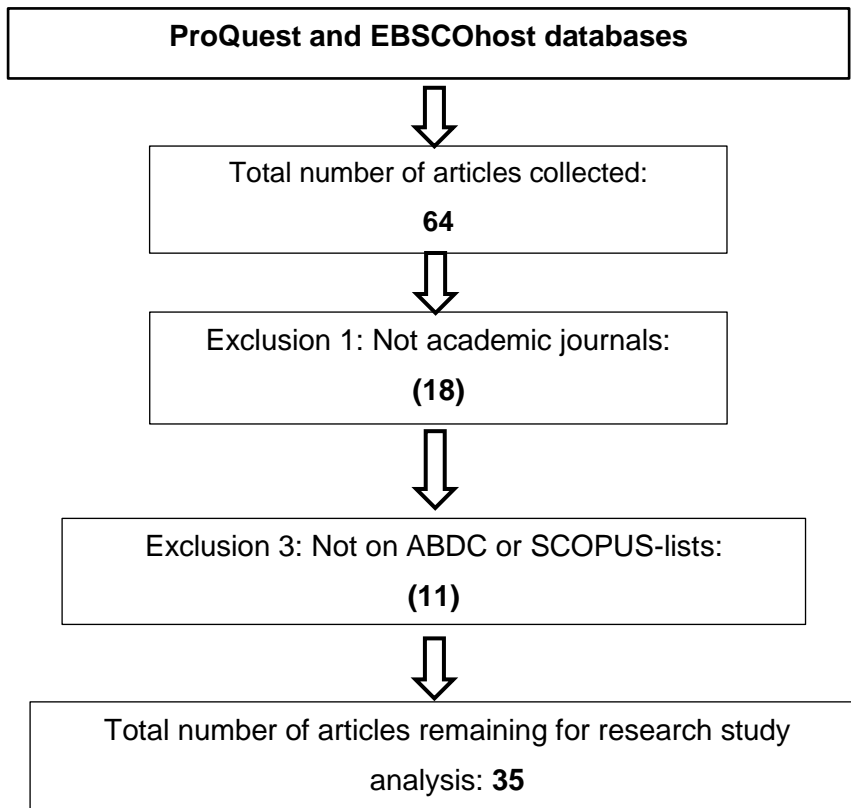
This section provides an overview of the results of the data collection and quality assessment as well as the confirmed sample and number of quality academic articles selected for analysis as part of this study.

A total of 64 articles were found as a result of the search criteria and the keywords listed in section 2.3.3.1, which include ‘tax administration’, ‘digitalisation’ and ‘small business’. The following exclusions were applied:

- 18 articles were excluded, as they were not journal articles. These consisted of books (two), publications (seven), periodicals (one), reports (three), unpublished papers (two), conference proceedings (one) and a policy brief (one).
- 11 articles were excluded, as they were not on the ABDC-list and could further not be traced to SCOPUS.

Following these exclusions, only 35 articles remained for further analysis in the present study. Figure 1 below, illustrates the summary of results from the quality assessment.

Figure 1: Quality assessment: Summary of results



2.4. CONCLUSION

This chapter focused on the research design and research methodology of the study. This study is a systematised literature review due to the limited literature and systematic processes that are followed for the research study. The design landscape and research methodology are set out in great detail in this chapter so as to provide insight into the selection and analysis of the applicable literature for this study. This chapter also discussed the process of identifying the articles analysed for the research study in the next chapter.

The next chapter details the process of analysing the selected articles and presenting the results of the aforementioned analysis.

CHAPTER 3: DATA ANALYSIS AND RESULTS

3.1. INTRODUCTION

Technology has never evolved so fast, yet this is the slowest that it will ever evolve (Reinecke, 2020). With this technological evolution, comes the era of digitalisation.

Tax administrations have to position themselves accordingly to ensure that they are able to handle the wave of digitalisation on processes and functionality. This study aims to explore literature relevant to digitalisation and tax administration.

Chapter 1 is the introduction to the study and provides the background of the research study as well as the main constructs of the study. Chapter 2 details the research design and methodology of this study, and introduces the literature chosen for review to answer the research question.

This chapter is the data analysis chapter where a review is performed of the literature which was selected in Chapter 2. The structure of this chapter starts with the introduction, followed by a discussion on the technique used to analyse the data in the literature collected, a presentation and discussion of the results of the data analysis performed on the literature relating to digitalisation and tax administration, and lastly a conclusion.

3.2. DATA-ANALYSIS TECHNIQUE

Data analysis is the process of using statistical or thematic techniques to interpret and evaluate data. The various techniques available for data analysis allow the analyst to draw specific inferences and facts from the data (Northern Illinois University, 2005).

Statistical techniques are used to give meaning to numbers. The results and inferences of the data are appropriate if proper statistics are utilised. There are two main statistical methods, namely descriptive statistics and inferential statistics (Ali & Bhaskar, 2016:1). Descriptive statistics summarise data from the population using methods such as the mean, median, mode and standard deviation. Inferential statistics use data selected from a

random sample and conclude on the whole population. Examples of inferential statistics are correlation analysis and regression analysis (Ali & Bhaskar, 2016:2-4). A detailed discussion on descriptive statistics and inferential statistics is included under presentation and results – data analysis in section 3.3.4.7.

Thematic analysis is a method used to analyse qualitative data. It is used on data that comprises of texts, and is preferred when the objective of the study is to obtain more information on people's thoughts or views around a certain subject. The data required to use thematic analysis is obtained from interviews, survey responses, research papers on the subject at hand (Caulfield, 2019). Thematic analysis provides the researcher with theoretical freedom and thus provides very detailed data analysis (Nowell, Norris, White & Moules, 2017:2).

The approach used in thematic analysis can be either inductive or deductive. An inductive approach is used to formulate theories based on the results of the data, and a deductive approach is used when pre-formulated theories are used and the data will prove it or disprove it (Caulfield, 2019; Nowell *et al.*, 2017:2).

This study makes use of a thematic analysis technique as well as a systematised review research structure.

3.3. PRESENTATION OF RESULTS AND DISCUSSION

This section discusses and presents the results observed from the analysis of the literature selected for this present study. It is noted in Section 2.3.3.3 that Qiqqa was used to store and analyse the selected literature. The tagging function in Qiqqa was used to analyse the literature to enable adequate presentation of the results and to form the basis of the discussion of the journals which informs and answers the research question.

The analysis comprises of a review of the journals in which the articles selected for the research study are published in and the year of publication, the perspectives in which the articles are written from, the theoretical framework of the articles and the research design and methodology of the articles. Overall, 35 articles are analysed and the results are presented below.

3.3.1. Academic journals

This section presents the analysis and results related to the journals in which the articles selected for the study are published in. The results of the analysis relating to journals which the literature is published in, the ratings of those journals, the academic discipline of the journals and the years that the articles were published in, are discussed below.

3.3.1.1. Journals

- Publishing journal: The articles selected for the research study are taken from journals which are rated on the ABDC- or the SCOPUS-journal listing. This analysis reflects the quality rating of the literature used in this study. It also aims to highlight the journals which authors are publishing in with regards to digitalisation and tax administration. Table 3 illustrates the analysis on the articles per journal and the rating assigned to the journal.

The presentation of the journals in which the literature is published reflects that most literature relating to digitalisation and tax administration is published in the eJournal of Tax (31%) which is an A-rated journal and is the second highest rating on the ABDC-journal listing. The literature published in the eJournal of Tax is peer reviewed, which is an indication that the literature is of good quality. The journal with the second highest number of articles that relates to the research study is the International Tax Review Journal with a C-rating from ABDC-journal listing. The remainder of the literature is not highly concentrated in any other identified journal. This could be an indication that there is a gap in published literature in terms of literature relating to tax administration and digitalisation, in view of the current global digital position and the vision to further digitalise processes and functions.

- Journal rating: Literature from journals which are A-rated on the ABDC-journal list account for 40% of the selected literature. This is followed by C-rated journals (34%), literature on the SCOPUS-list (not rated on ABDC) (17%), B-rated journals (6%) and finally A*-rated journals (3%).

The analysis indicates that authors who are conducting research on this topic are publishing in quality journals, but there could possibly be a gap in the published literature relating to tax administration and digitalisation. This is noted by the small number of journals in the A* rated category which have published literature on this topic. This is expected as digitalisation has rapidly evolved over the past five years and many aspects of digitalisation pertaining to tax administrations are still uncertain, and are in concept phases. It is also worth noting that although there is limited literature published on digitalisation and tax administration in journals included by the ABDC- and SCOPUS-lists, these journal ranking lists are not exhaustive, and there is an opportunity to identify more literature in other journals which are ranked using different metrics to the ABDC- and SCOPUS-lists.

3.3.1.2. Academic disciplines

Academic disciplines refer to the academic field in which the journal belongs. Academic disciplines can be seen as branches of knowledge which unite and form a collective body of knowledge related to a specific science (Krishnan, 2009). This means that a journal can cover various areas of study, but those studies form part of the same discipline. Journals can be interdisciplinary, meaning they can extend to various disciplines and are not limited to one discipline.

The results of the academic disciplines for the literature selected for review are shown in Table 4 below.

Table 4: Academic discipline

Academic Discipline	Number of Articles	Percentage
Taxation	18	51%
Business, Economics and Management	7	20%
Accounting and Finance	3	9%
Law and Economics	3	9%
Social sciences	3	9%
Informatics	1	3%
Total	35	100%

More than half of the selected literature (51%) is published in journals with Taxation as a discipline. This provides a positive reflection as it indicates that tax professionals (both corporate and academia) are proactive in research pertaining to tax and digitalisation, and this could provide solutions to tax administrations all over the world.

The academic disciplines of the journals which published the literature selected for this study are mainly interdisciplinary and broadly varied. It is noted from the disciplines, that there is a great variety extending to commerce (accounting and finance), law, social sciences informatics and taxation. Although the disciplines identified above are individually vastly great and complex, integration is necessitated to ensure that solutions which are identified are not in silos and are the most effective in ensuring that the objectives of tax administrations are achieved efficiently and are using up to date methods.

3.3.1.3. *Year of publication*

This research study reviews literature for the five-year period 2015 to 2019. The year 2020 is excluded from the search criteria as the research study commenced in February 2020. This posed a limitation on the number of academic literature published in 2020 which is related to the study therefore, the research study used the 5-year period from 2015 to 2019 set out in Table 5 below.

Table 5: Year of publication

Year of Journal Publication	Number of Journals Published in the Year	Percentage
2015	0	0%
2016	5	14%
2017	4	11%
2018	9	26%
2019	17	49%
Total	35	100%

There have been rapid developments with regards to digitalisation over the past five years, and this is supported by the publishing dates of the literature pertaining to digitalisation and tax administrations. The results indicate that a noticeable amount of literature pertaining to this topic has steadily increased over the years, with 49% of the literature

having been published in 2019. This also means that as there are developments and guidance within the digital environment, there is more data and knowledge with regards to digitalising tax administrations for researchers to work with, and publish articles that pertain to this topic.

It is also noted that due to the literature being the most recent, it is also still highly relevant to this study. Technology rapidly evolves and therefore, the most recent literature would be the most updated and relevant considering where the global digitalised economy is today, and the progress made by tax administrations with regards to digitalisation.

3.3.2. Perspectives

The next section deals with the perspectives from which the articles under review are written. The perspectives under review are country, author group and taxpayer group perspectives. This is further elaborated on under each heading below.

3.3.2.1. Country perspective

The country perspective of the article provides context to the research of the literature under review. From the articles analysed, the country perspective is broken down into a specific country, which is where the articles specify the country the research is based on, developing country, which is where the articles refer to developing countries without being specific to any country, and lastly, general, which is when the article is not specific on any country or region. Table 6 below, reflects the country perspectives used in the 35 selected articles and Table 7 specifying the countries.

Table 6: Country perspective

Country Perspective	Number of Articles	Percentage
Specific country	20	57%
General	14	40%
Developing country	1	3%
Grand Total	35	100%

Table 7: Countries noted in literature

Developing Countries	Number of Articles
Albania, Armenia, Democratic Republic of the Congo, Egypt, Ethiopia, FYR Macedonia, Georgia, Jordan, Kenya, Kosovo, Kyrgyz Republic, Madagascar, Malawi, Malaysia, Namibia, Romania, Serbia, Tanzania, Uganda, Vietnam, and Zambia	1

Specific Countries	Number of Articles
Australia	3
Kazakhstan	2
Uganda	2
Zimbabwe	2
Australia, Canada, China, Malaysia, New Zealand, Russia, South Africa, Thailand, Turkey, the UK and the United States of America	1
Australia, Finland, Germany, Indonesia, and the United States of America	1
China	1
Croatia	1
Indonesia	1
Kenya	1
New Zealand	1
Qatar	1
South Africa	1
Turkey	1
United Kingdom	1
Total	20

In Table 6 and Table 7 above, the analysis on the perspective of the countries shows that most of the literature (57%) is country specific and approaches the research study from the perspective of the country selected. Only one article (3%) focuses solely on various developing countries, whereas the other literature (40%) is general and does not focus or base its research on any specific country. This indicates that there is consideration towards the application of digitalisation from specific countries as tax administrations and jurisdictions operate differently. It could also be an indication that research pertaining to this topic is more realistic and meaningful using a practical tax administration and the

effects on the taxpayers in those countries. The results can then be replicated for countries of similar tax laws and economic development.

The country perspective informs us that the literature is broad, and that there is no concentration risk pertaining to a particular country or group for the research studies. This can also be interpreted to mean that this topic is relevant and of interest to researchers of different countries, whether developed or developing. The results are, therefore, broad and cover multiple aspects of different countries and jurisdictions which will provide more context and data to the research study.

3.3.2.2. *Author group perspective*

This section presents the results of the career group that the authors of the articles belong to between academia and corporate. Authors who are in academia are those who are in the academic world and conduct mainly research and lectures for academic purposes, whereas authors in corporate are those who are in the professional environment, either private or public, and practice in their area of expertise in the corporate world. A breakdown of the above-mentioned is shown in Table 8 below.

Table 8: Group perspective

Author Career Group	Sum of Articles with Authors from the Group	Percentage
Academia	22	62%
Corporate	10	29%
Academia and corporate	3	9%
Total	35	100%

As seen in Table 8, a large number of the authors are from academia (62%) followed by individuals who are in corporate (29%) and lastly literature where authors are both in academia and corporate (9%). This presents an interesting dynamic, as the literature covers perspectives of authors in practice and an academia perspective at the phenomena of digitalisation and the impact on tax administrations and taxpayers.

3.3.2.3. Taxpayer perspective

The taxpayer perspective presents the results of the type of taxpayer from whose perspective the literature is written. The taxpayer perspectives identified from the literature selected are businesses in general, small businesses, individual taxpayers and a perspective that did not infer a specific taxpayer as shown in Table 9 below.

Table 9: Taxpayer perspective

Taxpayer Perspective	Number of Articles	Percentage
Not specific	15	42%
Small business (SMME)	9	26%
Corporates	8	23%
Individual taxpayers	3	9%
Total	35	100%

It is noted from Table 9 that based on the literature selected from this study, most researchers (42%) are not too specific in addressing this topic in relation to the taxpayer affected as the literature is written in general, without considering the type of taxpayer. This supports the statements made in the above sections that technology and digitalisation have evolved rapidly over the past 5 years, which has a causal effect on research studies being based on the functioning of a digital tax administration holistically, rather than being specific on the different types of taxpayers. 26% of the selected literature use small businesses to conduct their research on the digitalisation of tax administrations, whereas 23% of the articles focus on all business taxpayers to conduct their research.

The mix of the taxpayers considered in the literature is important from the research performed from a tax administration perspective, as administrations have to cater for all types of taxpayers, natural or otherwise.

3.3.3. Theoretical framework

Theoretical framework is a collection of concepts which guide the research. It is used to define, discuss and assess the theories that are applicable to the study's research problem. This is used to provide insight on why the approach to answer the research

problem was chosen (Vinz, 2015). For this study, the constructs and the variables form part of the theoretical framework.

In this section, the constructs of the research study are discussed. The types of taxpayers are discussed in section 3.3.2.3 under taxpayer perspective.

3.3.3.1. Main constructs under investigation

Constructs are defined as the building blocks of theories. They are abstracts which are used in research to express ideas which guide the research (Laerd Dissertation, 2012).

Section 1.5 in Chapter 1 details the main constructs of this research study, which are digitalisation and tax administration. Section 1.6 further discusses an additional construct of SMMEs, which is also a focal point of this study. These constructs are used to formulate keywords that are used to identify and select the literature under review.

The constructs that are the most prevalent in the literature are tax administration, digitalisation, SMME and tax compliance. A detailed discussion of the constructs 'tax administration', 'digitalisation' and 'SMME' was conducted in section 1.5 and section 1.6. A summary of the above-mentioned constructs is presented below, with an additional discussion on the construct of 'tax compliance' as well as the interpretation of the results:

- Digitalisation is defined as the application and implementation of digital technologies to processes and frameworks in business and society (Autio, 2017:1). Digitalisation transforms business methods and business practices, which in turn, affects the economy.
- Tax administrations are the bodies put in place to administer taxes. Administrators are responsible for implementing and enforcing tax laws. Tax administrators are empowered by the country's law and government to collect tax revenue and enforce tax compliance (Alink & Van Kommer, 2016:87).

- SMME is a business that is limited in the number of people it employs (Oteniya et al., 2019:279), the revenue it generates within the industry of operations and the value of total assets the business has on hand (Berisha & Pula, 2015:19).
- Tax compliance is the extent to which a taxpayer adheres to the tax rules or laws of the country where they are liable for tax (US Legal, 2009).

The results of the main constructs identified in the literature under review are presented in Table 10 below.

Table 10: Constructs

Main Constructs from Article	Number of Times Identified as a Construct in Selected Literature Articles	Percentage
Tax administration	22	63%
Digitalisation	21	60%
Tax compliance	13	37%
SMME	9	26%
Number of articles :35		

From the literature analysed, 63% of articles identified ‘tax administration’ as a construct, followed by ‘digitalisation’ with 60%, whilst 37% of the articles had ‘tax compliance’ as a construct and 26% of the articles had ‘SMME’ as a construct. The constructs were linked to variables identified in the literature. A variable in research studies is a measurable characteristic that changes identity or changes the identity of another unit in the same study. Its nature varies and is dependent on the presented conditions (Shukla, 2018: 1). The variables noted in the literature under each main construct are discussed below:

- Tax administration

The variables identified in the literature with tax administration as a main construct were tax innovation, impact on tax revenue, tax administration development, tax administration digital transformation, online influence on tax administration, tax complexities of a tax administration, adaptation to digital transformation and the challenges of digital tax administrations.

- Digitalisation

In the literature where digitalisation was a main construct, the variables identified were assessing whether there are taxpayer uncertainties with regards to data driven tax audits, impact on taxpayer relationships with tax administration due to digital reporting, taxpayer capabilities to digital processes that will align with digital tax administrations, digitalisation and the impact on users, taxpayer response to digitalisation, tax administration transformation.

- Small business

With the small business construct, the variables identified were SMME tax compliance, taxpayer emotions on tax compliance, tax knowledge and tax compliance, and SMME tax morale on tax compliance.

- Tax compliance

The constructs of tax administration, digitalisation and small business identified tax compliance as a variable in some of the literature. This is because tax administrations aim for a higher level of tax compliance, and implementing digitalisation could have an impact on tax compliance levels. Tax compliance was measured against digitalisation, taxpayer tax knowledge, tax compliance behaviour and emotions, and digitalising small business operations to impact tax compliance.

The literature sought to understand the challenges that exists for traditional tax administrations and whether digitalisation will impact the tax compliance levels. The constructs and variables identified also indicate that the literature focused on understanding what the deterrents to tax compliance were and whether the solution exists in digitalisation or whether there are social constructs that affect the tax compliance levels of taxpayers.

The relationship of digitalisation and tax administration to tax compliance of taxpayers provides insight on what is expected from tax administrations to enhance tax compliance levels, and what experience will make taxpayers appreciate digitalisation. The literature also indicates that tax compliance might not only be a factor of process efficiency, but that social constructs may have an impact. These include taxpayer emotions, accessibility to

tax administrations or complexities of the tax system. The objective of tax administrations is to collect tax revenues efficiently and effectively, and strong tax compliance levels of taxpayers, achieves the objective of the tax administration.

The constructs of the selected literature are representative of this current study. From the analysis of the constructs for the literature selected, it is evident that the articles focus on tax administration and digitalisation as a whole with only a few specifically focusing on SMMEs. This also indicates that there is a gap in research studies for the topic focusing on SMMEs.

3.3.4. Research designs and methodologies

This section presents the results of the analysis performed on the literature under review relating to the research design and methodology adopted in the articles. The results presented are for the nature of study, methodological classification, reasoning methods, data sources, data collection technique and the research methods. The results of each element of the research design and methodology is presented under the respective headings below.

3.3.4.1. Nature of the selected studies

The nature of the study can be either descriptive, explanatory or exploratory. A detailed discussion on these studies and the differences is documented in section 2.2.2. The results of the nature of the studies in the articles selected for review is presented in Table 11 below and discussed thereafter.

Table 11: Nature of the study

Nature of the Study	Number of the Articles	Percentage
Descriptive	24	68%
Exploratory	8	23%
Explanatory	3	9%
Total	35	100%

The results of the nature of the studies of the literature selected shows that 68% of the articles conducted descriptive studies, 23% conducted exploratory studies and 9% performed explanatory studies.

This indicates that the data gathered is relevant to the research topic and a comprehensive analysis on the data gathered is performed.

The second highest nature of study is exploratory. Exploratory studies are preferable where there is little known about a topic and there are high levels of uncertainties. It is a useful study where there are elements of digitalisation that have been implemented in countries, as this allows researchers to obtain first-hand information on the topic and the impact or effect thereof on taxpayers, that would not necessarily be identified in a descriptive study.

Explanatory studies are the least selected for this research study. Explanatory studies use the best of the exploratory and descriptive methods.

The literature presents a diverse profile with regards to the nature of studies selected by the researchers. This is seen as a positive step, as it means that more is being explored in this area and in doing so, studies are bringing to light existing knowledge which creates opportunities to identify gaps and conduct further research in the areas with gaps. The diverse profile means that the data in the articles highlights different information, thus providing a more holistic view of the topic.

3.3.4.2. *Methodological classification*

The methodological classification of the research is dependent on the nature and purpose of the study. The main methodological classifications are qualitative, quantitative and mixed methods. The results of the methodological classification are presented in Table 12 below.

Table 12: Methodological classification

Methodological Classification	Number of Articles	Percentage
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Qualitative	29	83%
Quantitative	4	11%
Mixed methods	2	6%
Total	35	100%

The analysis performed on the literature indicates that 83% of the articles adopt a qualitative methodological classification, 11% adopt a quantitative methodological classification and 6% adopt mixed methods. These results indicate that most of the studies were conducted from a qualitative perspective which relies on and requires textual data to conduct the research. This indicates that human and corporate responses, in response to digitalisation and tax administration, were the focal point of the study for the majority of the research studies. This methodological classification allows for a deeper understanding of the topic, and considers feelings and perspectives of research subjects. Of the literature selected, 11% adopts the quantitative methodology, which is a methodology that is used to test objective theories. It is understandable as to why there is limited literature which is based on a quantitative methodology, as this requires a researcher to formulate objective theories prior to the collection and analysis of the data. Considering that this area of digitalisation and tax administration is very broad and research is currently underway, it leads to fewer theory formulations and rather an understanding of the current digital environment and the effect on taxation.

Only 6% of the literature adopts the mixed methods methodology, mixed methods which combines both qualitative and quantitative methodology in the research process. It is useful when the research question requires both quantitative data and qualitative data to holistically answer the research question. Quantitative methodology is appropriate for use where there is sufficient information with which to formulate theories, however, the use of mixed methods requires theory formulation and thus faces the same limitation as the quantitative methodology in this instance.

The limitation of articles which adopt the quantitative and mixed methods methodology could be an indication that there are opportunities for research in order to enhance the knowledge of the topic digitalisation and tax administration.

3.3.4.3. *Research method*

This section presents the results of the research method undertaken by the researchers of the articles selected for this present study. Research methods are the systematic procedure of collecting data, compiling it, analysing it and interpreting it (Welman, Kruger & Mitchell, 2013c:282). Research methods are chosen based on the nature and purpose of the study and follows the methodological classification selected as explained above in section 3.3.4.2.

The research methods identified in the literature are case study, grounded theory, interviews, statistical method and systematic analysis.

Case study research aims to analyse specific issues within a predefined or particular environment. The case study research method is a method which aims to answer the research question by using examples from real life situations. This research method often captures the complexities of real life situations to enable a greater understanding of the research problem (Welman, Kruger & Mitchell, 2013d:25).

Grounded theory is an inductive research method which aims to formulate a theory from the data and results collected for the research study. This method aims to identify problems and understand the solutions for those problems, often by using text analysis. Grounded theory is helpful in understanding phenomena which is unexplainable using existing information, and because of its detailed nature, the research problem is well understood and the studies produce detailed and precise results (Vogt, 2011:137).

Interviews are used as a research method to explore the perspectives from individuals who are knowledgeable on a certain topic or idea. Interviews can be structured, semi-structured or unstructured (Welman, Kruger & Mitchell, 2013b:165). Interviews are advantageous as they leave opportunity for collecting detailed information surrounding the research question which would or could not have been planned for (Welman *et al.*, 2013b:166). This method has the disadvantage that the information from the interviewees is taken as received and the information is not always adequately challenged or substantiated.

Statistical research method is a statistical based research study which includes planning, designing, collecting and analysing data to give insight into the predefined research problem (Ali & Bhaskar, 2016:1). This research method is based on using quantitative data to give insight on a topic and conclude on the research study based on the results received from the statistically analysed data. The advantage of this research method is that it eliminates researcher bias and the conclusion is based on the results observed from the statistical analysis performed.

Systematic analysis, or systematic review, is a transparent and structured approach to search for and identify literature for the formal integration of findings (Bearman *et al.*, 2012: 625). It is mainly used to determine the extent of the progress on a particular research topic and a theory or conclusion is formulated based on observations and findings from the research study (Siddaway, 2014:1). A detailed discussion on the systematic review is conducted in section 2.3.2.

Table 13, on page 44, presents the results of the research methods identified in the literature selected for this research study.

Table 13: Research methods

Research Method	Number of Articles	Percentage
Systematic analysis	10	29%
Case study	9	25%
Statistical method	8	23%
Interviews	7	20%
Grounded theory research	1	3%
Total	35	100%

The most used research method in the selected literature is systematic analysis (29%), followed by case studies (25%), statistical methods (23%), interviews (20%) and lastly, grounded theory (3%). The differences between the selected research methods are not large. This indicates that various methods are adopted to obtain the data required for the research studies.

The literature is well balanced in terms of the types of research methods conducted for the respective research studies. This also indicates that although the topic is similar in nature,

there are various methods to research which will provide answers to the research topic. There is commonality in research methods used, albeit different, that there is no preference as all are used almost equally across the literature reviewed. This indicates that there are reasonable grounds to place reliance on the research data from the literature analysed as no bias or preferences exists in the research method used to gather and analyse data.

3.3.4.4. Reasoning method

Research reasoning methods are used to determine the direction of the research study. Reasoning methods can be either inductive, deductive or abductive which are discussed above in Chapter 2 in section 2.2.3.

Table 14 presents the results of the reasoning methods adopted for the literature under review.

Table 14: Reasoning method

Reasoning Method	Number of Articles	Percentage
Inductive	24	69%
Deductive	9	26%
Abductive	2	6%
Total	35	100%

The most applied reasoning method based on the literature reviewed is the inductive reasoning method, representing 69% of the reviewed literature. The second most applied method is the deductive method, making up 26% of the literature, with the abductive method being the least used at 6%. These results mirror the results of the methodological classification.

Of the literature reviewed, the abductive reasoning method is only applied in two articles (6%). This indicates that in the majority of the selected studies conducted of this topic, the inductive or deductive reasoning method has been applied, which makes for the study to be specific when conducting the research as opposed to the abductive method. The literature indicates that the inductive research method is the preferred method in the available research studies. There is, therefore, an opportunity for more studies to be

conducted using deductive and abductive methods to enhance and add to the body of knowledge for this topic using the different reasoning methods.

3.3.4.5. *Data collection techniques*

Data collection in research studies may be either qualitative or quantitative. Quantitative data collection methods involve the use of numerical figures and calculations, whereas qualitative methods are textural and are closely associated with words and non-quantifiable elements (Kabir, 2016:202). Table 15 below, reflects the number of articles which used the respective techniques.

Table 15: Data collection techniques

Data Collection Technique	Number of Articles	Percentage
Qualitative	28	80%
Quantitative	7	20%
Total	35	100%

The results of the research methods discussed in section 3.3.5.3 indicate that a large number of studies adopted the qualitative research method. Of the selected literature, a preference is shown for qualitative data collection techniques to collect the data for the research conducted.

80% of the reviewed literature applies qualitative data collection techniques, with only 20% applying quantitative data collection techniques. Qualitative data techniques are more textural in nature and include methods such as interviews with open-ended questions, surveys, focus groups. This allows for a more in-depth understanding of the research question at hand and obtains valuable information from industry experts which might have been missed with close-ended data collection techniques. Quantitative data collection techniques are also beneficial to the research field as it is unbiased and presents consistent and measurable data which can be compared. The preference of qualitative data collection techniques to quantitative data collection techniques also indicates that there is much understanding and knowledge that is being collected and gathered within this research field and presents an opportunity for further research using alternative

methods to the qualitative data collection technique to contribute to the existing body of knowledge.

3.3.4.6. Sources of data

Data collection in research studies is obtained from primary or secondary sources. Primary source data is data which is obtained first hand thus the researcher is the first person to obtain this data. Secondary source data is data that is already available and has been collected and processed for the purposes of other studies (Ajayi, 2017). Table 16 below, sets out the sources of data used for the present study.

Table 16: Sources of data

Source of Data	Number of Articles	Percentage
Secondary	24	69%
Primary	11	31%
Total	35	100%

The literature analysed indicates that 69% of the literature under review used secondary data for the present research study. Secondary data comprises mainly of published literature, websites and other forms of publications. 31% used primary data which is obtained from sources such as surveys, observations and experiments.

The results indicate that secondary data, which is information that is already available, is mainly used in the selected literature to present detailed and cohesive results based on data collected or global phenomena on the topic such as certain countries tax digitalisation and taxation policies.

These results also indicate that although the majority of the studies use secondary data, there is a growing interest in the collection and utilisation of primary data with studies showing an increase in the literature which uses primary data as the years advance.

3.3.4.7. *Data analysis techniques*

The data collected using the above-mentioned data collection methods has to be analysed in order to answer the research problem and to conclude on the research study. There are various data analysis techniques applied in research studies, the discussion that follows will only go into detail on the methods noted in the selected literature for this research study. The data analysis techniques noted from the selected literature are descriptive statistics, regression analysis, correlation analysis, thematic analysis and the Gioia method which are discussed below:

- Descriptive statistics are statistical methods which analyse data using the mean, median, mode and the standard deviation. The mean is commonly known as the average. It is the sum of all scores divided by the number of scores. This is useful to determine the trend in data. It provides the average of the dataset in a very easy and quick to calculate manner (Dillard, 2015). The mode in a data set is the value which occurs frequently. The median is the mid-centre of the data and separates the top-tier data from the bottom-tier data.

Standard deviation represents the spread of data around the mean. The standard deviation is useful for determining the distribution of data points. It reflects the outlying data in a dataset from what is determined to be the norm (the mean). The standard deviation should be used in conjunction with other statistical methods to get a more accurate analysis as it does not always satisfy statistical analysis especially where the data is not linear (Dillard, 2015).

- Regression analysis illustrates the correlation between a dependent variable and an explanatory (independent) variable. It reflects whether the relationships between the variables are strong or weak, and commonly measures the relationship over time (Pidwirny, 2006).
- Correlation analysis measures the strength of the relationship between two or more characteristics. This analysis assumes that a set of values under a predefined set of

conditions consists of random variation and follows a normal distribution pattern (Pidwirny, 2006).

- Thematic analysis: is a method used to analyse qualitative data as well as to identify and analyse themes in a data set (Nowell *et al.*, 2017:2).
- Gioia method: is a qualitative data analysis technique that is favourable in grounded theory studies. This technique enables a systematic approach to analysing data. It offers qualitative rigor in inductive research (Gioia, Corley & Hamilton, 2013:20).

Table 17 below presents the data analysis techniques noted in the literature reviewed for this present study.

Table 17: Data analysis techniques

Data Analysis Technique	Number of Articles	Percentage
Thematic analysis	26	73%
Correlation analysis	3	9%
Regression analysis		
Descriptive statistics		
Regression analysis	3	9%
Correlation analysis		
Regression analysis	2	6%
Gioia method	1	3%
Total	35	100%

The data analysis techniques adopted are mainly thematic, which is used for qualitative studies, statistical techniques that are used in quantitative studies and the Gioia method that is used for grounded research studies (qualitative studies). The data analysis techniques adopted are representative of the nature of studies adopted in the literature articles. Thematic analysis comprises 73% of the data analysis techniques used in the literature, the statistical analysis combined comprises 24% of the data analysis techniques, and the Gioia method comprises 3% of the reviewed selected literature.

3.3.5. Focus areas of research studies

This section presents the results of the analysis performed on the literature under review, relating to the main focus areas of the research studies. The main focus areas noted in the literature are digitalisation, digitalisation and tax administration and SMME tax compliance, illustrated in Table 18 below, which will be discussed below.

The structure of this discussion addresses the focus areas of the literature, whilst relating those areas to the present study's research objectives. This study's research objectives are to understand:

- The reasoning and logic of tax administrations advancing to digital methods,
- The methods tax administrators have undertaken to digitally transform tax administrations, and
- How digitalisation can ease the tax compliance burden on taxpayers, more specifically SMMEs.

Under the heading of digitalisation in section 3.3.5.1, digitalisation and how SMMEs are responding to digitalising business operations is discussed. This is followed by the discussion of digitalisation and tax administration in section 3.3.5.2, which connects the information in the literature to the objectives of this study. This is structured into four subheadings, and the relevant objective is specifically identified in each subheading. Lastly, SMMEs and tax compliance is discussed in section 3.3.5.3., and the relevant objective of this study which relates to SMMEs and tax compliance is identified and linked. Table 18 below illustrates the main focus areas of the literature reviewed under this study.

Table 18: Focus of literature

Focus of Literature	Number of Articles
Digitalisation	6
Digitalisation and tax administration	23
Small business and tax compliance	6
Total	35

3.3.5.1. *Digitalisation*

Digitalisation is a global phenomenon, and exists within businesses, locally and internationally, to improve processes and to be the most effective while increasing their

revenue and customer base. Digitalisation stimulates the economy by creating jobs and providing cost savings to businesses (Hodžić, 2019:763). The advance of technology in the area of information technology has been important in accelerating globalisation since the 1990s (Portolese & Folloni, 2018:433).

The results indicate that SMMEs which are already in existence are not as quick and agile to digitalise their businesses and processes. The SMMEs are experienced in their traditional ways of doing business, and require extra assistance in understanding the digital transformation process and embedding this into their core business processes to reap the benefits of digitalisation. The research indicates that service providers in countries such as China, are offering training to SMMEs on the use of online business platforms and embedding this into normal business processes. Such an initiative bridges the gap between where the SMME is in terms of digitalising and where it ought to be in order to survive a digitalised economic environment (Li *et al.*, 2018:1135-1137).

A result of digitalisation is the formation of the sharing economy. The sharing economy is based on platforms that match individuals or entities which are willing to enter into sharing transactions. Examples of these are platforms such as Uber, Airbnb and Amazon (Migai, De Jong & Owens, 2019). The sharing economy presents new challenges to tax authorities which mainly still adopt traditional tax administrations in detecting tax fraud and evasion. Tax authorities which are digitalising their tax administrations are responding to the sharing economy by collecting data and using data analytics to identify and targeting tax evaders. Sharing tax data with tax authorities in other jurisdictions is another solution adopted by tax authorities to identify and target tax evaders to ensure that there is no corrosion of the tax base. The Organisation for Economic Co-operation and Development (OECD) has published a report to assist countries in determining the challenges and benefits of digital tools to enhance and increase knowledge amongst tax jurisdictions (Schwanke, 2017).

Digitalisation, in effect, eliminates manual processes and technology replaces the workforce. A reduction in the workforce results in a reduction in taxes charged on employee salaries commonly known as Pay-As-You-Earn. A reduction in taxes collected results in a reduction in government expenditure for service delivery, including social services (Blix, 2017:13). Tax authorities need to match the pace of digitalisation to ensure that there is no loss in tax revenue as a result of digitalisation. The literature indicates that

digitalisation improves processes and reduces costs; these factors should result in businesses being more profitable and contributing towards a greater corporate tax base.

3.3.5.2. *Digitalisation and tax administration*

The literature reviewed mainly addresses digitalisation and tax administration. The perspectives of both taxpayer and tax administrations are considered in the literature to inform the present research study.

The following discussion is based on what is identified in the research studies that informs the research objectives, and is in the structure as set out below:

- 3.3.5.2.1: Causes for tax administrations to implement digitalisation of tax administrations. The objectives addressed under this subheading are: ‘understand the reasoning and logic of tax administrations adopting digital platforms’; and ‘How digitalisation can ease the tax compliance burden on taxpayers, more specifically SMMEs.’
- 3.3.5.2.2: What has been implemented thus far by tax administrations. The objective addressed under this subheading is ‘The methods tax administrators have undertaken to digitally transform tax administrations’.
- 3.3.5.2.3: Challenges which arise as a result of the digitalisation of tax administration. The objective addressed under this subheading is: ‘The methods tax administrators have undertaken to digitally transform tax administrations’.
- 3.3.5.2.4: The impact that the digital transformation of tax administration has on taxpayer compliance, and the taxpayer’s response thereof. The objective addressed under this subheading is ‘How digitalisation can ease the tax compliance burden on taxpayers, more specifically SMMEs’.

3.3.5.2.1. Causes for tax administration to digitalise tax administration

Tax administration is a function of the local and global economy. The function of tax administrations is to enforce tax laws and policies and administer the collection of tax revenues. As it is a function of the economy, it has to respond to the changes in the economy and have measures in place to ensure that it is able to keep up with future changes. Tax administrations have to be proactive in identifying changes which have an impact on their ability to carry out revenue collection responsibilities. The main causes identified in the literature for digitalisation are globalisation, multinational entities tax practices, understanding the tax gap and tax complexities. These are discussed below:

- Globalisation

Tax authorities are aware of the digital and global business methods that have erupted as a state of normality, such as the sharing economy. Businesses are using technology to increase revenue; tax administrations have to follow suit. Traditional tax administrations pose a challenge in identifying tax fraud in the global economy, as global transactions are mainly digital. Countries have to share tax data with each other to mitigate the tax fraud practices. To ensure efficiencies in this process, standardisation and digitalisation have to be implemented to combat tax fraud (Schwanke, 2017:2).

- Multinational entities tax practices

Tax administrations have also been required to transform digitally due to globalisation. Multinational enterprises (MNE) have a stronger presence globally and earn income from multiple countries. This has the effect that tax administrations have to cater for intellectual property assets that are used by MNEs in different countries to where they were developed, and also a more robust assessment to determine a tax connection with that MNE (Portolese & Folloni, 2018:433). This leads to a reduction in tax practices where MNEs claim deductions in one country, yet obtain favourable tax rates in another country, which is not in the spirit of tax practices. The strength of tax assessments is determined by the data which tax administrators obtain, analyse and conclude in line with tax policies and tax laws (Gueydi & Abdellatif, 2019:784-785). A

digitalised tax administration system is able to handle big data, and also share and receive data from other tax jurisdictions.

- Understanding the tax gap

Digitalisation of tax administrations also provides tax authorities with insights into the tax gap. A tax gap is the difference between what should have been collected as per the tax laws compared to what was actually collected from taxpayers. By utilising available data, tax administrations are able to interrogate the processes which underlie the data and the accuracy to determine the actual tax liability of the taxpayer holistically (Warren, 2019:573). Understanding the tax gap assists in the link of tax policy design, revenue administration performance and taxpayer behaviour. What this means is that tax administrations will be able to determine the suitability of their tax policy to the taxpayers based on tax compliance and taxpayer behaviour to complying with tax laws (Warren, 2019:572-573).

- Simplifying tax complexities and reducing the tax compliance cost burden

Tax administrations should avoid unnecessary complexities in the tax system. This eases the burden of understanding tax laws and aids in taxpayers tax compliance. (Budak, James & Sawyer, 2016:351). Tax administrations should adopt a digitalised tax system that has less unnecessary complexities in favour of simple systems with only the necessary complexities that are aimed at specific complex transactions. For the individual and SMMEs with relatively simple businesses, this would assist in understanding tax responsibilities and hopefully increase tax compliance (Budak *et al.*, 2016:341).

Digitalisation offers tax administrations the opportunity to transform their methods of interaction with taxpayers. This results in less face-to-face time with taxpayers, faster response time, simple digital systems and an electronic trail of interaction with users that can be used for reference and case support. This could lead to reduced costs of tax compliance, due to the reduced need for tax experts to ensure taxpayer compliance for the taxpayer, as well as reduced administration costs for tax administrations due to

a digitalised and electronic environment that is likely to have higher productivity hours than a manual and traditional system (Green, 2017:2).

There is plausible cause for countries to digitalise tax administrations to ensure that they remain relevant in a fast-paced world that is going digital. In order for tax administrations to be effective, they have to optimise on tax administration and build in efficiencies in the process, so that the administration increases revenue collection and minimises the tax compliance burden for taxpayers (Serikova *et al.*, 2018:283). The progress of digitalisation depends on each country as well as on the readiness of the country to go digital. The next section discusses implementation by countries and provides information that other countries can take into account while planning for their tax administration digital transformation.

3.3.5.2.2. What has been implemented by tax administrations

The digitalisation of tax administrations includes electronic return filing, submitting documents, electronic taxpayer communications and tax audits. Tax authorities across the world are sharing tax data, which helps tax authorities conduct and complete more audits and investigations (Schwanke, 2016:1).

There are certain countries that are leading the migration to fully digitalised tax administrations. One such country is the UKs revenue commissioner (Her Majesty's Revenue and Customs) with the adoption and implementation of 'MTD'. The concept of MTD is designed around the idea that individuals and small business taxpayers should have their own digital tax account to enable them to manage their taxes online by 2020. Tax administrators collect and process information that has tax implications in real time, thus taxpayers do not have to wait until the end of the tax year to know what their tax liabilities are, and enable them to proactively plan for the tax payments to cover the tax liabilities at year end (James & Sawyer, 2018:14-15).

Initial implementation of MTD is on a voluntary basis for SMMEs, who are given the choice on when to migrate to the digital system. Initial implementation has been rolled out for Value Added Tax. The final implementation will also apply to individuals on their personal tax accounts (James & Sawyer, 2018:17). MTD is an example of how countries are

digitalising tax administrations. Other countries are designing their digital systems, and are taking note of trends occurring in neighbouring and developed countries to understand the risks of digitalisation. The insights from the trends are factored into the planning and development of the digitalisation of the tax administration system.

The Australian Taxation Office (ATO) is also on a journey to digitalise the tax administration using data and analytics to promote willing participation in tax compliance. The plans in place for this system include embedded compliance within the administration, this means that tax compliance just happens. Big data is utilised to provide tax systems with the necessary tax information on taxpayers, which represents a shift in responsibility from the taxpayer to the income source (Veit, 2019:477-478). The desired impact of this by the ATO is that taxpayers that meet the specified requirements based on the available information do not submit tax returns, and those that need to submit complete prepopulated returns for a faster and more seamless process (Veit, 2019:478).

The ATO is also embedding upstream tax compliance in their tax systems, which is a method utilised to improve taxpayer compliance. This requires that tax obligations are finalised and fulfilled closer to the tax event instead of a longer reporting period as is currently the case with traditional systems (Veit, 2019:479). This is similar to the objective of the UKs MTD.

Tax authorities across the world are sharing tax data, which will help tax authorities conduct and complete more audits and investigations on taxpayer information. This also targets those committing tax fraud or evading tax (Schwanke, 2016:3).

According to Schwanke (2016:2), there are various trends noted in digitalising tax administrations. This includes tax authorities monetising and analysing data to understand taxpayers and drive digital innovation for tax. Another trend is the transition to digital tools for electronic filing; this includes pre-filing of electronic tax returns, electronic verifications and audits, using social media to communicate with taxpayers and providing online tax assistance.

New technology tools for corporate tax management and risk management for businesses has seen an increase in demand as a response to digital tax administrations. Tax

administrations are also using automated technologies to analyse the data obtained from actual sources to verify the numbers used by taxpayers in the tax calculations and tax returns (Schwanke, 2016:1).

The OECD in the OECD's Model Tax Convention in Article 5 provides guidance to member and non-member countries on the digitalisation of tax administrations to ensure that there is no bias to traditional revenue collection methods and that tax authorities do not undermine tax neutrality (Bentley, 2019:685).

The transformation of tax systems and the improvement is not effective if the cost of introducing new systems exceeds the expected revenue to be collected from the transformation. Cost should, however, not be the driving force in making a decision on whether transformation of tax administrations is implemented, as the transformation can result in an optimal administration and solve the problems of uncertainties to tax laws and compliance by taxpayers that was previously not achievable (Turuntayeva *et al.*, 2019:13).

3.3.5.2.3. *Challenges of digitalisation and tax administration*

Transforming government services to digital avenues promises to yield high rewards in the form of cost savings, service efficiency and innovation. The transformation, however, is not without challenges. Some of the challenges noted are digital literacy of taxpayers, job losses, taxpayer uncertainties regarding the use and security of the data, tax complexities and the activities of multinational entities. These challenges are discussed further below:

- Digital literacy

Digital literacy of taxpayers and access to internet is one of the significant challenges that many countries encounter (O'Sullivan & Walker, 2018:498-500). If there is no provision for taxpayers to access the service, then the digitalisation is in vain, as taxpayers will continue with traditional manual methods of complying with tax laws. Taxpayers who are not digitally literate may resort to using tax professionals to comply with tax laws, which leads to high compliance costs, especially for SMMEs, which is a tax compliance deterrent (Gwaro, Maina & Kwasira, 2016:85).

- **Job losses**
Digitalisation will result in the elimination of manual processes, which may result in job losses. Tax administrations are government functions, and a surge in job losses in favour of technology in a country that already has high unemployment rates could result in negative feelings by taxpayers, and thus result in increased levels of tax non-compliance (Blix, 2017:13).

- **Taxpayer uncertainty**
Taxpayers may also feel uncertain about the level of disclosures which they are required to make in line with the digital tax administration. The uncertainties range from concerns surrounding what else the information and data is used for besides analysis and verification for tax purposes, as well as whether the data is secure so that digital criminals cannot access the data and put the taxpayers' lives and livelihoods at risk; and confidence in the digital system (Gwaro et al., 2016:85).

- **Tax complexities**
Another challenge noted is complexities in tax laws. Complex tax laws translate to complexities in the tax administration. For taxpayers that are not digitally literate, a complex digital tax administration will not be a solution, and this will impair on the principle of fairness as taxpayers that still use traditional tax methods have to endure longer service waiting times, whereas those who have gone digital receive quick and efficient service. Tax authorities should eliminate complexities in tax administrations by simplifying tax laws, tax systems and taxpayer communications (Budak et al., 2016:351-353).

- **Multinational entities**
Lastly, the challenge which tax administrations face in digitalising, is the tax treatment of MNEs. There is an increase in MNE activities in developing countries, which has to be dealt with in accordance with the countries' tax laws and treaties with other countries. Factoring this into tax administration, leads to complexity. Furthermore, the technical nature of international tax issues such as thin capitalisation and transfer pricing, add to the challenges that tax administrations have to address. Tax

administrations need to have tax officers and auditors who are experienced in dealing with the complex international tax issues, and employ adequate technological and human resources (Gueydi & Abdellatif, 2019:785).

3.3.5.2.4. The impact that the digital transformation of tax administration has on taxpayer compliance, and the taxpayer response thereof

Digitalisation of tax administration has an impact on taxpayers who are the ultimate users of the tax systems and the providers of the required digitised information. The ultimate goal for tax administrations is to maximise tax revenue collection while reducing the tax compliance burden on taxpayers. To achieve the tax administration goal, the tax laws and actions implemented by tax administrations have to result in taxpayers complying with tax laws and meeting their tax obligations. It is important to note the taxpayer's response to the digitalisation of tax administration, and whether this results in a reduced tax compliance burden for taxpayers. The discussion under section 3.3.5.3 addresses the impact on taxpayers, more specifically SMMEs, because of digital tax administration, and whether the tax administration could achieve its goal by digitalising tax administration.

3.3.5.3. SMME and tax compliance

The focus of this study is SMMEs, therefore, the discussion below, focuses on taxpayer response to digitalised tax administration with a focus on SMMEs. It also discusses whether tax administration digitalisation affects the tax compliance burden for taxpayers. The discussion addresses the factors which influence SMME tax compliance, which includes digitalisation, and tax incentives directed specifically towards SMMEs.

SMMEs form the largest group of business within the economy, yet, they have the highest level of tax non-compliance (Gwaro *et al.*, 2016:84). Tax compliance by SMMEs is based on three aspects: Economical; political; and socio-psychological perspectives (Battisti & Deakins, 2018:498).

With regards to the economic aspect, SMME tax compliance is driven by the probability of being audited, possible fines for non-compliance, the tax rates imposed on income and the income generated by the SMME, with SMMEs that earn less income less likely to comply

with tax laws (Battisti & Deakins, 2018:498). With a tax system that gathers data from the income sources, and places less responsibility on the taxpayers to provide this information, there might be a perceived increase in taxpayer compliance as taxpayers declare complete and accurate information in a structured and less complex tax system. The digitalisation of the tax administration also means that taxpayers understand what is required of them and are able to provide the necessary and required information. Some of the advantages noted for taxpayers due to tax administration digitalisation are as follows (Schwanke, 2016:1; Wadesango, Mwandambira, Mhaka & Wadesango, 2018b):

- Taxpayers will have insight to the information that tax systems are utilising to determine their tax liability;
- The electronic systems will allow for real time query lodging and resolution on the information used by the tax administrators;
- A less complex system will require minimal or less use of tax professionals, which reduces the cost of tax compliance;
- The use of data analytics also reduces the number of taxpayers selected for verification or audits where there are no exceptions that require verification. This will improve the tax compliance process and bring about efficiencies in the process. Taxpayer audits or verifications are usually cumbersome with no clear guidance provided to taxpayers on the information required, therefore, leading to taxpayers collating and submitting excessive and sometimes unnecessary information. This process is inefficient for both taxpayers and tax administrations. The refining of the selection criteria and the use of data analytics to select only those that meet the criteria will prove to be efficient and lead to a positive taxpayer experience with a digital tax system.

The above-mentioned reasons indicate that the taxpayer stands to benefit from a digitalised tax administration, which leads to cost savings that can be invested in other areas of business and growth opportunities (Dabla-Norris, Misch, Cleary & Khwaja, 2019:1; Schwanke, 2016:1-3).

From a political aspect, tax complexity and tax policies have an impact on SMMEs complying with tax laws. The more complex a tax system is, the less compliance is demonstrated by SMMEs as compliance costs increase and, those who opt not to incur the compliance costs do not have the necessary control to ensure that all tax tasks are

completed as required (Battisti & Deakins, 2018:498). A complex tax system, is a tax compliance deterrent. The business of an SMME would not require complexities in the tax systems, as their transactions are fairly less complex than that of large corporate companies. A complex tax system would not benefit SMMEs, and would lead to queries and disagreements between both parties, which leads to high tax costs of compliance for both taxpayers and the tax authority (Wadesango *et al.*, 2018b:7-8).

Socio-psychological aspects include the feelings and perceptions of taxpayers. Tax compliance is low when SMMEs feel that the tax system is unfair towards them (Battisti & Deakins, 2018:498). SMMEs which feel digitally excluded by a tax system, or feel that it is too complex are more likely to evade taxes or not comply with tax laws. Alternately, where taxpayers show high levels of trust in the tax authorities, the compliance levels appear to be higher. SMMEs also show a willingness to trust the approaches introduced by tax authorities and abide with tax laws when they trust the tax authorities (Olsen *et al.*, 2018:43).

As noted above, socio-psychological perspectives play a role in the tax compliance behaviour of taxpayers, the ability to use the system does not necessarily result in higher tax compliance as SMMEs could perceive the payment of taxes as a loss to the business (Battisti & Deakins, 2018:498). Taxpayers demonstrate a willingness to voluntarily comply with tax laws where the perception is that it benefits them. Tax administrations need to prove that the digitalisation is to the benefit of taxpayers, more especially SMMEs, to improve the taxpayer's perceptions and improve tax compliance behaviour of SMMEs (Kiconco, Gwokyalya, Sserwanga & Balunywa, 2019:1120).

Another measure to address tax non-compliance due to SMMEs perception of unfairness is to introduce or implement tax rates which are specific to SMMEs. In South Africa, SMMEs that meet the specified requirements to be classified as small business corporations are taxed at progressive tax rates which are different to the standard corporate tax rate of 28%. SMMEs are allowed an immediate write-off of all property, plant and equipment brought into use for the first time by the company for trade purposes (South African Revenue Services, 2020:39). This is to encourage tax compliance amongst the largest corporate group in the country.

3.4. CONCLUSION

This chapter presented the literature review of the selected literature for use in this study. The results provide insight on the journals of the literature, the perspectives that the literature was written from, the constructs of the literature and the research design and methodologies of the literature selected for this study.

The main focus areas identified in the literature selected for review was to understand and add to the existing body of knowledge related to digitalisation and tax administration, digitalisation in general and SMME tax compliance.

In summary, the results of the analysis conducted on the literature indicate that the publishing journals are quality journals, are multi-disciplinary and are published within the five-year period, 2015 to 2019 with more literature published in the later part of the five-year period, being 2018 and 2019.

The literature is written mainly from a specific country perspective and the authors of the literature are mainly researchers in academia, however, the gap between academia and corporate is not significant indicating that the literature caters for various perspectives. The literature perspectives vary, from specific taxpayers to literature which is not specific to a taxpayer type.

The constructs of the literature are consistent and aligned to the main constructs of this study with an additional construct of tax compliance. Tax administration and digitalisation are the main constructs present in the literature review.

The nature of the study mostly adopted in the literature is descriptive, and the research methodology mainly adopted is qualitative. The research methods present an interesting analysis, as there was no method that was preferred from the reviewed literature. The most adopted reasoning method is the inductive method, with the most used data collection technique being qualitative data collection. Most of the studies adopt a thematic data analysis technique, which includes mainly case studies.

The review of the literature selected for this research study highlights that there are opportunities for research studies in the topic of digitalisation and tax administrations. The literature collected is increasing as the years advance and indicates that there is more research activity due to an increase in understanding and the knowledge base for this topic.

The literature reviewed indicates that the digital transformation of tax administrations should be in response to taxpayer readiness for a digital system, to ensure that the objectives of the tax administration are achieved. High levels of tax compliance result in high revenue collection levels. Tax administrations need to respond to the needs of taxpayers in implementing any solutions, while simultaneously responding to the changing economic landscape to ensure that there is no erosion of the country's tax base.

CHAPTER 4

CONCLUSION

4.1. INTRODUCTION

The previous chapter discussed the technique used to analyse the literature selected for review, and went on to present and discuss the results of the data analysis.

This chapter concludes on the present research study. The chapter starts with an introduction, then presents a summary of findings and conclusions, discusses the limitations of the study and the possibilities of further and future research. This chapter ends with concluding remarks regarding the research on digitalisation and tax administration.

4.2. SUMMARY OF FINDINGS AND CONCLUSION

This study's main research objective was to explore the existing body of literature related to digitalisation and tax administration, with the aim to understand:

- The reasoning and logic of tax administrations adopting digital platforms;
- The methods undertaken to transform digitally; and
- How digitalisation can ease the tax compliance burden on taxpayers, more specifically SMME's.

In order to guide the research study, sub-headings were used as a guide to achieve the main research objective. The discussion below is a summary of the sub-headings used in the research study.

Firstly, the identification and selection of the literature to review in the research study was conducted (section 2.3.3). The literature was identified by conducting a search in the ProQuest and EBSCOhost databases, using the main constructs 'digitalisation', 'tax administration' and 'SMMEs' for the period 2015 until 2019. This search was enhanced by including keywords which align to the constructs mentioned. Based on the selection process, only 35 journals were selected for this study.

The selected literature was analysed using the sub-headings selected to address the objectives of this study. A thematic data analysis technique was adopted to review and analyse the 35 selected journal articles. The analysis was conducted using the following headings: Academic journals; perspectives of the articles; theoretical framework that was adopted in the articles; the research and design methodologies of the articles; and the focus areas of the articles.

The data analysis performed under the academic journals heading (Section 3.3.1) was to analyse the journals which the articles are published in and the quality rating, as per the ABDC-journal list, assigned to that journal. The review indicated that the eJournal of Tax published the majority of the articles used for the purposes of this study. The academic disciplines of the journals were mainly in the taxation academic discipline. The academic disciplines of the journals as a whole ranged from taxation, business economics, commerce (accounting and finance), law, social sciences and economics. The analysis indicated that with each year, more articles are published than the previous year, barring the year 2017 which showed a decline but the increasing trend continued from the year 2018 onwards.

The next sub-heading which was used was perspectives (section 3.3.2). This analysis sought to understand the perspectives of the literature. The perspectives directed the research study to a particular identifiable group of people or things. The perspectives identified were country perspective, author group perspective and taxpayer perspective.

Under country perspectives, it was noted that the literature was largely written from the perspective of a particular country, with Australia the most selected country in the research studies. The remaining literature addressed the topic generally without using any country as reference for the studies. This indicates that there are researchers obtaining an understanding of the cause and effect of digitalisation on tax administration without considering country specific challenges and advantages. This provides taxpayers and tax authorities with knowledge that they may use to educate themselves prior to designing and implementing digital methods to tax administrations.

The group perspective highlighted the professional group of the authors of the literature. The professional groups are either in academia or corporate, and many of the researchers of the literature reviewed are in academia. The taxpayer perspective was to analyse whether the articles focused on a particular group of taxpayers, such as individuals, businesses, SMMEs or no specific taxpayer. The taxpayer perspective was particularly important, as the results of the research might be different for different taxpayers. The impact of traditional tax administrations and digital tax administrations on the taxpayer is also important for consideration. The research indicates that there are possibilities for further research regarding the impact on particular taxpayers such as SMMEs and large corporate business under this topic as the majority of the literature used was from a general perspective with no specific taxpayer identified. The literature was all encompassing as it included the perspectives of business as a whole, individuals and SMMEs.

The theoretical framework of the literature selected was used as a sub-heading to understand the research methods adopted by the researchers (Section 3.3.3). The theoretical framework analysis was based on the constructs of the articles and the variables used in the articles selected for this study.

The fourth sub-heading used was research design and methodologies (Section 3.3.4). Under the research design and methodology, the data analysis focused on the nature of the studies, the methodological classification, the research method, the reasoning method, data collection techniques, sources of data, and data analysis techniques. It was noted that there are gaps which exist for research that uses quantitative and mixed methods methodological classification, quantitative data collection techniques, and statistical data analysis techniques. In this analysis, it was also noted that the research design and methodologies are indicative of this topic still being in the research phases. Many of the studies relied on what has been published, as well as interviews and discussions with subject matter experts. The research that was based on application mainly focused on the electronic filing of returns and communication to taxpayers, and not on a completely digitalised tax administration system which is able to incorporate big data into the administration, and use data insights to identify risks and mitigate audit costs.

The final sub-heading used to guide this research study is the focus areas of the literature (section 3.3.5). Under this heading, the literature which supports the main research objectives of this study was discussed. The discussion presented an understanding of the main focus areas of the literature under review and connected them to the objectives of this study. This included analysing the literature and conclusions presented in the selected articles to support the main aims of this study.

The literature review indicated that 'digitalisation', 'digitalisation and tax administration' and 'SMME and tax compliance' were the main focal points of the research undertaken in the literature. The results showed that digitalisation of tax administrations has an impact on both the tax authorities and the taxpayers. The points that follow are this study's research objective and where they were addressed in the literature review:

- Understand the reasoning and logic of tax administrations adopting digital platforms
This was addressed in Chapter 3 under the subheading 'Causes for tax administrations to implement digitalisation of tax administrations' in section 3.3.5.2.1.

Digital tax administration introduces new technologies, which has an effect on the types of skills it requires to operate in this technological environment, and could replace manual tasks currently performed by humans, but also opens up new opportunities. There are various benefits to digitalisation, including process improvements in operational processes, cost reductions in carrying tax administration functions such as verifying and auditing taxpayer information, and the reduced face time with taxpayer's means resources can be used to focus on technical or difficult cases, while processing and clearing the less complex cases faster. Having a digitalised tax administration system enables greater and more improved communication with other tax jurisdictions, and that information is more accessible and easier to share to ensure that taxpayers do not evade their tax obligations or commit tax fraud.

The literature provided various reasons to understand the reasoning and logic of tax administrations adopting digital platforms. The supporting reasons noted support the function of the tax administration, which is to maximise tax revenue and minimise the tax compliance burden on taxpayers. This objective was addressed with the selected literature.

- The methods undertaken to transform digitally

This was addressed in Chapter 3 under the sub-heading ‘what has been implemented thus far by tax administrations’ in section 3.3.5.2.2 and ‘challenges that arise as a result of digitalisation of tax administrations’ in section 3.3.5.2.3.

The literature indicated that different countries are at different stages of the digitalisation process. Tax administrations are country specific and there is no overall standard on where countries should be in terms of progress. It was, therefore, not possible to benchmark countries against each other, as implementation of digitalisation is for different types of taxes and for different types of taxpayers.

The literature identified two distinct countries which are further ahead with regards to digitalising the tax system. These countries are the UK with the MTD tax system, and the ATO. Both these countries are ahead with the digitalisation of tax, apart from the electronic assessments which has been implemented by many other countries worldwide, and are moving towards a fully digital system for other taxes including Value Added Tax or sales tax, International Tax and the reporting standards set by the OECD for country-by-country reporting.

The success of other countries in implementing electronic systems for tax reporting, and assessments is notable. Countries develop at different paces, and the digitalisation of the most common tax types is the priority to protect and grow the country’s tax generation capabilities and educating the taxpayer regarding their tax responsibilities.

The most successful digital methods implemented, as noted in the literature, is the electronic return filing, submitting documents for verification electronically, electronic taxpayer communications and remote tax verifications and audits. Tax authorities across the world are implementing systems which make it easier to share tax data and comply with international reporting tax standards.

The implementation of these digital methods and digital tax systems comes with challenges for tax administrations. These challenges, if not addressed timeously, could lead to further non-compliance by taxpayers including tax evasion. The challenges faced by administrators include taxpayer digital literacy, job losses which could lead to negative feelings towards the digitalisation of tax administrations, taxpayer uncertainty with regards to data disclosure and information security, tax system complexities and the tax treatment of multinational entities.

The limitation noted in the literature is that none could provide measurable or definite solutions to the challenges faced by the tax administrations with regards to the digital transformation of taxes. There is a limitation to the information and recommendations available on how tax administrations can proceed further with the digital transformation journey. This analysis reveals that there are issues which need to be addressed by tax administrations. The methods adopted by tax administrations require refining in addressing the identified issues.

This objective has been partly met. From the literature review, it is clear that tax administrations are underway with planning, design and implementation. It is also noted that the literature identifies the limitations which exist within this topic in understanding what tax administrators are implementing compared to what is well received by taxpayers.

- How digitalisation can ease the tax compliance burden on taxpayers, more specifically SMME's (Including the taxpayer response to digitalisation)

This was addressed in Chapter 3 under the sub-heading 'Causes for tax administrations to implement digitalisation of tax administrations' in section 3.3.5.2.1 and 'SMME and tax compliance' in section 3.3.5.3.

Tax compliance is driven by three factors: Economical, political, and socio-psychological perspectives. Digitalisation influences the three tax compliance factors. Whether the impact reduces or increases taxpayer compliance depends on the taxpayer perspective.

Taxpayers could find that digitalisation eases the process of complying with tax laws. Taxpayers will have the benefit of a tax system with minimal complexity, thereby reducing the tax compliance costs often associated with complex tax systems. Digitalisation, using data analytics (big data), will reduce the number of taxpayers selected for verifications and audit, thereby reducing the turnaround time on finalised tax assessments. The advantage of digitalisation is that it leaves a digital footprint, thereby taxpayers also have an audit trail of their interactions with tax administrations, which can be used by the taxpayer in future interactions, unlike with traditional systems which required face to face interactions, and seldom have proof of interaction which leaves the taxpayer unprotected.

How taxpayers perceive the digital system also contributes to the burden of taxpayer compliance. If taxpayers are unable to utilise the digital platforms, due to not being digitally literate, there could be a negative perception from taxpayers. This could be further heightened where taxpayers who are unable to use the digital systems feel that the traditional methods are complex, burdensome and cumbersome, leading to non-compliance of tax laws.

The use of digital systems could provide tax administrations with sufficient revenue data to understand where relief can be offered to taxpayers. Therefore, this could lead to additional relief measures to ensure that SMMEs are stimulated within the country and are supported to ensure business growth.

To summarise the points above, taxpayers could benefit from the digitalisation of tax administration systems, and the digitalisation could lead to a reduction in the taxpayer burden. Care should be taken that those who are unable to utilise the digital platforms are not prejudiced and still receive the attention required to ensure successful completion of tax filing and closing of tax queries.

The literature was able to provide insight into how digitalisation can ease the tax compliance burden on taxpayers. However, the literature lacked evidence to support the claim that a digital tax system increases tax compliance. All the benefits mentioned are based on discussions with taxpayers and an observation in taxes collected, however, none

of the literature selected for the purposes of this study can demonstrate a direct link between digitalisation and taxpayer compliance.

Furthermore, there is no evidence in the literature to determine that an increase in tax compliance, as a result of digitalisation, is due to taxpayers understanding their tax responsibilities or whether it is because they do not want to be fined or penalised as a result of all the information which tax administrators collect from taxpayers.

The literature addressed the objective in part, however, there is a gap for more research which will support the benefits of digitalisation. This would be of significance to countries that are still advancing to digital platforms, as they would be able to perform a more informed cost versus benefit analysis and plan out the digital journey with both qualitative and quantitative aspects taken into account.

4.3. LIMITATIONS

The following limitations were present while conducting this research study:

- **Period used to collect literature:** This study only used literature from the five-year period 2015 to 2019. This excludes all research and contributions to the study before 2015 which could have further added to the knowledge and insights collated in this research study. The year 2020 was excluded from the search criteria as the research study commenced in February 2020. This posed a limitation on the number of published quality academic literature related to the study from the year 2020, therefore, the research study used the years 2015 to 2019.
- **Type of literature used:** This study only used literature from academic journals which are included in two journal-ranking lists, namely ABDC- and SCOPUS-list. Digitalisation and tax administration are very topical in nature, and as presented in the study, there are still many uncertainties regarding the implementation thereof. This means that there is unpublished work and conference proceedings that could be used to add valuable insight to this research study on the progress of tax administration digital transformation. There are also journals which are included in other journal ranking lists

that were excluded from this study, as only articles from journals ranked on the ABDC- and SCOPUS-journal ranking lists were collected.

- Limited literature on the topic of digitalisation and tax administration with a special focus on SMMEs: The aim of the research study was to specifically focus on SMMEs, however, the literature on SMMEs for this topic is very limited as many researchers are still exploring the effects and impact of digitalisation on SMMEs with regards to tax administration. While some articles were specific on SMME taxpayers, there was a limitation in the quantity of those articles with many being from a general taxpayer perspective.

4.4. FUTURE RESEARCH

This study presented the results of the research conducted using literature on the topics of digitalisation and tax administrations. As indicated in the limitations, there is limited literature on the topic of digitalisation and tax administration from the perspective of SMMEs. There is also a gap in the research conducted using quantitative methodological classification to understand the quantitative impact of digitalisation on tax administration.

Further possibilities of future research exist on the topic of countries that have digitalised their tax administration systems beyond the electronic filing of returns and electronic taxpayer communication. Studies on the possibilities and effectiveness of tax administrations utilising data analytics and using the insights from the data to identify risk and to minimise compliance costs for both tax administrations and taxpayers while still complying with the applicable tax laws are a possibility for future research.

4.5. CONCLUDING REMARKS

Digitalisation and tax administration have prospects of positive results when designed and implemented correctly in the respective countries. It could lead to an increase in tax revenue collections and reduce tax administration costs for both taxpayers and tax administrators. This research study can be used as a starting point by other researchers to understand the existing body of literature on the topic of digitalisation and tax administration with a focus on SMMEs.

LIST OF REFERENCES

ABDC. No date. *About us*. [Online] Available from: <https://abdc.edu.au/about-us/> [Accessed: 2020-03-07].

Ajayi, V.O. 2017. *Advance statistical methods in education*. Makurdi: Benue State University. [Online] Available from: https://www.researchgate.net/publication/320010397_Primary_Sources_of_Data_and_Secondary_Sources_of_Data?enrichId=rgreq-5029f79e7f470c6cbdcbe7c34632f720-XXX&enrichSource=Y292ZXJQYWdIOzMyMDAxMDM5NztBUzo1NDIxMTQyMzQ1OTMyODBAMTUwNjl2MTUxMzExNg%3D%3D&el=1_x_2&_esc=publicationCoverPdf [Accessed: 2020-02-15].

Ali, Z. & Bhaskar, S.B. 2016. Basic statistical tools in research and data analysis. *Indian Journal of Anaesthesia*, 60(9):662-669.

Alink, M. & Van Kommer, V. 2016. Core business of a tax administration. *Handbook on tax administration*. second ed. Amsterdam, Netherlands: IBFD.

Anderson, H. 2007. The heart and spirit of collaborative therapy: The philosophical stance - "a way of being" in relationship and conversation. In: Anderson, H., & Gehart, D. (ed.). *Collaborative therapy: Relationships and conversations that make a difference*: Routledge/Taylor & Francis Group.

Arnold, C. 2019. *The foundation for economies worldwide is small business*. [Online] Available from: <https://www.ifac.org/knowledge-gateway/contributing-global-economy/discussion/foundation-economies-worldwide-small-business-0> [Accessed: 2020-09-20].

Australian Business Deans Council. 2019. *Journal quality list review*. Australia: Australian Business Deans Council. [Online] Available from: https://abdc.edu.au/wp-content/uploads/2020/03/abdc-2019-journal-quality-list-review-report-6-december-2019_2.pdf [Accessed: 2020-04-02].

Autio, E. 2017. *Digitalisation, ecosystems, entrepreneurship and policy*. London: Brief, P. [Online] Available from:

https://www.researchgate.net/publication/321944724_Digitalisation_ecosystems_entrepreneurship_and_policy [Accessed: 2020-02-03].

Battisti, M. & Deakins, D. 2018. Microfoundations of small business tax behaviour: A capability perspective. *British Journal of Management*, 29:497-513.

Bearman, M., Smith, C.D., Carbone, A., Slade, S., Baik, C., Hughes-Warrington, M. & Neumann, D.L. 2012. Systematic review methodology in higher education. *Higher education research and development*, 31(5):625-640.

Bentley, D. 2019. Timeless principles of taxpayer protection: how they adapt to digital disruption. *eJournal of Tax Research*, 16(3):679-713.

Berisha, G. & Pula, J.S. 2015. Defining Small and Medium Enterprises: a critical review. *Academic Journal of Business, Administration, Law and Social Sciences* 1(1):17-28.

Bird, R. & Wilkie, S. 2012. *Designing tax policy: Constraints and objectives in an open economy*. ICEPP Working Papers. Andrew Young School of Policy Studies.

Blackstone, A. 2012. Inductive or deductive? Two different approaches. *Principles of sociological inquiry: Qualitative and quantitative methods*. Maine: Saylor Foundation.

Blix, M. 2017. The effects of digitalisation on labour market polarisation and tax revenue. *CESifo Forum*, 18(4):9-14.

Boru, T. 2018. *The impact of industry concentration on performance, exploring a comprehensive bank performance model: The case of the ethiopian banking sector*. PhD. South Africa: School of Business Leadership (SBL), University of South Africa. [Online] Available from: https://www.researchgate.net/publication/329715052_chapter_five_research_design_and_methodology_51_introduction?Enrichid=rgreq-bc2b3ecfed8eaddcd3918435fe926387-xxx&enrichsource=y292zxjqywdlozmyotcxnta1mjt buz o3mdq4nde0mj q4mza0njramtu0nta1ody5ote5mw%3d%3d&el=1_x_2&_esc=publicationcoverpdf [Accessed 2020-02-26].

Budak, T., James, S. & Sawyer, A. 2016. International experiences of tax simplification and distinguishing between necessary and unnecessary complexity. *eJournal of Tax Research*, 14(2):337-358.

Business Dictionary. 2020. *Tax base*. [Online] Available from: <http://www.businessdictionary.com/definition/tax-base.html> [Accessed: 2020-04-13].

Caulfield, J. 2019. *How to do thematic analysis*. [Online] Available from: <https://www.scribbr.com/methodology/thematic-analysis/> [Accessed: 2020-05-22].

Chua, P.-P. & Mark, M.M. 2011. Quantitative Data. In: Mathison, S. (ed.). *Encyclopedia of Evaluation* Thousand Oaks: Sage Publications, Inc. .

Cooper, H. 2003. Psychological Bulletin: Editorial. *Psychological Bulletin*, 129(1):3-9.

Cresswell, J.W. 2009. Research Design: Qualitative, Quantitative and Mixed methods approaches. *Research Design: Qualitative, Quantitative and Mixed methods approaches*. Third ed. Thousand Oaks, California: SAGE Publications, Inc.

Creswell, J.W., Klassen, C.A., Plano Clark, L.V. & Clegg Smith, K. 2011. *Best Practices for Mixed Methods in the health sciences*.

Dabla-Norris, E., Misch, F., Cleary, D. & Khwaja, M. 2019. The quality of tax administration and firm performance: Evidence from developing countries. *International Tax and Public Finance*, 27:514-551.

DeCarlo, M. 2018. Inductive and deductive reasoning. *Scientific inquiry in social work*. Open Social Work Education.

Dillard, J. 2015. *5 Most Important Methods For Statistical Data Analysis*. [Online] Available from: <https://www.bigskyassociates.com/blog/bid/356764/5-Most-Important-Methods-For-Statistical-Data-Analysis> [Accessed: 2020-05-21].

Emmanuel, S.N. 2018. The impact of tax administration on revenue generation in gombe state, nigeria. *Scholedge International Journal of Management & Development*, 5(8):86.

EY. 2017. *Digital tax administration services*. [Online] Available from: https://www.ey.com/en_za/tax/digital-tax-administration-services [Accessed: 2020-03-28].

Gann, L. 2019. *What is a predatory journal? How do i know if i'm submitting to a predatory journal?* [Online] Available from: <http://mdanderson.libanswers.com/faq/206446> [Accessed: 2020-04-02].

Gioia, D.A., Corley, K.G. & Hamilton, A.L. 2013. Seeking qualitative rigor in inductive research: Notes on the gioia methodology. *Organizational research methods*, 16(1):15-31.

Goertz, G. & Mahoney, J. 2012. Introduction. *A tale of two cultures: Qualitative and quantitative research in the social sciences*. Princeton: Princeton University Press.

Grant, M.J. & Booth, A. 2009. A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2):91-108.

Green, P. 2017. Talking to the OECD: Tech disruption in tax administration. *International Tax Review*, 28:1-24.

Green, P. 2018. *What do we mean by digital transformation of tax administration?* Paper presented at 22nd General Assembly of IOTA: Impact of Digitalisation, Budapest:57-58.

Gueydi, S. & Abdellatif, M.M. 2019. The transformation of tax administration functions in the automatic exchange of information era – a developing country's perspective. *eJournal of Tax Research*, 16(3):780-800.

Gwaro, O.T., Maina, K. & Kwasira, J. 2016. Influence of online tax filing on tax compliance among small and medium enterprises in Nakuru Town, Kenya. *IOSR Journal of Business and Management*, 18(10):82-92.

Harsh, A. 2015. *What it means for a company to go digital in 8 easy points*. [Online] Available from: <https://www.linkedin.com/pulse/what-does-going-digital-mean-enterprise-anurag-harsh> [Accessed: 2020-04-04].

HM Revenue & Customs. 2020. *Overview of making tax digital*. [Online] Available from: <https://www.gov.uk/government/publications/making-tax-digital/overview-of-making-tax-digital> [Accessed: 2020-04-04].

Hodžić, S. 2019. Tax administrative challenges of the digital economy: the Croatian experience. *eJournal of Tax Research*, 16(3):762-779.

ICAEW. 2019. *Icaew thought leadership*. London: Icaew. [Online] Available from: <https://www.icaew.com/search#q=digitalisation%20of%20tax&sort=relevancy> [Accessed: 2020-02-03].

Igwenagu, C. 2016. *Fundamentals of research methodology and data collection*. Lap Lambert, Academic Publishing.

International Finance Corporation. 2007. *Designing a tax system for micro and small businesses: Guide for practitioners*. Pennsylvania Avenue: Corporation, I.F.

Jacobs, B. 2017. Digitalization and taxation. In: Gupta, S., Keen, M., Shah, A. & Verdier, G. (eds.). *Digital revolutions in public finance*. Washington: International Monetary Fund.

James, S. & Sawyer, A. 2018. Digitalization of Tax: Comparing New Zealand and United Kingdom Approaches *eJournal of Tax Research*:1-25.

Kabir, S.M.S. 2016. Methods of data collection. *Basic guidelines for research: An introductory approach for all disciplines*. First ed. Bangladesh: Book Zone Publication.

Kennedy, B.L. & Thornberg, R. 2018. Deduction, Induction, and Abduction. In: Flick, U. (ed.). *The SAGE handbook of qualitative data collection*. 49-64. London: SAGE Publications Ltd.

Kiconco, R.I., Gwokyalya, W., Sserwanga, A. & Balunywa, W. 2019. Tax compliance behaviour of small business enterprises in Uganda. *Journal of Financial Crime*, 26(4):1117-1132.

Krishnan, A. 2009. *Disciplines and interdisciplinarity*. Working paper. Southampton: ESRC National Centre for Research Methods, University of Southampton. [Online] Available from: http://eprints.ncrm.ac.uk/783/1/what_are_academic_disciplines.pdf [Accessed: 2020-05-22].

Kumar, D.S. 2018. Understanding different issues of unit of analysis in a business research. *Journal of General Management Research*, 5(2):70-82.

Laerd Dissertation. 2012. *Constructs in quantitative research*. [Online] Available from: <http://dissertation.laerd.com/constructs-in-quantitative-research.php> [Accessed: 2020-05-23].

Lambert, V.A. & Lambert, C.E. 2012. Qualitative Descriptive Research: An Acceptable Design. *Pacific Rim International Journal of Nursing Research*, 16(4):255-256.

Legg, C. & Hookway, C. 2019. Pragmatism. In: Zalta, E.N. (ed.). *Pragmatism*. Spring 2019 ed: Metaphysics Research Lab, Stanford University. [Online] Available from: <https://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=pragmatism> [Accessed: 2020-04-01].

Li, L., Su, F., Zhang, W. & Mao, J.Y. 2018. Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 28(6):1129-1157.

Macalester College. 2019. *Research guides: Types of research data*. [Online] Available from: <https://libguides.macalester.edu/c.php?g=527786/&p=3608643> [Accessed: 2020-02-16].

Marsonet, M. 2019. Philosophy and Logical Positivism. *Academicus International Scientific Journal*, (19):5.

Melnikovas, A. 2018. Towards an explicit research methodology: Adapting research onion model for futures studies. *Journal of Futures Studies*, 23(2):29-44.

Migai, C.O., De Jong, J. & Owens, J.P. 2019. The sharing economy: turning challenges into compliance opportunities for tax administrations. *eJournal of Tax Research*, 16(3):395-424.

Nishishiba, M., Jones, M. & Kraner, M. 2014. Qualitative data analysis. *Research methods and statistics for public and nonprofit administrators: A practical guide*. City Road: SAGE Publications, Inc.

Northern Illinois University. 2005. *Responsible conduct in data management*. [Online] Available from:

https://ori.hhs.gov/education/products/n_illinois_u/datamanagement/datopic.html

[Accessed: 2020-05-21].

Nowell, L.S., Norris, J.M., White, D.E. & Moules, N.J. 2017. Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1):1-13.

O'Sullivan, S. & Walker, C. 2018. From the interpersonal to the internet: Social service digitisation and the implications for vulnerable individuals and communities. *Australian Journal of Political Science*, 53(4):490-507.

OCAD University Library. 2019. *What is research: Modes of reasoning*. [Online] Available from: <https://ocad.libguides.com/Research> [Accessed: 2020-04-15].

OECD. 2018. Implications of the digital transformation for the business sector. London, United Kingdom, 08-09 November:1-9. [Online] Available from: <http://www.oecd.org/sti/ind/digital-transformation-business-sector-summary.pdf> [Accessed: 2020-09-20].

OECD. 2019. *Tax administration 2019: Comparative information on oecd and other advanced and emerging economies*. Paris: OECD publishing.

Olsen, J., Kasper, M., Enachescu, J., Benk, S., Budak, T. & Kircher, E. 2018. Emotions and tax compliance among small business owners: An experimental survey. *International Review of Law and Economics*, (56):42-52.

Oteniya, A.M., Sadiku, M.N.O. & Musa, S.M. 2019. Small and medium-sized enterprises. *International Journal of Scientific and Research Publications*, 9(12).

Pidwirny, M. 2006. Inferential statistics: Regression and correlation. *Fundamentals of physical geography*, 2020(2020-05-21) [Online] Available from: <http://www.physicalgeography.net/fundamentals/3h.html> [Accessed: 2020-05-26].

Portolese, G.C. & Folloni, A. 2018. Digitalization, IPRs and tax innovation. *International Review of Sociology*, 28(3):432-446.

Qiqqa. 2020. *Qiqqa features*. [Online] Available from: <http://www.qiqqa.com/About/Features> [Accessed: 2020-03-07].

Reinecke, E. 2020. *2020 and beyond: Transitions, disruptions and transformations*. [Online] Available from: <https://hello.global.ntt/en-us/insights/future-disrupted-2020-technology-trends/disruptive-technologies> [Accessed: 2020-09-20].

Sadress, N., Bananuka, J., Orobia, L. & Opiso, J. 2018. Antecedents of tax compliance of small business enterprises: a developing country perspective. *International Journal of Law and Management*, 61(1):24-44.

Schwanke, A. 2016. Tax technology: A brave new world. *International Tax Review*, (August):1-11.

Schwanke, A. 2017. Technology helping to tackle tax fraud across sharing economy. *International Tax Review*, (April):1-4.

SCImago. No date. *SCImago Journal & Country Rank*. [Online] Available from: <http://www.scimagojr.com> [Accessed: 2020-03-07].

Serikova, M., Sembiyeva, L. Mussina, A. Kuchukova, N. & Nurumov, A. 2018. The institutional model of tax administration and aspects of its development. *Investment Management and Financial Innovations*, 15(3):283-293.

Shukla, S. 2018. *Variables, hypotheses and stages of research*. Paper presented at Capacity Building Programme for Social Science Faculty Members, At Rajkot, India, May 2018:1-14. [Online] Available from: https://www.researchgate.net/publication/325127119_VARIABLES_HYPOTHESES_AND_STAGES_OF_RESEARCH_1 [Accessed: 2020-05-26].

Siddaway, A.P. 2014. *What is a systematic literature review and how do I do one?* . Discussion Paper. Stirling: University of Stirling. [Online] Available from: <https://www.semanticscholar.org/paper/what-is-a-systematic-literature-review-and-how-do-i-siddaway/22142c9cb17b4baab118767e497c93806d741461> [Accessed: 2020-04-02].

Silverman, D. 2006. *Interpreting qualitative data: Methods for analyzing talk, text and interaction*. Third ed. London: SAGE.

Skog, D.A., Wimelius, H. & Sandberg, J. 2018. Digital disruption. *Business & Information Systems Engineering*, 60(5):431-437.

South African Revenue Services. 2020. *Tax guide for small businesses (2019/2020)*. [Online] Available from: <https://www.sars.gov.za/AllDocs/OpsDocs/Guides/LAPD-IT-G10%20-%20Tax%20Guide%20for%20Small%20Businesses.pdf> [Accessed: 2020-09-20].

Swain, D.K. & Panda, K. 2009. *An overview of digitization of information resources*. Bhubaneswar, Orissa: Sambalpur University. [Online] Available from: https://www.researchgate.net/publication/40910531_An_Overview_of_Digitization_of_Information_Resources [Accessed: 2020-04-04].

Swedberg, R. 2018. On the uses of exploratory research and exploratory studies in social science. *Producing knowledge:2*.

Thanh, N.C. & Thanh, T.T.L. 2015. The interconnection between interpretivist paradigm and qualitative methods in education. *American Journal of Educational Science*, 1(2):24-27.

Thomas, P.Y. 2010. *Towards developing a web-based blended learning environment at the University of Botswana*. Pretoria: University of South Africa. [Online] Available from: <http://hdl.handle.net/10500/4245> [Accessed: 2020-04-13].

Turuntayeva, A., Tlegenova, F., Kassiyenova, K., Abrakhmatova, G. Raozhapou, A. & Alshymbek, D. 2019. Improving the effectiveness of tax administration through the example of the republic of Kazakhstan. *Journal of Legal, Ethical and Regulatory Issues*, 22(2):1-16.

US Legal. 2009. *Tax Compliance Law and Legal Definition*. [Online] Available from: <https://definitions.uslegal.com/t/tax-compliance/> [Accessed: 2020-05-24].

Veit, A. 2019. Swimming upstream: Leveraging data and analytics for taxpayer engagement – an Australian and international perspective. *eJournal of Tax Research*, 16(3):474-499.

- Vinz, S. 2015. *The theoretical framework of a thesis: What and how?* [Online] Available from: <https://www.scribbr.com/dissertation/theoretical-framework/> [Accessed: 2020-05-23].
- Vogt, W.P. 2011. *Dictionary of statistics & methodology* Thousand Oaks: SAGE Publications, Inc.
- Vu, U. 2015. *Cross-sectional vs. longitudinal studies*. Summer 2015(81):8. [Online] Available from: <https://www.iwh.on.ca/what-researchers-mean-by/cross-sectional-vs-longitudinal-studies> [Accessed: 2020-02-29].
- Vuković, M. 2018. *Toward the digitization of tax administration*. Paper. Center of Excellence in Finance.
- Wadesango, N., Mutema, A., Mhaka, C. & Wadesango, V.O. 2018a. Tax compliance of small and medium enterprises through the self-assessment system: Issues and challenges. *Academy of Accounting and Financial Studies Journal*, 22(3):1-15.
- Wadesango, N., Mwandambira, N., Mhaka, C. & Wadesango, O. 2018b. Literature review of the impact of tax knowledge on tax compliance among small medium enterprises in a developing country. *International Journal of Entrepreneurship*, 22(4).
- Warren, N. 2019. Estimating tax gap is everything to an informed response to the digital era. *eJournal of Tax Research*, 16(3):536-577.
- Welmen, C., Kruger, F. & Mitchell, B. 2013a. The aims of research. In: Rooyen, A.V. (ed.). *Research methodology*. 3rd ed. Cape Town: Oxford University Press Southern Africa.
- Welmen, C., Kruger, F. & Mitchell, B. 2013b. Data collection methods and measuring instruments in quantitative research. In: Rooyen, A.V. (ed.). *Research methodology*. 3rd ed. Cape Town: Oxford University Press Southern Africa.
- Welmen, C., Kruger, F. & Mitchell, B. 2013c. The research proposal. In: Rooyen, A.V. (ed.). *Research methodology*. 3rd ed. Cape Town: Oxford University Press Southern Africa.

Welmen, C., Kruger, F. & Mitchell, B. 2013d. The research topic, project title and research problem. In: Rooyen, A.V. (ed.). *Research methodology*. 3rd ed. Cape Town: Oxford University Press Southern Africa.

Williams, C. 2007. Research methods. *Journal of Business & Economic Research*, 5(3):65-72.

ANNEXURE A: LIST OF LITERATURE SELECTED FOR STUDY

Journal title	Journal name	Year of publishing	ABDC rating
Antecedents of tax compliance of small business enterprises: a developing country perspective	International Journal of Law and Management	2019	C
Data-driven tax audits add to digitalisation uncertainties	International Tax Review	2019	C
Digital reporting can put taxpayer relationships at risk	International Tax Review	2019	C
Digital transformation by SME entrepreneurs: A capability perspective	Information Systems Journal	2018	A*
Digitalization of Tax: Comparing New Zealand and United Kingdom Approaches	eJournal of Tax Research	2018	A
Digitalization, innovative work behaviour and extended Availability	Journal of Business Economics	2019	Not rated
Digitalization, IPRS and tax innovation	International Review of Sociology	2018	Not rated
Emotions and tax compliance among small business owners: An experimental survey	International Review of Law and Economics	2018	B
Estimating tax gap is everything to an informed response to the digital era	eJournal of Tax Research	2019	A
From the interpersonal to the internet: social service digitisation and the implications for vulnerable individuals and communities	Australian Journal of Political Science	2018	A
Impact of tax knowledge on tax compliance among small medium enterprises in a developing country	International Journal of Entrepreneurship	2018	Not rated
Improving the effectiveness of tax administration through the	Journal of Legal, Ethical and Regulatory Issues	2019	Not rated

example of the Republic of Kazakhstan			
Influence of Online Tax Filing on Tax Compliance among Small and Medium Enterprises in Nakuru Town, Kenya	Journal of Business and Management	2016	C
International experiences of tax simplification and distinguishing between necessary and unnecessary complexity	eJournal of Tax Research	2016	A
Micro-foundations of Small Business Tax Behaviour: A Capability Perspective	British Journal of Management	2018	A
Not another tax department transformation	International Tax Review	2019	C
Swimming upstream: leveraging data and analytics for taxpayer engagement – an Australian and international perspective	eJournal of Tax Research	2019	A
Talking to the OECD: Tech disruption in tax administration	International Tax Review	2017	C
Tax administrative challenges of the digital economy: the Croatian experience	eJournal of Tax Research	2019	A
Tax Amnesty and Tax Administration System: An Empirical Study in Indonesia	European Research Studies Journal	2017	Not rated
Tax compliance behaviour of small business enterprises in Uganda	Journal of Financial Crime	2019	C
Tax compliance of small and medium enterprises through the self-assessment system: issues and challenges	Academy of Accounting and Financial Studies Journal	2018	C
Tax technology: A brave new world	International Tax Review	2016	C
Taxing tech: risks of an Australian digital services tax under international economic law	Melbourne Journal of International Law	2019	A
Technology helping to tackle tax	International Tax Review	2017	C

fraud across sharing economy			
The Effects of Digitalisation on Labour Market Polarisation and Tax Revenue	Cesifo Forum	2017	Not rated
The institutional model of tax administration and aspects of its development	Investment Management & Financial Innovations	2018	C
The quality of tax administration and firm performance: evidence from developing countries	International Tax and Public Finance	2019	B
The sharing economy turning challenges into compliance opportunities for tax administrations	eJournal of Tax Research	2019	A
The transformation of tax administration functions in the automatic exchange of information era – a developing country's perspective	eJournal of Tax Research	2019	A
The 'Uberisation' of e-filing in South Africa	eJournal of Tax Research	2019	A
The use of caatts in tax audits–lessons from some international practices	eJournal of Tax Research	2016	A
Timeless principles of taxpayer protection: How they adapt to digital disruption	eJournal of Tax Research	2019	A
Understanding tax morale of SMEs: A qualitative study	eJournal of Tax Research	2016	A
We need to talk about platforms: Ongoing tax challenges in China	International Tax Review	2019	C

DECLARATION OF ORIGINALITY

UNIVERSITY OF PRETORIA

The Department of Taxation places great emphasis upon integrity and ethical conduct in the preparation of all written work submitted for academic evaluation.

While academic staff teach you about referencing techniques and how to avoid plagiarism, you too have a responsibility in this regard. If you are at any stage uncertain as to what is required, you should speak to your lecturer before any written work is submitted.

You are guilty of plagiarism if you copy something from another author's work (e.g., a book, an article or a website) without acknowledging the source and pass it off as your own. In effect you are stealing something that belongs to someone else. This is not only the case when you copy work word-for-word (verbatim), but also when you submit someone else's work in a slightly altered form (paraphrase) or use a line of argument without acknowledging it. You are not allowed to use work previously produced by another student. You are also not allowed to let anybody copy your work with the intention of passing it off as his/her work.

Students who commit plagiarism will not be given any credit for plagiarised work. The matter may also be referred to the Disciplinary Committee (Students) for a ruling. Plagiarism is regarded as a serious contravention of the University's rules and can lead to expulsion from the University.

The declaration which follows must accompany all written work submitted while you are a student of the Department of Taxation. No written work will be accepted unless the declaration has been completed and attached.

Full names of student: Tinyiko Shabangu

Student number: 10001663

Topic of work: Digitalisation and tax administration: Focus on Small, Medium and Micro Enterprises

Declaration

1. I understand what plagiarism is and am aware of the University's policy in this regard.
2. I declare that this assignment is my own original work. Where other people's work has been used (either from a printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.
3. I have not used work previously produced by another student or any other person to hand in as my own.
4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

SIGNATURE: TINYIKO SHABANGU