**THE PERCEPTION OF THE EFFECTIVENESS OF CARROTS IN COMPARISON TO STICKS ON TAX COMPLIANCE OF SMALL AND MEDIUM-SIZED ENTERPRISES**

This mini dissertation is part of a research project on the perceptions of the effectiveness of carrots in comparison to sticks on tax compliance

by

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# ABSTRACT

## THE PERCEPTION OF THE EFFECTIVENESS OF CARROTS IN COMPARISON TO STICKS ON TAX COMPLIANCE OF SMALL AND MEDIUM-SIZED ENTERPRISES

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**Background:** Tax authorities have traditionally focused on deterrence measures such as audits, penalties, and interest to enforce tax compliance. The focus on deterrence measures has come under scrutiny as researchers found that the level of tax compliance by taxpayers indicates that there may be supplementary factors in addition to deterrence measures to encourage tax compliance. Over time researchers have found that social norms, nudges, and morality impact a taxpayer's tax compliance decision. In this study, the perceptions of the taxpayers of small and medium-sized enterprises (SMEs) in South Africa will be examined on what they consider as likely to impact their tax compliance decision between sticks (deterrence measures) and carrots (measures aimed at encouraging voluntary tax compliance).

**Main purpose of study:** In this study, the perceived effectiveness of carrots in comparison to sticks on tax compliance of SMEs in South Africa is examined.

**Method:** A quantitative research method was adopted to analyse primary data and respond to the research question. Descriptive and inferential statistics were evaluated to respond to the set research objectives.

**Results:** The results of this study have shown that SME taxpayers perceive carrots as mostly likely to impact their tax compliance decision in comparison to sticks.

**Conclusions:** The results of this study align to existing literature which have shown that, in addition to deterrence measures, other factors impact a taxpayer's tax compliance decision. The results also show that deterrence measures are perceived to be less effective in comparison to carrots on tax compliance of SMEs in South Africa. This challenges tax authorities to reflect on their methods of encouraging taxpayer compliance.

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# LIST OF ABBREVIATIONS AND ACRONYMS

**Table 1: Abbreviations and acronyms used in this document**

| Abbreviation | Meaning |
|---|---|
| **SME** | Small and Medium Sized-Enterprises |
| **SARS** | South African Revenue Service |
| **SPSS** | Statistical Package for the Social Sciences |

**CHAPTER 1:**

**INTRODUCTION**

## 1.1. INTRODUCTION

Two things in life are certain – taxes and death, however, it is a fact that taxes are inevitable (Alm, 2019).

Securing absolute tax compliance remains an ongoing challenge for tax authorities. Despite the challenge to ensure tax compliance, it is of utmost importance to collect all the taxes to ensure the well-being of a country's citizens. The well-being of a country's citizens is financed by the tax base in the form of taxes collected. Various factors have an impact on the tax compliance of taxpayers. Factors that may affect the tax compliance of SMEs include tax rates, complexity of tax rules, and the possibility of detection of tax evasion and penalties (Chau & Leung, 2009:35).

Richardson (2006:151) highlights the complexity of tax rules as one of the determinants of tax compliance and concludes that highly complex tax rules lead to high levels of tax non-compliance. Misu (2011:71) further notes that the lower the possibility of detection of tax evasion schemes, the lower the levels of tax compliance. When making a tax compliance decision, taxpayers will weigh the benefit of tax evasion against the possibility of detection and the cost of the resulting punishment.

Given these factors that may negatively influence tax compliance, governments have to develop tax policies to encourage taxpayer compliance (Martinez-Vazquez & Alm, 2003:146). Traditional tax policies were focused on the assumption that taxpayers will measure the cost (likelihood of being caught and incur penalties) against the benefit (tax savings) of evading taxes, hence their focus on deterrence methods (Walsh, 2012: 453). From these traditional tax policies, it is clear that the likelihood of being caught and incur penalties has a positive impact on taxpayer compliance (Walsh, 2012:454).

Over time studies have been conducted that examined other factors that might have a positive influence on taxpayer compliance. Studies relating to the effect of social norms on taxpayer behaviour have concluded that taxpayers will comply with tax laws because they

consider compliance as the right thing to do, not because of the costs associated with being caught contravening tax laws (Wenzel, 2005).

Given the various views on factors influencing tax compliance, this study focuses on the perceived effectiveness of carrots in comparison to sticks on the tax compliance of SME taxpayers in South Africa.

This study is relevant for South Africa as the country is experiencing a decline in tax morality. As noted by Matthews (2017), increasing tax rates, poor delivery of services to the public, and negative reports about the government and the governing party may have an impact on the willingness of South Africans to pay taxes. Therefore, it is important to understand the type of measures that will effectively increase tax compliance. This study sheds light on measures that are perceived by taxpayers themselves as most likely to succeed in increasing tax compliance.

Furthermore, this study is relevant as it adds to the body of knowledge regarding the effectiveness of measures aimed at encouraging voluntary compliance (carrots). Historically tax authorities have focused mainly on deterrence measures to increase tax compliance and applied measures aimed at encouraging voluntary tax compliance as a complement to the deterrence measures (Monageng, 2020). For example, it appears that the South African Revenue Service (SARS) focuses on enforcement measures instead of measures that encourage voluntary tax compliance. As indicated in their 2021-2022 Annual Performance Plan, enforced tax compliance strategies, depending on the degree of non-compliance, are applied. The level of enforced tax compliance will vary from soft to hard enforced tax compliance strategies (South African Revenue Services, 2021). Given the fact that deterrence measures can be costly (Monageng, 2020), it is important to know whether these measures are perceived as effective by the taxpayers compared to measures aimed at encouraging voluntary tax compliance which tend to be more cost effective.

## 1.2.  BACKGROUND

### 1.2.1 SME Taxpayers in South Africa

In accordance with the Income Tax Act 58 of 1962, SMEs are defined as small business corporations with a gross income that does not exceed R20 million for a year of assessment and micro-enterprises with a qualifying turnover that does not exceed R1 million for a year of assessment with other conditions applicable in terms of the Income Tax Act 58 of 1962 (Junpath, Kharwa & Stainbank, 2016). SMEs are regarded as an important sector in South Africa due to their contribution to economic growth and the reduction of unemployment rates (Scholtz & Gravenorst, 2019). The failure rate of SMEs in South Africa is approximately 75 percent due to various factors and complex regulations (Naicker & Rajaram, 2018). Compliance with tax laws is regarded as one of the largest expenses of regulatory compliance by SMEs in South Africa (Junpath, Kharwa & Stainbank, 2016).

A SME in South Africa may have to administer up to 11 different tax types such as income tax, value added tax, capital gains tax, donations tax, provisional tax, employees' tax, dividends tax, employment related levies, transfer duty, customs and excise duties, and stamp duties (Naicker & Rajaram, 2018:98).

In the 2021-Tax Statistics Report, a joint publication between National Treasury and SARS, it was noted that as at 31 September 2021, 158 818 of the 812 306 companies assessed for income tax purposes in the 2019-year of assessment were assessed as small business corporations. They were, therefore, taxed using the progressive tax rates applicable to small business corporations as opposed to the 28 percent flat rate applicable to large companies.

The progressive tax rate applicable to small business corporations is one of the tax relief measures implemented by SARS to improve liquidity and cash flow of SMEs in South Africa (SAIPA, 2021). SARS further assists SMEs by educating them on their obligations, making tax compliance easier, fair, convenient, and cost effective in an attempt to lessen the overall burden of tax compliance.

**1.2.2 Carrots and sticks**

In this study the perception of the effectiveness of carrots in comparison to sticks on tax compliance of SMEs in South Africa is examined.

According to Mascagni, Nell, Monkam and Mukama (2016:6), sticks refer to deterrence measures such as interest and penalties imposed by a tax authority on taxpayers for non-compliance while carrots refer to measures to encourage voluntary tax compliance such as tax incentives introduced by a tax authority to lessen the administrative and financial burden of tax compliance on taxpayers. SARS makes use of both carrots and sticks to encourage tax compliance of SMEs in South Africa.

SARS has a turnover tax system for qualifying micro businesses which replaces value added tax, income tax, capital gains tax, and provisional tax. This system effectively reduces the administrative burden of tax compliance for the qualifying SME taxpayers. Qualifying small business corporations are taxed through the progressive tax rates as opposed to the 28 percent flat rate applicable to larger companies. The progressive tax rates result in lower taxes paid by small business corporations compared to large companies. The introduction of the turnover tax system may be considered as an example of a tax incentive (carrot) implemented by SARS to encourage SME taxpayers to pay tax.

SARS also makes use of deterrence measures (sticks) to enforce tax compliance. For example, all categories of taxpayers in South Africa, including SMEs are subjected to interest and penalties for non-compliance with tax laws in accordance with the Tax Administration Act 28 of 2011.

Rillstone (2015:1) states that the foundation of tax compliance policies focused on deterrence methods where tax authorities threaten taxpayers with audits and penalties for non-compliance to achieve the desired compliance levels (Frey & Feld, 2002:22). In an empirical analysis on deterrence measures and tax morale, Frey and Feld (2002) argue that there are lower levels of tax evasion than would be expected if taxpayers complied with tax laws in fear of deference measures. It can, therefore, be concluded that while deterrence methods are important in encouraging taxpayer compliance, there are additional non-deterrence factors that impact taxpayer compliance (Rillstone, 2015:5).

## 1.3.   RATIONALE FOR THE STUDY

Abrie and Doussy (2006:2) highlight that governments are required to charge taxes to be able to deliver services to the citizens of the country. However, taxpayers do not always accept that they have to pay the taxes imposed on them. It is commonly known that taxpayers will attempt to pay the least amount of tax possible. According to Merrefield (2020), non-disclosure of income is one of the most prevalent methods used by taxpayers to evade taxes. Tax authorities have to overcome the challenges of tax evasion to collect the highest possible tax revenue and ensure taxpayer compliance.

Taxpayer compliance is influenced by a mix of deterrence measures including audits, resulting interests, and penalties for non-compliance as well as tax incentives, and trust in tax authorities. According to Ahmed, Chetty, Mobarak, Rahman, and Singhal (2012:2), the enforcement of tax compliance using audits is not easy for developing economies due to the costs associated with audits, integrity of the auditors, and shortcomings in taxpayer records.

This study is important as it seeks to determine the perceived effectiveness of carrots in comparison to sticks on tax compliance of SMEs in South Africa. South Africa is a developing economy, and it is important to conclude on whether deterrence measures, including audits, by SARS are recognised to have an effective impact on tax compliance.

Secondly, based on available data, this is the first study that has consulted SME taxpayers directly to determine their perceived effectiveness of carrots in comparison to sticks on tax compliance in South Africa.

Thirdly, the study also adds to the body of knowledge related to the effectiveness of voluntary tax compliance measures in comparison to traditional deterrence measures such as audits and penalties.

## 1.4.   RESEARCH PROBLEM

This study seeks to primarily determine SME taxpayers' perceived effectiveness of carrots in comparison to sticks on tax compliance. Secondly, the study seeks to determine the factors that are perceived by SME taxpayers as likely to encourage tax compliance. The

study also determines the factors that are perceived by SME taxpayers as likely to discourage them from being tax compliant.

Research that seeks to determine factors that impact taxpayer compliance over and above deterrence methods is developing across the world (Rillstone, 2015:5). In a study conducted to examine whether rewarding taxpayers can be used as a measure to encourage tax compliance in New Zealand, it was concluded that the use of rewards can be a more effective approach to improve tax compliance in comparison to only relying on deterrence methods (Rillstone, 2015:1).

In a pilot study conducted in Rwanda to examine whether sending nudge messages to taxpayers improves tax compliance, it was found that such messages can encourage taxpayers to be tax compliant (Mascagni *et al.,* 2016:7). Despite this developing body of knowledge, there has been a limited number of studies focusing on taxpayer behaviour in Africa. There is no known study in South Africa that has gathered the views of SME taxpayers regarding the perceived effectiveness of carrots in comparison to sticks on tax compliance.

This study gathered the views of SME taxpayers, analysed their views, and concluded on their perceived effectiveness of carrots in comparison to sticks on tax compliance.

## 1.5. RESEARCH QUESTION

Are carrots perceived to be more effective compared to sticks in improving tax compliance of SMEs in South Africa?

## 1.6. RESEARCH OBJECTIVES

This study aims to address the following objectives:
- To determine SMEs perceived effectiveness of carrots in comparison to sticks on tax compliance.

- To determine which factors are perceived by SME taxpayers as likely to encourage tax compliance.

- To determine which factors are perceived by SME taxpayers as likely to discourage tax compliance.

## 1.7. RESEARCH DESIGN AND METHODOLOGY

In this study, a quantitative research methodology was deployed to examine the perceived effectiveness of carrots in comparison to sticks on tax compliance of SME taxpayers.

Quantitative research methodology entails explaining an observation by accumulating numerical data and analysing the data using statistical methods (Aliaga & Gunderson, 2000:1). An online survey targeting SME taxpayers was conducted to collect the numerical data analysed. The data were analysed using the Statistical Package for the Social Sciences (SPSS) program. Descriptive and inferential statistics were computed and interpreted to conclude on the perceived effectiveness of carrots in comparison to sticks on the tax compliance of SME taxpayers and derive factors that are likely to encourage or discourage SME taxpayers to comply with tax laws in South Africa.

## 1.8. STRUCTURE OF THE MINI-DISSERTATION

### Chapter 1: Introduction

This chapter contains the introduction and background which provide the context of the study. The chapter also highlights the rationale and the research problem of the study. The research design and methodology adopted in this study is briefly explained. Finally, this chapter outlines the research objectives addressed by the study.

### Chapter 2: Literature review

In this chapter a literature review related to tax compliance theories, factors affecting tax compliance of SME taxpayers, and previous research on the impact of the carrot versus stick principle on tax compliance is provided. The chapter also provides a discussion on the types of voluntary tax compliance strategies implemented by tax authorities.

**Chapter 3: Research design and methodology**

This chapter outlines the chosen research methodology and provides reasons why the chosen research methodology is appropriate for purposes of this study. The strengths and weaknesses of the adopted research methodology are highlighted. The manner in which the data were collected and analysed is also discussed as well as the ethical considerations observed in the study.

**Chapter 4: Data analysis and findings**

This chapter provides an analysis of the data collected and presents the research findings. Descriptive and inferential statistics are presented. The chapter also provides a brief discussion on the quality of data obtained.

**Chapter 5: Conclusion**

This chapter concludes the study. A summary of the findings is provided, limitations to the study are highlighted, and concluding notes on the research objectives are provided. The chapter closes off by recommending areas of future research of tax compliance to enhance the body of knowledge.

# CHAPTER 2:
# LITERATURE REVIEW

## 2.1. INTRODUCTION

Tax is defined as the "monetary charge imposed by the government on persons, entities, transactions or property to yield public revenue" (Umar, Derashid & Ibrahim, 2017:30).

A country's government spending to ensure the citizens' well-being is driven by the tax collection of the respective country's tax authorities (da Silva, Guerreiro & Flores, 2019:148). It is the duty of the taxpayers of a country to pay their taxes. It is in the interest of the taxpayers to ensure that they comply with the tax rules (Kirchler, Hoelzl & Wahl, 2008).

There are behavioural motives which may contribute to a taxpayer being tax compliant or not. Different motives may arise. Taxpayers may want to be tax compliant because the cost of non-compliance is significantly higher. Citizens may also comply because they feel it is their obligation to be tax compliant (Kirchler *et al.*, 2008).

SMEs form part of a country's economy. It has been concluded that statutory burdens fall disproportionately on SMEs internationally (Pope & Abdul-Jabbar, 2008).

## 2.2. TAX COMPLIANCE

Tax compliance can be defined as a taxpayer's obligation to adhere to the relevant tax legislation, submitting all their relevant tax returns, and declaring all their income (Kirchler, 2007).

There is a probability that some taxpayers do not like to pay their taxes and will perform various actions to escape the obligation of paying taxes (Alm & Torgler, 2011:2). The legal actions taken by taxpayers to legally reduce their tax liability by performing activities such as income splitting, postponement of taxes, and tax arbitrage across income that is subjected to different tax treatment contributes to tax avoidance (Alm & Torgler, 2011:2). In contrast, tax evasion can be defined as the illegal and intentional actions exercised by taxpayers to minimise their tax liability (Alm, 2019:2). Taxpayers pay their taxes most of the

time, although research has indicated that the chances of being audited to verify a taxpayer's tax liability and the penalties imposed in connection with tax evasion are significantly small (Alm, Sanchez & De Juan, 1995).

The question to resolve is to conclude why taxpayers pay their taxes (Alm *et al*., 1995). Researchers have examined various factors that could have an impact on the tax compliance of SME taxpayers. Due to the size and nature of SMEs, tax compliance remains an issue as these entities have limited resources and a lack of expertise to comply with diverse legislation (Atawodi & Ojeka, 2012).

In the sections that follow, tax compliance theories will be discussed briefly as well as factors affecting the tax compliance behaviour of SMEs.

## 2.3.   TAX COMPLIANCE THEORIES

**The classical economic paradigm**

The standard economics approach to analyse tax compliance based on the economics of crime methodology was first applied by Allingham and Sandmo (Alm *et al*., 1995). The methodology applied is based on the theory of Becker who adopted the classical economic paradigm which includes crime and punishment and is labelled the crime paradigm (da Silva, Guerreiro & Flores, 2019:148). According to the standard economics approach, the rational behaviour adopted by taxpayers is either to pay or evade their taxes by weighing the risks and financial benefits of tax evasion which may result in significant penalties if tax evasion is identified by the tax authorities (da Silva, Guerreiro & Flores, 2019:148). As proposed by the standard economics approach, the primary tools to combat these tax evasions is to conduct audits and impose strict penalties (da Silva, Guerreiro & Flores, 2019:151). The methods applied by Allingham, Sandmo and Srinivasan are based on the classical economic paradigm which contributes to enforced tax compliance (da Silva, Guerreiro & Flores, 2019:151).

**Service paradigm**

Numerous factors affect the tax behaviour of a taxpayer. A taxpayer's ethical principles is one of the significant factors affecting their tax behaviour (da Silva, Guerreiro & Flores, 2019:152). The payment of taxes is regarded as a complex matter which includes the engagement with tax officials. The way in which the taxpayer is addressed and treated by the tax officials has an influence on the tax compliance of the taxpayer which contributes to the existence of the service paradigm (Kirchler in da Silva, Guerreiro & Flores, 2019:152). The level of trust a taxpayer has in a country's tax authority has a direct influence on the tax morale of the taxpayer. Once the taxpayer gains trust, his tax compliance is likely to increase (Torgler in da Silva, Guerreiro & Flores, 2019:153). This results in the taxpayer being regarded as a customer of the public administration following a relationship of trust and respect creating cooperation between the taxpayer and the tax authorities (Kirchler in da Silva, Guerreiro & Flores, 2019:153).

**Fiscal exchange paradigm**

The provision of public goods by the government of a country is regarded as a carrot in the carrot versus stick principle (Umar, Derashid & Ibrahim, 2017:32). It is imperative for the government to improve the socio-economic conditions of a country in order to increase voluntary tax compliance by taxpayers. Government should provide basic social services which include education, healthcare, public security, and financial conditions (Umar, Derashid & Ibrahim, 2017:32). Research has shown that favourable socio-economic conditions provided by a country's government contributes to satisfied citizens which indirectly results in improved voluntary tax compliance by taxpayers (Umar, Derashid & Ibrahim, 2017:32).

In summary, the crime paradigm's main objective is to apply enforced tax compliance while the service and fiscal exchange paradigms encourage voluntary tax compliance (da Silva, Guerreiro & Flores, 2019:154).

## 2.4. FACTORS AFFECTING TAX COMPLIANCE OF SME TAXPAYERS

**Business size**

It has been concluded through various studies that a negative relationship exists between a SMEs size and tax compliance expenses compared to its turnover (Le, Tuyet, Hanh & Do, 2020). The reason for the negative relationship is due to tax compliance being regarded as a fixed cost to a certain extent (Le *et al*., 2020). The risk arises that a SME might not be tax compliant due to the unavailability of resources to incur the necessary costs to ensure that the business is tax compliant.

**Type of business ownership**

There are three aspects that have an impact on the perception of a SMEs in connection with their tax compliance namely:

- Small business owners are more likely to utilise an opportunity to be tax non-compliant compared to individuals.

- There is a lack of knowledge regarding the tax provisions a SME has to comply with to remain tax compliant.

- SME owners are more likely to experience decision frames that regard taxes as a loss (Kamleitner, Korunka & Kirchler, 2012).

**Business age**

There is a direct link between the turnover of a business, their growth, and the time the business is actively conducting business activities. It was found that younger businesses spend more time on tax compliance matters compared to older businesses (Le *et al*., 2020). The increased age of a business has been linked directly to an increased experience regarding the relevant tax matters of the business which leads to a reduction in internal time spent on tax compliance tasks (Matarirano, Chiloane-Tsoka & Makina, 2019). As the business becomes older, management is more familiar with the tax matters of the business which indirectly has an impact on the tax compliance of the SME.

**Tax compliance strategy**

The tax compliance strategy adopted by a SME can be regarded as a significant factor which has a direct impact on the tax compliance costs incurred by a SME. The tax compliance strategy requires the application of a combination of methods in order to prepare accounts, tax returns, the submission of tax returns and determining the tax obligations (Matarirano *et al.*, 2019).

The activities to maintain the tax compliance strategy of a SME includes the use of computerised accounting systems, the filing of tax returns, and the storage of the necessary documents to substantiate how the tax obligations were determined (Matarirano *et al.*, 2019). A business has the option to perform their tax and accounting tasks in-house or make use of external service providers (Matarirano *et al.*, 2019). There is a positive relationship between the tax compliance cost and the use of external service providers (Smulders, Stiglingh, Franzsen & Fletcher, 2016). If a SME does not have the necessary resources to obtain a proper accounting system or any manual process it will have a direct impact on their tax compliance. This may contribute to the SME being tax non-compliant. If an SME has no record keeping system which could be used to provide management with accurate and informative tax information, the SME will find it difficult to be tax compliant. (Yong, 2011).

**Tax knowledge**

The implementation of tax law is likely to be more accurate if a higher level of tax knowledge and understanding regarding the tax legislation exists (Le *et al.*, 2020). There is, therefore, a positive relationship between the level of tax knowledge and the tax compliance of a SME (Le *et al.*, 2020).

**Fairness of the tax system**

There is a direct link between the fairness of a country's tax system and the tax compliance status of a SME. Unfairness contributes to the justification and rationalisation for tax non-compliance (Kirchler, 2007).

When the SME perceives the services from the government to be unjustified to the amount of taxes charged, they resort to tax non-compliance (Hai & See, 2011). An improvement in the perceived fairness of taxes can result in improved tax compliance (Forest & Sheffrin, 2002).

**Tax rate**

Due to the burden of high tax rates, there is a significant negative relationship between the tax rate of a SME and their tax compliance. The higher the tax rate, the more likely it is for the SME to evade taxes contributing to tax non-compliance (Mas'ud, Aliyu, Gambo, Al-Qudah & Al Sharari, 2014).

A majority of studies conducted on the relationship between the tax rate and tax compliance have found that high tax rates lead to an increase in non-compliance (Hai & See, 2011). However, in a study by Modugu, Eragbhe and Izedonmi (2012), it was found that the tax rate does not have any impact on tax compliance. It is thus recommended that due to the conflicting findings on the relationship between the tax rate and tax compliance, further studies should be conducted (Freire-Serén & Panadés, 2013).

**Probability of audit examination**

The results of previous studies showed that there is a direct link between increased tax compliance and audit probability and the level of penalties imposed when tax evasion is detected (Allingham & Sandmo, 1972). In a study of determinants influencing tax compliance, it was concluded that tax compliance is directly impacted by audit probability (Nguyen, Pham, Le, Truong & Tran, 2019:65).

## 2.5. THE IMPACT OF THE CARROT VERSUS STICK ON TAX COMPLIANCE

The first detailed theoretical study in economics to analyse the feasibility of incorporating a system of rewards as a form of incentive to improve the tax compliance of taxpayers was introduced in 1991 by Falkinger and Walther (Rillstone, 2015). A mixed method where

penalties will be imposed on tax evasion and rewards awarded if taxes are paid, were proposed (Falkinger & Walther, 1990).

In another study three types of laboratory experiments were conducted to examine the effects of three different types of rewards namely, entry into a lottery scheme, issuing a fixed reward, and a reduction in the probability of a future audit (Rillstone, 2015). The outcome of this experiment was that for each reward issued, a subject audit was conducted to conclude whether the participants were tax compliant or not. It was found that the participants were fully compliant compared to a control group to which no reward was available. Furthermore, each reward had a significant impact on the tax compliance of the taxpayer. It was concluded that the lottery system had a significant positive impact on tax compliance (Rillstone, 2015).

An experiment was conducted in Costa Rica in which a monetary reward was distributed to each compliant taxpayer depending on the outcome of an audit. The outcome of the subjective audit performed concluded that the respective taxpayers were fully tax compliant. It can thus be concluded that the principle of reciprocity increases tax compliance where the government applies a positive rewards system (Torgler, 2003). Similar results were observed in experiments conducted in Germany and France. In the experiments, audits were conducted indicating that taxpayers were fully compliant due to the reward which enabled them to enter into a lottery scheme for being tax compliant. The entrance into the lottery scheme provided the participants with the chance to win an individual lottery. It is clear that the introduction of the reward scheme had a positive influence on the tax compliance behaviour of the taxpayers in the study (Bazart & Pickhardt, 2009).

## 2.6. TYPES OF VOLUNTARY TAX COMPLIANCE STRATEGIES IMPLEMENTED BY TAX AUTHORITIES

The main risks faced by tax authorities, which also affects the tax compliance of taxpayers, are the risk of taxpayers not registering for tax when obligated to do so, the risk of not filing a relevant tax return, and the risk of not accurately reporting one's tax affairs (OECD, 2009).

In the past the strategy adopted to improve tax compliance among a country's taxpayers was based on strengthening the tax enforcement strategies of the tax authorities. Based on research conducted by the World Bank Group it was demonstrated that in order to improve

the tax compliance among the taxpayers of a country, the trustworthiness of the tax system should be improved (Dom, Custers, Davenport & Prichard, 2022). Evidence was obtained from various regions and countries indicating that a taxpayer's willingness to pay taxes will increase when trust is instilled in the government (Dom *et al.*, 2022). It is imperative to shift the paradigm from taxing more to taxing better (Dom *et al.*, 2022).

Below, examples are provided on the types of schemes or strategies that have been implemented by various tax authorities in an effort to encourage voluntary tax compliance based on research conducted by the World Bank Group. In the context of this study, these strategies or schemes can be referred to as carrots designed to encourage voluntary tax compliance.

**E-services**

Higher income countries adopted an approach providing taxpayers with the resources to file their tax returns electronically and pay their tax obligations on an electronic platform (Dom *et al.*, 2022). Many tax authorities are experimenting with advanced technologies to improve the taxpayers' experience when interacting with the tax system. This entails digitising the contact between the tax authorities and taxpayers. The use of artificial intelligence (AI) chatbots is enabling taxpayers to reduce their interaction time with tax officials. Currently this feature is also being adopted by low and middle-income countries (OECD, 2019).

It is imperative to note that moving towards an e-system will give rise to a significant learning curve. This may lead to these services not being accessible to taxpayers due to the lack of knowledge on operating the e-system (Yilmaz & Coolidge, 2013). Taxpayers should have a basic level of computer literacy as well as internet access for these e-systems to be successful (Dom *et al.*, 2022). The perception of taxpayers plays a significant role in adopting new technologies to improve tax compliance (Fjeldstad, Kagoma, Mdee, Sjursen & Somville, 2020).

In India, the e-Sahyog project provides an online mechanism to taxpayers to resolve mistakes made in their income tax returns if they were selected for an audit. This online mechanism enables them to resolve their mistakes without visiting a tax official (Dom *et al.*, 2022). Brazil has also embraced the use of e-services by introducing the My Income Tax

App which enables the taxpayers of Brazil to file and submit their tax returns via mobile devices (Dom *et al.*, 2022). In South Africa SARS has also introduced the SARS MobiApp which is a mobile application which taxpayers can use to complete and submit their income tax returns (SARS, 2022).

**Better digital services**

Enforcement was regarded as the basis from which reform strategies could be applied to ensure tax compliance among taxpayers. However, tax authorities have committed significant resources to facilitate tax compliance. These resources lead to a mind shift in tax authorities where the taxpayers are regarded as the customers while the tax authorities are the service providers. Compliance reforms entail initiatives to ease filing of tax returns, refunds, payment procedures as well as informing taxpayers about their tax liabilities and the tax system (Dom *et al.*, 2022).

Tax authorities have implemented schemes or strategies that incorporate technology to improve their digital services and make compliance easier for the taxpayer which, in turn, may positively influence voluntary tax compliance. One of these strategies was the introduction of e-filing and e-payments.

Various countries adopted an automation approach such as e-filing and e-payment platforms which improved revenue performance across various types of taxes (International Monetary Fund, 2020). In 2014, Kenya introduced their iTax system. The system enabled the Kenya Revenue Authority to integrate and automate their domestic tax functions and provide new electronic functions to taxpayers to settle their tax liabilities. The result of implementing the iTax system led to a reduction in the collection costs of revenues and enabled real-time revenue and audit monitoring (Ndung'u, 2019).

In South Africa, the e-filing system was introduced and contributed to improved automation. The automation of tax matters resulted in reduced temporal expenses relating to tax assessments and customs evaluations (International Monetary Fund, 2020).

Guatemala initiated BancaSAT in 2001 with support from the World Bank. BancaSAT entails an e-filing and payment system. Due to the adoption of the system, 84 percent of the tax

revenues were accounted for within a year. Additionally, the system also reduced the revenue authority's administrative burden and enhanced service delivery (Jacobs, Crawford, Murdoch, Hodges, Lethbridge, Jimenez, Osinski, Hinsz, Pulse & Kamenov, 2013).

**Expanding Mobile Money Technologies**

Governments started investigating the potential benefit of implementing mobile money systems. These money systems entail government-to-business, government-to-person, business-to-government, and person-to-government transactions (Scharwat, 2014). Examples of countries that have successfully implemented these technologies include Tanzania where decreases in tax evasion have been recorded within a year after the revenue authority of Tanzania implemented mobile money payments for property and personal income taxes (Scharwat, 2014).

The revenue authority of Mauritius recorded a 12 percent increase in personal income tax returns filed once the Mauritius revenue authority collaborated with the State Bank of Mauritius to implement mobile money payments for income taxes (Scharwat, 2014).

Although the correlation between mobile money payments and tax compliance is limited, there is still a reason to be optimistic regarding the operation. The benefit of mobile technology for revenue authorities is to ease the collection of taxes in low and middle-income countries (Dom *et al.*, 2022).

**Digital technologies and information technologies (IT) to engender trust and increase perceived transparency**

In order for the digital technologies and IT solutions implemented by a country's revenue authority to function properly the taxpayer should trust the tools used by the revenue authority to administer the taxes. This involves the user-friendliness of the taxpayer platforms, the taxpayers' perception of the accuracy of their information provided electronically as well as their opinion on the privacy and security measurements of these platforms (Dom *et al.*, 2022).

Taxpayers' trust is normally improved once the compliance burden is reduced, the tax system is managed competently, and the tax burden between taxpayers and the revenue authority is distributed equally (Dom *et al.*, 2022).

The success of digital communication is highly subjective to the quality and usefulness of the information being communicated as well as the depth of transparency. The result of the effectiveness of digital communication contributes to tax compliance among taxpayers and enhances the trustworthiness of the tax system (Dom *et al.*, 2022).

In Rwanda, taxpayers were informed through short messaging services (SMS) of information on public services. This led to a substantial increase in declared taxes, and it was regarded as a cost-effective way to communicate with taxpayers (Mascagni *et al.*, 2016). This strategy is an example of using nudges as a tool to increase perceived transparency and encourage tax compliance behaviour. In Nigeria perceived transparency has been increased through the use of civil platforms known as TrackiNG and BudgIT that have been developed as a result of the disclosure of digital data. These platforms involve the analysis of information regarding public finances and expenditures (Dom *et al.*, 2022).

**Taxpayer education**

A lot of attention has been placed on well-designed educational programmes over the past decade to increase voluntary tax compliance. One of the challenges faced by taxpayers is understanding the tax system. The approach followed by the tax authorities to mitigate the challenges faced by taxpayers is to launch tax educational programmes to enable taxpayers to understand the relevant tax system (Dom *et al.*, 2022).

It has been concluded that the tax morale among taxpayers can be improved by adopting an approach to implement taxpayer outreach and educational programmes. To ensure the success of these programmes, it should be customised according to the different classes of taxpayers of a country's tax base (Fjeldstad & Heggstad, 2012).

Time constraints and limited human resources often make it difficult for tax authorities to implement and conduct tax educational programmes in which high-level political support can help to resolve the issue (Dom *et al.*, 2022).

Nigeria, Bangladesh and Kenya have adopted a variety of taxpayer outreach and educational programmes. A tax-based soap opera called "Binding Duty" was developed by Nigeria. National Income Tax Day is celebrated by Bangladesh and the tax authority of Kenya is collaborating with schools to incorporate tax education into the curriculum of the learners (OECD & The International and Ibero American Foundation for Administration and Public Policies (FIIAPP), 2015).

In order to incorporate high-level political support, the president of Rwanda distributes annual taxpayer awards while the minister of finance of Turkey speaks directly to taxpayers using YouTube (OECD & The International and Ibero American Foundation for Administration and Public Policies (FIIAPP), 2015).

**Fostering taxpayer engagement and nudging**

The low and middle-income countries' revenue authorities have invested in technology to improve taxpayers' education as well as the communication process between taxpayers and the revenue authorities (Dom *et al.*, 2022).

In Singapore the revenue authority of the country implemented short messaging service (SMS) notifications providing the taxpayers with services and nudges to remind them of their tax obligations. It also enabled the taxpayers to obtain important information regarding their tax system (OECD, 2016).

Costa Rica, Latvia, and Kosovo made use of email reminders as a nudge to encourage tax compliance. This strategy improved the tax compliance by 20 percent within five weeks among 50 000 non-filers in Costa Rica. In Latvia, non-compliant taxpayers received email messages regarding their non-compliance which led to an increase in the tax declaration submission rates. The personal income tax rate revenue increased by two to four percent in Kosovo due to emails and SMS reminders being sent to taxpayers informing them about their tax obligations (World Bank, 2021).

Although it is unlikely that electronic reminders on their own will transform tax administration, they are good value for money (Peixoto, Fanomezantsoa, Sjoberg & Mellon, 2019).

## 2.7. CONCLUSION

Based on the literature reviewed it can be concluded that tax compliance is impacted by both carrots and sticks applied by tax authorities. Sticks such as penalties upon detection of non-compliance are implemented concurrently with carrots and are aimed at making compliance easy for the taxpayer, such as electronic filing of tax returns and online payments of tax liabilities. In this study, we examine whether sticks or carrots as measures to increase tax compliance are perceived by SME taxpayers to be more effective.

# CHAPTER 3:
# RESEARCH DESIGN AND METHODOLOGY

## 3.1. INTRODUCTION

In this study the perceived effectiveness of carrots compared to sticks to increase the tax compliance of SMEs, and the factors that are likely to encourage and discourage tax compliance as perceived by SME taxpayers are examined. To adequately address the research objectives, a questionnaire was distributed to SME participants to obtain primary data. The data were analysed to conclude on the SME taxpayers' perceived effectiveness of carrots compared to sticks on tax compliance.

In this chapter an outline of the research methodology and research design used for this study is provided. The chapter starts with the research methodology followed by the research method as well as the reasons for the chosen research method. A discussion of the sampling method selected, data collection procedures, approach to data analysis, reliability and validity of the research method, and research ethics follow before the chapter is concluded.

## 3.2. RESEARCH METHODOLOGY

Research methodology involves the approach followed by a researcher in response to the research question (Monageng, 2020). A researcher may follow a quantitative method, a qualitative method, or a multiple methods approach (Nailana, 2021).

According to Aliaga and Gunderson (2000:1), quantitative research is "explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics)." A quantitative research methodology is usually used when the objective of the researcher is to determine whether a cause-and-effect relationship between variables with the aim of extrapolating the findings exists, and conclusions need to be made about a larger population (McKerchar, 2008).

A qualitative research methodology is desirable when a researcher seeks to gain an in-depth understanding of complex problems (Leedy & Ormrod, 2018:98). The qualitative research

methodology was inappropriate in addressing this study's research objectives and was not followed.

A mixed research methodology is a combination of both the quantitative and qualitative research methodologies with an advantage of strengthening the researchers' findings (Kiessling & Harvey, 2005:24). Deployment of a mixed research methodology may provide conflicting data that needs further analysis to resolve any inconsistencies (Malina, Norreklit & Selto, n.d.). Due to the time allowed for conducting this research, the mixed method approach was deemed less desirable.

The quantitative research methodology was followed in response to the research question of this study. The quantitative research methodology was chosen as it has the ability to provide the researcher with explanations and predictions that can be generalised (Monageng, 2020:94).

## 3.3.    RESEARCH METHOD

To ascertain the perceived effectiveness of carrots compared to sticks on tax compliance of SMEs in South Africa, an online survey was conducted, and the collected data were analysed using SPSS.

Weirsberg (2008: 223) describes survey research as "a technique that is well designed for assessing the prevalence and distribution of attitudes, as well as factual material about respondents." Surveys have strengths, weaknesses, and certain limitations. According to Sincero (n.d.), among the strengths of survey research is the relatively lower costs, convenience of data collection, and the possibility to obtain a larger representation of the population. One of the weaknesses is the possibility of different interpretations of the same question by different participants. One of the limitations of surveys is the consideration of isolated opinions while opinions mainly arise from group interactions (Weirsberg, 2008:224).

Individual opinions rather than group or focus group opinions will be considered as the individual perception of the SME taxpayers regarding the effectiveness of carrots compared to sticks on tax compliance are examined. Guest, Namey, Taylor, Eley and McKenna (2017)

concluded in their study that individual interviews can be as effective or more effective compared to group interactions.

In this study, the advantage of using surveys to collect as many responses as possible in the most convenient way without spending significant amounts of money, was utilised. Surveys also have the advantage of providing researchers with primary data. According to the Formplus blog (2015), primary data is "a type of data that is collected by researchers directly from main sources through interviews, surveys, experiments, et cetera." Primary data is considered the best type of data for reaching conclusions in research (Formplus blog, 2015). Additionally, research designs that follow a quantitative research methodology generally make use of surveys or experiments as the main method for data collection (McKerchar, 2008).

The participants were asked closed-ended questions on a 5-point Likert scale. According to Manaher (n.d.), "closed-ended questions offer conclusive results since the data they help accumulate can be easily quantified or sorted." A closed-ended question is "any question that provides response options, in the form of multiple choice, checkboxes, dropdowns, ranking question" (Manaher, n.d.). In this study, a quantitative research methodology was adopted which requires that the collected data be quantified and sorted. Statistical analysis of the data collected, using closed-ended questions, was deemed practical.

Close-ended questions also encourage participation and openness from participants. According to QuestionPro (n.d.), some of the advantages of closed-ended questions include the reduced time it takes to read and respond to the questions and that respondents are likely to even answer sensitive questions as they do not have to elaborate. Due to the limited time frame available to conduct this study, closed-ended questions were deemed appropriate for the purpose of addressing the research question.

A survey containing a questionnaire was distributed to collect responses from SME taxpayers. Refer to Appendix B for the survey questionnaire. The survey was set up on SurveyMonkey, a cloud-based survey tool. Before distribution of the survey to participants, the questionnaire was reviewed for completeness and accuracy.

## 3.4. SAMPLING

Non-probability sampling was employed by the researcher to select participants for the survey. Non-probability sampling involves sampling participants that may not be representative of the target population but with similar characteristics of the target population (Meadows, 2003:522). Non-probability sampling is used in quantitative research on surveys relating to unapproachable participants. The sampling methods generally used include convenience, and snowball sampling (Meadows, 2003:522). Convenience sampling involves the use of readily available participants that are willing to participate in a survey while snowball sampling requests identified participants to recruit other participants within the target population (Meadows, 2003:522). Snowball sampling is generally used when no listing of the entire population exists or when faced with an unapproachable group of participants. (Meadows, 2003:522).

In this research SME taxpayers were the target population. The researcher did not have access to a list of SME taxpayers with their contact details to participate in the survey, therefore, snowball sampling was considered the most appropriate method under the circumstances.

The major disadvantage of non-probability sampling is its non-random selection criteria (McCombes, 2022). This means that not every individual of the population has an equal chance of selection, which might give rise to sampling bias. Sampling bias occurs when certain members of the population have a higher chance of being selected than others (Bhandari, 2020). Inferences about the population where non-probability testing is used are considered weaker compared to inferences where probability testing is used (McCombes,2022). To strengthen the inferences when non-probability testing is used, findings must be generalised to populations that share characteristics with the sample (Bhandari, 2020).

As the researcher is based in the Eastern Cape province, the survey link was mainly distributed to SME taxpayers in the Eastern Cape province. Additionally, more than 50 percent of the participants in the survey were SMEs in the professional services sector. The inferences made will consider these characteristics of the sample data.

## 3.5.    DATA COLLECTION PROCEDURES

The data was collected through a survey conducted using SurveyMonkey. The link to the survey was distributed to participants from 24 April 2022 and was open for 46 days before it was closed on 8 June 2022. The link was distributed through emails to SME taxpayers and researchers' social media platforms including LinkedIn and WhatsApp.

Due to a low response rate, physical meetings in three towns in the Eastern Cape Province, namely East London, Gqeberha, and Mthatha were arranged to distribute the link in person and encourage the SME taxpayers to participate in the study.

The survey responses were exported into an Excel spreadsheet for analysis. Before analysis of the data, the data were cleaned to ensure completeness and accuracy. To ensure completeness, the survey on SurveyMonkey was set up in such a way that 21 of the total 22 questions were mandatory to complete for participants. Incomplete data, which relates to those participants who did not successfully complete the survey, was removed for purposes of the analysis. Only one attempt at the survey was allowed from each participant and no duplicate attempts were identified in the data set. After cleaning the data there were 19 completed surveys available for analysis.

## 3.6.    DATA ANALYSIS

Descriptive statistics were first deployed to present the results of the data collected. Descriptive statistics are described as the graphical techniques used to summarise the characteristics of a data set (Fisher and Marshall, 2008:1). A summary of the descriptive statistics gives insight and meaning to data before complex analyses are performed (Murphy, 2021:467).

The perceptions of SME taxpayers were analysed using inferential statistics. According to Allua and Thompson (2009:168), "Inferential statistics encompass a variety of statistical significance tests that investigators can use to make inferences about their sample data." Inferential statistics are used to reach conclusions about an entire population by using the findings from the sample data (Allua & Thompson, 2009:168). Cross tabulation was used to

perform various statistical tests of significance. Cross tabulation is a type of inferential statistics used to determine whether two variables are related or not (Choi, Tagore, Siddiq, Park & Ewing, 2020:114). Cross tabulation is also regarded as the quickest method to examine the correlation between two variables (Choi *et al.*, 2020:7).

The descriptive and inferential statistics were performed using the SPSS program and Microsoft 365 Excel. According to Cornnor (2019), the SPSS program has advantages such as preparing diagrammatic presentations, providing flexibility in data analysis, managing data which includes data storage and retrieval, and it can be used for statistical analysis.

## 3.7.    RELIABILITY AND VALIDITY

Rigour in research refers to the efforts to enrich the quality of the research and is considered to be as equally important as the results of the study (Heale & Twycross, 2015:66). In a quantitative study, a measurement of reliability and validity is performed to ascertain the rigour in the research.

Reliability refers to the consistency of a method of measure (Heale & Twycross, 2015:66). A method of measure is considered reliable if it consistently provides the same results when used under the same conditions (Middleton, 2022). Validity, on the other hand, refers to the extent that a phenomenon in a quantitative study is accurately measured (Heale & Twycross, 2015:66).

To measure the reliability of a method of measure, certain factors need to be considered which include test-retest reliability, and interrater reliability (Middleton, 2022). Test-retest reliability measures the consistency of results when the same test is repeated with the same participants at different points in time while Interrater reliability measures the extent of agreement between different participants responding to the same survey (Middleton, 2022).

A survey is a method used to collect data. To improve the reliability of the survey, the questions asked did not lead the participants to a specific answer based on the current circumstances in South Africa. The questions were set in a way not to trigger the participants'

emotions. The questions were also drafted in understandable English to manage different interpretations. Based on results from the data analysis, the SME participants agreed on a number of factors relating to the perceived effectiveness of using carrots compared to sticks for tax compliance which enhances the reliability of the research method.

Certain factors are considered to measure the validity of a method of measure which includes construct validity (Middleton, 2022). Construct validity questions whether the research method measures what it intends to measure (Middleton, 2022). The survey is considered valid as it required participants to provide their opinion on the effectiveness of carrots compared to sticks in encouraging tax compliance as well as the factors they consider would likely encourage and discourage tax compliance. Thus, the research objectives will be achieved through the use of this research method.

## 3.8. RESEARCH ETHICS

Research ethics refers to researchers' conduct and care for the research participants and the data collected (Monageng, 2020). Dooly, Moore and Vallejo (2017:352) highlight that researchers should make ethical considerations when conducting research namely potential harm to participants, transparency including the purpose of the research, and the use of the data collected, voluntary and informed consent including the option to opt out by participants, and confidentiality of personal data of participants.

In this study, the above-mentioned ethical considerations were addressed as follows:
- The participants were required to complete an online survey. The researcher's concern was the visual impairment of participants which may be caused by engaging with their devices for long periods of time. However, the survey required not more than 20 minutes to complete, therefore, this was not considered an ethical issue.
- The participants were made aware of the purpose of the research and the fact that the data collected will be used solely for academic purposes. The findings were also available to them on request.
- Participation in this study was on a voluntary basis and participants received a letter of informed consent which included detail on the purpose of the research, the contact details of the researchers, and research supervisor for any questions participants might

have. The participants were also given the option to withdraw from the study, even after consenting to participate.

● The anonymity of the participants was ensured as they were not required to provide any names or information that would allow any person to link their responses back to them.

Before the commencement of the data collection, an ethical clearance was applied for and granted by the Research Ethics Committee of the EMS Faculty at the University of Pretoria.

## 3.9.   CONCLUSION

This chapter described the research methodology and research method used in the study. The sampling method, data collection procedures, approach to data analysis, reliability, and validity of the research method were also discussed. The chapter concluded with a discussion on the research ethics maintained while conducting this research.

# CHAPTER 4:
## DATA ANALYSIS AND FINDINGS

## 4.1. INTRODUCTION

This study aims to answer the question of whether carrots are perceived to be more effective compared to sticks in improving tax compliance of SMEs in South Africa. As discussed in chapter 3, a quantitative approach was followed in response to the research question. Primary data were collected from SME taxpayers and descriptive and inferential statistical tests have been conducted for data analysis. In this chapter, the results of the data analysis will be presented. The results of the data analysis will be divided into descriptive and inferential analysis. This will be followed by a discussion of the findings and a final conclusion.

## 4.2. DESCRIPTIVE ANALYSIS

This part of the study focuses on the descriptive analysis of the participants' tax knowledge, drivers of tax compliance, levels of satisfaction with SARS services, and the factors that the participants consider encouraging or discouraging in the tax compliance decisions. An analysis to determine the mean was conducted on the factors that the participants consider to encourage and discourage tax compliance.

A mean is defined as the summation of values in a data set divided by the total number of values in the data set (Speelman & McGann, 2013). A mean is one of the measures that can be used to calculate central tendency.

Table 2 depicts the demographic details of the participants in the study.

| Table 2: Summary of the demographic profile of the participants | | |
|---|---|---|
| Demographic variables | Frequency | Percent (%) |
| *Gender* | | |
| Female | 9 | 47.4 |
| Male | 10 | 52.6 |
| *Age* | | |
| <29 | 8 | 42.1 |
| 30-39 | 8 | 42.1 |
| >40 | 3 | 15.8 |
| | | |
| *Level of education* | | |
| Matriculated | 1 | 5.3 |
| Diploma | 1 | 5.3 |
| Bachelors' degree | 13 | 68.4 |
| Honours degree | 3 | 15.8 |
| Masters' degree | 1 | 5.3 |
| *Sector* | | |
| Professional services | 10 | 52.6 |
| Agricultural | 3 | 15.8 |
| Manufacturing | 2 | 10.5 |
| Retail | 1 | 5.3 |
| Other* | 3 | 15.8 |
| *Role in business* | | |
| Owner | 12 | 63.2 |
| Accountant | 5 | 26.3 |
| Manager | 2 | 10.5 |

*Other sectors were hospitality, real estate, and beauty products.

A balanced representation of females and males in the sample were found with females comprising 47 percent of the sample and males 53 percent. The majority of the participants were 40 years or younger. The sample comprised educated individuals with 95 percent of the participants having higher education qualifications. It is noted from Table 2 that 10 of the

19 participants were in the professional services industry and 12 of the 19 participants were owners of the SMEs taxpayers participating in the study.

**Tax knowledge of participants:** The participants were requested to rate their level of tax knowledge on a five-point Likert scale with the following as options: very poor, poor, fair, good, and excellent. The descriptive analysis findings are presented in Figure1.

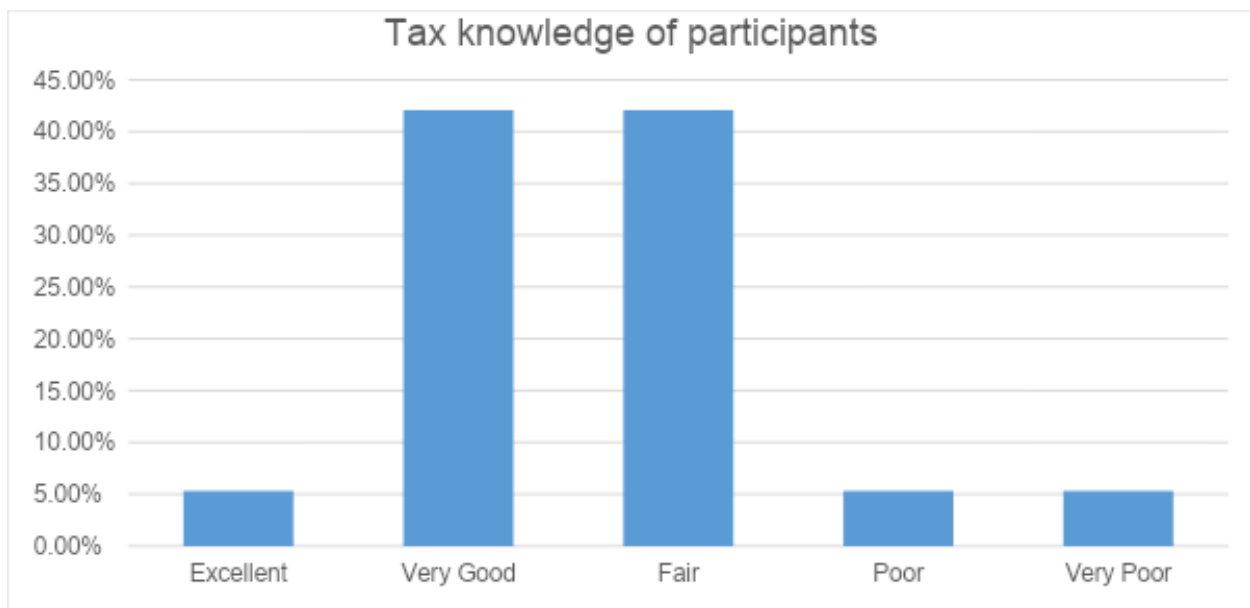**Figure 1: Analysis of tax knowledge of participants**



Figure 1 shows that 89 percent of the participants rated their tax knowledge to be sound, which reflects on being fair, very good and excellent, while only 11 percent of the participants rated their tax knowledge as poor or very poor. This is considered advantageous as participants with a sound tax knowledge are likely to understand and interpret the questions better than participants without a background knowledge of the tax discipline.

**Factors impacting the taxpayers tax compliance decision:** The participants were requested to indicate their level of agreement or disagreement from strongly agree, agree, neutral, disagree or strongly disagree with following statements:

- The fear of penalties prevents your business from being non-compliant with tax laws.
- Reducing tax rates will increase your business's tax compliance level.
- Increasing tax rates will encourage you as the representative of your business to adopt tax avoidance strategies.

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- The likelihood of a tax audit encourages your business to be tax compliant in terms of accuracy.

- Convenient payment arrangements with SARS would encourage SMEs like your business to pay their tax debts.

- Incentives such as lower probabilities of being audited as a result of being tax compliant for a fixed number of years would encourage SMEs like your business to be tax compliant.

- Rewards such as a fixed monetary reward for being tax compliant would motivate SMEs like your business to be voluntary tax compliant, and

- Perceived high levels of government corruption in South Africa affects your business's willingness to comply with tax laws.

The results of the descriptive analysis are presented in Figure 2.

**Figure 2: Analysis of various factors perceived to impact taxpayer compliance**
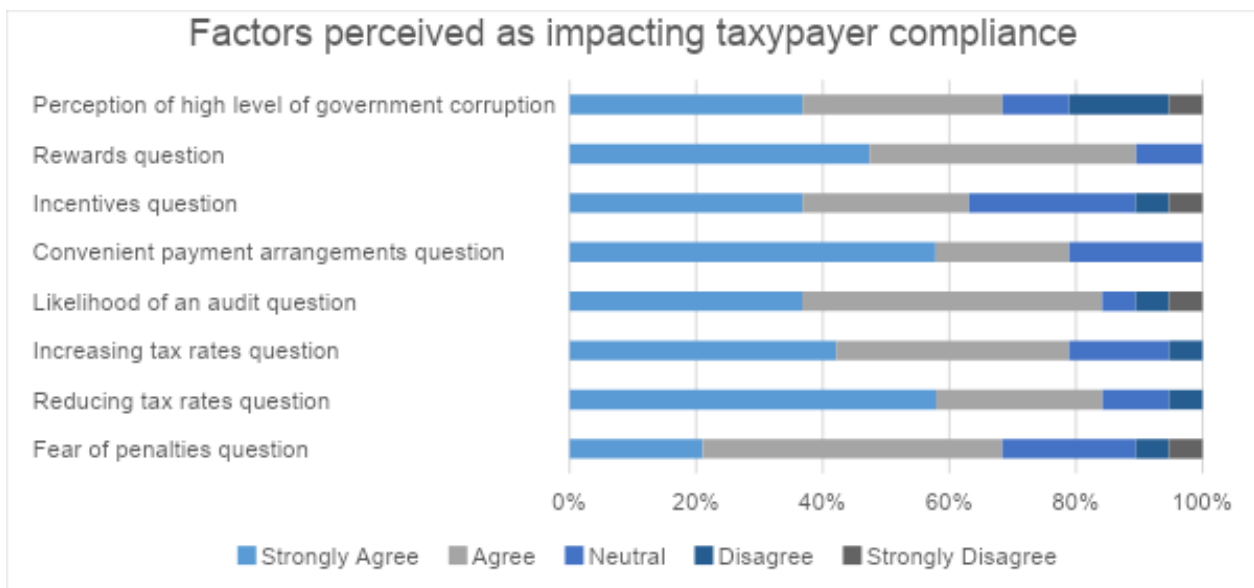


Based on the results presented in Figure 2, it can be noted that more than 60 percent of the participants either agree or strongly agree that all the factors have an impact on their tax compliance decision.

The questions on the likelihood of an audit, increasing tax rates, and the fear of penalties are considered sticks as they have a potential of discouraging the participants from not

complying with tax laws while the questions on the perception of government corruption, rewards, incentives, convenient payment arrangements, and reducing tax rates are considered carrots due to their potential of encouraging voluntary tax compliance.

Figure 2 shows that almost 90 percent of the participants either agree or strongly agree that rewards such as a fixed monetary reward for being tax compliant would motivate them to be tax compliant while only 60 percent of the participants agree or strongly agree that incentives such as lower probabilities of being audited as a result of being tax compliant for a fixed number of years would encourage them to be tax compliant. Only 20 percent of the participants strongly agree that fear of penalties would encourage them to be tax compliant while almost 58 percent of the participants strongly agree that convenient payment terms and reducing tax rates would encourage them to be tax compliant. Only 37 percent of the participants strongly agreed that the likelihood of a tax audit would encourage them to be tax compliant.

As much as it appears that a balance between carrots and sticks in encouraging tax compliance exists, the participants perceive carrots to be more effective in encouraging tax compliance in comparison to sticks.

**Factors that encourage SME taxpayers to comply with South African tax laws:** The participants were requested to indicate which of the following factors encourage them to be tax compliant: fear of penalties, risk to be selected for an audit, willingness to fulfil a moral obligation, tax clearance certificate needed to conduct business or any other reason.

The results of the descriptive analysis are presented in Figure 3.

**Figure 3: Analysis of the reasons SME taxpayers comply with tax laws**



As seen in Figure 3 the need for a tax clearance certificate to conduct business by SMEs is considered the major motivator of tax compliance by 73.7 percent of the participants while fear of penalties and willingness to fulfil a moral obligation are equally ranked second at 47.4 percent of participants, with the risk of being selected for an audit ranked last (36.8 percent of participants). 15.9 percent of the SME taxpayers indicated that other reasons such as integrity, and the desire to be voluntary tax compliant motivated them to be tax complaint.

These results indicate that participants are less motivated by sticks and more by incentives for being tax compliant. A tax clearance certificate is needed to conduct business with the state in South Africa, hence compliance with tax laws to obtain a tax clearance certificate positions a SME for better business opportunities.

**Cross tabulation of link between SME sector and the factors impacting their tax compliance.**

A cross tabulation was performed between the SME sector and the factors impacting their compliance with South African tax laws. The results of the cross tabulation test are presented in Figure 4.

**Figure 4: Factors impacting taxpayer compliance with South African tax laws by the SME sector**
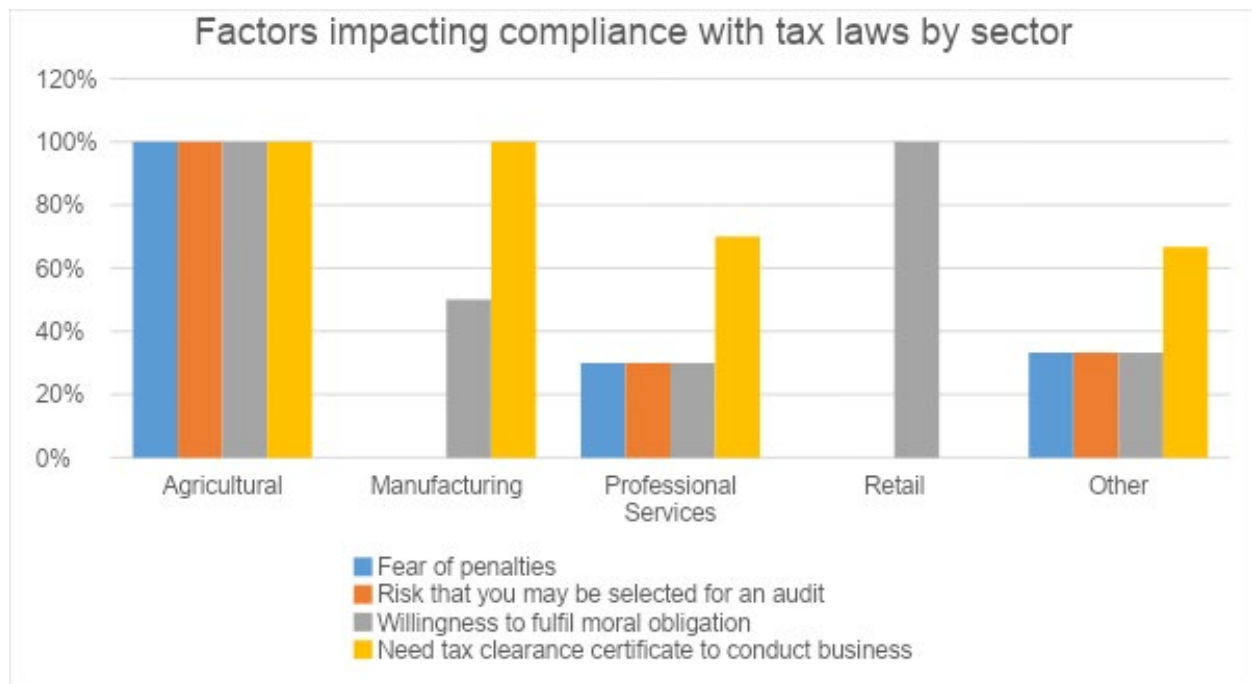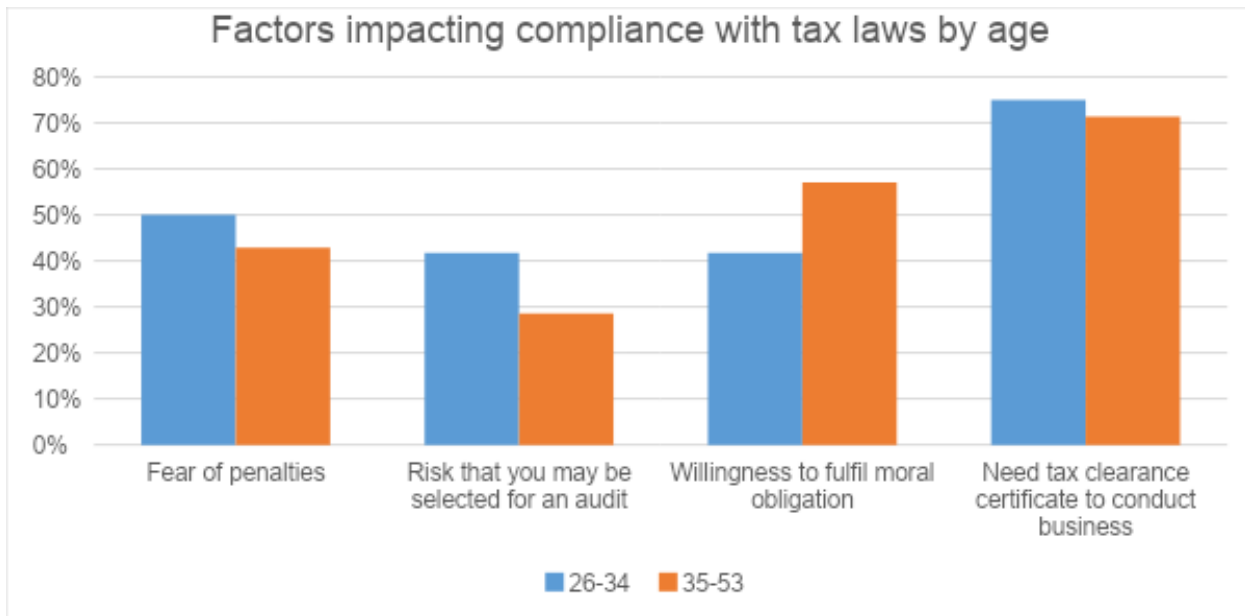


Figure 4 reveals that the need for a tax clearance certificate to conduct business is considered the most likely factor to motivate SME participants to comply with tax laws. For three of the five sectors presented in the graphical presentation, the need for a tax clearance certificate is the factor that obtained the highest number of selections. These sectors are manufacturing, professional services and other. The participants from the agricultural sector selected all of the four factors to be equal. Participants in the retail sector did not select the need for a tax clearance certificate. A possible reason for this is that SMEs in the retail sector generally do not conduct business with the South African government but with the general public which reduces the need for a tax clearance certificate.

**Cross tabulation of the link between the ages of SME representatives and the factors impacting their tax compliance.**

A cross tabulation was performed between the ages of SME representatives and the selected factors that impact their tax compliance. Due to the small sample size of 19 participants, the responses for the ages 26 to 34 and 35 to 53 have been grouped together for the purposes of descriptive analysis. The results of the cross tabulation test are presented in Figure 5.

**Figure 5: Factors impacting taxpayers' compliance with South African tax laws according to the ages of SME representatives**



From Figure 5 it can be noted that the participants in both age groups selected the need for a tax clearance certificate to conduct business as the most motivating factor for their compliance with tax laws. The older age group, 34 to 53 years, selected the risk of an audit as the least motivating factor for their compliance with tax laws while the younger generation has both the risk that you may be selected for an audit and willingness to fulfil a moral obligation as the least motivating factor for their compliance with tax laws.

**Cross tabulation of the link between the level of tax knowledge of SME representatives and the factors impacting their compliance with South African tax laws.**

A cross tabulation was performed between the level of tax knowledge of SME representatives and the factors impacting their compliance with South African tax laws. The participants were requested to indicate their level of tax knowledge from the following options: excellent, very good, fair, poor, and very poor. Two of the nineteen participants rated their tax knowledge as poor or very poor. For purposes of this analysis, their responses were discarded. Fair was considered to be average while very good and excellent were considered above average. They were grouped together to ensure a meaningful comparison. The results of the cross tabulation test are presented in Figure 6.

**Figure 6: Factors impacting taxpayer compliance with South African tax laws by the level of tax knowledge of SME representatives**
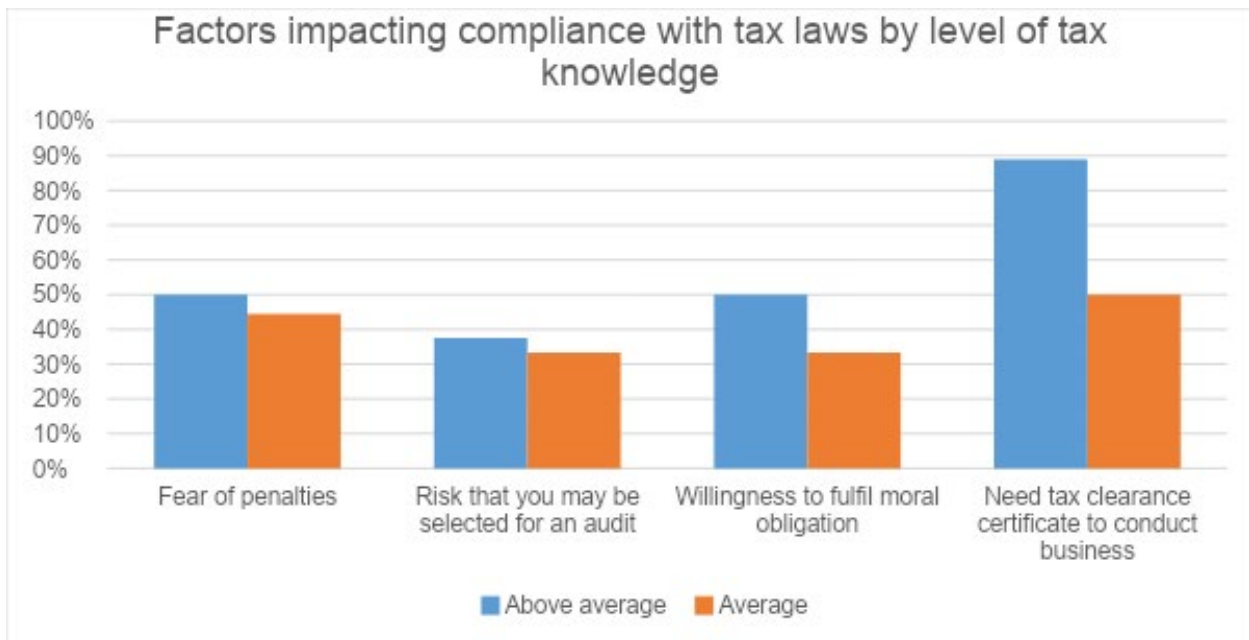


Figure 6 shows that the need for a tax clearance certificate to conduct business has been selected by participants with an above average and average level of tax knowledge as the most likely factor to impact their compliance with tax laws. It is further noted that the risk of selection for an audit is the least motivating factor for the participants with a level of tax knowledge above average. The risk of selection for audit and the willingness to fulfil a moral obligation have been equally selected as the least motivating factors for the participants with an average level of tax knowledge.

**Cross tabulation of the link between the level of satisfaction with the services provided by SARS and the factors impacting their compliance with South African tax laws.**

A cross tabulation was performed between the level of satisfaction with the services provided by SARS to the SME representatives and the factors impacting their compliance with South African tax laws. Participants were requested to rank their level of satisfaction between satisfied, partly satisfied and not at all satisfied. None of the participants selected were not at all satisfied, therefore, the cross tabulation only considered partly satisfied and satisfied participants. The results of the cross tabulation test are presented in Figure 7.

**Figure 7: Factors impacting taxpayers' compliance with South African tax laws by the level of satisfaction with the service provided by SARS**



In Figure 7 it can be noted that the need for a tax clearance certificate to conduct business has been selected by both partly satisfied participants and participants who are satisfied with the services provided by SARS as the most motivating factor for their compliance with tax laws. It is further noted that the risk of selection for an audit is selected as the least motivating factor for tax compliance of the partly satisfied category of participants while fear of penalties and willingness to fulfil a moral obligation have been equally selected as the least motivating factors for tax compliance by the satisfied category of participants.

**The impact of tax compliance of similar businesses to taxpayer compliance:** To examine whether social norms have an impact on tax compliance, the participants were requested to indicate their likelihood of tax compliance if businesses similar to their business were tax compliant. The participants had the following options: very likely, likely, somewhat likely, unlikely, and very unlikely.

The results of the descriptive analysis are presented in Figure 8.

**Figure 8: Social norms analysis**
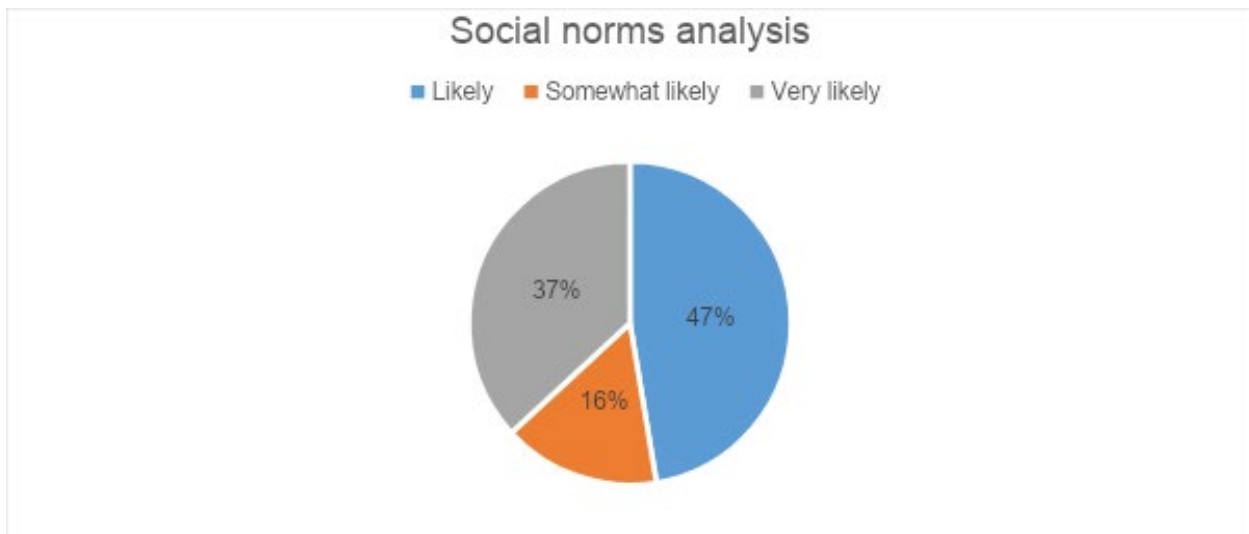


None of the participants selected highly unlikely or unlikely as can be seen in Figure 8. The SME taxpayers believe that tax compliance of similar SMEs has an impact on their compliance with tax laws with 16 percent indicating somewhat likely, 47 percent selecting likely and 37 percent selecting very likely. Based on these results it appears that social norms also play a role in the tax compliance of SMEs.

**The impact of the ease of e-filing on timely submission of tax returns:** The participants were requested to indicate whether they agree or disagree that the ease of e-filing contributes to their timely submission of tax returns. The participants had the following options: strongly agree, agree, neutral, disagree, and strongly disagree.

Figure 9 depicts the descriptive analysis of the participants' responses.

**Figure 9: Analysis of the impact of ease of e-filing on timely submission of tax returns**
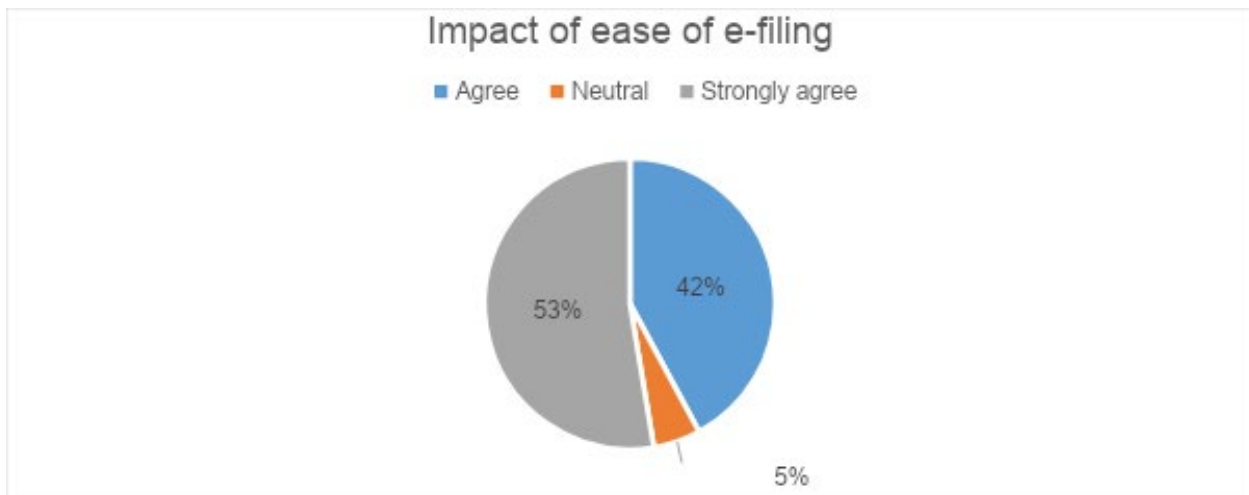


It can be noted in Figure 9 that 95 percent of the participants either agree (42 percent) or strongly agree (53 percent) that the ease of e-filing contributes to their timely submission of tax returns. 5 percent of the participants were neutral to the question while none of the participants selected disagree or strongly disagree. These results indicate that measures that make it easy for taxpayers to comply encourage tax compliance.

**Levels of satisfaction of the participants with the services provided by SARS**: The participants were requested to rate their level of satisfaction with the services provided by SARS. The participants had to choose between the options satisfied, partly satisfied and not at all satisfied.

The results of the descriptive analysis are presented in Figure 10.

**Figure 10: Analysis of levels of satisfaction with the services provided by SARS**
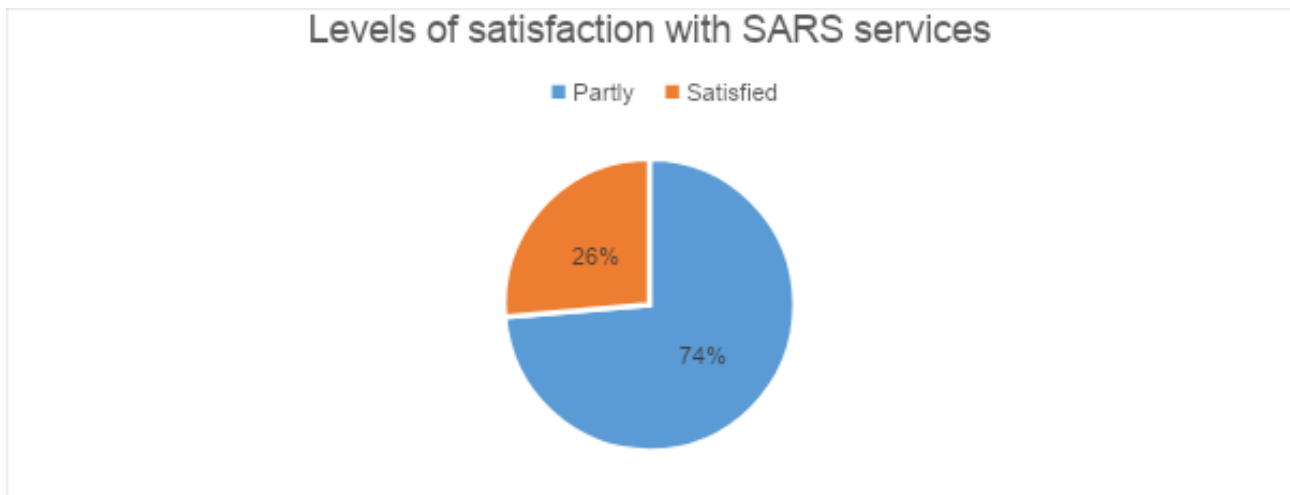


Figure 10 shows that 74 percent of the participants are partly satisfied with the services provided by SARS while only 26 percent are satisfied. None of the participants indicated that they were not satisfied with the services provided by SARS.

**Factors that may encourage tax compliance of SMEs:** The participants were requested to rank the factors listed below from 1 to 9 with 1 being the factor that is most likely to encourage their tax compliance and 9 the factor that is the least likely to encourage their tax compliance. The factors were as follows:

● Probability of interest and penalties if found to be tax non-compliant

● Public goods and services provided by government

● Probability of being audited

● If most SMEs that are similar to your business are tax compliant

● Decrease in tax rates

● SARS workshops aimed at assisting SMEs with understanding their tax obligations

● Personal messages from SARS as reminders to meet tax return filing deadlines

● Monetary rewards if tax compliant for a number of years; and

● Personal messages from SARS as a reminder of outstanding tax debt.

The results of the descriptive analysis are presented in Figure 11.

**Figure 11: Analysis of factors that are likely to encourage taxpayer compliance with tax laws**
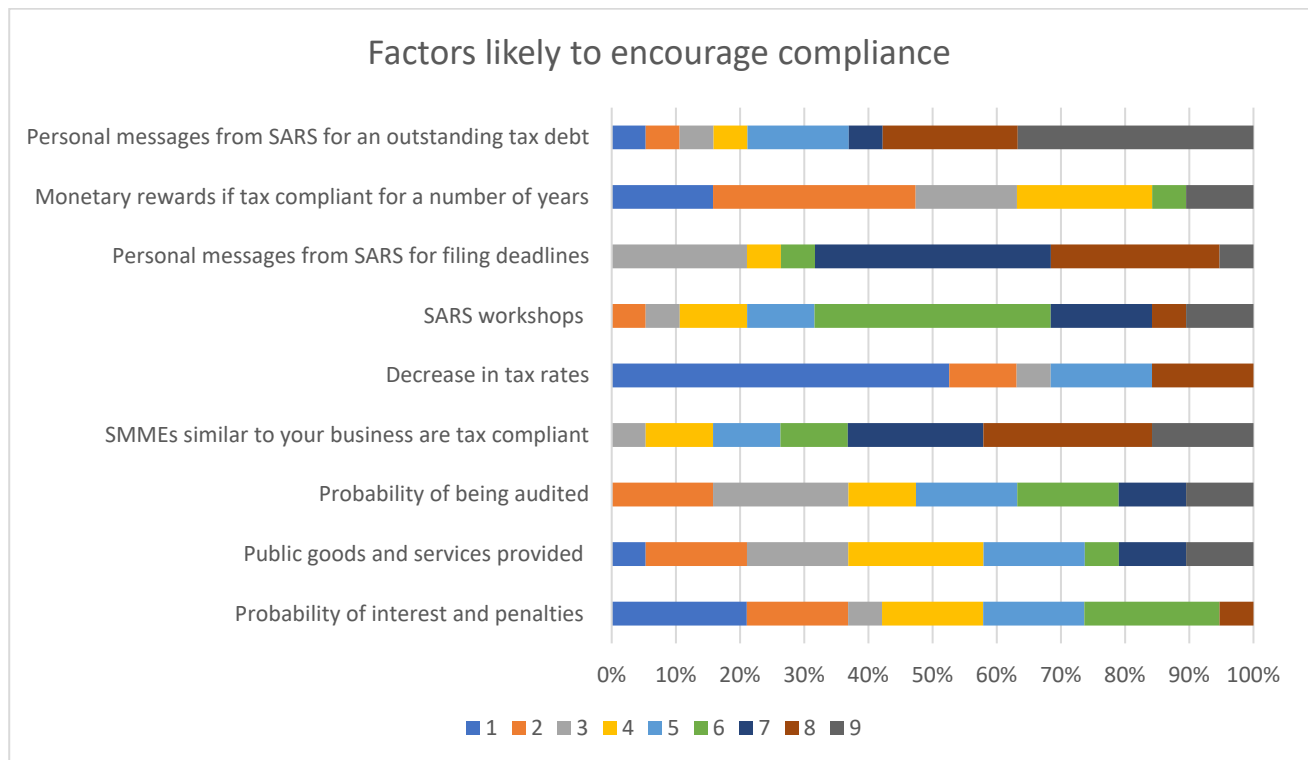


Based on the results in Figure 11, a decrease in tax rates was selected by 52 percent of the participants as the factor most likely to encourage tax compliance. This factor is considered to be a carrot in the carrots versus stick comparison. On the other hand, none of the participants selected the probability of being audited as the most likely factor to encourage tax compliance (i.e., none of the participants ranked this factor as number 1). The probability of being audited is a stick in the carrots versus stick comparison. These results may indicate participants regard carrots as being more effective than sticks in encouraging tax compliance by the participants.

More than 37 percent of the participants selected personal messages from SARS reminding taxpayers of their tax debts as least likely to encourage tax compliance. This factor is considered a nudge message that may have been viewed as a stick by the participants. This result further emphasises that the participants consider carrots to be more effective in encouraging tax compliance than sticks.

**Mean analysis of the factors that are likely to encourage a SME to be tax compliant.**

Table 3 presents the results of the mean analysis of the factors that are likely to encourage a SME to be tax compliant. Participants were requested to rank nine factors that are likely to encourage their business to be tax compliant with number 1 being the most likely factor and number 9 being the least likely factor. With this ranking approach, the factor with the lowest mean would be the factor that was ranked as the most encouraging factor for SME tax compliance while the factor with the highest mean would be the least encouraging factor for SME tax compliance.

Based on the results presented in Table 3, a decrease in tax rates has the lowest mean at 2,95 and is, therefore, considered to be the factor that would most likely encourage SME tax compliance. Personal messages from SARS to remind taxpayers of outstanding tax debts would be the least encouraging factor for SME tax compliance, with the highest mean of 6,68. The mean analysis further supports the observations noted in the analysis of Figure 11.

**Table 3: Factors that encourage tax compliance**

| Factor | Mean | Std. Deviation |
|---|---|---|
| Decrease in tax rates | 2,95 | 2,677 |
| Monetary rewards if tax compliant for a number of years | 3,37 | 2,362 |
| Probability of interest and penalties if found to be tax non-compliant | 3,79 | 2,149 |
| Public goods and services provided by government | 4,47 | 2,294 |
| Probability of being audited | 4,79 | 2,200 |
| SARS workshops aimed at assisting SMEs with understanding their tax obligation | 5,89 | 1,823 |
| Personal messages from SARS to remind you of tax return filing deadlines | 6,32 | 2,029 |
| If most SMEs that are similar to your business are tax compliant | 6,74 | 1,821 |
| Personal messages from SARS to remind you of an outstanding tax debt | 6,68 | 2,668 |

**Factors that may lead to non-compliance of SMEs**

The participants were requested to rank the factors that may lead to the non-compliance of SMEs from 1 to 7 with 1 being the factor that is most likely to lead to tax non-compliance and 7 the factor that is least likely to lead to tax non-compliance. The factors were as follows:

● Cost of tax compliance (for example paying someone to assist the business with filing tax returns)

● Unhappy with the public goods and services currently being provided by government

● Increase in tax rates

● If most SMEs that are similar to your business are not compliant

● Lack of tax knowledge

● Decreased probability of being audited; and

● Increasing number of taxes imposed by the government (tax burden).

The results of the descriptive analysis are presented in Figure 12.

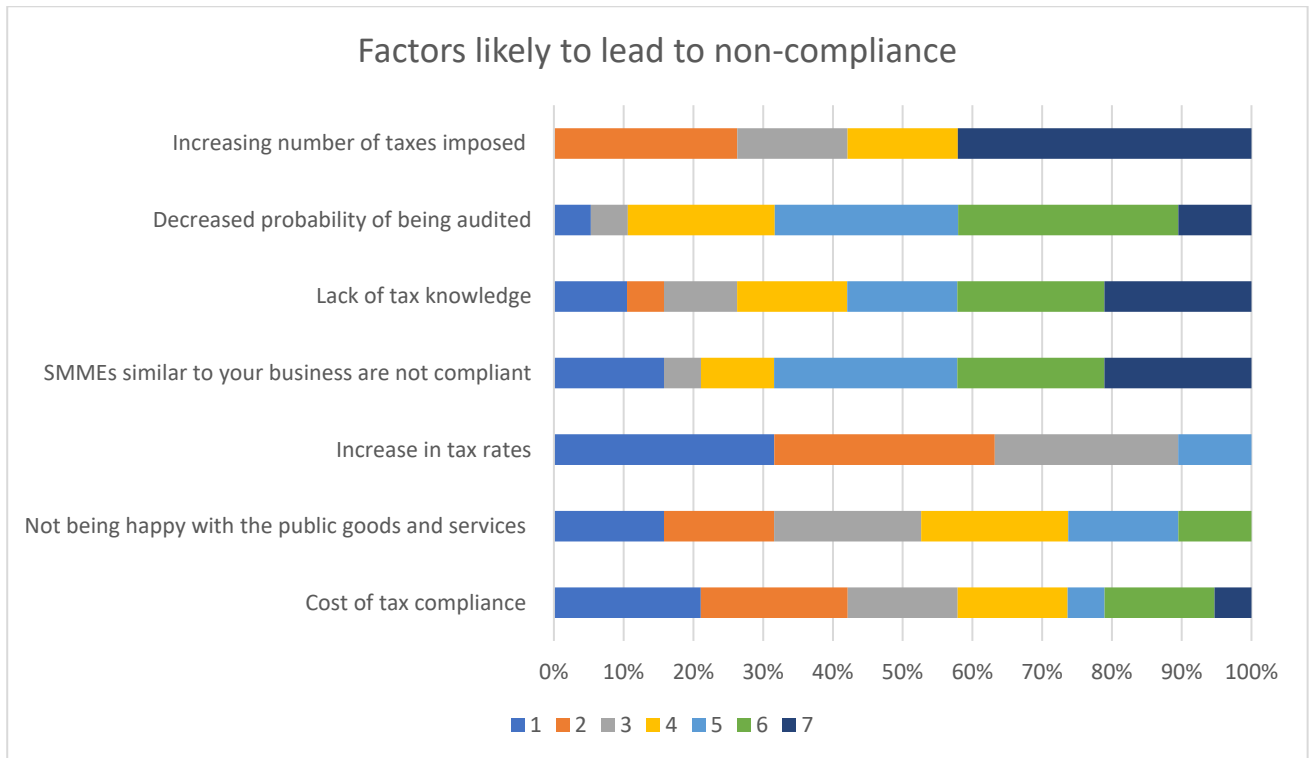**Figure 12: Analysis of factors that are likely to lead to non-compliance**



Figure 12 shows that more than 30 percent of the participants selected an increase in tax rates as the factor most likely to lead to non-compliance followed by cost of compliance at 21 percent. 42 percent of the participants ranked increasing the number of taxes imposed by the government among the least likely factors that would discourage taxpayer compliance. These results highlight the sensitivity of the participants to cash outflows and suggest that carrots may be introduced to effectively reduce the cash outflow associated with tax compliance.

**Mean analysis of the factors that are likely to discourage a SME from being tax compliant**

Participants were requested to rank seven factors that are likely to discourage their business from being tax compliant with number 1 being the most likely factor and number 7 being the least likely factor. By using this ranking approach, the factor with the lowest mean would be the factor that was ranked as the most discouraging factor for a SME to be tax compliant while the factor with the highest mean would be the least discouraging factor for a SME to

be tax compliant. The results of the mean analysis are presented in Table 4, in ascending order.

Based on the results presented in Table 4, it can be noted that an increase in tax rates has the lowest mean at 2,26 and is, therefore, considered to be the factor that would most likely discourage SMEs to be tax compliant. The decreased probability of being audited would be the least likely discouraging factor for a SME to be tax compliant having the highest mean of 5. The mean analysis further supports the observations noted in the analysis of Figure 12.

**Table 4: Factors that encourage tax non-compliance**

| Factor | Mean | Std. Deviation |
|---|---|---|
| Increase in tax rates | 2,26 | 1,240 |
| Cost of tax compliance for example paying someone to assist the business with filing tax returns | 3,32 | 1,945 |
| Not being happy with the public goods and services currently being provided | 3,37 | 1,606 |
| Increasing number of taxes imposed by the government tax burden | 4,58 | 2,219 |
| Lack of tax knowledge | 4,68 | 1,974 |
| If most SMEs that are similar to your business are not compliant | 4,79 | 2,016 |
| Decreased probability of being audited | 5,00 | 1,453 |

## 4.3. INFERENTIAL ANALYSIS

As mentioned in chapter 3, inferential statistics making use of cross tabulation were used to make inferences about the primary data collected. In this part, a test of statistical significance is performed to determine whether the gender and occupation of the SME representatives have any association with the option selected as a reason to comply with the tax laws in South Africa.

The statistical test generally used to test for association is the Pearson chi-square test of independence. According to Turney (2022) "Pearson's chi-square tests are non-parametric tests for categorical variables". Covert, Haines and Merk (n.d.) highlight that the Pearson chi-square statistic is highly sensitive to sample size, and it is thus recommended that the

statistic be used in circumstances where the sample size is 50 units or more. In circumstances where the sample size is 50 units or less, the Fisher's exact test is a recommended statistic (Covert, Haines & Merk, n.d.). In this study, the Fisher's exact test is used; the sample size consisted of 19 responses.

Fisher's exact test can be described as a statistical test that is conducted to establish whether there are non-random associations between two discrete variables (Weisstein, 2022). Fisher's exact test is typically employed in a set of autonomous test statistics where the null hypothesis is the same (Wikipedia, n.d.). Hypothesis testing, using Fisher's exact test, is used to determine the association between gender and the reason(s) for complying with tax laws in South Africa as well as the occupation and the reason(s) for complying with tax laws in South Africa. The generally accepted level of statistical significance is *P Value=0.05*.

**Association between the gender of SME representatives and the reason(s) why the participants think SMEs similar to their business would comply with tax laws**

Table 5 shows the results of the association between gender and reason(s) for complying with tax laws.

**Table 5: Association between gender and reason(s) for complying with tax laws**

| Cross-tabulation variables | Fisher test exact significance (p-value) | Result |
|---|---|---|
| Gender and the fear of penalties | 0.370 | Do not reject the null hypothesis at the 5% level of significance |
| Gender and the risk of being selected for an audit | 1,000 | Do not reject the null hypothesis at the 5% level of significance |
| Gender and the willingness to fulfil moral obligation | 0,656 | Do not reject the null hypothesis at the 5% level of significance |
| Gender and the need for a tax clearance certificate to conduct business | 1,000 | Do not reject the null hypothesis at the 5% level of significance |

**Gender and the fear of penalties**

The hypotheses tested are:

$H_0$: There is no association between gender and the fear of penalties as a reason for complying with tax laws.

$H_1$: There is an association between gender and the fear of penalties as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, that there is no statistically significant association between gender and the fear of penalties as a reason for complying with tax laws.

However, due to the very small sample size and low power of the test, the cross tabulation of the participants that selected this reason, showed that more males (66.7 percent) compared to 33.3 percent of females selected this reason. The strength of the association (0.267) as measured by Cramer V is indicative of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

**Gender and the risk of being selected for an audit**

The hypotheses tested are:

$H_0$: There is no association between gender and the risk of being selected for an audit as a reason for complying with tax laws.

$H_1$: There is an association between gender and the risk of being selected for an audit as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, that there is no statistically significant association between gender and the risk of being selected for an audit as a reason for complying with tax laws.

However, due to the very small sample size and low power of the test, the cross tabulation of the participants that selected this reason, showed that more males (57.1 percent) selected this reason compared to 42.9 percent females. The strength of the association (0.069) as measured by Cramer V is characteristic of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

**Gender and the willingness to fulfil moral obligation**

The hypotheses tested are:

H0: There is no association between gender and the willingness to fulfil moral obligation as a reason for complying with tax laws.

H1: There is an association between gender and the willingness to fulfil moral obligation as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, there is no statistically significant association between gender and the willingness to fulfil moral obligation as a reason for complying with tax laws.

However, due to the very small sample size and low power of the test, by studying the cross tabulation of the participants that selected this reason, it is noted that more females (55.6 percent) selected this reason compared to 44.4 percent males. The strength of the association (0.156) as measured by Cramer V is indicative of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

**Gender and the need for a tax clearance certificate to conduct business**

The hypotheses tested are:

H0: There is no association between gender and the need for a tax clearance certificate to conduct business as a reason for complying with tax laws.

H$_1$: There is an association between gender and the need for a tax clearance certificate to conduct business as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, there is no statistically significant association between gender and the need for a tax clearance certificate to conduct business as a reason to comply with tax laws.

However, due to the very small sample size and low power of the test, by studying the cross tabulation of the participants that selected this reason, it is noted that 50 percent males and 50 percent females selected this reason. The strength of the association (0.088) as measured by Cramer V is characteristic of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

**Association between the occupation of a SME representative (i.e., owner or employee) with reason(s) why the participants are of opinion that SMEs like their business would comply with tax laws**

Table 6 shows the results of the association between occupation and reason(s) for complying with tax laws.

**Table 6: Association between occupation and reason(s) for complying with tax laws**

| Cross-tabulation variables | Fisher test exact significance (p-value) | Result |
|---|---|---|
| Occupation and the fear of penalties | 1,000 | Do not reject the null hypothesis at the 5% level of significance |
| Occupation and risk that you may be selected for an audit | 0,173 | Do not reject the null hypothesis at the 5% level of significance |
| Occupation and willingness to fulfil moral obligation | 0,170 | Do not reject the null hypothesis at the 5% level of significance |
| Occupation and need tax clearance certificate to conduct business | 0.305 | Do not reject the null hypothesis at the 5% level of significance |

**Occupation and the fear of penalties**

The hypotheses tested are:

$H_0$: There is no association between occupation and the fear of penalties as a reason for complying with tax laws.

$H_1$: There is an association between occupation and the fear of penalties as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, that there is no statistically significant association between occupation and the fear of penalties as a reason for complying with tax laws.

However, due to the very small sample size and low power of the test, the cross tabulation of the participants that selected this reason showed that more owners (66.7 percent) selected this reason compared to 33.3 percent employees. The strength of the association (0.069) as measured by Cramer V is indicative of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

**Occupation and the risk that you may be selected for an audit**

The hypotheses tested are:

$H_0$: There is no association between occupation and the risk of being selected for an audit as a reason for complying with tax laws.

$H_1$: There is an association between occupation and the risk of being selected for an audit as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, that there is no statistically significant association between occupation and the risk of being selected for an audit as a reason for complying with tax laws.

However, due to the very small sample size and low power of the test, by studying the cross

tabulation of the participants that selected this reason, it is noted that more owners (85.7 percent) selected this reason compared to 14.3 percent employees. The strength of the association (0.357) as measured by Cramer V is characteristic of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

**Occupation and the willingness to fulfil moral obligation**

The hypotheses tested are:

$H_0$: There is no association between occupation and the willingness to fulfil moral obligation as a reason for complying with tax laws.

$H_1$: There is an association between occupation and the willingness to fulfil moral obligation as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, there is no statistically significant association between occupation and the willingness to fulfil moral obligation as a reason for complying with tax laws.

However, due to the very small sample size and low power of the test, by studying the cross tabulation of the participants that selected this reason, it is noted that more employees (55.6 percent) selected this reason compared to 44.4 percent owners. The strength of the association (0.368) as measured by Cramer V is indicative of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

**Occupation and the need for a tax clearance certificate to conduct business**

The hypotheses tested are:

$H_0$: There is no association between occupation and the need for a tax clearance certificate to conduct business as a reason for complying with tax laws.

$H_1$: There is an association between occupation and the need for a tax clearance certificate to conduct business as a reason for complying with tax laws.

The results indicated that, as the significance value was above 0.05, that there is no statistically significant association between occupation and the need for a tax clearance certificate to conduct business as a reason to comply with tax laws.

However, due to the very small sample size and low power of the test, by studying the cross tabulation of the participants that selected this reason, it is noted that more owners (71.4 percent) selected this reason compared to 28.6 percent employees. The strength of the association (0.287) as measured by Cramer V is indicative of a small effect as the degrees of freedom is 1 ((2-1)*(2-1)).

## 4.4. DISCUSSION

The findings drawn from the analysis performed above are now discussed. The findings are discussed in the context of the research objectives and the findings of similar studies as discussed in the literature review set out in chapter 2.

The research objectives of this study, as formulated in chapter 1 are as follows:

- to determine SMEs perceived effectiveness of carrots compared to sticks on tax compliance.
- to determine which factors are perceived by SME taxpayers as likely to encourage tax compliance; and
- to determine which factors are perceived by SME taxpayers as likely to discourage tax compliance.

The discussion will follow the sequence of the research objectives.

## 4.4.1. TO DETERMINE SMEs PERCEIVED EFFECTIVENESS OF CARROTS IN COMPARISON TO STICKS ON TAX COMPLIANCE

In accordance with the results of this study as presented in Figure 2 (page 33), Figure 7 (page 39), Figure 8 (page 40), Table 3 (page 44), and Table 4 (page 47), it appears that SMEs perceive carrots compared to sticks to be more likely to positively influence tax

compliance. In Figure 2 on page 33 a stacked bar chart of the results of an analysis of the factors perceived to impact taxpayer compliance was presented. It was noted that the top ranked factors included reducing tax rates and rewards such as fixed monetary rewards for being tax compliant. These factors are considered to be carrots.

An analysis of the factors that are likely to encourage or discourage tax compliance was performed and presented in stacked bar charts in Figure 7 (page 39) and Figure 8 (page 40). It was also noted that the participants are sensitive to the factors considered to be carrots compared to factors that are considered to be sticks in making their compliance decision. The two factors selected by participants as likely to encourage tax compliance were a decrease in tax rates, and monetary rewards if tax compliant for a number of years. The two factors selected by the participants as likely to discourage tax compliance were an increase in tax rates, and the increased cost associated with being tax compliant.

In a study performed by Bazart and Pickhardt (2009), it was found that using carrots such as a reward scheme has a positive impact on the taxpayer compliance decision, The observations in this study thus align with available literature on the subject of tax compliance.

## 4.4.2. TO DETERMINE THE FACTORS THAT ARE PERCEIVED BY SME TAXPAYERS AS LIKELY TO ENCOURAGE TAX COMPLIANCE

The survey participants were requested to rank nine factors that are likely to encourage the business to be tax compliant. The first factor was the most likely factor to encourage tax compliance while the last factor was the least likely factor to encourage tax compliance.

The results were presented In Table 3 on page 44, and it was evident that the participants are more sensitive to carrots as they regard the best two encouraging factors for tax compliance as a decrease in tax rates, and monetary rewards if tax compliant for a number of years. The participants considered the sticks less important in encouraging tax compliance compared to the carrots as they are ranked below the carrots in the order of importance.

According to Chau and Leung (2009:35), tax rates are among the factors that affect SME tax compliance. In an experiment conducted by Rillstone (2015), it was noted that rewards

for tax compliance have a positive impact on tax compliance decisions. The observations noted in Table 3 on page 44 are, therefore, supported by the available literature on the subject of tax compliance.

Nudges from SARS (i.e., communication from SARS) and social norms (compliance of similar SMEs) are considered as the least encouraging factors to tax compliance.

### 4.4.3. TO DETERMINE WHICH FACTORS ARE PERCEIVED BY SME TAXPAYERS AS LIKELY TO DISCOURAGE TAX COMPLIANCE

The participants were requested to rank seven factors that are likely to discourage their business from being tax compliant. The first factor was the most likely factor to discourage tax compliance while the last factor was the least likely factor to discourage tax compliance. The results were presented In Table 4 on page 47, and it was noted that the participants are more sensitive to cash outflows associated with tax compliance.

The participants rated the increase in tax rates, the costs of tax compliance such as costs to outsource the tax compliance function, and an increased tax burden through increased number of taxes as the major factors that may discourage their compliance with tax laws.

These observations are in line with the literature reviewed. Mas'ud, Aliyu, Gambo, Al-Qudah and Al Sharar (2014) found that there is a negative relationship between the tax rate and the tax compliance of a SME because the higher the tax rate, the more likely it is for the SME to evade taxes which contributes to tax non-compliance. Smulders, Stiglingh, Franzsen and Fletcher (2016) allude to the fact that a SME's lack of internal resources for tax compliance may lead to non-compliance due to the costs associated with the use of external service providers.

The participants also ranked the lack of service delivery despite their tax compliance as a factor that can largely discourage them to be tax compliant. According to Umar, Derashid, and Ibrahim (2017) the provision of services by the government is considered a carrot in the carrot versus stick comparison. This emphasises the observation that carrots are perceived to be more effective in comparison to sticks in encouraging tax compliance.

The participants ranked their lack of knowledge, decreased probability of auditing, and a situation where most SMEs similar to their business are not tax compliant as the factors that would discourage them the least from being tax compliant. The participants are therefore less sensitive to sticks.

## 4.5. CONCLUSION

In this study the perceived effectiveness of carrots in comparison to sticks on tax compliance of SME taxpayers in South Africa were examined including the factors that are likely to encourage or discourage tax compliance of SME taxpayers. A descriptive and inferential analysis were conducted to conclude on the perceptions of the SME taxpayer participants and the factors they consider encouraging or discouraging in making their tax compliance decision.

From the analyses it was found that the SME taxpayers perceive carrots compared to sticks to be more effective in encouraging tax compliance. The participants also consider the factors that are classified as carrots as the factors most likely to impact their tax compliance decision.

# CHAPTER 5:
# CONCLUSION

## 5.1.   INTRODUCTION

This study sought to examine the perceived effectiveness of carrots in comparison to sticks in improving tax compliance of SMEs in South Africa. In chapter 4, a descriptive and inferential analysis of the primary data was conducted. The results of the analyses were presented and discussed. This chapter concludes the study with a discussion of the findings and conclusions, the limitations of this study, recommendations for future research, the benefits and importance of the study, and the assumptions made in conducting the study. The discussion closes with concluding remarks.

## 5.2.   SUMMARY OF FINDINGS AND CONCLUSION

In this study three research objectives were formulated in response to the research question. The outcomes of the study are presented per research objective below and an overall conclusion is provided thereafter.

**To determine the SME perceived effectiveness of carrots in comparison to sticks on tax compliance**

Based on the descriptive and inferential analyses conducted, SME taxpayers perceive carrots to be more effective in comparison to sticks in encouraging tax compliance. The SME taxpayers ranked the factors that have characteristics of carrots highly when asked to rank factors they perceived to impact their tax compliance, factors that are likely to encourage tax compliance and factors that are likely to discourage tax compliance respectively. Consequently, they are more sensitive to carrots in comparison to sticks in their tax compliance decision.

**To determine which factors are perceived by SME taxpayers as likely to encourage tax compliance**

The inferential analysis conducted has shown that SME taxpayers perceive factors characterised as carrots as the most likely factors to encourage their tax compliance, hence SME taxpayers are more sensitive to carrots in their tax compliance decision.

**To determine which factors are perceived by SME taxpayers as likely to discourage tax compliance**

The inferential analysis conducted has shown that SME taxpayers perceive factors with the characteristics of carrots as the most likely factors to discourage their tax compliance, hence SME taxpayers are more sensitive to carrots in their tax compliance decision.

## 5.3.    LIMITATIONS OF THE CURRENT STUDY

The study had the following limitations:

- Limited responses were obtained from the target population due to time constraints and reluctancy of the target population to participate in this study.
- Due to the limited responses, the researcher was limited to statistical analysis tools that are suitable for small samples.
- The sample size was not representative of the South African SMEs (i.e., the population) as the participants in this study were all based in the Eastern Cape Province thus the conclusions cannot be generalised to the whole population.
- Despite an extensive review of literature, the review was not exhaustive.

## 5.4.    FUTURE RESEARCH RELATED TO THE TOPIC

The following are recommendations for future research in relation to the study:

- The perceptions of the effectiveness of carrots in comparison to sticks on tax compliance of multinational companies in South Africa.

- The perception of the effectiveness of carrots in comparison to sticks to tax compliance for different tax types.

- The perception of the effectiveness of carrots in comparison to sticks on tax compliance of companies in a specific industry such as the construction industry.


## 5.5.    BENEFITS AND IMPORTANCE OF THE CURRENT STUDY

The following important areas and benefits of this study were identified:

- Tax authorities generally focus on deterrence measures such as tax audits, which come at a cost to encourage taxpayer compliance. In this study the perceived effectiveness of deterrence measures in comparison to measures that encourage voluntary tax compliance were examined.

- Based on available information, a study of this topic has not been performed in South Africa.

- Tax compliance is important for any government and the results of the study provide insight into the factors perceived by taxpayers to encourage tax compliance.


## 5.6.    ASSUMPTIONS MADE IN THE STUDY

The following assumption were made in the study:

- The participants were able to interpret and understand the questions provided, thus the responses can be relied upon.

- The participants were honest and ethical in their responses and did not attempt to influence the outcomes of this study for personal reasons.


## 5.7.    CONCLUDING REMARKS

SME taxpayers perceive carrots to be more effective than sticks in encouraging tax compliance. SME taxpayers are more sensitive to carrots compared to sticks as they highly rate factors that have characteristics of carrots to encourage their compliance with tax laws.

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# APPENDIX A:
## DECLARATION OF PLAGIARISM

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

## DEPARTMENT OF TAXATION

| Declaration Regarding Plagiarism |
|---|

The Department of Taxation emphasises integrity and ethical behaviour with regard to the preparation of all written assignments. Although the lecturer will provide you with information regarding reference techniques, as well as ways to avoid plagiarism (see the *"Guidelines on Referencing"* document), you also have a responsibility to fulfil in this regard. Should you at any time feel unsure about the requirements, you must consult the lecturer concerned before submitting an assignment.

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

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

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

For the period that you are a student at the Department of Taxation, the following declaration must accompany <u>all</u> written work that is submitted for evaluation. No written work will be accepted unless the declaration has been completed and is included in the particular assignment.

| Student | |
|---|---|
| I (full names & surname): | Chuma Njomeni |
| Student number: | 12199967 |

## Declare the following:

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

| Chuma Njomeni | |
|---|---|
| **Signature** | |

**Section A: Demographic Details**

**Instructions:**

Participant, please tick the most appropriate answer based on your opinion in connection with Section A.

**Acronyms:**

SME – Small and Medium Sized Enterprises

**Question 1:**

Gender: Male ☐          Female ☐          Other ☐          Prefer not to say ☐

**Question 2:**

Please provide your age in the field below:

☐

**Question 3:**

Please select your appropriate level of education:

| | |
|---|---|
| Not matriculated | |
| Matriculated | |
| Diploma | |
| Undergraduate Degree | |
| Honor's Degree | |
| Master's Degree | |
| PhD Degree | |

**Question 4:**

Taxpayer status: Individual ☐          SME representative/employee/owner ☐

(If you are a representative/employee/owner of a SME please select SME representative/ employee/owner if you are in charge or assist with the tax compliance of the business)

**Question 5:**

If you have selected SME representative/employee/owner in question 4, please select the appropriate sector in which the business operates in.

| | |
|---|---|
| Manufacturing | |
| Retail | |
| Construction | |
| Agricultural | |
| Professional services | |
| Transportation | |
| Other: …………………. | |

**Question 6:**

If you have selected SME representative/employee/owner in question 4, please select the appropriate occupation/role you are fulfilling in the business.

| | |
|---|---|
| Owner | |
| Manager | |
| Accountant | |
| Other: …………………. | |

## Section B: Tax Compliance Determinants

**Instructions:**

Participant, please tick the most appropriate answer based on your opinion in connection with Section B.

**Part A: SMEs**

**Question 1:**

How would you rate your knowledge of the tax laws related to your business?
1. Excellent     2. Very Good          3. Fair                    4. Poor        5. Very Poor

**Question 2:**

If you have selected poor or very poor in Question 1, to what extent do you agree that your lack of knowledge on tax matters prevents your business from being fully tax compliant?
1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

**Question 3:**

On a scale from 1 to 5, 1 being Strongly Agree and 5 being Strongly Disagree, indicate how much you agree to the following statements:

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| The fear of penalties prevents your business from being non-compliant with tax laws | | | | | |
| Reducing tax rates will increase your business's tax compliance level | | | | | |
| Increasing tax rates will encourage you as the representative of your business to adopt tax avoidance strategies | | | | | |
| The likelihood of a Tax Audit encourages your business to be tax compliant in terms of accuracy | | | | | |

| Convenient payment arrangements with SARS would encourage SMEs like your business to pay their tax debts | | | | | |
|---|---|---|---|---|---|
| Incentives such as lower probabilities of being audited as a result of being tax compliant for a fixed number of years would encourage SMEs like your business to be tax compliant | | | | | |
| Rewards such as a fixed monetary reward for being tax compliant would motivate SMEs like your business to be voluntary tax compliant | | | | | |
| Perceived high level of government corruption in South Africa affects your business's willingness to comply with tax laws | | | | | |

**Question 4:**

Please select a reason(s) why you think SMEs like your business would comply with tax laws:

1. Fear of penalties
2. Risk that you may be selected for an audit
3. Willingness to fulfil moral obligation
4. Need tax clearance certificate to conduct business
5. Other (specify)…….

**Question 5:**

How would you rate your business's likelihood to be tax compliant if most SMEs similar to yours are tax compliant?

1. Very likely 2. Likely 3. Somewhat likely 4. Unlikely 5. Very unlikely

**Question 6:**

To what extent do you agree that the ease of e-filing tax returns contributes to SMEs filing their returns on time?

1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

**Question 7:**

How satisfied is your business with the services provided by SARS to facilitate the filing of returns and payment of taxes?

1. Not at all
2. Partly
3. Satisfied

**Questions 8:**

Please rank the factors below that are likely to lead to your business being tax **compliant** 1 being (most likely) and 9 being (least likely)

| | |
|---|---|
| Probability of interest and penalties if found to be tax non-compliant | |
| Public goods and services provided by government | |
| Probability of being audited | |
| If most SMEs that are similar to your business are tax compliant | |
| Decrease in tax rates | |
| SARS workshops aimed at assisting SMEs with understanding their tax obligations | |
| Personal messages from SARS to remind you of tax return filing deadlines | |
| Monetary rewards if tax compliant for a number of years | |
| Personal messages from SARS to remind you of an outstanding tax debt | |

**Question 9:**

Please rank the factors below that are likely to lead to your business being tax **non-compliant** 1 being (most likely) and 7 being (least likely)

| | |
|---|---|
| Cost of tax compliance (for example paying someone to assist the business with filing tax returns) | |
| Not being happy with the public goods and services currently being provided by government | |
| Increase in tax rates | |
| If most SMEs that are similar to your business are not compliant | |
| Lack of tax knowledge | |
| Decreased probability of being audited | |
| Increasing number of taxes imposed by the government (tax burden) | |

Source: (Poonam, 2019)

**LIST OF REFERENCES**

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**Faculty of Economic and Management Sciences**

**Combined Letter of Introduction and Informed Consent**

**Dept. of Taxation**

**Title of the study**

*The perception of the effectiveness of carrots in comparison to sticks on tax compliance.*

<u>Research conducted by</u>:

Mr NJ Robbertse & Mr C Njomeni

Dear Participant

You are invited to participate in an academic research study conducted by Mr NJ Robbertse and Mr C Njomeni, Master students in the Faculty of Economic and Management Sciences at the University of Pretoria.

The purpose of the study is to analyse the perception of the effectiveness of carrots in comparison to sticks on tax compliance in South Africa regarding individual taxpayers and Small and Medium Sized Business Enterprises.

Please note the following:

- This is an <u>anonymous</u> study survey as your name will not appear on the questionnaire. The answers you give will be treated as strictly <u>confidential</u> as you cannot be identified in person based on the answers you give.

- Your participation in this study is very important to us. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.

- Please answer the questions in the questionnaire as completely and honestly as possible. This should not take more than 20 minutes of your time.

- The results of the study will be used for academic purposes only and may be published in an academic journal. We will provide you with a summary of our findings on request.

Please feel free to contact our supervisor, Doctor Nompumelelo Monageng at mpumi.monageng@up.ac.za, if you have any questions or comments regarding the study.

Please indicate below by selecting "I consent to take part in this study" by confirming that:

- You have read and understand the information provided above.
- You give your consent to participate in the study on a voluntary basis and you are 18 years or older.