

WHAT DRIVES THE TAX COMPLIANCE LEVELS OF SOLE TRADERS IN SOUTH AFRICA?

QU'EST-CE QUI DÉTERMINE LE NIVEAU DE DISCIPLINE FISCALE DES OPÉRATEURS INDIVIDUELS EN AFRIQUE DU SUD ?

O QUE DETERMINA OS NÍVEIS DE CUMPRIMENTO FISCAL DOS COMERCIANTES INDIVIDUAIS NA ÁFRICA DO SUL?

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ABSTRACT

The study examined the drivers of levels of tax compliance of sole traders in South Africa. The study adopted a quantitative research approach where a sample of 500 sole traders was selected from a database of 146 075 active sole traders for the fiscal year 2020/21. A survey questionnaire was used to collect primary data from the participants. Only 194 sole traders responded to the questionnaire, resulting in a response rate of 39 per cent. Descriptive and inferential statistics, as well as multiple linear regression, were used to conduct the analysis. The study revealed that the tax compliance level of sole traders is influenced by whether their friends and relatives pay all their taxes and whether they have too much debt, which discourages tax compliance. The study recommended targeted taxpayer education and awareness, tax alleviation measures for sole traders, and government transparency in expenditure management policy, amongst other things. The study makes an important contribution to the body of knowledge in this research area and provides much-needed insights into how to improve the tax compliance levels of sole traders.

Keywords: drivers, sole traders, tax compliance

RÉSUMÉ

L'étude a examiné les facteurs qui déterminent les niveaux de discipline fiscale des opérateurs individuels en Afrique du Sud. L'étude a adopté une approche de recherche quantitative dans laquelle un échantillon de 500 opérateurs individuels a été sélectionné à partir d'une base de données de 146 075 opérateurs individuels

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actifs au cours de l'exercice fiscal 2020/21. Un questionnaire d'enquête a été utilisé pour recueillir des données primaires auprès des participants. Seuls 194 opérateurs individuels ont répondu au questionnaire, ce qui représente un pourcentage de réponse de 39 %. Des statistiques descriptives et inférentielles, ainsi qu'une régression linéaire multiple ont été utilisées pour réaliser l'analyse. L'étude a révélé que le niveau de discipline fiscale des opérateurs individuels est influencé par le fait que leurs amis et parents paient tous leurs impôts et qu'ils sont très endettés, ce qui les dissuade de se plier à la discipline fiscale. L'étude recommande, entre autres, une éducation et une sensibilisation ciblées des contribuables, des mesures d'allègement fiscal pour les opérateurs individuels et une politique transparente de gestion des dépenses de la part du gouvernement. L'étude apporte une contribution importante à l'ensemble des connaissances dans ce domaine de recherche et fournira des indications précieuses sur la manière d'améliorer les niveaux de discipline fiscale des opérateurs individuels.

Mots-clés : conducteurs, opérateurs individuels, discipline fiscale

RESUMO

O estudo examinou os factores que determinam os níveis de cumprimento das obrigações fiscais dos comerciantes individuais na África do Sul. O estudo adoptou uma abordagem de investigação quantitativa, tendo sido seleccionada uma amostra de 500 comerciantes individuais a partir de uma base de dados de 146 075 comerciantes individuais activos para o ano fiscal de 2020/21. Foi utilizado um inquérito por questionário para recolher dados primários dos participantes. Apenas 194 comerciantes individuais responderam ao questionário, o que resultou numa taxa de resposta de 39%. Para efectuar a análise, foram utilizadas estatísticas descritivas e inferenciais, bem como a regressão linear múltipla. O estudo revelou que o nível de cumprimento fiscal dos empresários em nome individual é influenciado pelo facto de os seus amigos e familiares pagarem todos os seus impostos e de terem demasiadas dívidas, o que desencoraja o cumprimento fiscal. O estudo recomendou uma educação e sensibilização dos contribuintes, medidas de alívio fiscal para os comerciantes individuais e a transparência do governo na política de gestão das despesas, entre outros aspectos. O estudo dá um contributo importante para o conjunto de conhecimentos nesta área de investigação e fornecerá as informações necessárias para melhorar os níveis de cumprimento fiscal dos empresários em nome individual.

Palavras-chave: condutores, empresários em nome individual, cumprimento das obrigações fiscais

I INTRODUCTION AND BACKGROUND

Revenue authorities worldwide have an important responsibility to ensure that taxpayers understand their obligations under the revenue laws. Every taxpayer should adhere to the four broad categories of compliance as defined by the Organisation for Economic Co-operation and Development (OECD), namely (i) registration in the system, (ii) timely filing or lodgement of requisite taxation information, (iii)

reporting of complete and accurate information and (iv) payment of taxation obligations on time. If a taxpayer fails to meet any of these obligations, they may be tax non-compliant.

In South Africa, the South African Revenue Service (SARS) has set out its strategic intent as 'voluntary compliance' (SARS, 2020, 5). Sole traders are among the different types of business ownerships within the small, micro and medium enterprise (SMME) segment. Others are partnerships, companies, trusts and cooperatives. In developing countries such as South Africa, failure to meet tax obligations by sole traders is a major challenge that hinders the maximisation of revenue collection. Currently, sole traders only contribute to 0.35 per cent of the total revenue collected from SMMEs. In South Africa, most tax compliance studies have focused on companies, but there is no study by SARS focusing on individuals running their own businesses.

Globally, there is extensive literature on the tax compliance of SMMEs and tax compliance in general. For example, Omary and Pastory (2022), Naicker and Rajaram (2018), Atawodi and Ojeka (2012), and Adeline and Karina (2014) have investigated the determinants of tax compliance among SMMEs. In South Africa, Gcabo and Robinson (2007) have probed the general tax compliance and behavioural response of taxpayers.

This study is therefore necessary, as it will assist SARS in conceiving of interventions to help these taxpayers meet their tax obligations. It is also aimed at creating an atmosphere that encourages sole traders to voluntarily comply with their tax obligations and thereby impact the economy positively.

The remaining sections of this paper are organised as follows: section II outlines the research objectives, section III discusses the significance of the study, section IV presents the literature review, and section V outlines the research design and methodology adopted in the study. The research findings are discussed in section VI, while the conclusions and recommendations are presented in section VII. Section VIII explores the policy recommendations. Suggestions for further research work are provided in section IX.

II RESEARCH OBJECTIVES

The main objective of this study is to understand the drivers of sole traders' tax compliance. The following specific objectives will help to address the broader objective of the study:

- understanding the characteristics of sole traders in South Africa
- determining the tax compliance level of the sampled sole traders
- determining the drivers of tax compliance in sole traders in South Africa.

III SIGNIFICANCE OF THE STUDY

This study provides much-needed insights into the factors driving sole traders' tax compliance in South Africa and assist SARS in improving sole traders' tax compliance. It will provide further empirical evidence of the effect of the complexity of tax, training, tax knowledge, economic factors, social factors, and institutional factors on sole traders' tax compliance levels.

The results of this research will serve as a useful source of information for reference purposes for students, academics, sole traders, and other interested parties who are conducting further studies on sole traders' tax compliance.

IV LITERATURE REVIEW

Razak and Bidin (2019) investigated factors influencing tax compliance intention among sole proprietors in Malaysia. A quantitative research method was employed using a questionnaire to gather data from the respondents. Non-audited taxpayers were chosen as a sample to measure voluntary compliance instead of enforced compliance. The results show that factors with the potential to influence the intention to comply with tax laws are the taxpayer's attitude, subjective norms, opportunity for non-compliance, probability of being audited, and penalty rates.

Similarly, Maseko (2014) investigated the determinants of tax compliance in small and medium-sized enterprises (SMEs) in Zimbabwe, focusing on how tax knowledge and compliance costs affected tax compliance for the tax period 2009 to 2011. Most of the SMEs that participated in the survey are private limited companies (53.1%), followed by unregistered family businesses (18,8%), sole traders (15.6%), partnerships (9.4%), and, finally, public limited companies (3.1%). The study adopted a qualitative research design, employing in-depth face-to-face interviews. Methodological triangulation was used, utilising the interview method and a questionnaire survey to collect primary data. The results indicated that there is no correlation between tax knowledge and tax registration compliance. There is, however, a weak negative correlation with filing compliance. Compliance costs correlate negatively with tax compliance. There is a strong correlation between Pay-As-You-Earn (PAYE) registration compliance and income tax registration, as well as between PAYE registration compliance and the filing of returns. There was no correlation between PAYE registration and tax knowledge levels.

A study conducted by Naicker and Rajaram (2019) identified the following tax compliance factors for South African SMEs: (i) SARS payment deadlines, (ii) regulations imposed by SARS, (iii) time spent on preparation and submission of tax returns, and (iv) time spent dealing with SARS. The research was conducted using a questionnaire sent to

85 small business owners to determine the most complex taxes and the most excessive challenges and costs which are the most excessive. The study revealed that Value-Added Tax (VAT) is the most complex tax for small South African businesses, and it is also the most costly and challenging. The time owners spent on compliance is perceived to be the most excessive cost incurred in ensuring tax compliance.

Atawodi and Ojeka (2012) investigated factors affecting tax compliance among SMEs in Nigeria. A survey was conducted using questionnaires, and data was collected through personal interviews with 150 SMEs. The results showed that high tax rates and complex filing procedures are the most crucial factors in respect of non-compliance in SMEs. Other factors identified included multiple taxation and a lack of proper understanding. Similarly, Adeline and Karina (2014) analysed factors affecting tax compliance of micro, small and medium enterprises (MSMEs) in Indonesia. A questionnaire was used to collect data from 398 MSME owners in Batam City. Data analyses was undertaken using descriptive statistics and multiple linear regression. The findings indicated that tax morale, tax justice, trust in government, power of authority, tax complexity, tax information, and tax awareness have a significant effect on the intention to comply with tax obligations.

Various authors such as Blumenthal et al (1998), Park and Hyun (2003), and Yong and Hooper (2011) identified the following determinants of tax compliance: (i) tax rates, (ii) tax audits, (iii) perception on government spending, (iv) role of the tax authority and tax administration, (v) simplicity of tax returns, (vi) probability of detection, (vii) awareness on offenses and penalty, and (viii) personal financial constraints.

Furthermore, Mbilla, Gatsi and Ayimpoya (2018) investigated the extent to which institutional factors, economic factors, individual factors, and social factors drive tax compliance among self-employed individuals in Northern Ghana. A quantitative survey was undertaken based on convenience sampling to collect primary data by means of a questionnaire. The results showed the significant positive influence of economic drivers, individual drivers, and social drivers on tax compliance behaviour.

Similarly, Dermawan, Dewi, Astari, Yantari, Rusmiani, Yastini and Widiarini (2020) evaluated the factors affecting the tax compliance levels of taxpayers. The study was aimed at determining the effect of tax socialisation, taxpayer morality, and the modernisation of the tax administration system on the level of individual taxpayer compliance in fulfilling their tax obligations. The study population consisted of all individual taxpayers registered at Pratama Singaraja Tax Service Office, totalling 72 847 people. A quantitative research method was used for the study and a probability sampling technique was employed to select a sample of 346 respondents. Primary data was obtained from a survey

questionnaire. The findings revealed that tax socialisation variables, taxpayer morality, and the modernisation of the tax administration system each had a positive and significant effect on the level of individual taxpayers' compliance.

In addition, Rabi, Mustafa and Baita (2020) investigated tax compliance determinants in Nigeria using data from agro-allied industries in the Katsina state. A questionnaire was used to collect primary data from 133 agro-allied industries. In addition, multinomial probit model was used to carry out the analysis. The results showed that tax rate, level of income, perceptions of government spending, change in government policy, simplicity of the tax system, and the efficiency of the tax authority were significant determinants of tax compliance. Perceptions of equality and peer influence were found to be insignificant determinants of tax compliance. On the other hand, Jayawardane (2015) examined the influence of psychological factors on tax compliance decisions in Sri Lanka. A literature review was used as the research method. The study indicated that compliance is influenced by psychological factors such as tax morale, social norms, equity and fairness, and perception of government accountability.

This literature review shows that there are several factors driving the tax compliance of sole traders, which can be grouped into social, economic, individual, behavioural, demographic, and institutional factors. These include taxpayers' attitudes toward paying taxes, poor tax morale, subjective norms, social standards, equity and fairness, perception of government accountability and transparency, demographic variables such as age, marital status, educational level, occupational status and gender, perceived behavioural control, and the problem-solving ability and perceptions of taxpayers in respect of the tax system. Economic factors affecting tax compliance include business characteristics, capital structure, level of actual income, the probability of being audited, the complexity of filing procedures, the perceived fairness of the tax system and the complexity of the policy, the level of tax knowledge, fines, penalties and interest rates on tax compliance, high tax rates, and the cost of compliance.

V RESEARCH DESIGN AND METHODOLOGY

The study adopted a quantitative research methodology to determine the drivers of sole traders' tax compliance levels. A survey questionnaire was designed, and the data was collected electronically between 25 November 2022 and 2 December 2022. Secondary data was collected from the South African tax authority (SARS) to draw the sample.

(a) Theoretical model

The relationship between sole traders’ tax compliance and tax complexity, training, tax knowledge, economic factors, institutional factors, and social factors can be represented by the following multiple regression model:

$$TC_t = \beta_0 + \beta_1 TCOMP + \beta_2 TK + \beta_3 EF + \beta_4 IF + \beta_5 SF + \varepsilon_t \quad (1)$$

Where tax compliance (TC) is the dependent variable, the five independent variables or indicators are: (i) tax complexity (TCOMP), (ii) tax knowledge (TK), (iii) economic factors (EF), (iv) institutional factors (IF), and (v) social factors (SF); β_j s are the respective coefficients and ε_t is the error term at a particular point t.

The independent variables in equation 4.1 are factor variables being measured by one or more indicators or variables. Furthermore, the study assumes the formative (that is, indicators that explain the factors) relationship between the factors and their indicators, as presented in Figure 1.

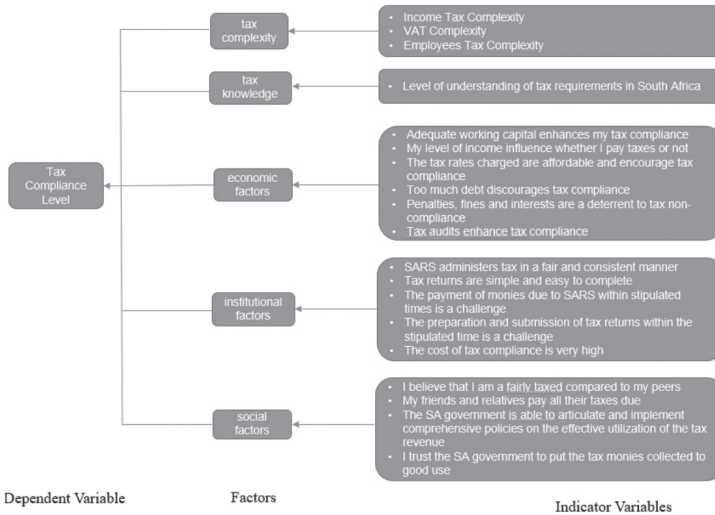


Figure 1: Tax compliance conceptual model

Source: Authors’ own compilation

The training (T) variable was used as the control variable to check the impact of factors on sole traders with and without tax training. However, this study assumes a linear relationship between overall tax compliance and indicators within the various factors of concern. This implies that to build a multiple linear regression, equation 4.1 becomes equation 4.2.

$$\begin{aligned}
 TC_t &= b_0 + b_j \sum_{j=1}^l TCOMP_j + b_j \sum_{j=1}^k TK_j + b_j \sum_{j=1}^r EF_j + b_j \sum_{j=1}^v IF_j + b_j \sum_{j=1}^p SF_j + e_t \\
 TC_t &= b_0 + b_{ij} \sum_{(i,j)=(1,1)}^{(5,2)} FAC_{i,j} + e_t \\
 \widehat{TC}_t &= b_0 + b_{ij} \sum_{(i,j)=(1,1)}^{(5,2)} FAC_{i,j}
 \end{aligned}
 \tag{2}$$

This implies that the error term can be obtained as equation 4.3.

$$\begin{aligned}
 e_t &= TC_t - \left(b_0 + b_j \sum_{j=1}^l TCOMP_j + b_j \sum_{j=1}^k TK_j + b_j \sum_{j=1}^r EF_j + b_j \sum_{j=1}^v IF_j + b_j \sum_{j=1}^p SF_j \right) \\
 e_t &= TC_t - b_0 - b_{ij} \sum_{(i,j)=(1,1)}^{(5,2)} FAC_{i,j} \\
 e_t &= TC_t - \widehat{TC}_t
 \end{aligned}
 \tag{3}$$

Where $Z\exists(l, k, r, v, p)$, l, k, r, v, p are the total number of variables in the factors, b_0 is the constant term, b_1 is the indicator variable coefficient, FAC_{ij} is the variable j of factor e_t , and is the error term at point t or observation t .

However, when the model is built on the actual data obtained, the indicators or variables that are insignificant are dropped (reducing $Z\exists(l, k, r, v, p)$) from the model to allow for a well-representative model selection.

There are several measures of accuracy, including the model with the smallest mean square error, mean percentage error, mean absolute percentage error or mean absolute error, depending on the criterion/criteria that one chooses to use. The most commonly used statistic for multiple linear regression is the coefficient of determinant R^2 which ranges between zero and one; the closer to one, the stronger the model and the closer to zero, the weaker the model (Makridakis, Wheelwright, & Hyndman, 1998).

However, the R^2 for a model with more than one variable creates a problem as the more indicators included, the higher the R_2 becomes. To avoid this problem, the study used the adjusted r-squared (R^{-2}) represented in equation 4.4, which adjusted R^2 and accounted for the number of variables included in the model.

$$R^2 = 1 - ((1 - R^2)(n - 1)/n - k - 1)
 \tag{4}$$

Where n and R are the sample and the number of variables included in the model, respectively.

(b) Hypothesis testing

The effect of tax complexity on sole traders' tax compliance levels.

H₁: The complexity of different tax types has no influence on sole traders' tax compliance levels.

The effect of tax knowledge on sole traders' tax compliance levels.

H₂: A lack of tax knowledge has a negative effect on sole traders' tax compliance levels.

The effect of institutional factors on sole traders' tax compliance levels.

H₃: Institutional factors do not have a significant effect on the tax compliance levels of sole traders.

The influence of social factors on sole traders' tax compliance levels.

H₄: Social factors do not have a significant effect on the tax compliance levels of sole traders.

The impact of economic factors on sole traders' tax compliance levels.

H₅: Economic factors do not have a significant effect on the tax compliance levels of sole traders.

The influence of tax training on sole traders' tax compliance levels.

H₆: Tax training does not influence sole traders' tax compliance levels.

VI RESEARCH FINDINGS

The SARS database was used to collect the response variable data for the chosen sample. The main source of data for the predictor variables was the survey instrument. The survey collected demographic data and data on sole traders' attitudes to tax complexity, training, tax knowledge, economic factors, institutional factors, and social factors. A 5-point Likert scale was used ranging from 1 (Very easy) to 5 (Very complex) for tax complexity; 1 (Not knowledgeable at all) to 5 (Extremely knowledgeable) for tax understanding; and 1 (Strongly disagree) to 5 (Strongly agree) for the different tax compliance factors.

The descriptive statistics involved the use of tables in the form of proportions, mean, median, and standard deviation while inferential statistics involved the use of multiple linear regression.

(a) Demographic analysis

(i) Background information

Gender

The majority of respondents were male (61.3%), followed by females (34%) (Figure 2).

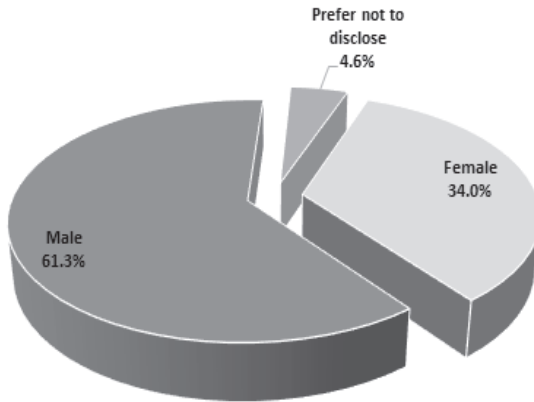


Figure 2: Gender

Source: Sole traders' survey, 2023

Race

As observed from Figure 3, the sample was dominated by white respondents (81%), followed by coloured respondents (6%).



Figure 3: Race

Source: Sole traders' survey, 2023

Age group and level of education

Table 1 shows the age of most of the respondents as follows: 56–64 years (29.4%), 46–55 years (27.3%), and 65 years and above (22.2%). Most respondents had a degree/diploma/BTech (34%) or an honours degree or equivalent (26.8%). More than four per cent of the respondents had a doctorate.

Table 1: Age group and level of education

Education	18-35 years old	36-45 years old	46-55 years old	56-64 years old	65 years old and above	Total
Doctorate	0	3	0	3	2	8
Masters	2	5	6	6	9	28
Honours or equivalent	2	7	19	16	8	52
Degree/diploma/BTech	3	9	17	18	19	66
Post-matric certificate	1	3	6	7	2	19
Grade 12 or lower	1	5	5	7	3	21
Total	9	32	53	57	43	194

Source: *Sole traders' survey, 2023*

Business age and number of employees

As shown in Table 2, most sole traders had been operating for more than ten years (55.2%), and most sole traders had between one and ten employees (59.8%).

Table 2: Business age and number of employees

Business age	Number of employees					Total
	0	1 to 10	11 to 50	51 to 100	No response	
< 1 year	1	0	0	0	0	1
1-2 years	10	8	1	0	0	19
3-5 years	14	16	0	0	0	30
6-10 years	15	19	1	0	0	35
> 10 years	24	71	9	2	1	107
No response	0	2	0	0	0	2
Total	64	116	11	2	1	194

Source: *Sole traders’ survey, 2023*

Annual turnover of sole traders

Most sole traders had an estimated annual turnover of less than or equal to R1 million, followed by 36 per cent with an estimated annual turnover of over R1 million but less than R20 million (Figure 4). This means that 97 per cent of the respondents had an estimated annual turnover of R20 million or less. Only two per cent of sole traders had an annual estimated turnover of more than R1 billion.

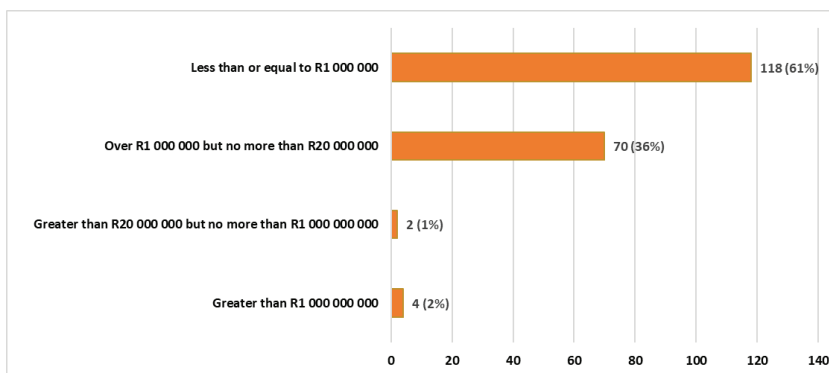


Figure 4: Estimated annual turnover

Source: *Sole traders’ survey, 2023*

Classification of sole traders

Figure 5 shows that 43.3 per cent of sole traders classified their business as other, which ranges from accounting, legal services, business consulting, education, and information technology to advertising. Furthermore, 22.7 per cent of sole traders were in financial services, 11.3 per cent in personal services, 7.7 per cent in agriculture, forestry and fishing, and 7.2 per cent in wholesale and retail trade, catering, and accommodation.

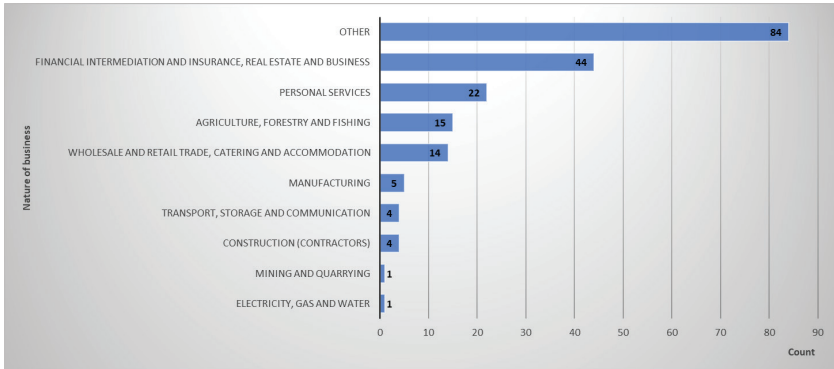


Figure 5: *Nature of the business*

Source: *Sole traders’ survey, 2023*

Geographical location of sole traders

As shown in Figure 6, most businesses were based in Gauteng (35.6%), followed by the Western Cape (27.8%). Additionally, 7.7 per cent of sole traders operated in more than one business location or province while only one individual operated internationally (Eswatini and Lesotho).

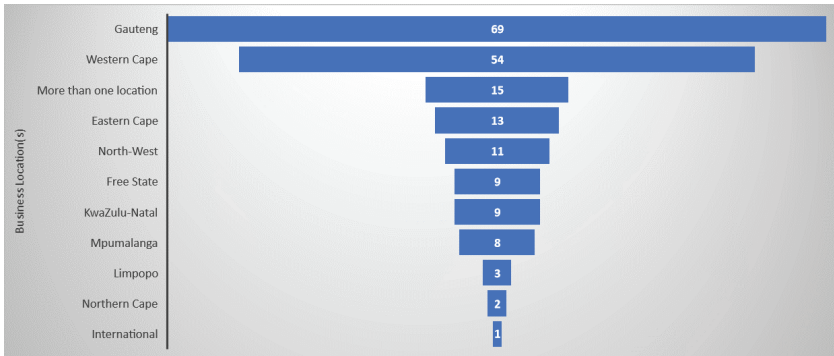


Figure 6: *Operating locations*

Source: *Sole traders’ survey, 2023*

(ii) Tax registration and complexity ranking

Sole traders are registered and liable for a combination of taxes. Generally, most sole traders are registered and liable for income tax, employee tax, and VAT (Figures 7 and 8).

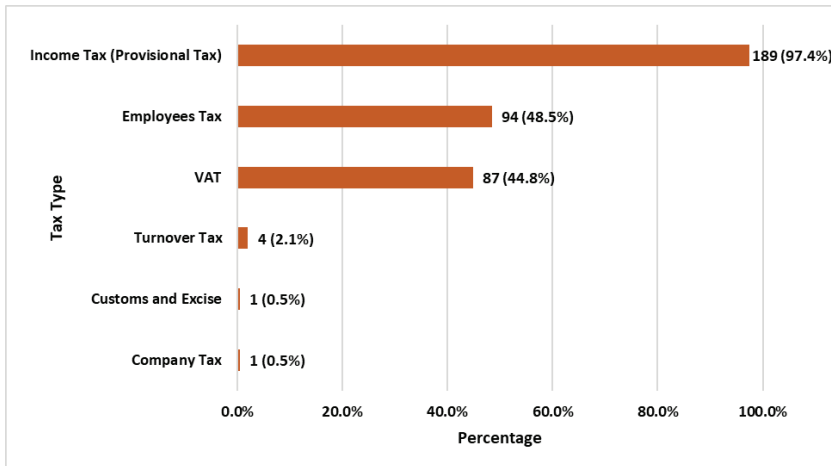


Figure 7: Taxes for which sole traders are registered

Source: Sole traders' survey, 2023

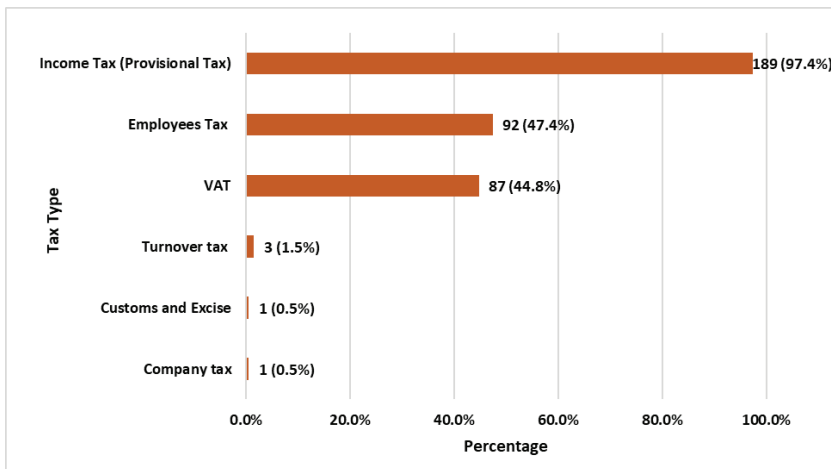


Figure 8: Taxes for which sole traders are liable

Source: Sole traders' survey, 2023

As observed in Figure 9, most respondents found income tax to be more complex (39.7%) or moderately more complex (35.6%) than the other two tax types evaluated. Employee tax was rated easier (28.4%) than the other tax types. Other taxes included by the respondents were turnover tax, capital gains tax, customs and excise tax, dividend tax, estate duty, and securities transfer tax/dividend withholding tax/employment tax incentive.

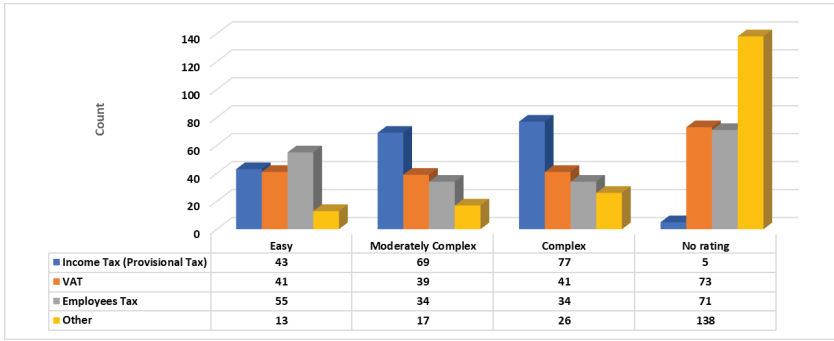


Figure 9: Tax complexity

Source: Sole traders’ survey, 2023

(iii) Tax training and knowledge

Tax training

Eighty-two respondents attended tax training, of which many attended quite frequently (annually) as part of continuing professional development programmes (Figure 10).

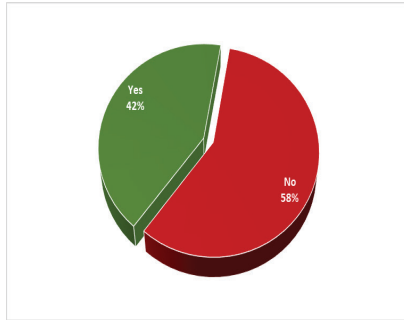


Figure 10: Training attendance

Source: Sole traders’ survey, 2023

Tax knowledge

The respondents were generally knowledgeable about their tax requirements, with 45.9 per cent being moderately knowledgeable, 21.1 per cent being very knowledgeable, 19.1 per cent being slightly knowledgeable, and 10.3 per cent being extremely knowledgeable, as shown in Figure 11.

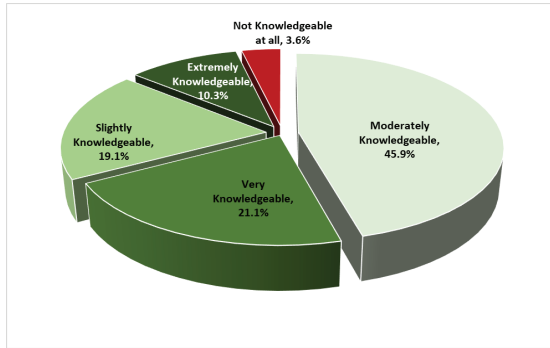


Figure 11: Tax requirements understanding

Source: *Sole traders’ survey, 2023*

(b) Tax compliance levels

Data on the level of compliance of the 194 respondents was obtained from the SARS database. The respondents’ compliance levels ranged from 20 per cent to 100 per cent as shown in Figure 12. Over 70 per cent of the respondents achieved a compliance level of more than 60 per cent, while 44 per cent achieved a compliance level of more than 80 per cent. Finally, 22 respondents (11%) were 100 per cent compliant.

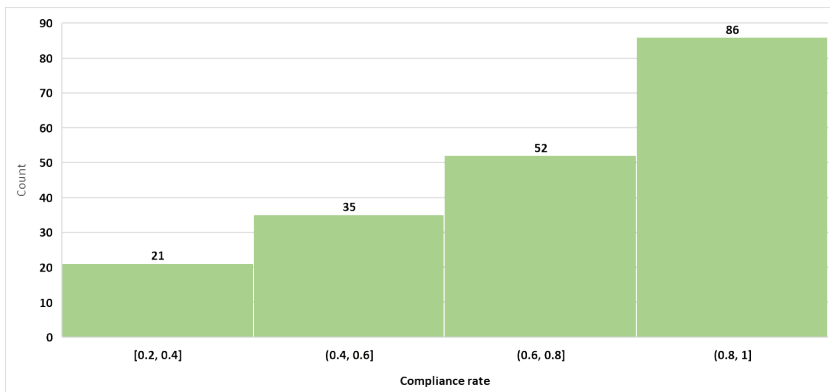


Figure 12: Tax compliance level

Source: *Sole traders’ survey, 2023*

(c) Empirical results

Economic, institutional, and social factors were assessed using a five-point Likert scale ranging from 1 to 5, where 1 indicated ‘Strongly disagree’, 2 indicated ‘Disagree’, 3 indicated ‘Neither agree nor disagree’, 4 indicated ‘Agree’, and 5 indicated ‘Strongly agree’.

Economic factors

The economic factors were tested on the basis of the following six dimensions: (i) 'adequate working capital enhances my tax compliance' (X_{11}), (ii) 'my level of income influences whether I pay taxes or not' (X_{12}), (iii) 'the tax rates charged are affordable and encourage tax compliance' (X_{13}), (iv) 'too much debt discourages tax compliance' (X_{14}), (v) 'penalties, fines and interest are a deterrent to non-tax compliance' (X_{15}), and (vi) 'tax audits enhance tax compliance' (X_{16}). Table 3 indicates that economic factors came to a composite score of 3.13, which implies that economic factors may influence the tax compliance of sole traders. The highest score of 3.44 was on X_{15} , indicating that the respondents somewhat agreed that penalties, fines and interest deter non-tax compliance. The lowest score of 2.55 was on X_{13} showing that, on average, the respondents disagreed that the tax rates levied were affordable and encouraged tax compliance.

Over 44 per cent of the respondents agreed that penalties, fines and interest were a deterrent to non-tax compliance, and 38.7 per cent of the respondents agreed that tax audits improved tax compliance. A further 38.1 per cent of the respondents agreed that adequate working capital increased their tax compliance and more than 30 per cent of the respondents agreed that their level of income influenced whether they paid taxes or not and that too much debt discouraged tax compliance.

Table 3: Economic factors

Dimension	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Min	Max	Mean
X_{11}	10.3%	10.3%	28.4%	38.1%	12.9%	1	5	3.33
X_{12}	19.6%	17.0%	14.9%	34.5%	13.9%	1	5	3.06
X_{13}	23.7%	25.8%	25.8%	21.1%	3.6%	1	5	2.55
X_{14}	9.8%	17.0%	25.3%	32.0%	16.0%	1	5	3.27
X_{15}	7.7%	17.0%	14.9%	44.3%	16.0%	1	5	3.44
X_{16}	11.9%	13.9%	29.4%	38.7%	6.2%	1	5	3.13
Composite score								3.13

Source: Authors' computation

Institutional factors

The institutional factors were assessed on the basis of the following five dimensions: (i) 'SARS administers tax in a fair and consistent manner' (X_{21}), (ii) 'tax returns are simple and easy to complete' (X_{22}), (iii) 'the payment of monies due to SARS within stipulated times is a challenge' (X_{23}), (iv) 'the preparation and submission of tax returns within the stipulated time is a challenge' (X_{24}), and (v) 'the cost of tax compliance is very high' (X_{25}). Table 4 shows that institutional factors

have a composite score of 3.18, indicating that institutional factors may influence sole traders' tax compliance. The highest score of 3.54 was on X₂₅, showing that the respondents somewhat agreed that the cost of tax compliance is very high. The lowest score of 2.89 was on X₂₁, indicating that the respondents were indecisive about whether SARS administers tax fairly and consistently.

Over 45 per cent of the respondents agreed that tax returns were simple and easy to complete, 37.1 per cent of the respondents agreed that the cost of tax compliance was very high and 36.6 per cent of the respondents agreed that SARS administered tax in a fair and consistent manner. The results were evenly split between whether the preparation and submission of tax returns within the stipulated time was a challenge with 34.0 per cent of the respondents agreeing and 30.4 per cent disagreeing.

Table 4: Institutional factors

Dimension	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Min	Max	Mean
X ₂₁	13.9%	26.3%	20.1%	36.6%	3.1%	1	5	2.89
X ₂₂	6.7%	24.7%	20.1%	45.4%	3.1%	1	5	3.13
X ₂₃	5.2%	29.9%	23.2%	29.4%	12.4%	1	5	3.14
X ₂₄	4.6%	30.4%	17.5%	34.0%	13.4%	1	5	3.21
X ₂₅	4.6%	12.9%	25.8%	37.1%	19.6%	1	5	3.54
Composite score								3.18

Source: Authors' computation

Social factors

Social factors were examined across the following four dimensions: (i) 'I believe that I am fairly taxed compared to my peers' (X₃₁), (ii) 'my friends and relatives pay all their taxes due' (X₃₂), (iii) 'the South African government is able to articulate and implement comprehensive policies on the effective utilisation of the tax revenue' (X₃₃), and (iv) 'I trust the South African government to put the tax monies collected to good use' (X₃₄). Table 5 shows a composite score of 2.71, which implies that social factors may or may not influence tax compliance. The highest score of 3.73 was on X₃₂ indicating that the respondents somewhat agreed that their friends and relatives pay all their taxes due. The lowest score of 1.72 was on X₃₄ indicating that the respondents did not trust the South African government to put the tax monies collected to good use.

Furthermore, 79.9 per cent of the respondents did not trust the South African government with tax monies and 59.8 per cent did not believe that the SA government is able to articulate and implement comprehensive policies on the effective utilisation of the tax revenue. Finally, 69.1 per cent of the respondents agreed or strongly agreed that

their friends and relatives paid all their taxes due, and 40.7 per cent believed that they were fairly taxed compared to their peers.

Table 5: Social factors

Dimension	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Min	Max	Mean
X ₃₁	9.8%	12.4%	34.0%	40.7%	3.1%	1	5	3.15
X ₃₂	1.5%	6.2%	23.2%	56.2%	12.9%	1	5	3.73
X ₃₃	37.1%	22.7%	19.6%	19.1%	1.5%	1	5	2.25
X ₃₄	61.3%	18.6%	9.3%	8.8%	2.1%	1	5	1.72
Composite score								2.71

Source: Authors' computation

(i) *Regression model*

To analyse the factors influencing overall entity compliance, a multiple regression model was developed using independent variables, including tax knowledge, income tax, VAT and employee tax complexity, tax training, and individual factors. The data for the overall entity compliance was sourced from the SARS database, while data on the independent variables were obtained from the survey questionnaire. Three models were derived.

$$TC_t = -0.016X_{12} + 0.028^*X_{14} + 0.020X_{16} + 0.031^*X_{22} + 0.020X_{25} + 0.024X_{31} + 0.064^{**}X_{32} + 0.028X_4 + 0.013X_6 + e_i \quad (5.3)$$

NB: * 10% significance level, ** < 1% significance level

where TC is tax compliance level, X₁₂ is 'my level of income influence whether I pay taxes or not', X₁₄ is 'too much debt discourages tax compliance', X₁₆ is 'tax audits enhance tax compliance', X₂₂ is 'tax returns are simple and easy to complete', X₂₅ is 'the cost of tax compliance is very high', X₃₁ is 'I believe that I am fairly taxed compared to my peers', X₃₂ is 'my friends and relatives pay all their taxes due', X₄ is 'tax knowledge', and X₆ is 'VAT complexity'. Table 6 shows the regression results.

Table 6: Model 1

Variables	Estimate	S.E	t-value	p-value	Lower_CI	Upper_CI
X ₁₂	-0.016	0.014	-1.210	0.228	-0.043	0.010
X ₁₄	0.028	0.015	1.843	0.067	-0.002	0.059
X ₁₆	0.020	0.016	1.254	0.211	-0.011	0.050
X ₂₂	0.032	0.018	1.789	0.075	-0.003	0.066
X ₂₅	0.020	0.016	1.278	0.203	-0.011	0.052
X ₃₁	0.024	0.017	1.448	0.149	-0.009	0.058
X ₃₂	0.064	0.019	3.432	0.001	0.027	0.100
X ₄	0.028	0.018	1.551	0.122	-0.008	0.064
X ₆	0.013	0.011	1.189	0.236	-0.008	0.034

Source: Authors' computation

The compliance of sole traders was mostly driven by whether friends and relatives paid all their taxes due (social factor), debt (economic factor), and whether tax returns were simple and easy to complete (institutional factor). An increase in these variables will result in an increase in tax compliance. The effect of the other variables is very minimal with p-values > 10%. Model 1 is able to account for 89.6 per cent of tax compliance variation in sole traders. The overall model significance is less than one per cent (Table 9).

The following two models were developed to assess the impact of the independent variables on tax compliance levels with and without tax training. The data shows that entities with tax training made up 42 per cent of the observations while those without training accounted for 58 per cent of the total observations.

Model 2: respondents who received tax training

$$TC_t = 0.063^{**} X_{14} + 0.064^{***} X_{31} + 0.082^{**} X_{32} + e_t \quad (5.4)$$

NB: *** 1% significance level, ** < 1% significance level

Where TC is tax compliance level, X₁₄ is 'too much debt discourages tax compliance', X₃₁ is 'I believe that I am fairly taxed compared to my peers', and X₃₂ is 'my friends and relatives pay all their taxes due'. Table 7 shows the regression results.

Table 7: Model 2

Variables	Estimate	S.E	t-value	p-value	Lower_CI	Upper_CI
X ₁₄	0.063	0.018	3.455	0.001	0.027	0.099
X ₃₁	0.064	0.023	2.751	0.007	0.018	0.110
X ₃₂	0.082	0.022	3.699	0.000	0.038	0.126

Source: Authors' computation

The tax compliance level of sole traders who received tax training was driven by whether friends and relatives paid all their taxes due (social factor), debt (economic factor) and whether the sole trader believed they were fairly taxed (economic factor). An increase in these variables will result in an increase in tax compliance. However, the tax compliance of sole traders was affected more by whether friends and relatives paid their taxes due. Model 2 can account for 88.6 per cent of tax compliance variation in sole traders with tax training. The overall model significance is less than one per cent (Table 9).

Model 3: respondents who did not receive tax training

$$TC_t = -0.034^* X_{11} + 0.034^* X_{14} + 0.058^{***} X_{16} + 0.078^{**} X_{32} - 0.027 X_{33} + 0.067^{***} X_4 + 0.023 X_5 + 0.026^* X_6 + e_t \quad (5.5)$$

*NB: * 10% significance level, ** < 1% significance level, ***1% significance level*

Where TC is tax compliance level, X₁₁ is 'adequate working capital enhances my tax compliance', X₁₄ is 'too much debt discourages tax compliance', X₁₆ is 'tax audits enhance tax compliance', X₃₂ is 'my friends and relatives pay all their taxes due', X₃₃ is 'the South African government is able to articulate and implement comprehensive policies on the effective utilisation of the tax revenue', X₄ is tax knowledge, X₅ is income tax complexity, and X₆ is VAT complexity. Table 8 shows the regression results for sole traders who had never received tax training.

Table 8: *Model 3*

Variables	Estimate	S.E	t-value	p-value	Lower_CI	Upper_CI
X ₁₁	-0.034	0.020	-1.734	0.086	-0.073	0.005
X ₁₄	0.034	0.020	1.723	0.088	-0.005	0.073
X ₁₆	0.058	0.021	2.747	0.007	0.016	0.101
X ₃₂	0.078	0.021	3.644	0.000	0.036	0.120
X ₃₃	-0.027	0.019	-1.401	0.164	-0.065	0.011
X ₄	0.067	0.025	2.704	0.008	0.018	0.116
X ₅	0.023	0.019	1.190	0.237	-0.015	0.060
X ₆	0.026	0.014	1.948	0.054	-0.000	0.053

Source: *Authors' computation*

The results suggest that the level of tax compliance is not driven by all variables across different factors but by a select few within economic and social factors, along with tax knowledge, income tax complexity, and VAT complexity. Model 3 accounts for 90.8 per cent of tax compliance variation in sole traders without tax training, with an overall model significance of less than one per cent (Table 9). The relative importance of the variables in descending order is: friends/relatives pay taxes, tax audits, tax knowledge, VAT complexity, adequate working capital, and debt. Friends and relatives paying all their taxes due, increased tax knowledge and tax audits have a positive impact on tax compliance. In contrast, adequate working capital does not enhance tax compliance.

Table 9: *Model diagnostics*

	Model 1	Model 2	Model 3
R ²	0.9008	0.8902	0.9143
Adjusted R ²	0.896	0.886	0.9077
F	186.7	213.4	138.6
p-value	< 2.2e-16	< 2.2e-16	< 2.2e-16

Source: *Authors' computation*

VII CONCLUSIONS AND RECOMMENDATIONS

(a) *Conclusions*

The results show that 81 per cent of the sole traders are white South Africans, of whom 63% are male and mostly older than 46 years of age. The tax compliance levels range from 20 to 100 per cent, with the majority demonstrating compliance levels of 60 per cent and above.

Over 60 per cent have an annual turnover of R1 million or less and have some tax knowledge.

Sole traders who received tax training are more likely to comply if they believe that they are fairly taxed compared to their peers.

Although the variable 'tax rates charged are affordable and encourage tax compliance' (X_{13}) did not show any significance in the models, 49.5 per cent of the respondents believe the tax rates are unaffordable and that they discourage compliance.

The study has identified the economic factors that influence sole traders' tax compliance, including debt (positive), adequate working capital (negative) and tax audits (positive). The simplicity and ease of completing tax returns is the only institutional factor positively associated with compliance. Additionally, two social factors were found to have a positive influence on compliance, namely, the belief that one is fairly taxed compared to ones peers and the observation that friends and relatives pay all their taxes due.

It may be concluded that the level of tax compliance of sole traders is influenced by whether friends and relatives pay all their taxes due (X_{32}) and their level of debt (X_{14}). These are the common variables across the three models. Sole traders are influenced by their friends and relatives. If they pay all their taxes due, that suggests that the sole trader will also comply. Sole traders who are highly indebted will most likely not comply with their tax obligations but will rather use their monies for immediate needs.

(b) Recommendations

- The South African government should work on improving the sense of moral obligation of this segment. The way in which SARS services the taxpayers and how the government spends tax money informs the perceptions of friends and relatives which, in turn, affects the tax compliance of sole traders.
- Targeted taxpayer education and awareness through workshops and webinars need to be prioritised as it plays a significant role in tax compliance. Tax training focusing on the preparation, registration and submission of tax returns would be valuable as most sole traders seem to be outsourcing tax compliance. Over 55 per cent of the respondents indicated that the cost of tax compliance is very high. Just under 50 per cent found the preparation and submission of tax returns within the stipulated time challenging.
- SARS should continue finding innovative ways to improve the registration, filing and processing of tax returns. The simpler the tax declaration form, the higher the tax compliance.
- The South African government should be more transparent in its expenditure management policy and all government officials who are

found to have misused government funds should be dismissed in order to improve taxpayers' trust in the government. This is critical as 80 per cent of the respondents do not trust the South African government to put the tax monies collected to good use.

- The South African government should consider tax alleviation measures for sole traders considering the current unemployment rate in South Africa. This should encourage entrepreneurship and increase economic growth. Furthermore, 50 per cent of the respondents consider the tax rates to be unaffordable and discouraging tax compliance.

VIII POLICY IMPLICATIONS

Polycymakers should make tax education compulsory for citizens in all sectors of the economy to empower South African society with the necessary tax knowledge.

IX FURTHER RESEARCH WORK

Tax compliance remains a crucial means of generating state revenue. Therefore, focusing on understanding the dynamics of compliance and its treatment should translate into tangible positive tax results. Future research should build on existing work done by calculating the compliance level of the entire population of sole traders using the multiple regression approach and the compliance pillars of registration, declaration, filing, and payments in order to find an alignment between the primary data (survey data) and the compliance pillars.

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