The Effect of Tax Avoidance and Tax Evasion on the Performance of South African Economy

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ABSTRACT
Using a quantitative longitudinal trends analysis, this study analysed the link between tax evasion and avoidance. The main aim was to assess the implications of evasion and avoidance of taxes on South African economy progress from 1994 to 2021. The data gathered provided us with basis of longitudinal statistical analysis of the extent of tax evasion and or tax avoidance affected the economic growth in the years 1994-2021. The Evievs 10 Results was used to estimate elasticities and buoyancies for major taxes with respect of South Africa’s economic growth for years 1994-2021. The natural logarithm of the gap between total budgeted tax income and realised tax income was also employed as a metric of tax evasion and avoidance in South Africa for this key research work. Ordinary Least Squares Regression (OLS) regression analysis was employed to evaluate whether the link between Gross Domestic Product (GDP) and tax evaded and avoided is strong or weak. Test for stationarity to see whether the parameter does not vary over time and for OLS was performed. The overall analysis of tax evasion and avoidance upon South African economy showed the increased tax revenue resulted in surpluses between tax revenue budgeted, tax revenue collected and economic growth (GDP), meaning tax evasion and avoidance in South Africa are minimal. The study’s findings disprove prior studies that suggest that tax evasion and tax avoidance seriously affect GDP and refute the null hypothesis of this study. However, the study’s results further revealed that increasing tax rates was said to have triggered a positive trend towards economic growth or GDP (actual revenue collected is more than expected taxation revenue annually to cover tax evaded and avoided. As far as policy is concerned the conclusion is reassuring that tax evasion and avoidance has minimal effect upon economic growth as long as tax rates are being risen. The results of this study provide implications for government that specific insights should allow policy makers to gain a better understanding on the key variables that are potentially associated with tax evasion and avoidance. Finally, the study contributes knowledge that is pertinent to an emerging country and provides much needed insights into the magnitude of the extent of tax evasion and avoidance on the country’s economic growth progress.

Keywords: Tax Evasion, Tax Avoidance, Gross Domestic Product
JEL Classifications: H2, H61, H62, M20, M26

1. BACKGROUND OF THE STUDY AND GAP
African governments lose billions of dollars in tax income due to fraudulent money flows and tax evasion and avoidance, limiting their capacity to deliver services and discouraging economic growth (Aumeerun et al., 2016; Gunasinghe et al., 2020). South Africa is no exception where the country has become a high temple of tax evasion and avoidance. For example, according to Koloane and Bodhlyera (2022), the country has been losing approximately R250 daily in tax revenue due to tax evasion and avoidance and illicit trade.

In South Africa, and elsewhere, tax non-compliance (tax evasion and tax avoidance) practices have harmful effect on governments revenue performance for provision of public utilities and services and essential infrastructures (Reddy, 2021; Stark and Smulders, 2018). Dare et al. (2019), briefly outlined the following as key determinants of tax compliance:(1) social factors (attitude and
This article added to the discourse on tax evasion or tax avoidance by considering its effects on South Africa in advancing economic growth.

This study contributes to the debates and guide South African policymakers in policy formulation.

This paper seeks to fill the gap and contribute to the empirical development of the the causes of this tax evasion and avoidance in the context of South African Economy.

Furthermore, this article provide recommendations on how the South Africa government and tax collectors can improve their taxation administration to expedite tax revenue collection maximisation by minimising or eliminating tax evasion and avoidance.

The theoretical evidence has produced a robust range of estimates for the effect of tax evasion and avoidance upon economic growth.

The remainder of the article is organized as follows: the next section presents literature review. Section 3 is a methodology. The fourth section presents the study’s results. The fifth section is the discussion of the the results. The final section offers the study’s conclusions and contribution to the field, limitations and suggestions for future research.

2. LITERATURE REVIEW

The following subsections is a brief review of relevant literature with regard to tax avoidance, tax evasion, impact of tax avoidance and tax evasion on economic performance, determinants of tax compliance behaviour and relationship between tax and gross domestic product (GDP).

2.1. A Distinction between Tax Evasion and Tax Avoidance

This study adopted tax compliance theory propounded by Devos and Devos (2014). The South African Revenue Service (SARS) was formally established on 01 October 1997 (Stiglingh, 2009).

With the commencement of the South African revenue service Act No.34 of 1997. This Act mandates SARS to efficiently and effectively collect all revenue due to ensure optimal compliance with tax and customs legislation, and provide a customs and excise service that will facilitate legitimate trade as well as protection of the economic growth and society (Chauke and Sebola, 2016; Pieterse et al., 2018; Stiglingh, 2014).

South African Tax law allows all taxpayers certain exemptions, deductions, and special allowances to reduce the tax burden, in
light of these incentives taxpayers still feel that some of these
exemptions, later on, later on back to their taxable income under
another act that applies to the Natural or legal entity (Nangh
and Dick, 2018). The income tax legislation provides for several
exemptions and deductions for small businesses, however, the
attitude of taxpayers towards payments of taxes even considering
such exemptions has proven to be against payments of taxes.

Taxpayers show resistance to paying taxes because they believe
their contributions are not being distributed correctly and the so-
called taxpayers never get to benefit from these tax contributions
because some of the taxpayers don’t get to use public services like
public hospitals (Mhlongo, 2019). After all, most taxpayers have
medical aid. Therefore, the inability to benefit from paying tax
results in taxpayers evading tax or finding ways to avoid tax legally.
Increasing transparency. Assuming that governments are genuinely
committed to improving services, increasing transparency is one
strategy for achieving improvements in public trust (2022).

2.2. Tax Evasion
Tax evasion is an illegal method used by taxpayers to pay less tax
to the government. Usually, by falsifying statements or presenting
false information to the South African Revenue Service. SARS
has the right to impose penalties including imprisonment (Fritz
and Botha, 2022). Taxpayers argue that they are taxed on a double
tax system especially those who are shareholders of companies
because they pay tax on dividends while the business still pays
tax on a corporate tax level. The double tax system results in
taxpayers finding alternatives to paying taxes and ways to reduce
taxes payable to SARS.

2.3. Factors Affecting Tax Evasion
As alluded by Bako (2021), tax evasion is influenced by the
a number of factors namely: (1) perception of fairness where
taxpayers are more likely to evade taxes if they perceive the tax
system to be unfair or unequal, (2) complexity of the tax system
where complex tax laws and regulations can make it easier for
individuals to evade taxes by taking advantage of loopholes or
misunderstandings, (3) corruption in tax administration can
undermine tax compliance by enabling taxpayers to avoid taxes
through bribes or other forms of unethical behaviour, (4) lack of
law enforcement and penalties can encourage tax evasion by
reducing the risks associated with non-compliance, (5) economic
downturns, high unemployment, and other economic factors can
increase the incentives for tax evasion as individuals seek to protect
their financial well-being, (6) Cultural norms and values, such
as a general disregard for paying taxes or a sense of entitlement
evade taxes, can also influence tax evasion and (7) privacy
concerns where The need to protect privacy can make it difficult
for tax authorities to identify and punish those who evade taxes,
thereby creating a culture of non-compliance.

2.4. Tax Compliance Theory
Tax compliance theory suggests that individuals and firms make
decisions about their level of compliance with tax laws based
on a cost-benefit analysis (Bako, 2021). The theory posits that
the decision to comply with taxes is influenced by factors such as
the perceived fairness of the tax system, the level of trust in
the government and its institutions, the perceived enforceability
of tax laws, the level of administrative burden associated with
compliance, and the potential consequences of non-compliance.

The theory of tax compliance has been applied to understand
why some individuals and firms comply with tax laws while
others engage in tax evasion. It has been used to design tax policy
and administration that can increase tax compliance, such as
simplifying tax laws and procedures, increasing transparency and
accountability in the tax system, and improving taxpayer services

The theory of tax compliance also recognizes that social norms
and cultural values can play a role in shaping individual and firm
behaviour, as well as their decisions about compliance with tax
laws. By considering these non-economic factors, tax compliance
theory provides a more comprehensive understanding of why
individuals and firms comply or evade taxes, and how tax policies
can be designed to promote compliance.

2.5. Tax Avoidance
Tax avoidance refers to the use of legal means to minimize the
income tax payable by an individual or corporation. This
is generally achieved by claiming as many deductions and credits
as possible. This can also be achieved by prioritizing tax-advantaged
investments such as Purchasing Tax-Exempt Municipal Bonds.
Tax avoidance differs from tax evasion, which relies on illegal
methods such as under-reporting income or falsifying deductions
(Kagan, 2016).

According to Kassa (2021), tax avoidance is influenced by a
number of factors. Some of these include: (1) high rates can create
an incentive for individuals and firms to engage in tax avoidance
in order to reduce their tax liability, (2) Complexity of tax laws
and regulations can also increase the costs of compliance and
create opportunities for tax avoidance, (3) perception of fairness,
(4) economic incentives or potential gain can drive individuals
and firms to engage in tax avoidance, (5) government enforcement
and perceived likelihood of being caught can influence the
decision to engage in tax avoidance, (6) ethical considerations,
and (7) international tax laws which is the difference between
tax laws across countries can create incentives for multinational
firms to engage in tax avoidance by shifting profits to low tax
jurisdictions. Kassa (2021) further alluded that these factors can
interact and have a complex effect on tax avoidance behaviour
and understanding these factors is crucial for policymakers in
designing tax policies and administration to promote and reduce
tax avoidance.

2.6. Impact of Tax Avoidance on Tax revenue
Contribution to the state income by taxpayers is of paramount
importance for the government to continue offering services to
the public through infrastructure improvements social security
grants, and many more (Nguyen and Darsono, 2022). However,
all taxpayers still have options to arrange their tax offers to
reduce tax payable at the end of a financial period. Many large
organizations have used techniques to try and reduce their tax
burden and these have come under increased public scrutiny in
recent years, together with the state’s investigations and
international commitments aimed at curbing opportunities for tax avoidance (Sadjiarto et al., 2020).

Aggressive tax planning is a way of exploiting tax systems by taking advantage of the technicalities of a tax system or of the mismatches between two or more tax systems to reduce tax liability (Schwab et al., 2022). Aggressive tax planning in developing countries comes in the form of tax treaty shopping an indirect transfer of an interest in assets, interest deductibility, and transfer pricing (Agbo, 2020). The tax burden is an important and relevant cost factor for businesses. In-house companies can apply international tax planning techniques to increase their competitiveness. The main goal of international tax planning is to reduce the overall tax burden of the company. To this end, international companies may pursue a variety of business strategies, often involving regional revenue transfers, corporate redevelopment, tax havens, and loopholes in tax law. Included (Donkor et al., 2022). With these strategies seems that the more corporations practice these techniques the less revenue collection figures.

According to Yousefi et al. (2020), 15% of VAT rate was said to have triggered a trend towards tax evasion and avoidance with entities retaining earnings rather than paying dividends that would create additional tax liabilities for their shareholders. Yousefi et al. (2020) further found that companies created avoided tax by distributing income as non-taxable capital gains, rather than dividends.

Bearer-Friend et al. (2022) argue that ideological bias of wealthy taxpayers become the dominant factor behind tax avoiders and evaders’ decisions. These ideological biases were also largely influenced by the increase of tax rates over the years.

2.7. Relationship between Tax and Gross Domestic Product (GDP)

A tax-to-GDP ratio is a gauge of country’s tax revenue relative to the size of its economy as measured by gross domestic product (GDP). Adhikari (2020) a tax-to-GDP ratio is calculated by dividing the tax revenue of specific time period by GDP. Adhikari (2020) further to that a total tax revenue is considered part of a country’s GDP.

A tax -to GDP ratio provide a crucial and useful look at nation’s tax revenue since it reveals potential taxation relative to economic growth (Dahal, 2020; Seydou, 2020). Seydou (2020) further alluded that a tax-to-GDP ratio enables a view of the overall direction of a country’s tax policy as well as international comparisons between the tax revenues of different countries.

Tanchev and Todorov (2019) emphasised that the tax-to-GDP ratio is the ratio tax revenue of a nation compared to the nation’s gross domestic product (GDP). Gupta and Liu (2020) further argue that argue that tax-to-GDP ratio is used as a measure of how well the government controls a nation’s economic resources. Changes in the level of taxation in a nation also impact its level of economic growth and therefore its GDP (Pattichis, 2022; Purnomolastu, 2021).

According to Economic Theory, as economies become more developed and income rise, people generally demand start to ask more service from the government whether in education, public transportation, infrastructure and healthcare (Breton, 2017). For example, the tax-to-GDP ratio in 2019 in European Union was at the average of 41.4% in so much higher than in Asia pacific where tax-to-GDP ratio ranged from 11.9% to 35.4% (Rolph, 2022).

Gupta et al. (2022) tax revenue should be closely correlated to economic activity, rising during periods of faster economic growth and declining during recessions. Lubega (2020) and Al-Freijat (2022) reviewed literature and note that tax revenues generally rise and fall faster than GDP, but the ratio should stay relatively consistent barring extreme swings in growth.

3. RESEARCH METHODOLOGY

The objective of this research study was to assess the effect of tax evasion and tax avoidance on the Performance of South African Economy in the fiscal years 1994 to 2021, thereby establishing whether Tax evasion and tax avoidance has adversely affected South African economy or not. A quantitative, approach was adopted to explore the extent of tax evasion and tax avoidance on the South African economy in the selected sample (Fiscal Years). The study employed secondary data relating to tax evaded and avoided and gross domestic product (GDP) obtained from the South African Revenue Services Tax Statistics 2021. The study covered 27 years from the years 1994 until 2021. The timeframe was relevant to the study as it provides more reliable and longitudinal trends analysis comparison regarding in South African economic growth, thus leading to tailor made recommendations (Tibiletti et al., 2021). Quantitative longitudinal analysis has been a widely used methodology by scholars and researchers (Elshandidy et al., 2018; Mbithi et al., 2020; Wahh et al., 2020). Therefore, quantitative analysis was conducted over companies’ income tax (CIT), personal income tax (PIT), value-added tax (VAT), Fuel Levy and customs to measure South Africa’s Tax-to GDP ratios and tax collected against budgeted tax revenues, tax evaded or avoided.

In order to achieve the objective of the study of assessing and analysing the trend in the extent of the effect of tax evasion and tax avoidance on South African economy effective descriptive statistics and inferential analysis were adopted to better understand the scope and extent and benchmark of tax-to-GDP ratio in South Africa for all 27 fiscal years. Hence the first step was to select tax budgeted against tax collected, followed by tax evaded or avoided and to determine how they triggered, economic growth of the South Africa for fiscal years 1994-2021.
The data gathered provided us with basis of longitudinal statistical analysis of the extent of tax evasion and or tax avoidance affected the economic growth in the years 1994-2021. The Eviews 10 Results was used to estimate elasticities and buoyancies for major taxes with respect of South Africa’s economic growth for years 1994-2021. Thereafter graphical and descriptive statistical were conducted on data collected to identify which years were most affected by tax evasion. The means which are the sum of all the values divided by the sample size while standard deviations are indicative of the consistence and variability of the observations were all determined by descriptive statistics and used to reveal whether there was a gap between total budgeted tax income and realised tax income or not were employed as a metric of tax evasion and avoidance especially concealments of profits and submission of false accounts. The Table 2 below shows income legally avoided and evaded by South African millionaires (1994-2021).

The findings of the current study are overwhelmingly supported by the current body of knowledge that found that emerging countries are highly prone to tax evasion and avoidance.

Donkor et al. (2022) also found the overwhelming views of respondents that high levels of tax rates trigger greatly to tax evasion and avoidance especially concealments of profits and submission of false accounts. The Table 2 below shows income legally avoided and evaded by South African millionaires (1994-2021).

Table 2: Income legally avoided and evaded by South African millionaires (1994-2021)

<table>
<thead>
<tr>
<th>Year</th>
<th>Means</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>11.6786</td>
<td>3.72234</td>
</tr>
<tr>
<td>1995</td>
<td>13.1786</td>
<td>5.16381</td>
</tr>
<tr>
<td>1996</td>
<td>12.5357</td>
<td>4.14087</td>
</tr>
<tr>
<td>1997</td>
<td>14.6384</td>
<td>5.18632</td>
</tr>
<tr>
<td>1998</td>
<td>13.8961</td>
<td>6.15921</td>
</tr>
<tr>
<td>1999</td>
<td>14.8965</td>
<td>3.01893</td>
</tr>
<tr>
<td>2000</td>
<td>15.7927</td>
<td>4.24064</td>
</tr>
<tr>
<td>2001</td>
<td>15.0639</td>
<td>4.09829</td>
</tr>
<tr>
<td>2002</td>
<td>14.8332</td>
<td>4.13848</td>
</tr>
<tr>
<td>2003</td>
<td>15.8271</td>
<td>4.11386</td>
</tr>
<tr>
<td>2004</td>
<td>13.8224</td>
<td>4.10791</td>
</tr>
<tr>
<td>2005</td>
<td>15.8296</td>
<td>4.18962</td>
</tr>
<tr>
<td>2006</td>
<td>16.8433</td>
<td>4.15835</td>
</tr>
<tr>
<td>2007</td>
<td>15.7992</td>
<td>4.11744</td>
</tr>
<tr>
<td>2008</td>
<td>14.8287</td>
<td>4.32552</td>
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<td>2009</td>
<td>15.7691</td>
<td>4.26947</td>
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<td>2010</td>
<td>15.7828</td>
<td>4.31604</td>
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<tr>
<td>2011</td>
<td>14.6694</td>
<td>4.62102</td>
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<tr>
<td>2012</td>
<td>14.8331</td>
<td>4.20383</td>
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<tr>
<td>2013</td>
<td>15.8797</td>
<td>4.21721</td>
</tr>
<tr>
<td>2014</td>
<td>13.8742</td>
<td>4.02238</td>
</tr>
<tr>
<td>2015</td>
<td>14.6553</td>
<td>4.21760</td>
</tr>
<tr>
<td>2016</td>
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<tr>
<td>2017</td>
<td>16.7942</td>
<td>4.20810</td>
</tr>
<tr>
<td>2018</td>
<td>15.8382</td>
<td>4.18788</td>
</tr>
<tr>
<td>2019</td>
<td>16.7604</td>
<td>4.33238</td>
</tr>
<tr>
<td>2020</td>
<td>15.8157</td>
<td>4.24437</td>
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<tr>
<td>2021</td>
<td>17.8728</td>
<td>4.20258</td>
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</tbody>
</table>

Source: Authors’ compilation

The surplus of tax revenue collections was further supported by the continuous efforts by SARS to increase PIT and VAT, the increased value added tax in the South African economy resulted in better than expected outcome for tax revenue for the fiscal year within 26 years. Further analysis shown in Table 2 found that the severity of tax evaded and avoided were not noticeable across all fiscal years which highly linked to better economic growth that were most positively impacted on after South African government budgets. Relying on these empirical findings, the researcher can draw a valid conclusion that tax evasion and tax avoidance positively impacted in a meaningful way during 27 years’ period ago.

Unfortunately, the research findings were inconsistent and contradictory to the hypothesis and reasoning presented above since we discovered that the link is favorable. Therefore, tax evasion and tax avoidance had a beneficial influence on South Africa’s economic growth. The connection that was uncovered was statistically significant, and the model was found to be a reliable and overall significant model.

The findings of the current study also support the findings of Omodeo (2019) who discovered that tax income and economic growth exhibit favorable and substantial links. This claim contends that tax avoidance and evasion impede economic growth, which is the assumption this study followed, that tax evasion and avoidance are inversely connected with economic growth and hence have a detrimental influence on the South African economy.

It is, however, noteworthy that the study agrees with or is consistent with the claims made by Mehrara and Farahani (2016), who demonstrated in their research that for people with logarithmic inclinations, economic expansion increases because of tax evasion since assets are shifted.
from the inefficient public sector towards the lucrative corporate sector. This is true due to the findings; this might mean that as tax is evaded and avoided in South Africa, the private sector then gets to flourish and thus contribute more to economic growth.

The findings of the study say that South African taxpayers have a positive attitude toward tax payments. This argument is based on Alleyne and Harris’s (2017b) claim that taxpayers who have a negative view of taxes will not pay due duties to the authority and, therefore, will engage in tax fraud and avoidance; on the other hand, if taxpayers have a better outlook on taxes, they will pay their taxes. Makugu and Amayi (2016) argued that tax revenue that is higher than GDP implies improved tax compliance.

Figure 1 below shows tax evaded or avoided from 1994-2021 graphically. Longitudinal trend analysis as per Figure 1 above, shows that tax evasion and avoidance become inevitable only fiscal year 2014/15, no tax evasion and avoidance was recorded in South Africa. Government of South Africa and SARS should lower their VAT and PIT rates in order to curb the issue of tax evasion and avoidance “twin devils” as higher rates especially on pay as you earn (PAYE) are making taxpayers use legal and illegal means to evade tax.

Empirical findings revealed the slow economic growth, Figure 2 below shows longitudinal trend in tax collected, tax evaded or avoided and economic growth graphically.

Despite, the increase in tax being evaded or avoided, the longitudinal results further show interrupted slow economic growth. The findings of the current study are overwhelmingly supported by the current body of knowledge that found that many taxpayers consider the distribution of their income unfairly and attempt to make unilateral adjustment for equity by non-compliance through tax evasion and avoidance (Aumeerun et al., 2016; Dare et al., 2019; Vellios et al., 2020).

<table>
<thead>
<tr>
<th>Year</th>
<th>Tax budgeted</th>
<th>Tax revenue collected</th>
<th>Tax evaded or avoided</th>
<th>Economic growth (GDP)</th>
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<td>113,774.00</td>
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<tr>
<td>2020</td>
<td>1,231,485.00</td>
<td>1,249,711.00</td>
<td>1,204,512.00</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>1,212,021.00</td>
<td>1,249,071.00</td>
<td>1,204,512.00</td>
<td></td>
</tr>
</tbody>
</table>

Source: Tax Statistics 2022 (SARS).
4.1. Ordinary Least Squares Regression (OLS) Regression Analysis
The researcher evaluated the link between tax evasion and tax avoidance and GDP using OLS regression to see if the relationship is strong or weak in South Africa. After establishing the correlation, a test for stationarity followed and lastly presented the OLS output.

4.2. Correlation Analysis
The study used a 95% significance level, meaning that the conclusion was given to be statistical significance when the p-value was <0.05.

Given the results above, the correlation coefficient r is positive, meaning GDP and TEA tend to increase together, and the correlation is statistically significant since the probability (p-value) is zero, which is less than 0.05. The r-value of 0.78 indicates a strong positive correlation. This means it is a good model.

4.3. Stationarity
The Augmented Dickey Fuller (ADF) test was performed to assess database stationary qualities. The Akaike Information Criterion (AIC) was utilized to identify the optimal ADF lag. Table 4 below shows the results of the ADF tests. Table 3 examines data normality using interception and trend. The values in parentheses are the optimal delays determined by the AIC criterion. Because the research is evaluating a 95% sampling error, we deny the hypothesis if the p-value of the t-statistic is a little below 0.05.

As shown in Table 4 above, the findings reveal that LnGDP and LnTEA are stationary at a 95% confidence level. So, we infer that stationarity occurs in the model since the p-values of both parameters were much less than 0.05. This validates the previously stated assumption that the natural logarithm precludes any possibility of unpredictability.

4.4. Long-term Association
Table 5 shows the maximum-Eigen statistical values (Intercept and no trend), suggesting the long-term relationship between the research variables and refuting the premise of no co-integration. Whenever the Max-Eigen Statistics are bigger than respective critical values, we dismiss the null hypothesis at 95% confidence. Because the quantitative measurements of the Max-Eigen values are greater than their associated critical values, we may deduce that the variables in this system are interrelated and have a long-term relationship.

4.5. OLS Regression
Table 6 below is the regression results and the discussion.

The correlation was found between the variables, the study then tested the relationship between the two. Using the OLS regression helped answer this research’s empirical question: “What are the effects of tax evasion and tax avoidance on economic growth in South Africa.” Our research hypothesis was “Tax evasion and avoidance hamper economic growth in South Africa. i.e., if Tax evaded and avoided increases, then economic growth in the country will decrease”.

### Table 3: Correlation table between gross domestic product (GDP) and tax evaded and avoided (TEA)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNGDP</td>
<td>1.000000</td>
</tr>
<tr>
<td>LNTEA</td>
<td>0.775781</td>
</tr>
</tbody>
</table>

Source: Eviews 10 Results

### Table 4: ADF stationarity findings (including intercept and not a trend)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Test Statistic</th>
<th>Critical value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnTEA</td>
<td>−3.88[0]</td>
<td>−3.60</td>
<td>0.03</td>
</tr>
<tr>
<td>lnGDP</td>
<td>−5.05[0]</td>
<td>−2.98</td>
<td>0.0004</td>
</tr>
</tbody>
</table>

Source: Eviews results

### Table 5: Johansen cointegration findings (Including intercept and no trend)

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>Max-eigen Statistic</th>
<th>0.05 critical value</th>
<th>Hypothesized No. of CE(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.48</td>
<td>16.11</td>
<td>14.26</td>
<td>None*</td>
</tr>
<tr>
<td>0.19</td>
<td>5.25</td>
<td>3.84</td>
<td>At most 1*</td>
</tr>
</tbody>
</table>

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level. * denotes rejection of the hypothesis at the 0.05 level. Source: Eviews Results.

### Table 6: Regression results of the economic growth function (GDP)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>0.56</td>
<td>6.15</td>
<td>0.00</td>
</tr>
<tr>
<td>C</td>
<td>9.70</td>
<td>12.18</td>
<td>0.00</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>1.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>37.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Eviews results.

Table 6 displays the model findings where GDP is the response variable and TEA is the determinant. According to the findings, each rise of R1 billion in overall tax evasion and avoidance in South Africa ultimately boosts R 0.56 billion in economic expansion. Because we refute the null hypothesis, the findings show that these data are statically significant. This occurs because overall results obtained in the analysis have a p-value of just under 0.5, implying that at a 95% degree of significance, we may infer that tax avoidance and evasion own a beneficial impact on GDP in South Africa. We may also imply that perhaps the outcomes are significant since the t-stat of the analysis (6.15) is more than 2, indicating that the findings are statistically noteworthy.

Furthermore, because the R-squared of the model (0.60) is credible, this model is an appropriate or dependable model. The determination coefficient, which reflects this model’s goodness of fit as shown by R-square, suggests that the independent variable explains 60% of fluctuations in the dependent parameter. The Adjusted R-Square at 59% correctly adjusted the R-squared
Table 7: Longitudinal Trends analysis in major tax revenues 199402021

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>PIT (%)</th>
<th>CIT (%)</th>
<th>VAT (%)</th>
<th>Fuel levy (%)</th>
<th>Customs (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994/95</td>
<td>8.0</td>
<td>2.1</td>
<td>5.2</td>
<td>1.5</td>
<td>1.0</td>
<td>17.8</td>
</tr>
<tr>
<td>1995/96</td>
<td>8.0</td>
<td>2.2</td>
<td>5.1</td>
<td>1.4</td>
<td>1.0</td>
<td>17.7</td>
</tr>
<tr>
<td>1996/97</td>
<td>8.3</td>
<td>2.4</td>
<td>5.0</td>
<td>1.4</td>
<td>1.0</td>
<td>18.1</td>
</tr>
<tr>
<td>1997/98</td>
<td>8.6</td>
<td>2.5</td>
<td>5.0</td>
<td>1.5</td>
<td>0.7</td>
<td>18.5</td>
</tr>
<tr>
<td>1998/99</td>
<td>9.0</td>
<td>2.4</td>
<td>5.1</td>
<td>1.6</td>
<td>0.7</td>
<td>18.7</td>
</tr>
<tr>
<td>1999/00</td>
<td>9.0</td>
<td>2.2</td>
<td>5.1</td>
<td>1.5</td>
<td>0.7</td>
<td>18.5</td>
</tr>
<tr>
<td>2000/01</td>
<td>8.0</td>
<td>2.7</td>
<td>5.0</td>
<td>1.3</td>
<td>0.8</td>
<td>17.8</td>
</tr>
<tr>
<td>2001/02</td>
<td>7.5</td>
<td>3.5</td>
<td>5.1</td>
<td>1.2</td>
<td>0.7</td>
<td>18.2</td>
</tr>
<tr>
<td>2002/03</td>
<td>6.7</td>
<td>4.0</td>
<td>5.0</td>
<td>1.1</td>
<td>0.7</td>
<td>17.5</td>
</tr>
<tr>
<td>2003/04</td>
<td>6.5</td>
<td>4.0</td>
<td>5.3</td>
<td>1.1</td>
<td>0.6</td>
<td>17.5</td>
</tr>
<tr>
<td>2004/05</td>
<td>6.6</td>
<td>4.2</td>
<td>5.8</td>
<td>1.1</td>
<td>0.8</td>
<td>18.7</td>
</tr>
<tr>
<td>2005/06</td>
<td>6.7</td>
<td>4.6</td>
<td>6.1</td>
<td>1.1</td>
<td>1.0</td>
<td>19.5</td>
</tr>
<tr>
<td>2006/07</td>
<td>6.6</td>
<td>5.6</td>
<td>6.3</td>
<td>1.0</td>
<td>1.1</td>
<td>20.6</td>
</tr>
<tr>
<td>2007/08</td>
<td>7.0</td>
<td>5.9</td>
<td>6.2</td>
<td>1.0</td>
<td>1.1</td>
<td>21.5</td>
</tr>
<tr>
<td>2008/09</td>
<td>7.4</td>
<td>6.3</td>
<td>5.8</td>
<td>0.9</td>
<td>0.9</td>
<td>21.3</td>
</tr>
<tr>
<td>2009/10</td>
<td>7.3</td>
<td>4.8</td>
<td>5.2</td>
<td>1.0</td>
<td>0.7</td>
<td>19.0</td>
</tr>
<tr>
<td>2010/11</td>
<td>7.3</td>
<td>4.3</td>
<td>5.9</td>
<td>1.1</td>
<td>0.9</td>
<td>19.5</td>
</tr>
<tr>
<td>2011/12</td>
<td>7.4</td>
<td>4.5</td>
<td>5.6</td>
<td>1.1</td>
<td>1.0</td>
<td>19.6</td>
</tr>
<tr>
<td>2012/13</td>
<td>7.6</td>
<td>4.4</td>
<td>5.9</td>
<td>1.1</td>
<td>1.1</td>
<td>20.1</td>
</tr>
<tr>
<td>2013/14</td>
<td>7.9</td>
<td>4.6</td>
<td>6.0</td>
<td>1.1</td>
<td>1.1</td>
<td>20.7</td>
</tr>
<tr>
<td>2014/15</td>
<td>8.4</td>
<td>4.4</td>
<td>6.2</td>
<td>1.2</td>
<td>1.0</td>
<td>21.2</td>
</tr>
<tr>
<td>2015/16</td>
<td>8.7</td>
<td>4.3</td>
<td>6.2</td>
<td>1.2</td>
<td>1.0</td>
<td>21.4</td>
</tr>
<tr>
<td>2016/17</td>
<td>8.8</td>
<td>4.3</td>
<td>6.0</td>
<td>1.3</td>
<td>0.9</td>
<td>21.3</td>
</tr>
<tr>
<td>2017/18</td>
<td>9.0</td>
<td>4.3</td>
<td>5.8</td>
<td>1.4</td>
<td>1.0</td>
<td>21.5</td>
</tr>
<tr>
<td>2018/19</td>
<td>9.1</td>
<td>4.0</td>
<td>6.0</td>
<td>1.4</td>
<td>1.0</td>
<td>21.5</td>
</tr>
<tr>
<td>2019/20</td>
<td>9.3</td>
<td>3.8</td>
<td>6.1</td>
<td>1.4</td>
<td>1.0</td>
<td>21.6</td>
</tr>
<tr>
<td>2020/21</td>
<td>8.8</td>
<td>3.7</td>
<td>6.0</td>
<td>1.4</td>
<td>0.8</td>
<td>20.7</td>
</tr>
</tbody>
</table>

Source: Tax statistics 2021 (SARS)

Table 8: Result analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Elasticity</th>
<th>Buoyancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Tax Revenue</td>
<td>1.14(0.03)***</td>
<td>1.24(0.01)***</td>
</tr>
<tr>
<td>PIT</td>
<td>1.24(0.06)***</td>
<td>1.48(0.04)***</td>
</tr>
<tr>
<td>CIT</td>
<td>1.18(0.06)***</td>
<td>1.28(0.24)***</td>
</tr>
<tr>
<td>Fuel Levy</td>
<td>1.69(0.04)***</td>
<td>1.84(0.48)***</td>
</tr>
<tr>
<td>Customs duties</td>
<td>0.70(0.06)***</td>
<td>0.78(0.01)***</td>
</tr>
</tbody>
</table>

Source: Eviews Results.

As illustrated in Table 7, the findings of this study revealed that South Africa’s Tax-to GDP ratio increased from 20.1% in 2013/14 to 21.2% in 2014/15. While this exceeds the long-term average of 20%, it remains below the peak of 21.5% reached in 2007/08. The findings further revealed that after PIT and VAT, CIT has been the third largest contributor to tax revenue for the past decade. It briefly surpassed VAT in 2008/09, but slipped back after global crisis that reduced companies’ profitability.

As shown in figure 3, horizontal axis (X-Axis) are years while vertical axis (Y-Axis) reflects the percentage of tax revenue comprehended to GDP. The plotted data points indicate the change over 27 years’ time in these values. The tax buoyancy ratio measures the sensitivity of tax revenues to changes in economic growth.

This research study finds elasticity coefficient for a total revenue more than unity (1.4). Thus, it rejects the null hypothesis that the long run total tax revenue is inelastic to GDP. The findings further revealed that over 27 years, South Africa’s sustained economic growth has accelerated tax revenue earnings. Evidently, GDP had strong influence over tax revenue resources mobilisation.

As shown in figure 4, horizontal axis (X-Axis) are years while vertical axis (Y-Axis) reflects the percentage of tax revenue collected. The tax revenue was also adversely impacted by, among others, tax evasion and avoidance. Tax evasion and avoidance had strong influence over tax revenue resources mobilisation. This is evident by the reduction in the tax-to-GDP ratio, which decreased from 20.1% to 17.5% during this period. Relying on these empirical findings, the research can thus conclude that the decline in GDP was especially severely impacted by the deterioration in revenue collected. The tax revenue was also adversely impacted by, largely due to evaded and avoided tax by South African millionaires.

Although CIT has slightly maintained its status as the third largest contributor to tax revenue, its relative contribution declined during recession peak of 6.3% in 2008/09 to 4.3% in 2015/16. This is further evidenced by the reduction in the tax-to-GDP ratio, which decreased from 0.83% to −0.61% during this period. Relying on these empirical findings, the research can thus conclude that the decline in GDP was especially severely impacted by the deterioration in revenue collected. The tax revenue was also adversely impacted by, largely due to evaded and avoided tax by South African millionaires.

As shown in figure 3, horizontal axis (X-Axis) are years while vertical axis (Y-Axis) reflects the percentage of tax revenue collected. The plotted data points indicate the change over 27 years’ time in these values. The tax buoyancy ratio measures the sensitivity of tax revenues to changes in economic growth. The findings of this research revealed that Year on Year total revenue collected from a low of −0.61 in 2009/10 to the height of the global financial crisis to 1.07 in 2020/21. Empirical findings further revealed that the long-term tax buoyancy is either one or slightly above one for 16 years. While fragile have lower short-term buoyancy reflecting the country’s weakness which is proved by the tax revenues are significantly less than one 11 years.
obtain an understanding of where variances lie, both coefficients of elasticity and buoyancy for total tax revenue are more than unity (1.14 and 1.24 respectively), both coefficients of elasticity and buoyancy for PIT (1.24 and 1.48), VAT (1.18 and 1.28), Fuel Levy (1.69 and 1.84) are also more than unity. However, both coefficient of elasticity and buoyancy with respect to customs duties (total imports) are less than unity (0.70 and 0.78 respectively).

The higher coefficients of buoyancy for PIT, CIT, VAT and Fuel Levy as compared to the elasticity indicate that there is still room to increase revenue from PIT, CIT, VAT and Fuel Levy. Tax evasion and avoidance is also enormous and a huge concern. Longitudinal trends analysis in major tax revenues 1994-2021 discloses that loss incurred through tax evasion and tax avoidance was about 1.4 per cent of total tax collected and 0.3 percent of GDP in fiscal years 1994-2021.

5. DISCUSSION OF THE RESULTS

Taxes underpin the government’s ability to achieve overall objectives; they serve as the primary venues for the administration of national interactions; and they define the proportion amongst acquisition and distribution, which affords governments their central role (Bethencourt and Kunze, 2019).

Empirical results of this study show that tax evasion and tax avoidance had a beneficial influence on South Africa’s economic growth. This finding also enjoys overwhelming in the literature and is an indication that the findings of this study are consistent with the situation across the globe (Carvalho, 2019; Chiarini et al., 2022; Stavjaňová and Vítek, 2022).

The literature also widely supported the view that taxes assist in establishing the ability to supply stability, satisfy basic requirements, and boost economic growth, credibility, and acceptance, which contribute to creating a democratic, responsible, and inclusive government (Izadkhasti et al., 2022; Khan and Akhtar, 2022).

The results of the study reveal that the increased tax revenue resulted in surpluses between tax revenue budgeted, tax revenue collected and economic growth (GDP), meaning tax evasion and avoidance in South Africa are minimal. This result overwhelmingly supported by SARS’s (2021) claim that increased in nominal tax revenue during the study’s chosen years were brought on by a combination of expanding the tax base, above-inflation wage settlements, an increase in the value of imports, as well as improvements in tax administration and compliance (SARS, 2021).

The aforementioned justification for tax fairness is equivalent to tax fairness supports the arguments by Alkhatib et al. (2019)
who found that when the tax rate is acceptable and fair, taxpayers will regret engaging in tax evasion tactics and will report their yearly income to regulators without disputing the precise amount.

The findings of this research further revealed that due to the tax fairness in the country, the country realizes less tax evasion and avoidance and, thus, an increase in revenue and the economic growth. In addition, the researcher argued that the results of this study might be due to moral obligation; the taxpayers in South Africa might have a good and positive moral responsibility and, therefore, might be engaging less in tax evasion and tax avoidance. Hence the surpluses realized between tax revenue collected and tax revenue budgeted, as seen in this study. The findings of the current study in this area also support the current body of knowledge that found that tax sentiment or taxpayers integrity rises whenever tax authorities are accountable and show respect for respective obligations to taxpayers (Abdelfattah and Aboud, 2020; Benkraiem et al., 2022; Yousefi et al., 2020).

### 6. CONCLUSION, LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The evidence revealed that a potential issues of tax evasion and avoidance, and declining levels of tax compliance in South Africa and elsewhere are large in numbers which limits the countries to grow exponentially economically. As previously indicated, the strong underpinning for this study is based mainly on the link between tax evasion and avoidance and economic advancement. The primary goal was to assess the implications of avoidance and evasion of taxes on economic progress. Our research’s empirical question was: “What are the effects of tax evasion and avoidance on economic growth in South Africa?” Our research hypothesis was “Tax evasion and avoidance hamper economic growth in South Africa. i.e., if Tax evaded and avoided increases, then economic growth in the country will decrease”.

The results of the study reveal that the increased tax revenue resulted in surpluses between tax revenue budgeted, tax revenue collected and economic growth (GDP), meaning tax evasion and avoidance in South Africa are minimal. The study’s findings disprove prior studies that suggest that tax evasion and tax avoidance seriously affect Gross Domestic Products (GDP) and refute the null hypothesis. However, the study’s results further revealed that increasing tax rates was said to have triggered a positive trend towards economic growth or GDP (actual revenue collected is more than expected taxation revenue) annually to cover tax evaded and avoided. This implies immediate conclusion that, in practice tax evasion and avoidance does not affect the rate of economic growth since the tax rates and revenues as proportion of GDP have risen significantly in South Africa and other developed and developing countries over the course of the last century but the level of economic growth has remained relatively stable and static. The conclusions of empirical evidence are quite as adverse as those of this research study.

Based on Alleyne and Harris’s (2017a) assertion that those with a negative attitude toward taxes will not pay their fair share to the government and consequently participate in tax fraud and evasion, this argument contends that those with a positive attitude toward taxes will pay their fair share. Thus, South Africa economy is not affected much due to tax evasion and or tax avoidance due to increase in tax rates.

The study was limited due to less available data on the parameters used in this study; hence, there might be inconsistencies and limitations in the results. The argument is that with more observations or data points, results might differ from the ones in this study. Therefore, the study recommends that further studies adopt and use more robust data collection methods to account for tax avoidance and tax evasion in a more significant sample that might reflect consistent and more reliable results.

The calculation of tax avoidance and tax evasion in the country was calculated using nominal values. Such values might not account for evasion and avoidance that happens in the Shadow economy and other sectors of the economy. This study did not look or account for other causes of tax evasion that account for evasion of tax as omitted in the calculation in this study. This might provide for the inconsistency in the results and findings of this research.

This study only accounts for the relationship between tax evasion and avoidance; it does not critically analyse and discuss the consequences thereof. We recommend that future research looks into the critical analysis of the results of tax evasion and tax avoidance in South Africa.

Most emerging economies’ authorities face the difficulty of not having enough funds to fulfil their obligations to society owing to a low tax-to-GDP magnitude relation resulting from a high percentage of tax evasion (Omdero, 2019). The findings of this study are inconsistent with this argument, and we argue that in South Africa, as the study’s findings show, as tax revenue increases, so are the GDP. This shows an increase every year in the tax-to-GDP magnitude. We recommend that more studies be performed to study the cause of the fund shortages in South Africa since there is a need for more attention in that area. The funding shortages to fulfil obligations owed to society might be due to other issues like fraud in the country. We recommend that a study about the effect of tax fraud and corruption on sharp economic growth and development be undertaken. This might explain the fund shortages in South Africa since according to this study, tax evasion and tax avoidance are not the reason since there is a surplus of tax instead of a gap. The researcher still believes the effects of corruption on tax evasion and avoidance in South Africa should be investigated in detail shortly.

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