AN OVERVIEW OF CORPORATE INCOME TAX IN SOUTH AFRICA

This paper investigates the corporate income tax regime in South Africa in order to determine if it has a comparatively high cost corporate tax regime compared to other jurisdictions. The paper also explores the relationship between corporate income tax and investment, as a higher tax cost relative to other jurisdictions is likely to discourage investment in South Africa. The paper uses three different measures to compare South Africa to other jurisdictions namely: the statutory rate, the backward effective rate and the forward effective rate. South Africa has a relatively high statutory rate, forward and backward effective tax rate which suggests the country imposes a higher corporate income tax cost compared to other jurisdictions in the sample. In South Africa, economic growth is key for driving both corporate tax collections and investment, where certain studies suggest that economic conditions are far more important than the tax structure for investment decisions. Further studies are required to fully unpack the investment and tax regime relationship in South Africa.

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1 Introduction

Taxes are the backbone of revenue for government and are used to finance public and social programmes that provide access to health, education, infrastructure and other essential services. This paper investigates the size of the corporate income tax (CIT) cost in South Africa and to determine if South Africa has a relatively higher CIT regime compared to other jurisdictions. A tax regime is a complex structure which stretches beyond the headline rate and includes all accompanying incentives, credits, allowances and other provisions. A generous tax regime has provisions in place which lower the end cost that a taxpayer must pay – it lowers the tax burden. This tax burden is particularly important for firms as it imposes an additional cost of doing business. The tax regime needs to carefully balance the twin outcomes of revenue collections that are high enough to meet budgeting needs against limiting inefficiencies that may arise such as tax avoidance and the loss of investment. This paper will also explore the relationship between CIT and investment in South Africa as a comparatively higher tax burden may discourage investment as businesses seek lower cost jurisdictions.

The rest of the discussion is divided across 5 sections. **Section 2** begins with a literature review that provides an overview of the types of CIT regimes which exist and the theoretical relationship between CIT and investment. **Section 3** looks more closely at the CIT regime in South Africa. Beginning with a historical overview of how CIT regulation has changed since the start of democracy to where it stands today, as well as proposed changes to the current regime. Last, it shows how CIT revenue collections have changed over time. In South Africa, economic growth is a key determinant of changes in CIT revenue collections, where periods of higher growth were associated with higher tax collections.

The study then undertakes the comparator analysis of South Africa's tax regime against other jurisdictions in **section 4.** The methodology is set out and describes three measures that will be used for the cross comparison namely: the statutory rate, the backward effective tax rate and the forward effective tax rate. The OCED tax database is the source for all three tax measures. The statutory rate is the headline rate that a country charges firms, this measure is limited as it does not reflect the other tax provisions which impact the end tax burden. The backward effective rate (BETR) provides a historical view of how the tax burden has changed over time. This is calculated as the ratio of CIT revenue to GDP. Finally, the forward effective tax rate (FETR) is a projected value which measures the corporate tax cost of an investment. It considers the various provisions which may increase or decrease the tax cost for a business

investment in a particular jurisdiction. Each comparator rate tells a different story. While South Africa has a relatively high statutory rate, indicating a less competitive and higher tax burden, it is not a true measure as the tax burden is impacted by all provisions in the regime. The BETR shows that historical changes in the tax burden across jurisdictions is driven by both economic conditions, such as economic growth or global shocks, and changes in the structure of the regime. South Africa's BETR has declined over time, and this is mostly attributable to declining domestic economic conditions rather than changes in the tax regime. South Africa's FETR is relatively high compared to other jurisdictions in the sample. This means the tax cost in South Africa, after accounting for provisions and allowances, is still higher than other jurisdictions. However, there is a 2.2% difference between the statutory rate (28%) and the forward effective average tax rate (25.8%). This means that the various provisions and allowances, in particular the tax depreciation allowances, in the regime impose a lower tax burden than what is implied by the statutory rate.

The paper then ties together these findings and its implications for the proposed changes in the CIT provisions in **section 5**. This section scrutinises the twin structures of the tax regime and economic conditions. These need to be understood in tandem as they both have an important impact on the tax base, revenue collections, and the backward and forward effective tax rates. The discussion on the tax regime structure reveals that South Africa's tax depreciation allowance is the largest portion of revenue foregone. South Africa could lower its statutory rate by as much as 2.2%, while keeping revenue collections constant, by aligning tax depreciation to accounting depreciation. This suggests that there is room to change the regime. However, it is economic growth, more than any changes in the tax structure, which unlocks higher revenue collections and promotes investment. Higher growth naturally translates into higher revenue as firms expand, new firms open, and total profits rise. This would provide room for the government to introduce more generous tax incentives or a lower statutory rate, while maintaining needed revenue, in order to attract investment. However, this strategy must be cautiously pursued as certain studies suggest it is economic conditions more than the tax structure which ultimately impact investor decisions in South Africa.

The paper reaches its conclusion in **section 6** by highlighting that while the various rates suggest a higher CIT cost compared to other jurisdictions, provisions such as the tax deprecation allowance have gone a long way in driving this cost down. It reiterates the importance of economic growth relative to changes in the tax regime for achieving a more

competitive tax system while sustaining revenue collections. Finally, further research is needed to fully understand the impact of changes in the tax regime on investment in South Africa.

2 Literature Review

2.1 Corporate Income Tax Regime

The mix and structure of a country's tax landscape depends on the aims and objectives of each country. The tax landscape typically consists of a wide array of instruments such as personal income tax (PIT), value added tax (VAT), property tax and CIT. CIT is widely used and forms a key component of most countries' tax regimes. For instance, a survey conducted across 225 jurisdictions found that only 15 did not have CIT (Bray, 2021). These 15 countries were mostly small island nations, with a few such as the Cayman Islands and Bermuda that are well-known as tax havens.

Despite being a common tax lever, there is still strong criticism on the use of CITs as a government revenue stream. Opponents argue that it is economically inefficient, since CITs can result in double taxation – first a firm incurs tax on its taxable income base, thereafter when dividends are paid out to the shareholders they face a tax on the same income base (Ogley, 1992). The CIT structure implemented by a country determines the extent to which these inefficiencies are addressed. There are two extreme systems that are discussed in the literature. The first is the full imputation system where shareholders are granted full credit for any taxes charged to the firm thereby eliminating the double taxation (Ogley, 1992). The second is the classical system where the company is treated as a separate entity to its shareholders and there is a complete double tax (Ogley, 1992). Each of these regimes have important implications for the tax burden and who carries it in the economy.

Under the classical system, neither the shareholder nor the firm are granted any tax relief from redistributed profits (Oliver & Honiball, 2011). Instead, this system encourages firms to retain profits and use them for research & development (R&D), investment and innovation. Numerous countries follow a modified classical system which provides some relief to shareholders and avoids a complete double taxation (The Davis Tax Committee, 2018). This system can be structured in various ways. It can occur at the shareholder or company level or both and can take the form of a dividend exclusion, a credit or a reduced tax rate (Oliver &

Honiball, 2011). Countries that follow a classical system include Austria, Czech Republic and Germany (OECD, 2021c).

With the imputation system, a shareholder can receive a tax credit on any dividend pay-outs – the extent of the payment depends on the magnitude of the imputation system (The Davis Tax Committee, 2018). A full imputation system ensures that shareholders receive a full rebate for the tax expense incurred by the firm when dividends were paid out. This rebate is deducted from the shareholders personal income tax expense thus eliminating the double tax (Oliver & Honiball, 2011). On the other hand, a partial imputation system allows for part of the CIT or the shareholder withholding tax to be credited against the shareholders personal income tax liability (Oliver & Honiball, 2011). Australia, Canada, Chile and New Zealand are examples of countries that follow the full imputation system (OECD, 2021c).

Countries have structured their CITs in various ways, and these lie on a spectrum between the full classical and imputation system. Certain countries have chosen lower dividend tax rates while others have provided relief at the firm level. For the latter, countries may adopt a dividend-deduction method whereby distributed profits will reduce a firm's taxable income base. For instance, Spain offers a lower CIT rate for distributed profits and a higher rate on retained profits (The Davis Tax Committee, 2018). In the case of South Africa, historically there were elements of a classical system with the introduction of the Secondary Tax on Companies (STC) in 1993. The STC was a tax imposed on a company declaring dividends, however, it was not a complete double tax as it was calculated as a fixed percentage of the dividends declared (National Treasury, 2012). The STC was removed in 2012 in favour of a dividends tax where 20% of dividends tax are withheld by the company paying out the dividends (National Treasury, 2012; The Davis Tax Committee, 2018). While this is not a traditional dividend tax on the shareholder, it still results in double taxation as there is a tax rate charged on corporate profits as well as dividends paid out.

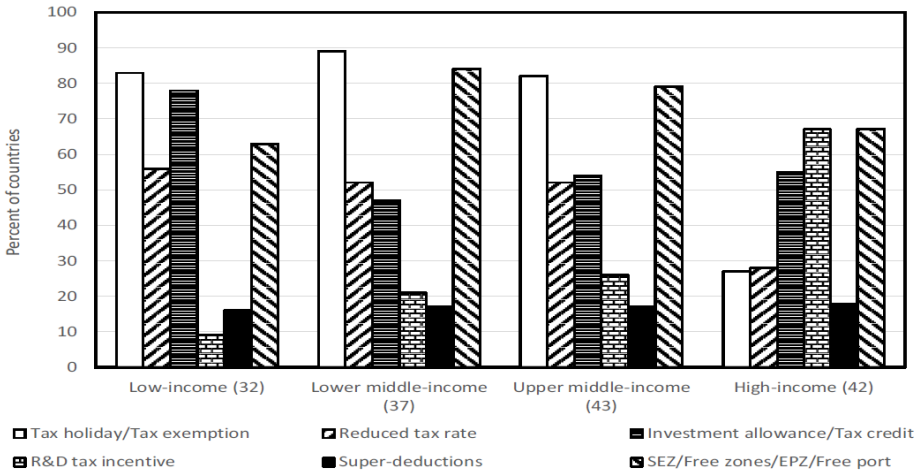
The type of tax regime a country follows, classic or imputation, may have important implications for both the tax structure and investment. A country that follows the imputation system may have a higher CIT rate but due to the dividend tax relief the broader system is not as burdensome as the headline rate may suggest. Lastly, there are other taxes imposed on companies outside of CIT. In South Africa this includes payroll tax, which is made up of Pay As You Earn (PAYE); Unemployment Insurance Fund (UIF) contribution; Skills Development

Levy (SDL); VAT; and Customs Duty. These taxes are payable by companies and may decrease profit rates which is the base CIT is calculated on. Notably, these other taxes are recognised as direct revenue income across other tax bases by the South African Revenue Service (SARS) (SARS & National Treasury, 2021). For instance, withholdings tax forms part of the personal income tax base while VAT is a standalone tax base. While these taxes are important in the wider context of company tax costs it falls outside the scope of this paper which will focus on CIT.

The regimes discussed provide a broad framework for the tax structure which is made up of a complex system of headline rates, allowances, incentives, deductions, and rebates which are used to achieve various policy outcomes. One of these policy outcomes is the encouragement of further investment, the relationship between CIT and investment will be discussed in further detail in the next section. At the peak of Keynesian fiscal activism, tax incentives were used as means of bolstering private-sector investment in order to achieve macroeconomic stabilisation (Gramlich, 1971; Tobin, 2001). While this remains a policy objective, tax incentives are increasingly being adopted to promote both domestic and foreign investment, create jobs, and or to develop a particular sector or region in the economy (Calitz et al., 2021).

The types of tax incentives differ across low, developing and high-income countries. Incentives in high income countries are mostly used to promote R&D, tax holidays are more common among low income countries, while special economic zones are used more in middle income economies (see in Figure 1) (Calitz et al., 2021).

Figure 1: Global tax incentives grouped by income level



Source: (Calitz et al., 2021, p. 4)

It is important to consider the additional costs imposed by tax incentives. While tax incentives may bolster investment it adds complexity to the tax regime and imposes a cost on both tax authorities and taxpayers to administer the tax rules correctly (Holland & Vann, 1998). Companies may also spend considerable amounts of time and money to qualify for and obtain tax incentives (James, 2009). Other costs include potential revenue loss, low economic efficiency, excessive tax planning and tax evasion (United Nations, 2018). These costs may counterbalance the reduced tax burden that makes tax incentives beneficial to investment. Studies on the effectiveness of tax incentives to bolster investment have produced mix results as isolating the effect of tax incentives, among other factors which impact investment, is a challenge. Despite inconclusive evidence from the literature and high associated costs, incentives still remain a key part of many tax regimes (Calitz et al., 2021).

There are two incentive structures which are of relevance to this study, tax depreciation allowances and net operating loss carry forwards. Depreciation accounts for the change in value of an asset over time. Most taxation systems have depreciation allowances in place to account for the increase or decrease in the value of an asset. There are three different definitions of depreciation that are relevant for this paper. The first is economic depreciation which is the true change in market value of the asset, this can usually only be measured when there is a change of ownership, and the exchange of value determines the market value, or the asset becomes worthless as it reaches the end of its useful life (Thuronyi, 1998). The second is accounting depreciation which is the financial accounting method of calculating the depreciation of an asset. This is calculated using the straight-line or diminishing balance method. The straight-line method is where the value of the asset decreases by the same amount every year until the end of its useful life. The diminishing-balance method takes into account that there is a faster decrease in the value of the asset in the early years of its life. Third, tax depreciation is the depreciation schedule that the relevant tax authority puts in place. This may follow the accounting depreciation standard, or it may have special schedules for different types of assets. The measure of tax depreciation is important for revenue collections and investment incentives. Tax depreciation allowances which decrease the value of an asset below both the economic and accounting measures, also known as accelerated depreciation, allow the taxpayer to overestimate the loss in asset value (Thuronyi, 1998). This narrows the tax base and ultimately revenue collections. On the other hand, tax authorities may deliberately put in place generous tax allowances, including tax depreciation allowances, to incentivise investment in specific industries or classes of assets.

A net operating loss carry forward allows a company to deduct losses incurred in the previous year against future profits (Tax Foundation, 2021). The amount and period of time that the loss that can be carried forward depends on the individual tax structure. This deduction creates stability by allowing businesses to continue their operations despite having suffered losses, this is particularly important for small businesses and those with a high degree of cyclicality (Tax Foundation, 2021).

The broader structure and specific provisions which make up the tax regime all have important implications for revenue collection, efficiency, and competitiveness.

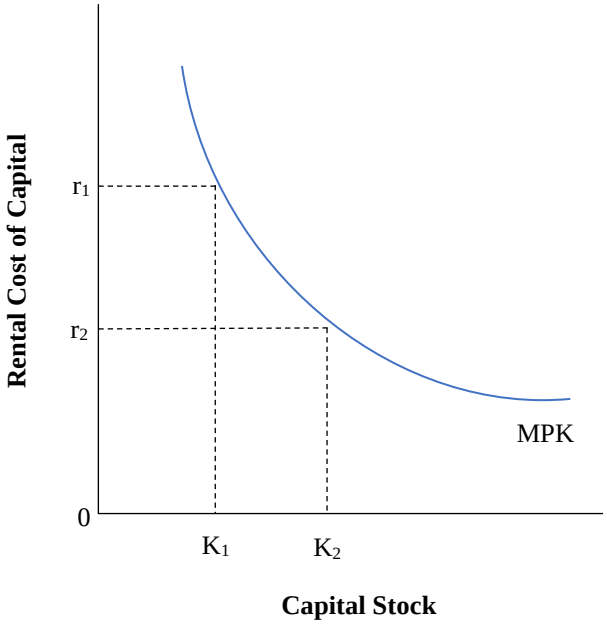
2.2 Corporate Tax and Investment

The core objective of any tax system is to raise sufficient revenue while reducing efficiency losses (Auerbach & Hines Jr, 2001). Taxes also have a redistributive effect and in South Africa a portion of tax revenue is used for this purpose such as the funding of social grants. While this is an important use of tax, this paper will focus on the relationship between revenue and efficiency. Efficiency losses can occur in many ways including tax avoidance and loss of investment, this paper focuses on the latter. To unpack the relationship between CIT and investment, this section discusses the various economic theories and the types of tax incentives used in the promotion of investment.

The efficacy of corporate tax policy as a lever to stimulate investment has generated much debate in literature and continues to be a focal point for many policy makers. The neoclassical theory of corporate investment is modelled by Hall and Jorgensen (1967). The level of investment, defined as the increase in capital stock of an economy (K), is determined by the marginal product of capital (MPK) and the real rental cost of capital (r). This neoclassical relationship is depicted in Figure 2, where the rental cost of capital (r) is negatively related to the level of capital stock (K) based on a diminishing MPK. The higher the rental cost of capital (r), the lower the level of capital stock (K) and by extension the level of investment. In this relationship, the user cost of capital is equal to the rental cost of capital at the profit maximising position – where an additional unit of capital will not raise profits (Creedy & Gemmell, 2015). In Figure 2, the user cost of capital is equal to the rental cost of capital (r) where it intersects with the MPK. Neoclassical theory posits that corporate taxes increase the user cost of capital

which results in less capital stock and lower investment levels. The literature has produced mixed findings on the impact of corporate taxes on investment with some studies in support of the neoclassical theory, however, others (Bond et al., 2003; Chirinko et al., 1999) have produced results which show that the impact of corporate tax on investment is smaller than the theory suggests. Chirinko et al (1999) sought to determine the impact of the Tax Reform Act of 1986 in the United States, which included a reduction in the top marginal capital gains tax rate from 28% to 19.8%, on the levels of capital stock. The paper found that despite the decrease in the user cost of capital, it only produced a 0.47% increase in the long run level of capital flows (Chirinko et al., 1999, p. 74).

Figure 2:Determination of Desired Stock of Capital



Source: (Authors own illustration)

Other theories have been developed which address some of the real-world complexities that are not fully accounted for in the neoclassical theory. The financial constraints theory (Fazzari et al., 1988; Myers & Majluf, 1984) argues that the tax-adjusted cost of capital needs to take capital market imperfections into account. It proposes that a firm's investment decisions are ultimately driven by the availability of internal financing, something which is not explicitly accounted for in the neoclassical model, as firms do not have unlimited access to capital markets and debt-financing. The institutional theory proposes that investment is largely driven by the formal rules that govern economic interactions, it is the economic environment which influences a firm's investment decision (North, 1991). A strong investment climate is needed

and is defined by the institutional, policy and regulatory environment. A poor investment climate, which includes inefficient bureaucracy and administration, corruption, and a lack of physical & financial infrastructure, creates a highly uncertain environment and drive up transaction costs thereby disincentivising firms from investing in fixed assets (Maboshe, 2021). There have been studies carried out by Ayyagari et al (2008), Aiello et al (2012) and Ponticelli & Alencar (2016) which support the institutional theory. Finally, certain studies have undertaken an empirical analysis of the relationship between investment and CIT using gross fixed capital formation (GFCF) and foreign direct investment (FDI) as a proxy for investment (Clausing, 2012; Klemm & Parys, 2009). The findings in these papers do not align with the neoclassical theory as they did not find a significant relationship between CIT and capital flows.

These theories all provide different perspectives on the relationship between corporate tax policy and investment. The extent to which this relationship is discussed in the literature affirms the importance of the corporate tax mechanism as a lever for investment.

3 Corporate Income Tax in South Africa

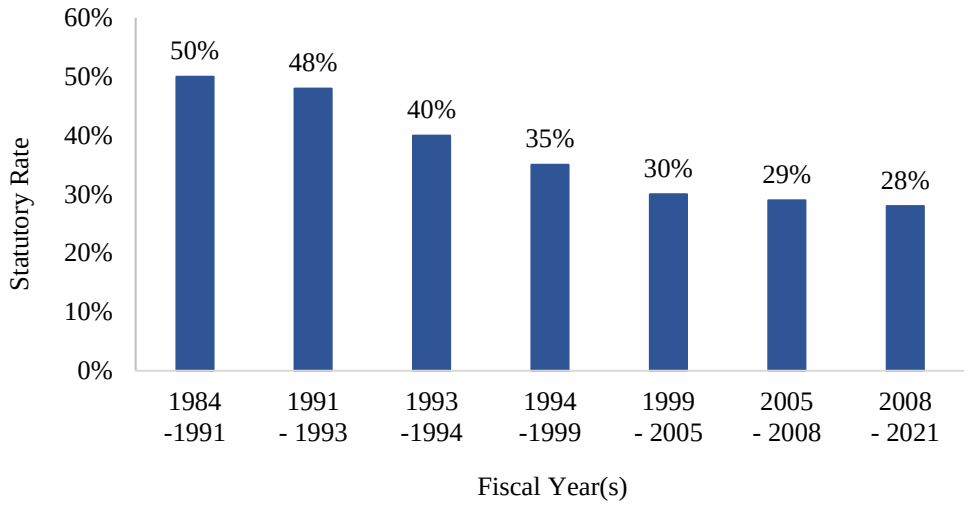
3.1 Regulatory Development

South Africa's CIT policy has changed extensively since the beginning of democracy in 1994 with the aim of stimulating investment and economic growth (Katz, 1997; The Davis Tax Committee, 2018). These changes have resulted in a corporate tax system that is relatively efficient in comparison with South Africa's trading partners (including the United States and United Kingdom) and neighbouring countries (The Davis Tax Committee, 2018).

There have been some noteworthy changes to the tax structure. First, there has been a consistent reduction in the headline CIT rate, with steeper reductions found post-1994, see Figure 3. Second, several accelerated depreciation allowances were introduced in 2002 with specific schedules across different sectors (Maboshe, 2021). This included a schedule for new plant and machinery in the manufacturing sector of 40% in year 1 and 20% in each of the next three years; a 100% depreciation expensing of new plant and machinery in the mining sector; and an accelerated depreciation schedule of Year 1 - 50%, Year 2 - 30%, and Year 3 - 20% for agriculture and renewable energy (Maboshe, 2021; *Income Tax Act 58 of 1962*, 1962). Third, the secondary tax on companies (STC) discussed earlier was introduced as an incentive for

firms to retain and reinvest a portion of their profits, thereby encouraging investment through internal financing, as well as to bolster declining tax revenues. This is a clear instance of government balancing the twin aims of corporate tax policy to raise sufficient revenue while still incentivising investment. The STC was decreased from a rate of 12.5% in 1996 to 10% in 2006 and eventually eliminated in 2012 (Maboshe, 2021). The STC was replaced by the dividends tax to align South Africa's dividend structure more closely to global norms and to dispel the perception that South Africa had a high and unfavourable CIT regime (Maboshe, 2021). Last, interest expense and operating cost deductions were introduced in a further effort to create tax incentives for firms in South Africa.

Figure 3: South Africa Statutory CIT Rate, 1984-2021



Source: (South African Reserve Bank, 2021)

Currently, resident and non-resident firms are charged a flat statutory rate of 28%. A South African resident company, defined as a company with its headquarters in South Africa, is subject to a tax on its total income, regardless of where this income was earned, while non-resident firms are taxed on that portion of income which was made in South Africa (Pricewaterhousecoopers, 2021). Gold mines may opt to have their tax rate calculated according to a special formula in lieu of the 28% flat rate (South African Reserve Bank, 2021). The CIT is applied on a firm's taxable income base which is defined as gross profit less allowable deductions, credits from losses declared in prior years and exemptions. There are several deductions, allowances and incentives in the corporate tax regime which are summarised in Table 1. These provisions have important implications for total corporate tax

revenue collected by the government. A generous tax regime will shrink the taxable income base and as a result decrease total tax revenue available for collection.

Table 1: Corporate Income Tax Deductions, Allowances & Incentives in South Africa

Deduction, allowance or incentive	**Category**	**Description**
Deduction	Depreciation and depletion	A depreciation allowance for natural wear-and-tear on movable assets that are used in the course of trade. SARS has published a schedule of depreciation rates which have been calculated using both the straight-line and diminishing line accounting method. There are specific schedules across sectors, buildings and other permanent structures.
Deduction	Start-Ups	Start-ups are granted a special deduction on expenditures incurred in the year that trade begins.
Deduction	Interest Expense	Interest expenditure resulting from the production of taxable income and for the purpose of trade is deductible. There are a clear set of rules used to calculate the interest amount and the timing of the deductions. All debt payments and receipts across all debt instruments are considered and interest is determined using an internal rate of return.
Deduction and allowance	Bad Debt	Bad debts are deducted if they form part of the taxable income for any tax year and if it is due at the end of the tax year. Bad debt from loaned money is deductible if the money was loaned by a money-lending business. A tax allowance is granted for doubtful debts.
Deduction	Inventory	Inventory should be deductible on purchase, however, at the end of the financial year any inventory on hand has to be included in the income tax base. The deduction is thus delayed to the following year to align the deduction to the time of the inventory's realisation.

Deduction, allowance or incentive	Category	Description
Deduction	Net Operating Losses	Losses may be brought forward for an indefinite period as long as some form of active trade or business continues without interruption. For tax years ending on or after 31 March 2023, assessed losses are limited to a maximum write-off of 80% of the assessed loss, subject to a minimum of R1 million.
Deduction	Roads and fences built for the production of renewable energy	A deduction for any expenses incurred in building a road or fence, including a foundation or supporting structure. The expenditure must be related to the trade of an individual who is generating more than 5 megawatts of energy using a renewable energy source.
Rebate/ Deduction	Foreign Tax Credit	A rebate is provided for tax expenses incurred in another jurisdiction on foreign earned income. A deduction is granted for foreign taxes paid on domestically earned income. To qualify for this rebate the taxpayer must be a South African resident, the income must form part of the company's taxable income and be subject to a foreign tax that is irrecoverable.
Incentive	Research & Development (R&D)	A 150% reduction is granted for any costs incurred in the course of R&D activities subject to receiving pre-approval from a government elected committee. Assets purchased in the course of R&D have a special depreciation schedule.
Incentive	Industrial Policy Projects	A special tax allowance is granted for the cost of manufacturing assets purchased and used as part of an energy-efficient industrial project in the manufacturing sector. Manufacturing of the following products are excluded from the allowance: Tobacco or tobacco-

Deduction, allowance or incentive	Category	Description
		related products, alcohol or alcohol-related products, firearms and ammunition, and biofuels.
Incentive	Special Economic Zone (SEZ)	Businesses operating in an SEZ have a CIT rate of 15%. There is a 10% allowance for the cost of new and unused buildings or any building improvements.
Allowance	Mining Capital Allowances	A company with mining as part of its business are allowed a 100% deduction for capital expenditure, however, this cannot cause an assessed loss.
Allowance	Special provisions for oil and gas businesses	Capital expenditure for exploration qualifies for a double deduction and a 150% deduction from production.

Source: (*Income Tax Act 58 of 1962*, 1962; including amendments as at Taxation Amendment Act 2021)

SARS, the tax administration and collection authority in South Africa, publishes all the relevant schedules and special rates that apply. In regard to depreciation allowances, SARS has provided the timelines over which an asset may be written off while the rate of wear and tear can be calculated according to the straight line or diminishing-balance accounting method. Note, accounting depreciation value does not need to align with the tax depreciation value. Special allowances apply for manufacturing and agriculture and renewable energy, detailed above, and other building and equipment such as pipelines, airport property, and railway lines. The mining sector qualifies for a 100% deduction on capital expenditure in place of the depreciation allowances detailed above. Mines have steep start-up capital costs and a considerable lag between the time the mine is set-up to when it starts to realise income which is why this special deduction applies.

There are other nuances in the CIT regime based on the type or nature of the business. Life insurers are subject to the 28% CIT on the company policy holder fund, risk policy fund and corporate funds and small businesses have a special tax schedule as follows (Pricewaterhousecoopers, 2021):

Table 2: Small Companies Tax Schedule, South Africa

Tax bracket	Tax Rate
R0 – R87 300	0%
R87 300 – R365 000	7%
R365 000 – R550 000	21%
+R550 000	28%

Source: (Pricewaterhousecoopers, 2021)

3.2 Latest Regulatory Developments

The 2020 Budget proposed two key changes to the CIT regime. First, a reduction in the statutory headline rate from 28% to 27%. Second, limiting assessed losses and interest expense deductions. Balances brought forward on assessed losses is going to be restricted to 80% of taxable income, smaller firms will be exempt from this change to protect their cash flows. Payments that are economically equivalent to interest will be added to the interest limitation provision. Further, the net interest expense will be limited to 30% of earnings before interest, tax, depreciation, and amortisation (EBITDA). Based on National Treasury's forward estimates, the changes in the deductions will broaden the tax base and provide the room for the proposed lower CIT statutory rate. Overall, these changes are estimated to have a net-neutral effect on revenue as seen in Table 3, a direct extract from the latest budget review (National Treasury, 2022).

Table 3: Impact of tax proposals on 2022/23 revenue

R million	Effect on tax proposals
Gross tax revenue (before tax proposals)	**1 603 647**
Budget 2022/23 proposals	**-5 200**
Direct taxes	**-2 200**
Personal income tax	
Increasing brackets by inflation	–
Revenue if no adjustment is made	*13 500*
Increase in brackets and rebates by inflation	*-13 500*
Expansion of the employment tax incentive	-2 200
Corporate income tax	
Reform package	–
Reduction in corporate income tax rate to 27%	*-2 600*
Restriction of assessed losses	*1 100*
Additional interest limitation	*1 500*
Indirect taxes	**-3 000**
Fuel levy	
Not adjusting the general fuel levy	-3 500

Specific excise duties		
Increase in excise duties on alcohol	400	
Increase in excise duties on tobacco	100	
Gross tax revenue (after tax proposals)		**1 598 447**

Source: (National Treasury, 2022, p. 44)

According to the 2021 budget review, these changes are expected to bring about three key developments (National Treasury, 2021). First, National Treasury aims to reduce the complexity of the system by removing some of the tax incentives and aligning it to the principles of a good tax system, which should be simple, efficient, equitable and easy to administer. The budget review finds that these incentives and deductions tend to favour certain taxpayers or groups of taxpayers which results in vested interest and lobby groups thereby eroding the fairness of the tax system. Second, it aims to improve investment and competitiveness as South Africa is viewed as having a high corporate tax rate compared to its trading partners and neighbouring countries. The higher statutory is seen to reduce the country's competitiveness and incentivises businesses to shift their profits and operations into other jurisdictions with lower tax rates. The lower statutory rate intends to bring South Africa closer in line to comparable countries. Finally, these changes are posited to have a positive effect on wages and employment as according to the budget review it is the owners of capital, labour (through wages) and consumers (through prices) that ultimately bear this tax burden. The reduction in tax incentives is being used to provide the fiscal room to lower the statutory rate for the benefit of both consumers and businesses.

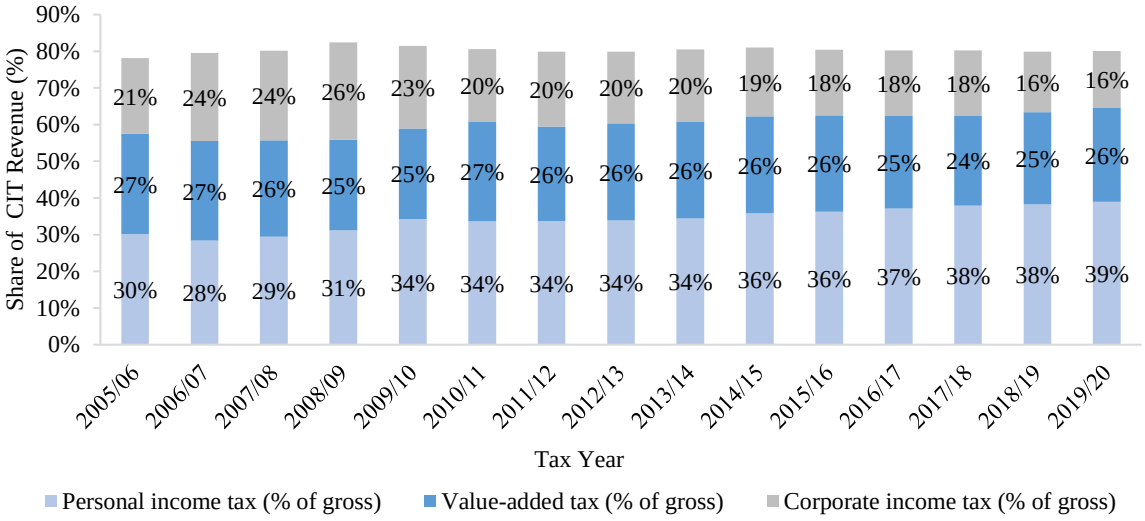
Since the announcement of these proposals, the reduction of the statutory rate to 27% has not come into effect. However, during the latest budget review the Minister of Finance announced the reduced rate will apply to companies with a tax year ending on or after March 2023 (National Treasury, 2022) and it has been included in the "Draft Rates and Monetary Amounts and Amendment of Revenue Laws Bill" (Republic of South Africa, 2022). The restriction of assessed losses has been passed with the promulgation of amendments to section 20 of the Income Tax Act No 58 of 1962 (1962).

3.3 South Africa's Tax Landscape

CIT is the third largest source of tax revenue in South Africa after PIT and VAT, as seen in Figure 4. PIT continues to generate the largest share of gross revenue, which was 39% of total

gross tax revenue in 2019/20. VAT follows PIT and has contributed between 25%-27% to gross revenue collections since 2005/06. This share has not changed drastically even following the 1% increase in VAT to 15% in April 2018. CIT as a share of total revenue has been steadily declining and now only holds 16% of total revenue share where it once held 26% in 2008/09.

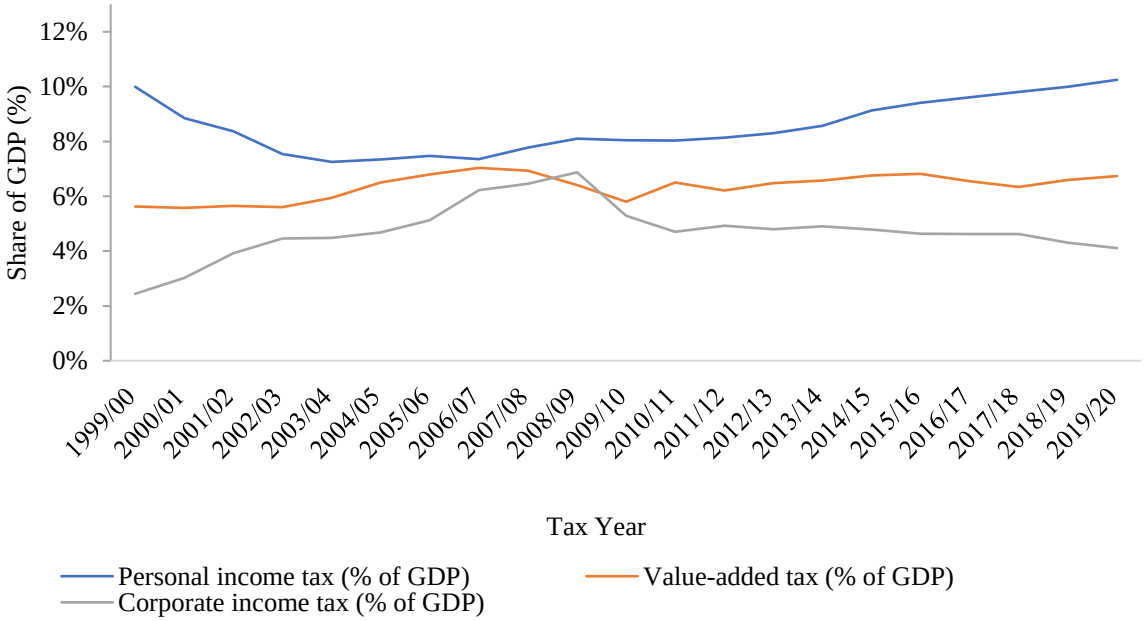
Figure 4: PIT, VAT and CIT as a Percentage of Gross Corporate Tax Revenue



Source: (Authors own calculation; National Treasury, 2021)

When examined over a longer time frame, while the overall tax-to-GDP ratio has increased over the last 20 years from 23.43% in 1999/00 to 26.22% in 2019/20, the CIT-to-GDP ratio rose until 2008 after which it steadily declined, see **Error! Reference source not found.**. PIT remains the largest driver of these increases and in sustaining total tax revenues. CIT as a ratio of GDP has not recovered to its pre-financial crisis level of 6.87%, however, it has had a low but positive compound annual growth rate (CAGR) of 5.45% between 2009/10 and 2018/19. The CAGR of CIT to GDP dropped to 4.17% when the last two financial years are included. These trends all suggest that CIT is sensitive to any changes in the overall economy as businesses are quick to react to changing economic conditions.

Figure 5: VAT, PIT and CIT as a Percentage of GDP



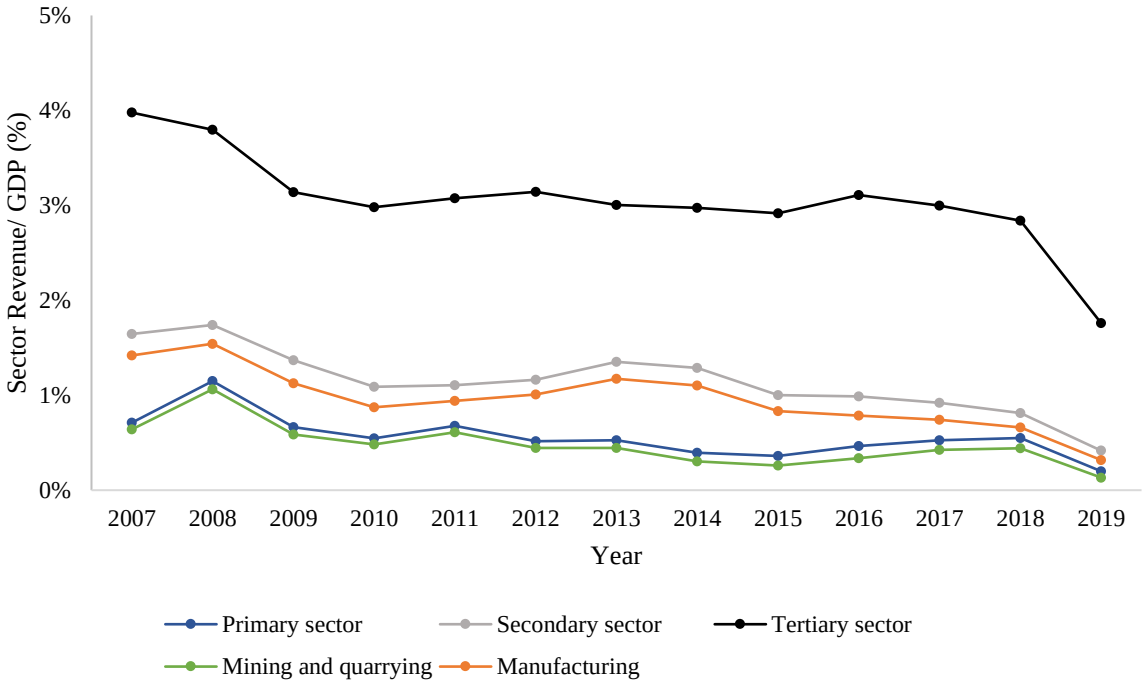
Source: (Authors own calculation; National Treasury, 2021)

The movement in CIT revenue collections can be more clearly understood against the economic backdrop of the time (The Davis Tax Committee, 2018). In 2008/09 corporate tax revenue held a high share of total tax revenue. This was due to the commodity boom and improved tax administration measures implemented by SARS to mitigate against tax avoidance. Post 2008/09 there has been a steady decline in the total CIT collections. The first contributing factor was the 2008 global financial crisis which saw a significant drop in CIT. The second has been the continued decline in profits driven by lower demand in both the domestic and international market, and other economic disruptions including the mining sector labour disputes which arose in 2014/15. Lastly, the end of the commodity price super cycle, in this instance the one which ran from 2002 to 2012 (Sachs, 2021), caused a major drop in tax collections from key mining and manufacturing sectors as the prices of iron ore, platinum and oil fell (The Davis Tax Committee, 2018).

Figure 6 shows the shift in CIT revenue contribution as a proportion of GDP across sectors. The tertiary sector continues to be the biggest contributor. The largest portion of these funds come from the finance, insurance, real-estate, and business service subsector followed by the wholesale & retail trade and catering & accommodation subsector. Mining and quarrying

mirror the primary sector closely. Given that mining and quarrying are a subsector of the primary sector, this suggests that it is a major driver for primary sector contributions. This is the same case for manufacturing, a subsector of the secondary sector. Post the 2008 financial crisis, tax revenue collections dipped across all sectors. From 2012/2013 onwards as the aforementioned commodity super cycle came to an end there was a marked decline in revenue collections from manufacturing and mining & quarrying. While the latter saw an uptick in revenue collections from 2015, the manufacturing sector collections have continued to decline. There was a decline in revenue collections across the sectors in 2018/19, with the most significant decline seen in the tertiary sector. This was due to weak economic activity, reduced production in mining and quarrying (National Treasury, 2019), and the beginning stages of the covid-19 pandemic.

Figure 6: CIT Revenue as a Share of GDP by Sector



Notes: SARS' source of income code is used to classify according to the Standard Industrial Classification (SIC) system. SARS' source of income code is not fully aligned with the SIC system that Statistics South Africa uses as tax payers self select industry classification.

Source: (SARS CIT Revenue data, 2017 & 2020; National Treasury, 2021)

Finally, while this paper does not focus on tax avoidance as an inefficiency it is an important contributor to lost revenue. The paper by Wier & Reynolds (2018), which uses firm level data from SARS to investigate the relationship between profit shifting (where companies shift their

profits to tax havens) and the size of the corporation, highlights the large volumes of lost revenue due to this form of tax avoidance. This paper finds that the largest 10% of corporations, which make up a large share of the tax base, account for 98% of the total estimated loss from profit shifting (Wier & Reynolds, 2018), while the smallest 50% of firms do not have any estimated tax losses (Wier & Reynolds, 2018). Large corporations are taking advantage of tax havens in other jurisdictions to lower the CIT revenue owed in South Africa. This is only one form of tax avoidance as firms attempt to find other legal means of lowering their CIT expense. This drives down revenue collections and should continue to be monitored to avoid further leakage from the system.

This section has provided an overview of South Africa's CIT regime and has shown that it is a complex structure that stretches beyond a statutory rate and includes incentives, allowances and special tax schedules based on differing firm characteristics. Furthermore, while revenue collections are determined by the tax regime in the case of South Africa it is also impacted by broader economic changes. CIT revenue collections move closely in line with economic growth and conditions. Finally, tax administration is also important for improving revenue collections. This is a snapshot view of the taxation landscape, however, a methodical investigation is required to determine how South Africa's CIT regime compares to other jurisdictions.

4 Cross Jurisdiction Comparison of Corporate Tax Regimes

4.1 Methodology

Th economic literature sets out various approaches to comparing tax rates across jurisdictions. The most simplified way is to compare statutory or headlines rates. While this provides an initial indication of the dispersion of tax rates it is not a complete picture as the structure of the tax regimes differs considerably across jurisdictions. As highlighted in section 2, these differences can be complex as each country employs a variety of exemptions, deductions, credits and incentives which are not reflected in the headline rate.

Effective tax rates can provide a less distorted view of the dispersion of the tax rates as it takes into consideration some of the underlying tax regime structures. There are three approaches for computing effective tax rates: the macro backward-looking approach, the micro backward looking approach, and the macro forward-looking approach. This paper will follow the macro approach as it is interested in uncovering differences in CIT regimes between countries rather

than between different types of firms, the latter would seek to uncover differences in taxes paid between firms of varying size or sector and usually within a jurisdiction. While this study will not undertake a micro approach for computing the effective rates (i.e. using individual firm level data), this type of analysis is useful when seeking to understand firm level differences in taxes paid (Carreras et al., 2017). The analysis will include finding both the macro forward-looking and backward-looking effective rates which are computed using aggregate economic datasets such as national accounts or global databases as provided by the OECD or World Bank.

The backward-looking effective tax rate (BETR) uses past data to estimate historical tax burdens. The BETR will be measured as the ratio of CIT Revenue to GDP following equation 1 below (Sørensen, 2007). This will be used as the basis for the cross-jurisdictional comparison over time.

$$BETR = \frac{Corporate\ Income\ Tax\ Revenue}{GDP} \quad (1)$$

Source: (Sørensen, 2007)

The BETR will be calculated for all countries that have available data. In order to understand what has caused shifts in South Africa's BETR, the ratio will be decomposed further following the methodology set out by Sørensen (2007, pp. 177–179) in equation 2.

$$\frac{CIT_{Rev}}{GDP} = \frac{CIT_{Rev}}{C_{Profits}} \cdot \frac{C_{Profits}}{Total\ Economy_{Profits}} \cdot \frac{Total\ Economy_{Profits}}{GDP} \quad (2)$$

Source: (Sørensen, 2007)

Here, CIT_{Rev} is total CIT revenue collections, $C_{Profits}$ is total corporate profits, and $Total\ Economy_{Profits}$ is total profit in the economy. This equation suggests that changes in the CIT revenue to GDP may be due to an increase or decrease of (1) the tax burden on the corporate sector; (2) the share of total profits of the corporate sector relative to the economy; and or (3) total economic profits in the economy (Sørensen, 2007). Data from the OECD national accounts and tax databases will be used to calculate the ratios (Sørensen, 2007). The OECD defines the total economy as being made up of five mutually exclusive sectors: (1) non-financial corporations; (2) financial corporations; (3) government units, including social

security funds; (4) non-profit institutions serving households (NPISHs); and (5) households. Gross operating surplus/mixed income is calculated for all these sectors in South Africa. Total economy profits are calculated across the above five sectors while corporate profits only include financial and non-financial corporations. Lastly, profits will be defined as gross operating surplus and mixed income following the OECD definition. Equation 2 will only be carried out for South Africa as a deeper investigation into its BETR.

Forward-looking effective tax rates are projected rates constructed using information about specific tax policy rules and incorporate the impact of economic depreciation and other tax provisions (Nicodeme, 2001). Forward-looking effective tax rates provide a more accurate framework for comparing differences in CIT regimes. There are two measures of forward rates that will be explored: marginal and average. The effective marginal tax rate (EMTR) was first constructed by Jorgensen (1963) and Hall and Jorgensen (1967). The EMTR considers the case for a marginal investment and incorporates the tax cost through the cost of capital (i.e. the tax cost raises the cost of capital). The EMTR is not always a good proxy for measuring the impact of the tax cost between discrete investment decisions. Given this limitation, Devereux (2002; 1999) developed the Effective Average Tax Rate (EATR) to measure the impact of tax on discrete investment choices.

The EMTR is the tax cost a firm faces when expanding their operations, for instance by setting up a new factory, given a specific location. The location in this scenario is predetermined as the firm is expanding its production in the same jurisdiction. There is no need to compare the EMTR to other jurisdictions as the firm is only concerned about comparing the rate of return between two investment options (e.g. the returns from setting up another factory versus placing the funds in an interest bearing account). The tax regime remains fixed. The EATR measures the tax cost of a firm setting up its first production site. In this scenario, a firm is choosing between different locations to set-up its operations. A firm will compare the EATR across jurisdictions to determine which location, given its tax regime, offers the lowest tax cost. The size of the investment depends on the EMTR while the location depends on the EATR (Devereux & Griffith, 2002).

Equation 3 sets out the basic formula for calculating the EMTR. The cost of capital is defined as the pre-tax rate of return needed to breakeven on post-tax economic profits. The real interest rate is the return on capital if the funds were placed in a bank account. Equation 3 is the

difference between these two rates of return (cost of capital and interest rate) relative to the cost of capital, representing the trade-off between two investment decisions (OECD, 2021a). A higher tax burden pushes up the cost of capital as it requires a higher pre-tax rate of return on the investment to breakeven post-tax. The EMTR determines the impact of the tax cost on the size of the investment by measuring the degree to which the tax increases the cost of capital above the real interest rate (Devereux & Griffith, 2002).

$$EMTR = \frac{(Cost\ of\ Capital) - (Real\ Interest\ Rate)}{(Cost\ of\ Capital)} \quad (3)$$

Source: (OECD, 2021a, p. 20)

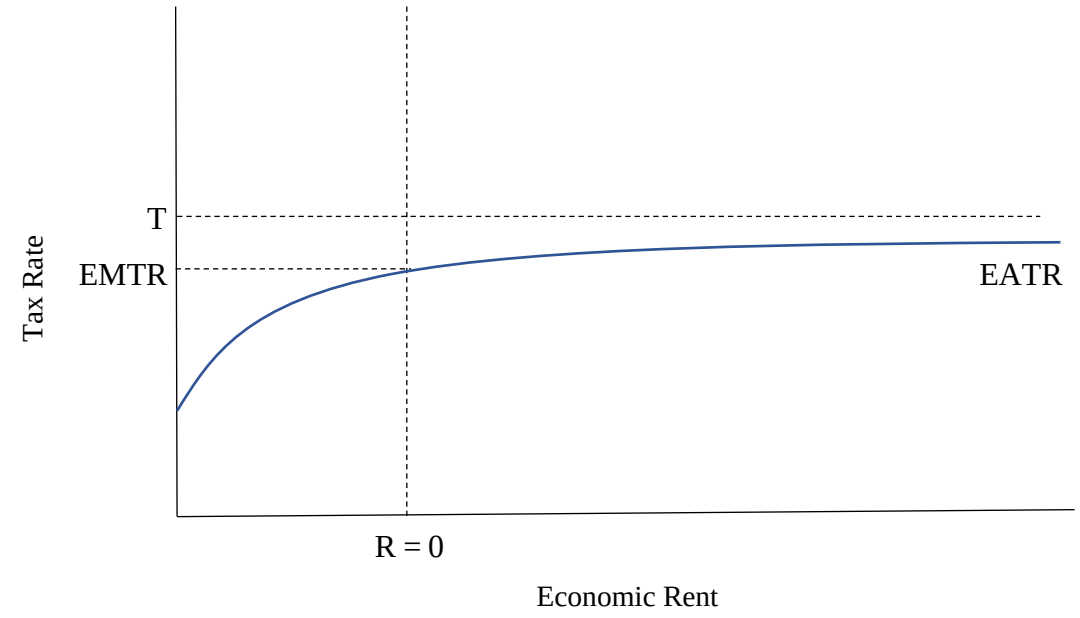
Equation 4 sets out the EATR calculation. This measure is critical for comparing the competitiveness of tax rates across jurisdictions. The choice of location is dependent on the EATR as the post-tax net present value ($Economic\ Profit_{post-tax\ NPV}$) is impacted by the specific tax regime of that location. For instance, a tax regime with generous tax depreciation allowances will narrow the tax base and lower the tax cost for that jurisdiction thereby increasing the post-tax economic profits for that investment.

$$EATR = \frac{Economic\ Profits_{pre-tax\ NPV} - Economic\ Profit_{post-tax\ NPV}}{Net\ Income_{pre-tax\ NPV}} \quad (4)$$

Source: (OECD, 2021a, p. 20)

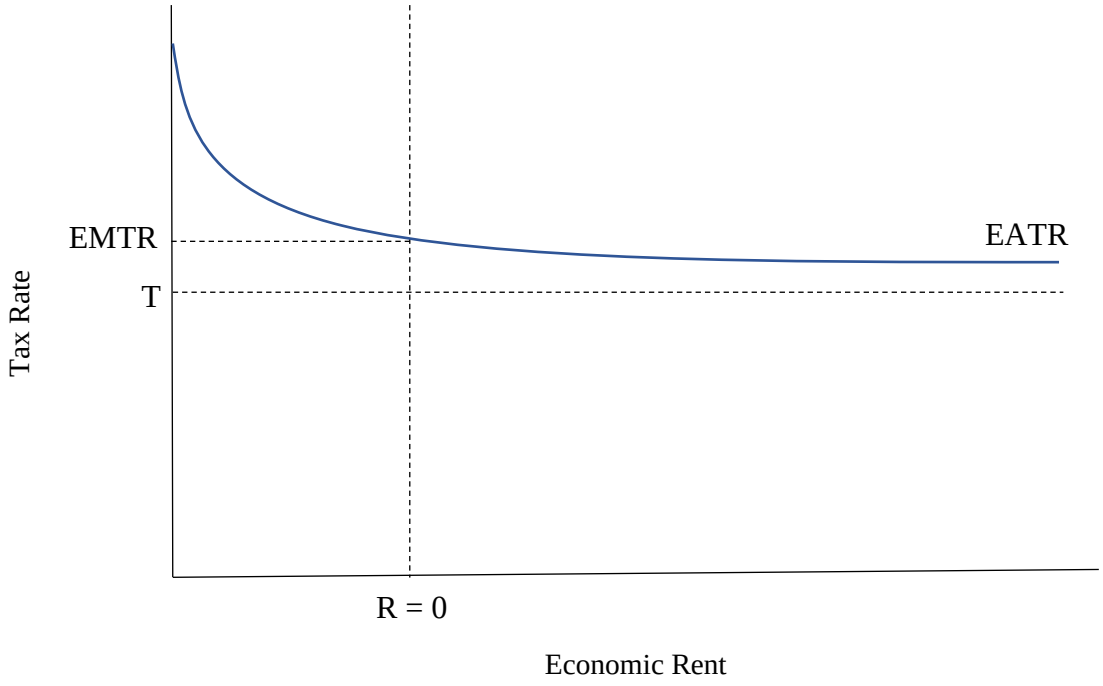
Devereux and Griffith (2002) illustrate the relationship between the EMTR and EATR. Figure 7 and Figure 8 show two scenarios, the first is where the EMTR is below the statutory CIT rate (EMTR<T) and the second where it is above (EMTR>T), where R is the pre-tax rate of return. Note that T is fixed for a given jurisdiction as firms do not have control over the statutory rate (T).

Figure 7:Scenario 1, EMTR < T



Source: (Devereux & Griffith, 2002, p. 28)

Figure 8: Scenario 2, EMTR > T



Source: (Devereux & Griffith, 2002, p. 28)

The EMTR is derived by setting economic rent to zero at the margin (R=0) and this is where the EMTR lies in both figures. In scenario one, the tax regime is generous towards the marginal investment and the EMTR lies below the statutory rate (T). In this scenario, the tax regime

narrows the tax base thereby lessening the tax burden below what the statutory rate captures. The opposite case is true for the EMTR in scenario two, where the tax regime is less generous towards the marginal investment. The EATR can be interpreted as the full schedule of effective rates corresponding to different levels of return on investment, where the EMTR is the special case in this distribution of a marginal investment. In both scenarios, the EATR approaches but does not reach or cross the statutory rate (T). This is because at very high rates of return (i.e. as $R \rightarrow \infty$) allowances become insignificant and the tax rate is the key contributor to the tax cost. The EATR ranges from the lower bound of zero economic rent (EMTR=EATR) to an upper bound of the statutory rate (T) in scenario 1, while in scenario 2 it ranges from an upper bound at EMTR to the lower bound of the statutory rate (T). Given these relationships, the EATR is upward sloping for scenario one and downward sloping in scenario two. The relationship between the EATR and EMTR shows the impact of the tax cost for varying levels of return on investment. The EATR when compared to other jurisdictions provides a measure of the differences in tax costs across jurisdictions where a higher EATR suggests a more burdensome tax regime (i.e. a higher cost of doing business) and a less competitive investment environment.

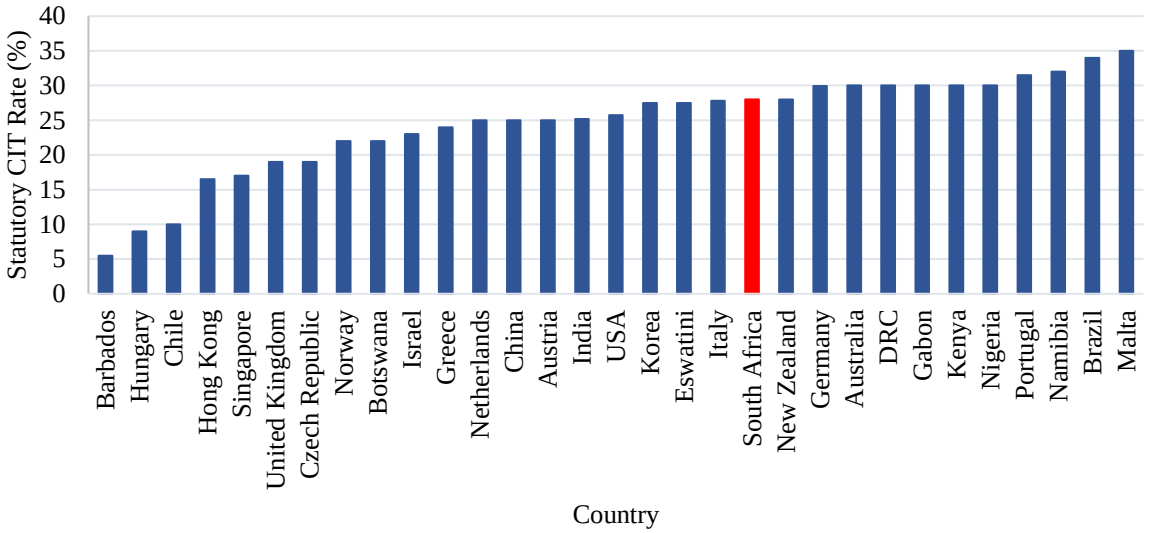
This paper will analyse all three rates using data from the OECD Tax Database. Finally, these measures may not provide a complete estimate of the tax cost firms carry. Certain costs such as social security taxes may impose an additional tax burden and lower firms profit which is the base CIT is calculated on. However, the comparison of the statutory and effective rates across countries will only incorporate CIT costs as defined by the OECD (OECD, 2021b), and will not directly account for these other tax costs.

4.2 Statutory Corporate Income Tax Rates

The OECD tax database provides the statutory tax rates of 111 jurisdictions (OECD, 2021a). The data shows that the statutory CIT rates vary from 0% to 35%, with South Africa on the upper end at 28%. Figure 9 shows the spectrum of statutory tax rates across select jurisdictions (Appendix A provides the full table of rates). In order to understand how these have changed over the last 10 years following the 2008 financial crisis, statutory rates from 2010 are examined. Since 2010 corporate tax rates have mostly remained unchanged or decreased with the most significant reductions seen in Belize, Barbados and the United States of America (USA) which dropped their statutory rate by 25%, 19% and 13.5% respectively. The only

country to increase their statutory rate was the Maldives which went from being a tax haven (i.e. no corporate taxes) to introducing a 15% tax on any businesses with profits exceeding $32 000 (or MVR 500 000).

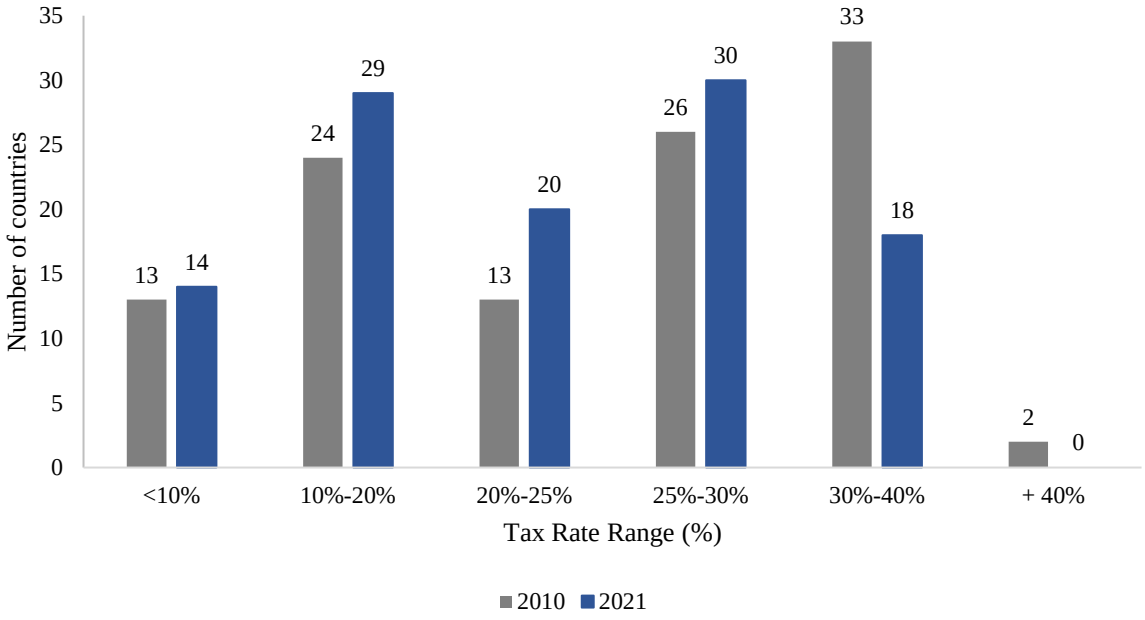
Figure 9: Statutory CIT Rates for selected countries, 2020



Source: (OECD Tax database, 2020)

This general decline in CIT rates is also reflected in the changing distribution of the CIT rates between 2010 to 2021 seen in Figure 10. There were 33 jurisdictions with a tax rate between 30%-40% in 2010 compared to 18 jurisdictions in 2021. While by 2021 there were no jurisdictions charging a CIT rate above 40%. There has also been a significant shift into the 20%-25% range from 13 to 20 jurisdictions by 2021. South Africa's statutory tax rate has remained unchanged at 28% - the last change occurred in 2007/8 when the rate was dropped by 1% from 29%. South Africa's statutory tax rate lies in the 25%-30% range, which had the largest number of jurisdictions (30). However, the country still has one of the higher CIT rates compared to the other jurisdictions and lies above the OECD average of 23%.

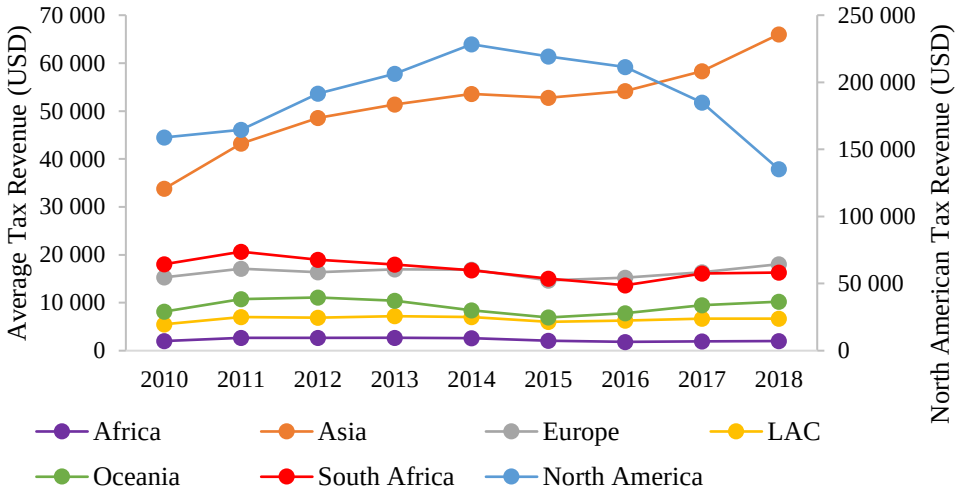
Figure 10: Change in Distribution of Statutory CIT Rates, 2010 to 2021



Source: (OECD, 2021)

The statutory rate provides one perspective of the tax regime in a country, it masks key differences in the tax structure. One of the drivers behind differences in the statutory rates includes the type of tax regime a country follows. Australia and New Zealand have relatively high statutory rates, however, both countries follow the imputation systems which means that shareholders are granted a tax relief under PIT. In the same manner, while Austria and the Czech Republic have lower CIT statutory rates these countries both follow the classical system. In the classical system, there is no tax relief granted to shareholders when dividends are paid out. Hungary follows a similar structure to the imputation system as it does not charge any withholding taxes. However, it still has one of the lowest CIT rates at 9% which was adopted in order to attract major investments. Chile has temporarily lowered its CIT rate to 10% for the period 2020 – 2022. Normally, Chile follows an imputation system and has a statutory rate of 25% (OECD, 2021b). South Africa has a relatively hight CIT rate and a 20% withholdings tax suggesting that its broader tax landscape is less competitive. Further, a high statutory tax rate does not necessarily translate into high tax revenue collections. As seen in Figure 11, total tax collections vary greatly across regions. These differences in revenue can be explained by several factors including the size of the market, the size of the tax base and sophistication & effectiveness of the tax collection system.

Figure 11: Total Tax Revenue by Region, 2010 - 2021



Note: Country regional classification following United Nations classification standards
Source: (Authors own calculation; OECD Tax Database, 2021)

South Africa may appear to be less competitive and have a costly tax regime based on the statutory rate alone. However, other aspects of the country's tax regime, part of which were outlined in Table 1 above, will have an important impact on the tax base. Further, economic structures along with the tax structures determine the revenue collections of a country. These structures need to be considered in tandem when assessing the relative rate or cost of the corporate tax burden. The statutory rate is only one aspect of a bigger picture.

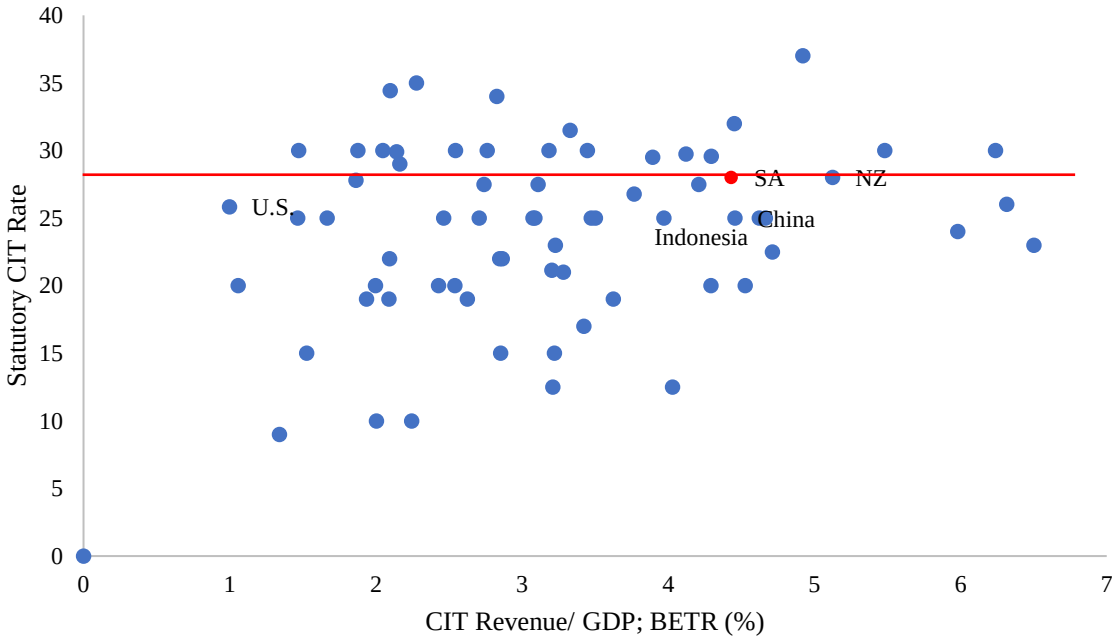
4.3 Backward Effective Tax Rates

Backward effective tax rates provide insight into the size of the tax base, measured by the ratio of CIT revenue collections to GDP (Sørensen, 2007). Figure 12 shows the dispersion of BETR's against the corresponding statutory rate for 69 jurisdictions. There is no clear relationship between the variables. This confirms that a country's statutory rate is not linearly related to its revenue collections. South Africa has a BETR of 4.4% which is above the OECD average of 3.1%.

Figure 13**Error! Reference source not found.** shows that in relation to other emerging markets, which in this dataset includes Chine, Chile, Indonesia, Egypt and Thailand (Duttagupta & Pazarbasioglu, 2021), with GDP ranging from 4% to 4.7%, statutory rates for these countries lie between 20% - 25%. This suggests South Africa has a relatively high BETR

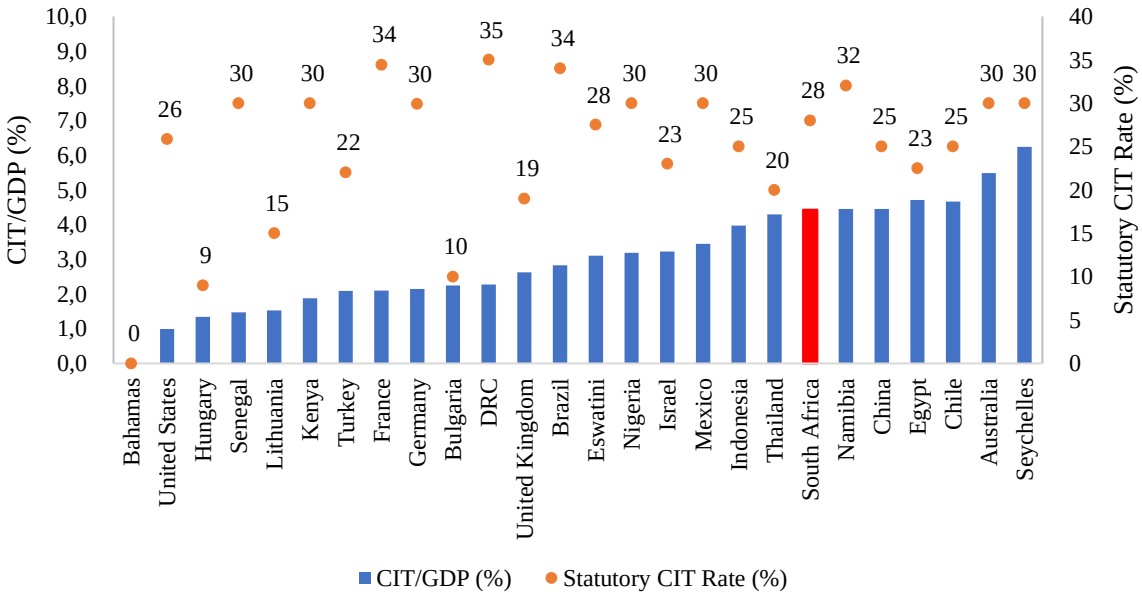
rate compared to other emerging economies of a similar economic size. On the other end of the spectrum is the USA which has a relatively low CIT/GDP ratio but a statutory rate of 26%.

Figure 12: CIT to GDP Spread, 2018



Source: (OECD Tax Database, 2018)

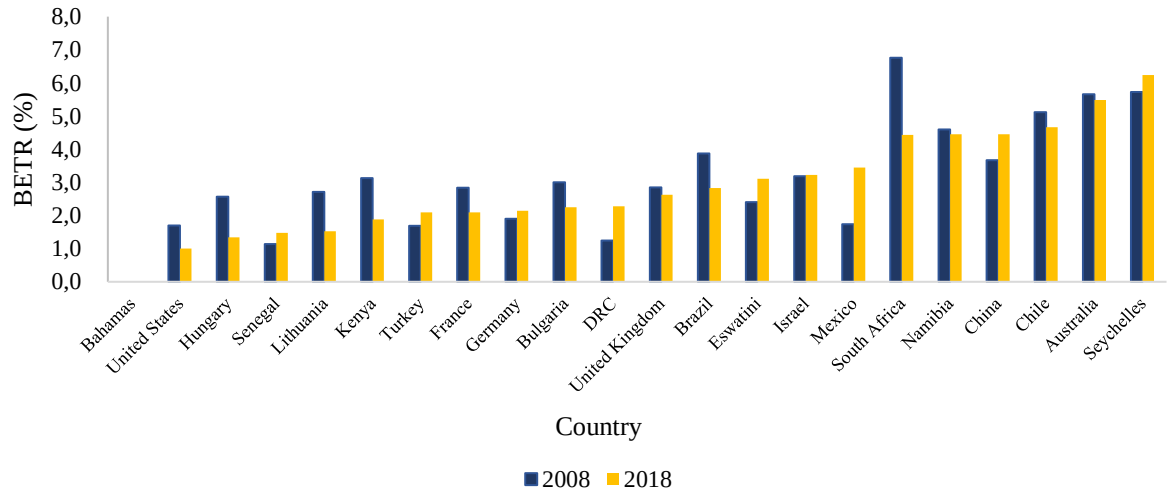
Figure 13: CIT to GDP for select countries, 2018



Source: (OECD Tax Database, 2018)

The BETR is best used to understand how CIT collections have changed over time. Figure 14 below shows the changes in BETR across select jurisdictions from 2008 to 2018. South Africa's CIT to GDP has fallen significantly in the ten-year period between 2008 to 2018 where the statutory rate remained the same while nominal GDP dropped from 6.8% to 4.4%. As discussed in section 3, South Africa has seen a marked decline in CIT revenue collections due to declining economic conditions such as the financial crisis and the end of the commodity price super cycle in 2012. The USA has also faced a decline in its CIT/GDP, however, this is mostly due to the significant drop in the CIT statutory rate from 39.3% in 2008 to 26% in 2018.

Figure 14: CIT to GDP, 2008-2018



Source: (OECD Tax Database, 2008 & 2018)

In order to understand the causes of the shift in South Africa's BETR, the ratio will be decomposed following equation 2 which describes changes in the CIT revenue to GDP as an increase or decrease of (1) the tax burden on the corporate sector (CIT Revenue/Corporate Profits) ; (2) the share of total profits of the corporate sector relative to the economy (Corporate Profits/ Total Economy Profits) ; and or (3) total profit share in the economy (Total Economy Profits/ GDP). Table 4 provides a breakdown of each of these measures for South Africa using data from the OECD over 2009 – 2018. This provides a year-on-year view of the major contributors to changes in the BETR following the 2008 financial crisis.

Table 4: CIT/GDP Decomposed for South Africa, 2009-2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CIT/GDP (BETR) (%)	5.7	4.8	5.0	4.8	4.9	4.8	4.7	4.6	4.6	4.4
CIT Revenue/ Corporate Profits (%)	19.8	17.0	17.6	17.1	18.1	18.0	18.8	18.6	18.6	18.1
Corporate Profits/ Total Economy Profits (%)	63.1	63.4	64.5	64.7	64.0	63.8	62.2	61.9	61.9	62.1
Total Economy Profits / GDP (%)	45.4	44.6	43.7	43.2	42.4	41.6	40.5	40.0	40.1	39.5

Source: (OECD, 2018)

From 2010 to 2011 there was a 0.02% increase in the BETR. Despite a decline in total economic profits, CIT revenue and corporate profits rose resulting in a higher BETR for 2011. The overall decline in the BETR from 2008 to 2018 was mainly driven by a decline in total profits in the economy relative to GDP, while the tax burden and share of profits accruing to the corporate sector also fell but to a lesser degree. Data from the Annual Financial Statistics Survey (2021) is used to track the shifts in CIT revenue and corporate profits more closely. In this case, profits are defined as net profits before tax and dividends and are a closer measure of the tax base compared to gross profits. CIT revenue/Corporates profits is also calculated in this table and produces values that are consistently higher than in Table 4. This variation is mostly due to the difference in the definition of corporate profits. The results are presented in Table 5.

Table 5: CIT Revenue and Corporate Profits in South Africa, 2010-2019

Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Net profit before providing for company tax and dividends	439 263	444 730	515 839	491 789	556 556	529 782	462 038	680 490	616 751	623 844
Company tax paid or provided for during the financial year	109 277	127 177	147 933	127 757	139 536	139 901	134 528	148 662	156 028	157 261
CIT Revenue/ Corporate Profit (%)	24,88%	28,60%	28,68%	25,98%	25,07%	26,41%	29,12%	21,85%	25,30%	25,21%
Statutory CIT rate	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%

Source: (Annual Financial Statistics Survey, Statistics South Africa, 2021; Own Calculations)

There was a significant drop in the CIT revenue/Corporate Profits between 2016 and 2017. Despite a large increase in net profit (47%), driven by an uptick in commodity prices (National Treasury, 2017), there was only a small increase in CIT collections (10.5%). The same period in Table 4 shows no change for this measure suggesting this was underestimated based on the OECD database. Over the period 2010 to 2019, the same trend arises as net profits rose by 30%

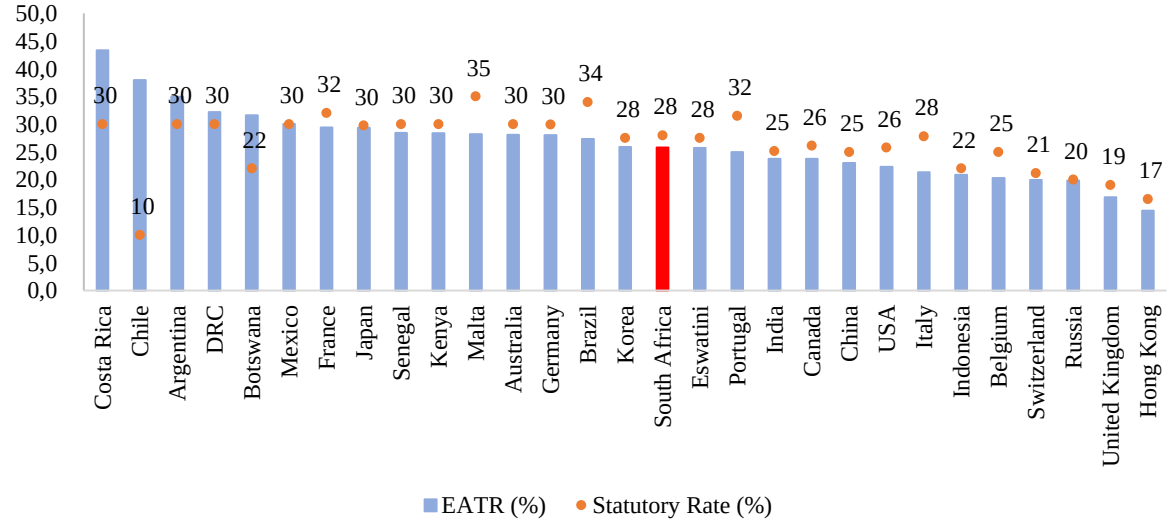
while CIT revenue collections only rose by 11% (using constant 2020 values). This suggests that the tax regime played a significant role in narrowing the tax base because despite the high profits, tax collections did not increase to the same degree.

The BETR is able to take the picture of South Africa's corporate tax level one step further, highlighting that both the tax regime and economic factors need to be considered. In the case where the CIT/GDP ratio is used to cross-compare jurisdictions, it is essential to understand how the tax regime and the economic conditions contributed to the final ratio. Once again, the statutory rate alone would not reflect these differences.

4.4 Forward-Looking Effective Tax Rates

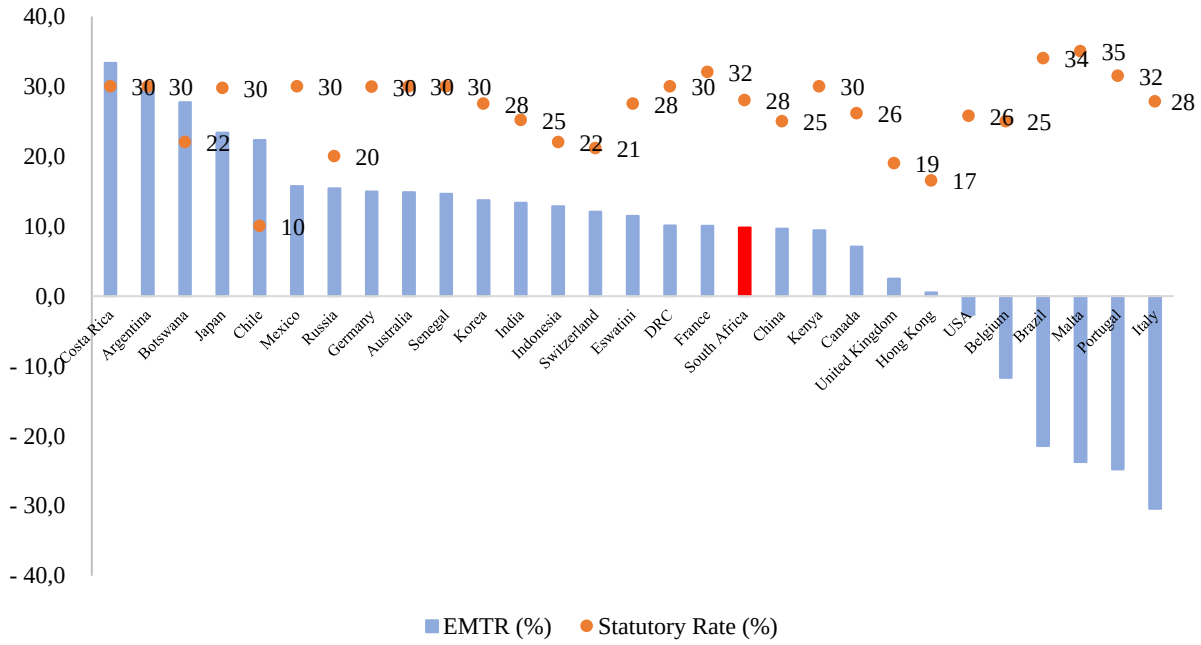
The forward-looking effective rate is based on a hypothetical, future investment following the methodology developed by Devereux and Griffith (2002; 1999). The calculation considers various details about a country's tax regime including the statutory rate and other provisions such as allowances and deductions which allows for more accurate cross-jurisdictional comparisons. The OECD has computed forward effective tax rates across 77 jurisdictions. A full breakdown of the EMTR and EATR across all jurisdictions can be found in Appendix B. Figure 15 and Figure 16 show the statutory rate, the EATR and EMTR respectively for select countries.

Figure 15: Effective Average CIT Rate, 2020



Source: (OECD, 2021a)

Figure 16: Effective Marginal CIT Rates, 2020



Source: (OECD, 2021a)

The EATR is the difference between pre- and post-tax economic profits divided by the net present value of pre-tax income as set out in equation 4. EATRs that lie below the statutory tax rate indicate that there are generous statutory provisions which narrow the taxable income base. In this case, the statutory rate is applied to a reduced tax base due to the various allowances, incentives and other provisions, which means a lower tax cost. EATRs that lie above the statutory tax rate indicate more restrictive regulation and a higher tax burden (OECD, 2021a). Notably, the OECD forward rates do not include any R&D incentives, however, it is consistently excluded across all countries.

The data shows that EATRs are generally lower than the statutory rate with the exception of Chile, Costa Rica, Botswana, Argentina, Democratic Republic of the Congo (DRC), Hungary, Saudi Arabia and Mexico. These high EATRs are generally driven by restrictive tax depreciation rules. For example, there is no depreciation allowance for any purchased software in Chile, Costa Rica, and Botswana, with very low depreciation rates for it in Argentina (OECD, 2021a). These countries' EMTRs are also far above the statutory rate for the same reasons as the EATR.

Except for the aforementioned countries, EATRs lie above the statutory tax rate and this difference lies in the range of 1%-4%. This difference is mostly driven by generous tax depreciation allowances suggesting that most countries have depreciation allowances in line with or more generous than economic depreciation. Italy, Portugal, Brazil and Malta have a greater difference between their EATR and statutory rate, ranging from 6.5% - 6.8%. These latter countries all offer tax allowance for corporate equity (ACE), also referred to as notional interest deduction which lowers their tax cost (OECD, 2021a). The ACE provides a tax incentive for firms to finance their operations through equity rather than debt and narrows their tax base considerably. Notably, EATRs do not diverge significantly from the statutory rates unless there are specific tax regulations such as allowances or non-depreciable assets which ultimately determine how competitive a corporate tax regime is. In this case, higher EATRs suggest a less competitive regime.

The EMTR data mirrors the EATR data, where countries with an EATR above the statutory rate also have an EMTR above it and vice versa for EATRs below the statutory rate. This implies that most countries align to scenario 1 described by Devereux and Griffith (2002) where the tax regime is more generous towards marginal investments (EMTR < T). This further implies that EATRs are upward sloping over a range of return on investments.

South Africa lies on the upper bound of the spectrum, which ranges from 9.9%-43.3%, with an EATR of 25.8%. However, it has a lower EATR compared to some African countries including Botswana and Kenya. South Africa's EATR is below its statutory rate of 28% and the 2.2% difference is largely due to the generous tax depreciation allowances. South Africa's CIT policy is generally in line with the global standard as it has an EATR and EMTR that lie below its statutory tax rate. However, it is still relatively high in the spectrum of effective tax rates which suggests there may be room to lower the country's EATR further and thereby encourage investment by offering lower tax costs for doing business in South Africa. Notably, this can be achieved through a reduction in the headline rate as well as putting in place more generous tax provisions which will narrow the tax base. However, changes in the tax regime to lower the tax cost, represented by the EATR in this case, needs to be balanced against potential losses in revenue collections. To understand what impact these types of changes could have on collections and competitiveness, a closer inspection of the economic environment and tax structure is needed.

5 Implications of changes in the tax regime

5.1 Tax Depreciation and Incentives

The tax regime impacts the size of the tax base through the headline rate, incentives, allowances, and all other statutory provisions. Differences in the backward and forward effective tax rates both across and within a jurisdiction are driven in part by the complex corporate tax systems. This section unpacks South Africa's allowances and incentives and the impact they have on the tax base and revenue collections.

National Treasury produces an estimate of tax expenditures following the revenue foregone approach. This method compares actual revenue collections to revenue collections without any incentives in place using data from the South African Revenue Service (SARS). Table 6 below provides a breakdown of this calculation. The three main drivers of CIT expenditure according to these calculations are small business corporation tax savings, the employment tax incentive and the participation exemption. Small business corporation tax savings is mostly driven by the reduced headline schedule small businesses face outlined in section 3. The employment tax incentive is used to promote the hiring of young work seekers in South Africa. However, this incentive reduces the pay-as-you-earn (PAYE) burden of firms rather than their CIT burden. The participation exemption comes from section 10 B(2) of the Income Tax Act (*Income Tax Act 58 of 1962*, 1962) which exempts foreign dividends from income tax, based on qualifying criteria set out in the provision. Dividend income falls outside the scope of this paper. There has been a decline in revenue foregone from R&D, strategic industrial projects and urban development zones from 2015/16 to 1018/19. Energy efficiency savings, however, have significantly increased.

This data provides a limited view of the incentives and allowances in the CIT regime. In order to conduct a more in-depth analysis, data and tables from Calitz et al (2021) will be used. This aforementioned paper finds the revenue foregone for depreciation and investment allowances across all businesses that pay tax using SARS firm level data. The study produces three key findings that are relevant to this discussion. First, depreciation allowances reduce the tax base far more than investment allowances. The tax benefit due to investment allowances is only 1.41% of the tax benefit due to depreciation allowances, based on the totals across 2014-2017. The tax benefit due to depreciation exceeds the benefit due to investment allowances year on

year based on the sample shown in the dataset (Calitz et al., 2021). This aligns to the discussion on South Africa's EATR.

Table 6: Corporate Income Tax Expenditure (Rm), SARS data

Year	**2015/16**	**2016/17**	**2017/18**	**2018/19**
Small business corporation tax savings	2900	3008	3014	2420
Reduced headline rate	*2856*	*2964*	*2969*	*2386*
Section 12E depreciation allowance	*44*	*44*	*45*	*34*
Research and development	277	233	262	172
Learnership allowances	1072	1079	717	442
Strategic industrial projects (12I)	461	693	599	344
Film incentive	12	15	5	0
Urban development zones	259	276	314	205
Employment tax incentive	4314	4656	4317	4512
Energy-efficiency savings	1058	1201	600	1804
Participation exemption	4198	5483	5094	11010
Total corporate income tax expenditure (Rm)	**14551**	**16644**	**14923**	**20909**

Source: (National Treasury, 2021)

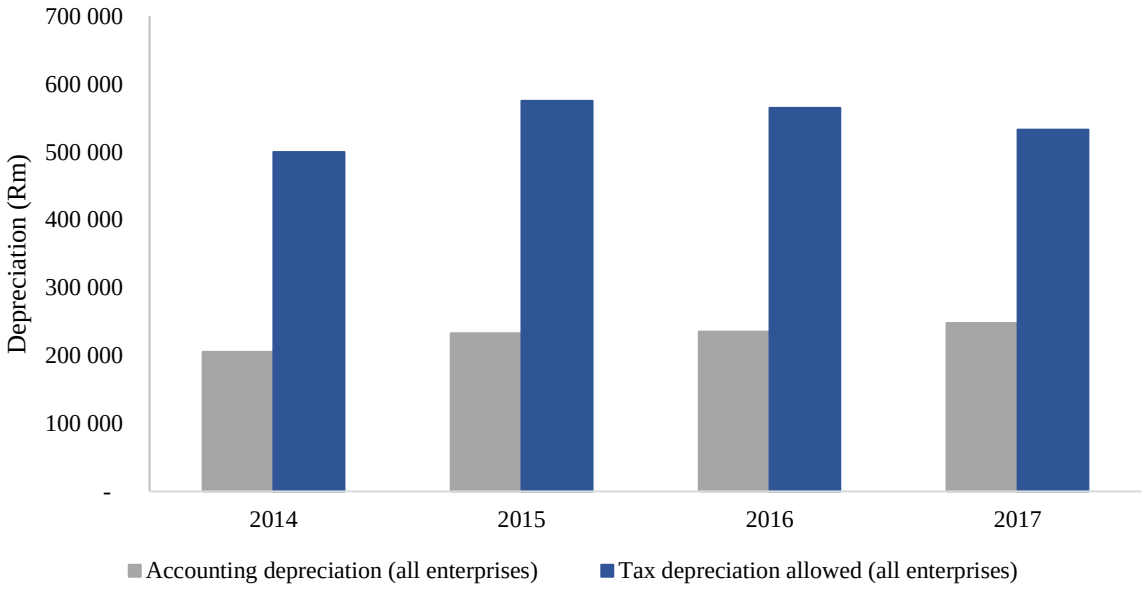
Table 7: Corporate benefits from tax depreciation and investment allowances, 2014–17 (million ZAR, current year prices)

Financial item	**2014**	**2015**	**2016**	**2017**	**Total, 2014-2017**	**Average, 2014-2017**
Net accounting profit (all enterprises)	1 534 431	1 771 525	2 124 515	1 970 348	7 400 819	1 850 205
Net accounting loss (all enterprises)	290 515	694 017	341 798	532 875	1 859 205	464 801
Taxable income before assessed losses (all enterprises)	636 757	659 535	718 062	738 932	2 753 287	688 322
Taxable loss (all enterprises)	189 504	419 136	222 781	214 081	1 045 501	261 375
Accounting depreciation (all enterprises)	205 543	232 747	235 228	247 922	921 440	230 360
Tax depreciation allowed (all enterprises)	500 077	575 254	564 856	532 966	2 173 015	543 288
Investment allowances (all enterprises)	3 820	3 537	4 332	4 692	16 382	4 095
Tax benefit due to depreciation allowances (enterprises with	42 277	67 968	34 534	27 217	171 997	42 999
Tax benefit due to investment allowances (enterprises with taxable income>0*) (at average rate of taxable income group)	657	627	618	521	2 423	606

Source: (Direct extract from Calitz et al., 2021, p. 11)

Second, the tax depreciation allowance exceeds the accounting depreciation value year on year as seen in Figure 17. Tax depreciation allowed is at least double the accounting depreciation, where the latter is based on the book values of individual firms' depreciation expense calculation (Calitz et al., 2021). Once again, this confirms the finding that generous depreciation allowances in South Africa are a key reason for the difference between the EATR and statutory rate.

Figure 17: Tax Versus Accounting Depreciation Allowance, 2014-2017

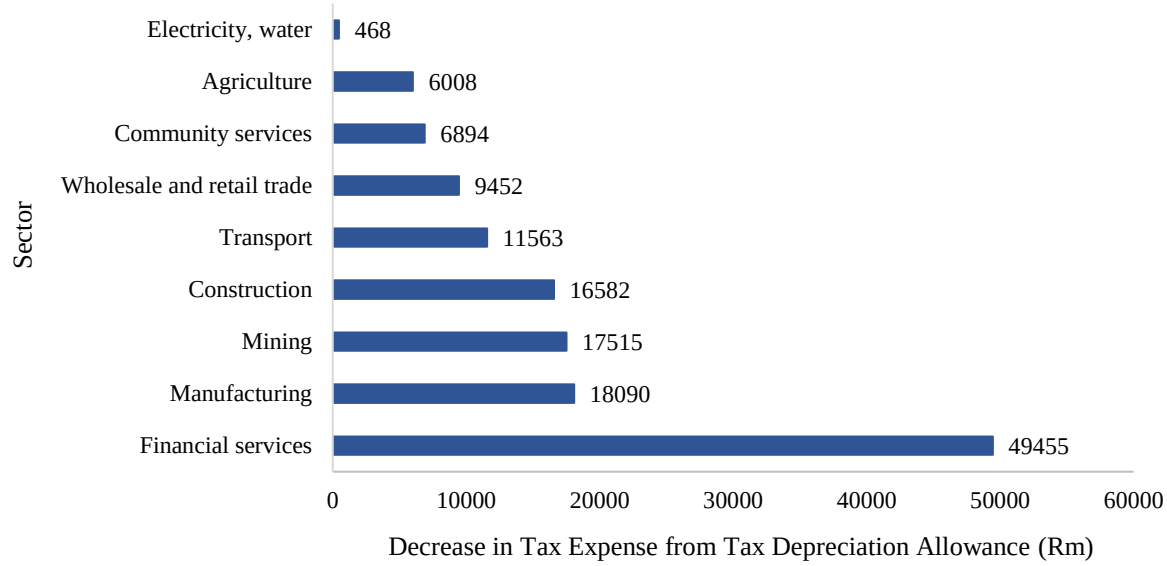


Source: (Calitz et al., 2021)

Lastly, the sectoral split of tax depreciation allowances shows that the financial services sector benefits from this allowance far more than any other industry, refer to Figure 18. The financial services sector includes a broad classification that covers different types of businesses, consequently many firms are categorised in this sector. As per the SARS definition it includes financing, insurance, real estate and business services (SARS & National Treasury, 2021). It is important to note that the firm classification is based on a self-selection option when submitting their tax returns and does not necessarily align with the standard industrial classification (SIC) codes used in national account statistics. This means that certain businesses may be mis-classified (Calitz et al., 2021). The other major sectors which benefit from this allowance are construction, mining and manufacturing. These sectors are capital-intensive in nature and expectedly have larger depreciation allowances. Mining and manufacturing have special depreciation schedules which drive their allowances. Both these sectors are particularly

important for achieving the country's industrialisation objectives, as articulated in the Industrial Policy and Action Plan (Department of Trade & Industry, 2018). Given that investment incentives are a key pillar of this plan, the current split in tax depreciation allowances suggests that these sectors could be made more desirable by bringing them more closely in line with the financial services sector. However, due consideration should also be given to crafting tax incentives which favour labour intensive sectors given the high unemployment rates in the country.

Figure 18: Reduction in Tax Liability Due to Depreciation Across Sectors, 2014-2017



Source: (Calitz et al., 2021)

This data can be compared with the earlier findings from a World Bank study on Marginal Effective Tax Rates by Sector in South Africa (2006). This paper incorporated CIT and VAT in its measure of the marginal effective tax rate (METR) across several sectors. The paper found that the mining sector held the lowest METR (0.4%), this was driven by the special statutory rates that apply to gold mines and the write-off provision which allows for machinery and equipment to be immediately written-off (i.e. depreciation). The agricultural sector also had a low METR (6%) which the study explained was partially due to the accelerated depreciation schedule. The financial sector, however, had one of the highest METRs. The study attributed this to the lack of special incentives and allowances for the financial sector as well as being unable to claim for VAT credits as most financial services are VAT exempt. The high METR in the financial sector does not closely align with the figures on depreciation

allowances. This difference could be due to various reasons. The lack of VAT credit may outweigh the depreciation allowances seen in Figure 18, alternatively many businesses may be misclassifying into the financial sector. Despite this uncertainty, the revenue foregone from depreciation allowances is still significant.

Calitz et al (2021) conclude that aligning tax depreciation allowances with accounting depreciation provides the space to drop the CIT statutory rate from 28% to 25.5%, while maintaining revenue collections. Notably, this could increase the backward and forward effective rate, if the lower statutory rate does not compensate for the restricted allowances, which would make South Africa less competitive using these measures.

Overall, tax depreciation allowances are one of the main drivers behind the narrowing of the tax base in South Africa. This suggests that government could bring the statutory rate closer in line to neighbouring countries and trading partners by restricting depreciation allowances. This will allow for a more significant decrease in the statutory rate compared to its current proposals. Alternatively, if these allowances are viewed as an important contributor to attracting investment, which is the case if EATR is used as the measure of the corporate tax burden, due consideration should be given to the types of industries the current allowances favour.

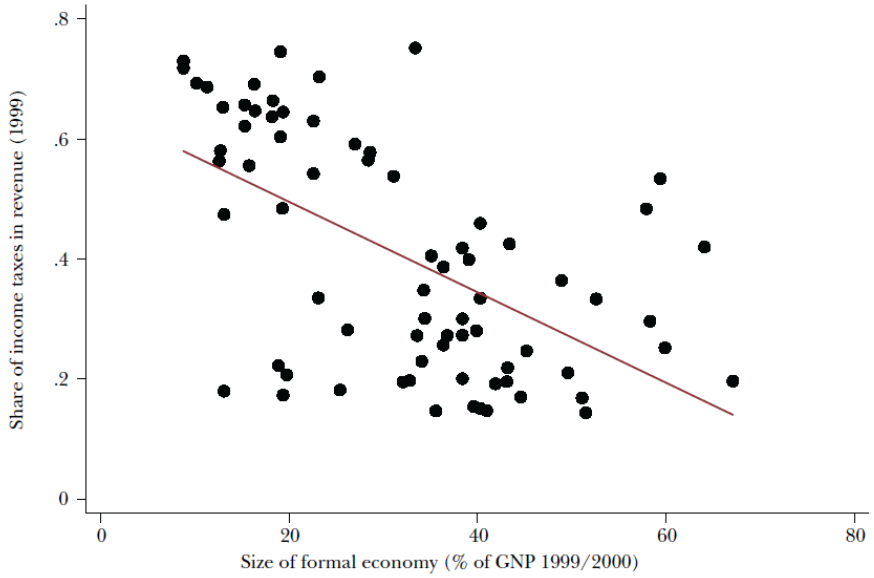
5.2 State of the Nation

The size of the tax base depends on the structure of the tax regime and wider economic factors. As shown in section 2, CIT and GDP move closely together in South Africa. This relationship was also reflected in the BETR shown across countries where differences over time and between countries were in part driven by economic changes. A wider tax base driven by increased firm profits would provide room to create a more generous and attractive tax regime, either through a lower statutory rate or introduction of more incentives and allowances, while holding revenue collections stable. This means that the state and structure of the economy is key for driving growth economically as well as in CIT collections.

The relationship between economic development and taxation is explored by Besley et al (2014). The paper investigates economic and political structures and argues that both are contributing factors to the lower taxes seen in developing countries. The discussion on economic structure focusses on the size of the informal economy and the extent of reliance on

aid and resource sectors (Besley & Persson, 2014). It is important to note that a limitation of Besley & Persson (2014) is that the paper does not account for differences in tax regimes or consider different subgroups such as low- or middle-income countries which if considered could change the nature of the correlations discussed below. Figure 19 from the paper shows a negative relationship between the size of the informal economy and the share of income taxes in total tax revenue. The informal sector is of particular importance in CIT as one would expect that the greatest loss of revenue would occur within this tax instrument as a direct result of business profits that are not taxed.

Figure 19: Share of Income Taxes in Tax Revenue versus Size of Informal Economy



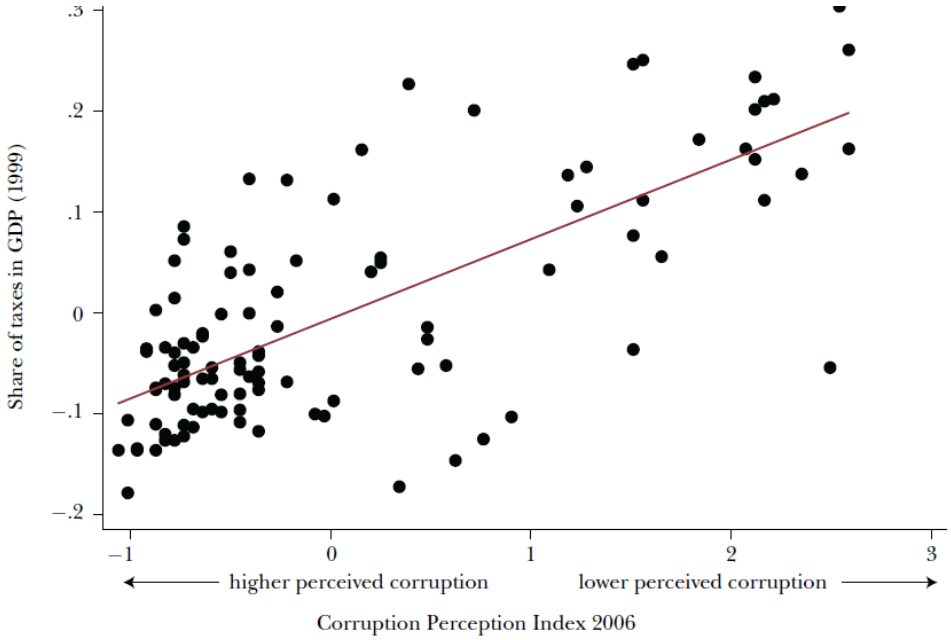
Source: (Direct extract, Besley & Persson, 2014, p. 110)

In the case of South Africa, the size of the informal sector is fairly small with its contribution to GDP estimated to be 6% in 2017 (Statistics South Africa, 2019). This may explain why South Africa's tax collections are high compared to other African and LAC countries seen in Figure 11 and the relatively high BETR in **Error! Reference source not found.**. While the informal sector may not be particularly important for CIT in South Africa, economic growth is critical to driving up revenue collections. The domestic economy has been in a slow decline due to various economic events including the financial crisis and the end of the commodity super cycle in 2012, which all marked the beginning of South Africa's economic stagnation. These have had a knock-on impact on CIT collections. In order to bolster growth, government

has focussed on public infrastructure investment. In the case of South Africa, infrastructure investment needs to be complemented by a strong regulatory, policy and institutional environment that addresses and corrects market failures (Sachs, 2021). The importance of strong political structures for taxation was earlier noted by Besley et al (2014). In the discussion on the political structure, Besley et al (2014) focus on political control and internal checks and balances. The strength of political structures is often reflected in the quality of public service. Poor service delivery is generally a result of both inefficiency and corruption – both of which are systemic problems in South Africa. In addition, policy proposals in South Africa such as the expropriation of private property without compensation has created uncertainty about the political commitment to the

rule of law further fuelling a lack of trust in political institutions. Besley et al (2014) finds a positive correlation between lower perceptions of corruption and higher tax collections (Figure 20). Until the institutional weaknesses in South Africa are corrected, it is more likely that growth will be driven by private sector investment (Sachs, 2021).

Figure 20: Corruption and Fiscal Capacity



Notes: The authors of the paper used two different sources to plot the size of the informal economy (Schneider, 2002) *and the share of income taxes in total tax revenue* (Baunsgaard & Keen, 2005), *both variables were from around the year 2000 and over 75 countries where data appeared in both sources.*

Source: (Direct extract, Besley & Persson, 2014, p. 115)

Finally, economic growth and strong political structures may be more important than the tax regime in driving tax collections and investment. A study of South Africa's manufacturing sector by the World Bank (2016) found a weak correlation between changes in corporate tax and investment. This was confirmed in a study by Maboshe (2021) which found that adjustments in corporate tax policy do not have a significant impact on firm-level capital investment, contrary to the neoclassical theory. Maboshe (2021) found that it was higher output which increased firm-level investment. These findings are in line with the institutional theory which defines a strong investment climate, which includes the institutional, policy and regulatory environment, all of which have serious weaknesses in South Africa.

This means that increases in investment and revenue collections are more likely to be achieved through economic growth as opposed to changes in the CIT regime. Achieving growth should translate into higher CIT revenue collections as firms expand, new firms open, and profits rise. This would broaden the tax base and promote investment without any direct intervention from the tax regime. This discussion suggests that growth needs to be achieved first, as introducing additional generous tax incentives or a lower statutory rate are unlikely to bolster investment as much as a strong economic environment. Once higher growth has been achieved, government can then consider the role of tax incentives in boosting investment further.

5.3 Proposed Changes to the CIT Regime

The Budget Speech (National Treasury, 2021, 2022) outlined two key changes in the CIT regime. A 1% decrease in the statutory rate to 27% and a reduction in the assessed losses and interest deductions. It will also continue to review other incentive structures. The current proposed changes are expected to be net neutral on revenue, that is any reductions in tax collections from the lower statutory rate will be made up by more restrictive allowances.

The lowering of the statutory rate is expected to move South Africa closer to those of its neighbouring and trading countries, for instance Botswana has a CIT rate of 22%, and may be viewed as a more attractive investment destination. This reduction will not necessarily translate into a lowering of the effective tax rate which is a closer measure of the tax burden firms face. If net profits at a country-level do not rise then the BETR will increase if CIT collections grow, as a result of the wider tax base, resulting in a less competitive tax regime. In a similar regard, the forward effective rate will increase if the reduction in the allowances and incentives

outweighs the decrease in the headline rate once again creating a less competitive tax regime. The current proposal suggests the changes will be net neutral which means that the effective tax rate and the competitiveness of the country's tax regime will remain unchanged.

However, if decreases in the statutory rate are expected to improve competitiveness then the focus should be on reducing tax depreciation allowance. In line with scenario 1 and 2 described by Devereux (2002), the EATR approaches the statutory tax rate for investments with high returns suggesting this is the key determinant for large investments. Reducing tax depreciation allowances will result in significant widening of the tax base and provide room for a further decrease in the statutory rate (Calitz et al., 2021). As yet, there have not been any proposed changes to the tax depreciation allowances. Once again, it is important to note that this may drive up the countries EATR if the reduction in the statutory rate is outweighed by lessened allowances and drive down cross-jurisdictional competitiveness.

As highlighted in the previous discussion, economic growth will alleviate some of the tension between these trade-offs. A broader tax base from higher firm profits will create room to put in place a more generous tax regime, either by introducing more generous tax incentives or lowering the statutory rate. This will create a more competitive tax regime and potentially attract further investment. Notably, the additional costs associated with new incentives will need to be carefully balanced against the investment gains. Further studies will need to be conducted to fully understand which aspects of the tax regime, if any, have a significant impact on the final investment decision.

6 Conclusion

This paper has sought to compare South Africa's tax regime to other countries and the implications of this regime on investment. It began with a theoretical discussion of the literature on tax regimes and the relationship between this regime and investment. Following this, a historical overview of the changing CIT regulatory environment and landscape in South Africa was undertaken. Even at this early point, the discussion started to reveal the complex dynamics that drive the tax base, revenue collections, and investor sentiment.

Three tax measures were used in the comparator analysis, the statutory rate, the backward effective tax rate and the forward effective tax rate. While each provided different perspectives

on South Africa's tax regime it was important to consider all in tandem as a corporate tax regime extends beyond the statutory rate to include the set of provisions, incentives, allowances, and special schedules which all impact the end CIT cost.

The paper found that South Africa has a relatively high statutory, forward-effective and backward-effective tax rate compared to other jurisdictions suggesting it imposes a higher corporate tax cost compared to other jurisdictions. Notably, the tax depreciation allowance considerably narrows the tax base and accounts for the largest portion of revenue foregone, however, it has been a major contributor to lowering CIT cost firms face. While the BETR is high it has been declining over time, however, this has been due to weakening domestic economic conditions rather than changes in the tax regime.

Lastly, economic conditions are essential for higher CIT revenue collections and investment. Growth should naturally translate into higher revenue collections as profitability rises. This was seen in the BETR as well as the close relationship between the historical change in CIT revenue collections and growth. The increase in revenue collections from economic growth will create the fiscal space to include tax structures that lower the end tax cost while keeping collections buoyant to meet revenue needs of government.

Further studies are needed to measure the true impact of any changes to the tax regime on investment. While theory suggests that a lower tax burden raises investment, the story may be different for South Africa where a stable economic environment, which includes strong policy, institutions, and regulation, seems to be far more important for investor decisions.

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8 Appendix A: Table of Statutory Corporate Income Tax Rates, 2021

Country	Statutory CIT Rate (%), 2021
Anguilla	0.00
Bahamas	0.00
Bahrain	0.00
Belize	0.00
Bermuda	0.00
British Virgin Islands	0.00
Cayman Islands	0.00
Guernsey	0.00
Isle of Man	0.00
Jersey	0.00
Turks and Caicos Islands	0.00
United Arab Emirates	0.00
Barbados	5.50
Hungary	9.00
Chile	10.00
Andorra	10.00
Bosnia and Herzegovina	10.00
Bulgaria	10.00
North Macedonia	10.00
Paraguay	10.00
Macau, China	12.00
Ireland	12.50
Liechtenstein	12.50
Lithuania	15.00
Albania	15.00
Georgia	15.00
Maldives	15.00
Mauritius	15.00
Oman	15.00
Serbia	15.00
Romania	16.00
Hong Kong, China	16.50
San Marino	17.00
Singapore	17.00
Armenia	18.00
Croatia	18.00
Faeroe Islands	18.00
Brunei Darussalam	18.50

Country	Statutory CIT Rate (%), 2021
Czech Republic	19.00
Poland	19.00
Slovenia	19.00
United Kingdom	19.00
Switzerland	19.70
Estonia	20.00
Finland	20.00
Iceland	20.00
Latvia	20.00
Russia	20.00
Saudi Arabia	20.00
Thailand	20.00
Vietnam	20.00
Sweden	20.60
Slovak Republic	21.00
Denmark	22.00
Norway	22.00
Botswana	22.00
Curacao	22.00
Indonesia	22.00
Egypt	22.50
Israel	23.00
Greece	24.00
Malaysia	24.00
Luxembourg	24.94
Austria	25.00
Belgium	25.00
Netherlands	25.00
Spain	25.00
Turkey	25.00
Angola	25.00
Aruba	25.00
China (People's Republic of)	25.00
Côte d'Ivoire	25.00
Dominica	25.00
Jamaica	25.00
Liberia	25.00
Panama	25.00
Uruguay	25.00
India	25.17
United States	25.76

Country	Statutory CIT Rate (%), 2021
Canada	26.15
Greenland	26.50
Monaco	26.50
Korea	27.50
Burkina Faso	27.50
Eswatini	27.50
Italy	27.81
New Zealand	28.00
Grenada	28.00
South Africa	28.00
France	28.41
Peru	29.50
Japan	29.74
Germany	29.94
Australia	30.00
Costa Rica	30.00
Mexico	30.00
Argentina	30.00
Democratic Republic of the Congo	30.00
Gabon	30.00
Kenya	30.00
Montserrat	30.00
Nigeria	30.00
Saint Lucia	30.00
Saint Vincent and the Grenadines	30.00
Senegal	30.00
Seychelles	30.00
Colombia	31.00
Portugal	31.50
Namibia	32.00
Brazil	34.00
Malta	35.00

Source: (OECD, 2021d)

9 Appendix B: Table of Forward Effective Tax Rates, 2021

Country	EATR (%)	EMTR (%)
Albania	14.7	12.1
Andorra	9.4	5.6
Angola	27.5	9.9
Argentina	34.9	29.2
Australia	28.1	14.9
Austria	23.4	12.6
Belgium	20.3	-11.7
Botswana	31.6	27.7
Brazil	27.3	-21.4
British Virgin Islands	0.0	0.0
Bulgaria	9.1	3.7
Canada	23.8	7.1
Cayman Islands	0.0	0.0
Chile	37.9	22.3
China (People's Republic of)	23.0	9.6
Colombia	30.1	16.6
Costa Rica	43.3	33.4
Croatia	16.5	6.5
Curacao	21.2	14.8
Cyprus	10.8	0.9
Czech Republic	18.3	13.1
Democratic Republic of the Congo	32.2	10.1
Denmark	20.3	8.4
Estonia	17.0	0.0
Eswatini	25.7	11.5
Finland	19.8	15.0
France	29.4	10.1
Germany	28.0	15.0
Greece	23.0	15.3
Guernsey	0.0	0.0
Hong Kong, China	14.4	0.5
Hungary	10.2	4.7
Iceland	19.1	12.5
India	23.8	13.4
Indonesia	20.9	12.8
Ireland	12.4	10.5
Isle of Man	0.0	0.0
Israel	21.6	12.1

Country	EATR (%)	EMTR (%)
Italy	21.3	-30.4
Jamaica	23.7	13.9
Japan	29.4	23.4
Jersey	0.0	0.0
Kenya	28.4	9.4
Korea	25.9	13.7
Latvia	17.0	0.0
Liechtenstein	10.2	-3.6
Lithuania	13.7	5.2
Luxembourg	23.2	11.9
Macau, China	11.3	6.7
Malta	28.2	-23.8
Mauritius	13.8	6.0
Mexico	30.1	15.7
Montserrat	28.5	17.4
Netherlands	23.7	14.2
New Zealand	27.1	20.1
Norway	20.5	10.0
Papua New Guinea	30.1	20.4
Peru	29.2	19.9
Poland	15.5	-5.8
Portugal	25.0	-24.8
Romania	14.4	4.7
Russia	19.8	15.4
Saudi Arabia	20.1	16.0
Senegal	28.4	14.6
Seychelles	27.8	12.4
Singapore	16.1	9.0
Slovak Republic	19.3	8.6
Slovenia	17.5	7.9
South Africa	25.8	9.8
Spain	23.3	11.8
Sweden	20.4	13.1
Switzerland	20.0	12.1
Thailand	19.6	13.6
Turkey	18.3	-5.1
Turks and Caicos Islands	0.0	0.0
United Kingdom	16.8	2.5

Country	EATR (%)	EMTR (%)
United States	22.3	-2.7

Source: (OECD, 2018)