ASSESSING FISCAL & STRUCTURAL POLICIES TO ADDRESS SOUTH AFRICA'S FISCAL AND ECONOMIC CHALLENGES

Abstract

Following years of low growth, high unemployment, high relative interest rates, low public and private sector productivity and declining terms of trade for its commodities exports, South Africa is facing a fiscal cliff. This paper makes use of the UN's Overlapping Generations Macroeconomy Model (OG-ZAF) to simulate solutions to the fiscal challenges being faced by South Africa at this time. Four model simulations are run—fiscal drag/bracket creep (a policy 'by omission'), a VAT increase, public spending reprioritisation and finally a combination of these fiscal policy tools and broader structural reforms that are able to revitalise the economy and reverse productivity stagnation.

We find that fiscal policy alone is an insufficient remedy, even with government expenditure reprioritisation from current spending towards investment spending. The final simulation makes it clear that only a *cross-cutting policy framework that addresses the constraints on productivity growth* (i.e. a structural reform programme) is capable of lifting the economy from its current state of stagnation. These findings are a reality check for South Africa's policy design and should galvanise action to begin structural reforms as soon as possible and with purpose.

INTRODUCTION[1]

South Africa faces, at the start of 2025, several stark policy choices that will determine its economic path over the next decade and potentially its economic fortunes over the first half of the 21st century. The South African economy has barely grown in ten years, with average real GDP growth from 2014 to 2024 reaching just 0.9%. In 2024, the economy expanded by only 0.6% (StatsSA 2024), narrowly avoiding a technical recession. Projections for 2025 offer little respite, with growth anticipated to fall within a wide range of 0.5% to 1.6% (PWC 2025). This economic underperformance is unable to address the country's profound unemployment crisis. In the fourth quarter of 2024, the official unemployment rate stood at 31.9%, while youth unemployment was estimated at 59.6% (Trading Economics 2025).

The country's macroeconomic challenges are compounded by precarious public finances and deep-seated structural weaknesses. Public debt has surged to approximately 75% of GDP—a threefold increase in under two decades, signalling a deterioration of fiscal discipline over the period. The cost of servicing this debt is alarmingly high, consuming 21% of all tax revenue, which is equivalent to an outflow of approximately USD 57 million per day. This fiscal vulnerability is in turn exacerbated by a highly concentrated tax base. On the personal income side, the top 4% of taxpayers contribute 52.7% of total tax revenue. This dependency is mirrored in corporate tax, where only 0.1% of companies account for 72.3% of all corporate income tax receipts (Meyer 2025).

These fiscal constraints overlay an economy hamstrung by systemic structural flaws, including poor industrial competitiveness, an over-reliance on commodity and vehicle exports, and crippling infrastructure failures, most notably the persistent power cuts known as 'load shedding', which disrupted the economy on 289 days in 2023 (AFDB 2024).

In order to address these challenges, policy makers will need to plan fiscal and industrial policy carefully, with no room for error. This highlights the importance of sophisticated planning tools, ranking high among which are dynamic macroeconomic computable models such as the South African calibration of the Overlapping Generations Macroeconomy Model (OG-ZAF)[2]. This paper will put forward a suggested solution to tackling the fiscal challenge being faced by South Africa as this time, making use of the OG-ZAF dynamic model. The first section will describe the

1 I am grateful to Marcelo LaFleur and Benda Gu for helpful commentary on earlier drafts.

2 The Department of Economic and Social Affairs of the UN has recently made the OG-ZAF model available to South African researchers, policy analysts and officials, for the purpose of macroeconomic planning and policy analysis.
Given the current challenges and headwinds being faced by the South African economy, the value in using a sophisticated tool to analyse policy options cannot be overstated. The model is not a 'forecasting' tool but rather a means of assessing a counterfactual scenario to the default, or baseline scenario. The model's results will provide valuable insights into the short- and medium-term consequences of alternative policy paths, thereby assisting policy makers in their choices.

various economic challenges being faced and their interconnectedness. This is followed by a review of the main policy recommendations that have been put forward as solutions to these challenges—whether fiscal in nature or more broadly-defined economic policies. Thereafter, the model simulations are introduced and explained, followed by a presentation and analysis of simulation results. The concluding section contains a summary of the main findings and a set of policy recommendations flowing from the simulation results and the policy review.

THE CHALLENGES FACING THE SOUTH AFRICAN ECONOMY IN 2025

Actual and projected economic performance

South Africa, with a nominal GDP of USD 381 billion in 2023, finds itself in a complex fiscal and economic predicament. Despite its status as an upper-middle-income economy, average real GDP growth over the period 2014-2014 has been just 0.9%. In 2024, growth was a meagre 0.6%, narrowly avoiding recession (StatsSA 2024). Projections for 2025 range from 0.5% to 1.6% (PWC 2025).

TABLE 1
South Africa Key Economic Indicators (Current and Projections)

Indicator	2022	2023	2024 estimates	2025 projections	2026 projections
Real GDP Growth (%)	1.9	0.6	0.6–1.3	1.3–1.6	1.6–1.9
Unemployment Rate (%)	33.5	32.1	31.9	32.7–33.2	-
Inflation Rate (Avg. %)	6.9	6	4.4-4.8	4.0–4.5	-
Public Debt (% of GDP)	71.1	73.4	~75	~75.3	-

Sources: StatsSA (2024), PWC (2025).

Unemployment remains among the highest globally. The official rate for Q4 2024 was 31.9%, while youth unemployment (ages 15–24) stood at 59.6% (Trading Economics 2025). Furthermore, when considering the expanded definition of unemployment, which includes individuals who have become discouraged from actively seeking work, the jobless rate was 41.9% in the fourth quarter of 2024.

Although inflation moderated to 4.4% by August 2024, average inflation in 2023 was 6.0% (AfDB 2024), with potential future pressures from administered prices and wage settlements (PwC 2025). These inflation dynamics suggest that current relief may be temporary.

The precarious fiscal landscape

Fiscal pressures are mounting. South Africa's public debt hovers around 75% of GDP and could exceed 80% without corrective action (National Treasury 2024b). The sustainability of public finances is threatened by rising debt-service costs, now consuming 21% of tax revenue, equivalent to approximately USD57 million per day (Gumede 2024). In addition, around 24% of public debt is external, exposing South Africa to exchange rate volatility. The rand's depreciation—38.6% against the US dollar between 2014 and 2024—has worsened debt service costs and increased macroeconomic risk. During global shocks, like the COVID-19 pandemic, such vulnerabilities become more acute.

This charge on the fiscus has the potential to crowd out social spending and service delivery. What is especially unfortunate is the fact that less than 20 years ago, the debt to GDP proportion was a third of what it is now (Botha 2025). This reflects a rapid collapse of fiscal discipline, even taking into account the impacts of the Covid-19 pandemic.

The narrowness of the tax base also presents critical vulnerabilities. Personal and corporate income taxes are heavily concentrated, leaving the government highly dependent on a small proportion of taxpayers. This narrow tax base constrains the government's ability to raise money, making broadening of the tax base a priority.

TABLE 2
Concentration of South Africa's Tax Base (2023/2024)

Tax Type	Concentration	Contribution to Total Tax Revenue
Personal Income Tax	Top 2.6% of earners contribute 76.2% of PIT; Top 4% of taxpayers contribute 52.7% of total tax revenue	~38% (based on 2023/24 data)
Corporate Income Tax	Top 0.1% of companies pay 72.3% of CIT	~21.3% (based on 2023/24 data)
Value-Added Tax	-	~30.1% (based on 2023/24 data)

Source: Author's construction based on Meyer (2025).

Personal income tax (PIT) accounts for nearly 38% of total revenue, but this comes largely from a narrow segment of high earners (Meyer 2025).

As with personal income tax, the corporate income tax base in South Africa is also highly concentrated. In the 2023/24 fiscal year, only 1,051 companies, representing a mere 0.1% of the total number of companies, were responsible for paying 72.3% of all company income tax (Meyer 2025). This indicates that a very small number of large enterprises are crucial for the government's corporate tax revenue. Notably, corporate income tax revenue declined sharply in key sectors such as mining in the 2023/24 fiscal year, highlighting the sensitivity of this revenue stream to the performance of specific industries and broader economic conditions.

Moreover, South Africa's corporate income tax collections are already relatively high compared to many of its peer countries 17. The corporate income tax rate was even reduced from 28% to 27% for tax years ending on or after 31 March 2023, in part to enhance the country's

TABLE 3
South Africa's Global Competitiveness Rankings (Various Years)

Source	Year	Overall Rank (Out of Total)	Government Efficiency	Business Efficiency	Economic Performance	Infrastructure
WEF	2017-18	61st (out of 137)	-	-	-	-
IMD	2022	60th (out of 63)	53rd	56th	59th	60th
IMD	2024	60th (out of 67)	-	-	-	-

Source: WEF; IMD.

competitiveness. Given this context, further significant increases in the corporate income tax rate could discourage both domestic and foreign investment, potentially leading to lower overall profitability for businesses and, consequently, reduced tax revenue. The government's plan to raise VAT by one percentage point over two years may yield additional revenue but risks being regressive[3]. Lower-income households, which spend a larger share of income on consumption, will be disproportionately affected (Visser 2025). VAT already contributes around 30% of revenue and while the largest proportion in absolute terms is paid by rich households, poorer households pay a relatively larger share. This regressivity is demonstrated in the example that follows.

Basing our analysis on Gcabo (2019), if we assume the following:

- The poorest decile spend 90% on consumption, the richest decile 65%
- The share of consumption subject to VAT is 60% for the poorest decile and 80% for the richest

For a 1% increase in the rate of VAT, the poorest decile experience an increase in VAT as a proportion of income from 8.1% to 8.7%. The richest decile, on the other hand experience an increase of 2.6% to 2.85. The median decile experience an increase of 6.6% to 7.1%.

It seems clear then, that despite relatively strong tax compliance and a high tax-to-GDP ratio of 27.1%—well above the African average of 16% (Meyer 2025)—there is limited room for further tax hikes without adverse consequences. The focus must shift from extracting more revenue to broadening the tax base and achieving higher growth and investment.

Industrial competitiveness and structural weaknesses

South Africa's industrial sector suffers from poor competitiveness, with exports concentrated in commodities and a single manufacturing sector—vehicles and parts. Structural weaknesses include electricity supply disruptions, inadequate rail infrastructure, high labour costs, and over-regulation (AFDB 2024; Trace 2020; Worku 2016). South Africa's heavy reliance on vehicles and commodity exports exposes it to cyclical and structural shocks. Vehicle exports dropped 22.8% in 2024 due to EU demand declines and rising competition from Chinese manufacturers. The absence of a definitive electric vehicle (EV) strategy adds further uncertainty.

Commodity exports are vulnerable to global price swings, with 2023's decline in gold and platinum prices contributing to slower GDP growth (AfDB 2024; Badsha 2024).

Systemic issues such as power cuts (load shedding), which disrupted the economy on 289 days in 2023, continue to undermine industrial output (AFDB 2024). Rail transport inefficiencies have depressed coal exports and increased logistics costs. Additionally, labour costs have risen faster than productivity, and the business environment remains constrained by red tape, over-regulation, and dominance by a few firms (Worku 2016; Thakoor 2020).

These various challenges and weaknesses underly the poor competitiveness rankings given to the South African economy by the WEF and IMD (Table 3).

Interconnected challenges

The core challenges—low growth, high unemployment, narrow tax base, rising debt, and poor competitiveness—are mutually reinforcing. Low GDP growth limits employment and tax revenue, while high unemployment exacerbates poverty and constrains demand. Debt servicing absorbs a growing share of public resources, limiting room for developmental investment. Due to the high level of unemployment, debt-service crowding out and dependence on social spending, government is significantly constrained in terms of its non-social spending and investment priorities. These factors interact to create a 'trap' where stagnation is reinforced.

NAVIGATING POTENTIAL SOLUTIONS

The immediate policy response to these challenges, in the fiscal policy sphere, includes tax increases and some limited spending reprioritisation[4]. While the government's approach of using incremental tax increases may raise short-term revenue it risks suppressing economic activity and worsening debt dynamics. A more sustainable path requires decisive structural reforms, as urged by the World Bank and IMF.

3 As at the time of writing, the National Treasury has dropped plans for a VAT hike in 2025, however, it remains highly likely that a VAT increase of 1-2% - over two or three years—will be on the cards for the next financial year. For this reason, a VAT hike remains as a simulated policy option in the final section of this paper, albeit phased in.

4 For example, at the start of 2025 National Treasury announced that it would no longer provide unconditional bail-outs for State-Owned Enterprises (SOEs) (Daily Maverick 2025).

These should enhance market competition, streamline and improve government institutions, and pursue prudent fiscal consolidation through targeted expenditure cuts. These approaches are outlined in the following sub-sections.

Government Proposals (National Treasury)

The South African government has put forward short-term fiscal measures to raise revenue. These include:

- **A phased 1% VAT increase over two years:** intended to boost tax revenues, but recognised as regressive since it disproportionately affects lower-income households (Visser 2025) [5].
- **No adjustment of personal income tax brackets for fiscal drag in the second year ('fiscal drag'/'bracket creep'):** effectively raising personal tax liabilities by an estimated 1-3% in real terms, as inflation pushes taxpayers into higher brackets[6]. While both measures will improve revenue collection, they are unlikely to be sufficient to stabilise high public debt levels (National Treasury 2024a).

IMF Recommendations

The International Monetary Fund (IMF) calls for more ambitious fiscal consolidation and structural reform, specifically:

- **Reduce government expenditure by 1%:** focusing on cutting inefficient spending, limiting transfers to underperforming state-owned enterprises, improving procurement efficiency, and rationalising the public-sector wage bill (IMF 2024a; IMF 2024b).
- **Implement structural reforms:** improve the business climate, strengthen governance and anti-corruption measures, enhance labour market flexibility to encourage job creation, and facilitate trade (National Treasury 2024b).

World Bank Recommendations

The World Bank advocates a dual structural strategy:

- **Strengthen and broaden market competition:** make it easier for new entrants, both domestic and foreign, to participate, and reduce protections for incumbent firms (including SOEs) to promote efficiency and innovation (Jacobs 2025).
- **Enhance institutional efficiency and reduce regulatory burdens:** streamline regulations and lower compliance costs for businesses, drawing on successful liberalisation experiences in telecommunications and air transport (Jacobs 2025).

The Need for Both Fiscal and Structural Reforms

Given the depth of South Africa's economic and fiscal difficulties, it is unlikely that individual reforms will be enough to address them. A sustainable solution likely requires both fiscal changes and deep structural reforms to improve competitiveness, spur economic growth, and expand the tax base.

SIMULATING THE EFFECTS OF POLICY OPTIONS

We model each of these policy options using the OG-ZAF dynamic, overlapping generations computable general equilibrium model, made available to South African researchers by the United Nations' Department of Economic and Social Affairs (UN-DESA). OG-ZAF is a country adaptation of the OG-Core full-economy macroeconomic model, which was prepared and made available through a series of workshops in South Africa with the policy analysis community of the country.[7] The OG-Core model is particularly useful to study fiscal policies, both detailed revenue and spending options, as well as study the effect of structural changes to the long term path of an economy.

Suggested simulation approach[8]: direct fiscal policies and measures

In order to model the fiscal policies and measures, the following simulations using this model have been proposed. There are multiple unknowns in the actual policy packages, but each scenario below is posited in light of the best available information and the proposals at time of writing.

- **VAT increase:** The implementation of a new VAT rate of 16% (a 1% increase in VAT), according to the original budget proposal presented by the Minister of Finance in February 2025[9].
- **Fiscal Drag:** The implementation of an effective approximately 1% increase in real personal (payroll) tax, given that for the second consecutive year, fiscal drag/bracket creep has not been addressed and the tax brackets remain exactly the same.

  The rationale and calculations underlying this metric are given in the Appendix, Annex 1.

5 As at the time of writing, the National Treasury has dropped plans for a VAT hike in 2025, however, it remains highly likely that a VAT increase of 2% - over two or three years—will be on the cards for the next financial year. For this reason, a phased VAT hike remains as a simulated policy option in the final section of this paper.

6 The ultimate extent of the real increase in the tax burden faced by an individual will depend on the actual inflation rate faced by an individual and not the aggregate inflation rate.

7 See the activities here: https://desa-eapd.github.io/modelling-project/og-core/

8 Run script extracts for all simulations are provided in the Appendix (annex 4).

9 Although subsequent political action saw the VAT increase of 1% shelved for 2025 it is highly likely that this change will be implemented in the near-term, possibly even as soon as 2026, due to extremely limited alternative revenue sources. For this reason, the VAT simulation has been retained in this study.

- **Adjustments to spending proportions:** The National Treasury has stated that they intend to reduce current government expenditure and increase investment expenditure. The proportion of social spending will, however, be retained. The proportion of transfers in the budget will remain constant, so as not to negatively impact social spending. For the simulation, general current government expenditure out of GDP is assumed to drop from 26.7% to 24%.

  Treasury has not explained where exactly these cuts will take place[10], but it assumed that cuts typical of austerity measures will be implemented. That is, public sector wage bill cuts, operation cost reductions, reduction of transfers to State-Owned Enterprises and targeted cuts in sectoral budgets.

  Government investment spending on public infrastructure rises by the drop in current expenditure, from 0.3% to 2.73%. This represents a reprioritisation of government expenditure towards investment spending and away from current expenditure.

  The rationale for these metrics is provided in the Appendix, Annex 2.

  Simulation 3 will include these adjustments to spending proportions as well as the two previous fiscal measures and so will equate to an *'all fiscal measures'* simulation.

Suggested simulation approach: broader structural reforms

The above three pillars represent the current fiscal policy approach. However, as argued above, fiscal policy alone will be insufficient to redirect the South African economy and avoid a hard correction at some point in the near future. For this reason, an additional simulation is run; one which is based on a range of structural reforms in order to bring about a positive shift in total factor productivity.

- **Addressing industrial competitiveness by addressing over-regulation and infrastructural challenges across industry:** This additional shock assumes:

  a) That the government follows the advice of the World Bank and the IMF and reduces the regulatory and compliance burden on businesses.

  b) That the electricity supply is stabilised and load-shedding is ended.

  c) That the rail infrastructure challenges are addressed with a rejuvenated rail service in terms of rolling stock and railway line infrastructure. This will greatly reduce the cost of internal bulk transport—which is used heavily by the minerals sector.

  d) That the harbour and port challenges are addressed through public-private partnerships (PPPs), thereby reducing the costs of international transport for exporters and importers.

The above shock will raise industry total factor productivity (TFP), and this will be simulated in the model. The shock is modelled as a 2% increase in the 'Z' variable, which is defined in the model as 'total factor productivity in firm production function'. The magnitude of this shock is the result of an analysis of TFP trends in South Africa and several peer countries, which is provided in the following section. As explained below, this 2% positive shock is the net difference between South Africa's 30-year TFP trend and that of two of its better-performing developing country peers: Rwanda and Mauritius.

Total factor productivity growth: establishing a range for simulation based on an analysis of peer countries

Long-term TFP growth in South Africa (1990–latest)

South Africa's economy-wide total factor productivity has experienced a long-term stagnation and decline since 1990. In the early 1990s, TFP fell sharply—the Penn World Table shows South Africa's TFP index (2017=1) dropping from about 1.13 in 1990 to 1.05 by the mid-1990s (FRED 2015). Modest gains in the late 1990s and early 2000s were not enough to reverse the longer-term trend. TFP peaked around the mid-2000s (the index reached ~1.15 in 2005) but has since trended downward, especially after the 2008 global financial crisis. As a result, by 2019 South Africa's TFP index was about 0.96 (with 2017=1)—lower than its level nearly three decades earlier. In annual terms, this implies a slight negative average TFP growth rate (approximately −0.5% per year from 1990 to 2019). In the 2010s, productivity performance worsened: TFP contracted by roughly −1.5% per year between 2010 and 2019 (Pain, Rapapali & Steenkamp 2020). This protracted stagnation in efficiency is a major drag on South Africa's potential growth.

Sectoral patterns confirm the broad weakness. In particular, manufacturing TFP growth has been lacklustre, mirroring the economy-wide slowdown. South Africa undertook trade liberalization in the 1990s which initially boosted manufacturing productivity. Indeed, empirical studies find that trade-opening in the 1990s had a positive impact on TFP growth in manufacturing, as domestic firms faced new competition and access to inputs. However, these gains dissipated in the 2000s as structural bottlenecks emerged. Recent research by the South African Reserve Bank finds productivity growth has slowed markedly since the global financial crisis, and moreover, production has shifted away from tradable manufacturing toward sectors with low exposure to competition and low productivity growth (Pain, Rapapali & Steenkamp 2020). In other words, South Africa's economy has gradually tilted

10 According to Reuters (2025), expenditure cuts that would be considered if budget negotiations faltered would be "frontline services to support for … power utility Eskom" (Reuters 2025).

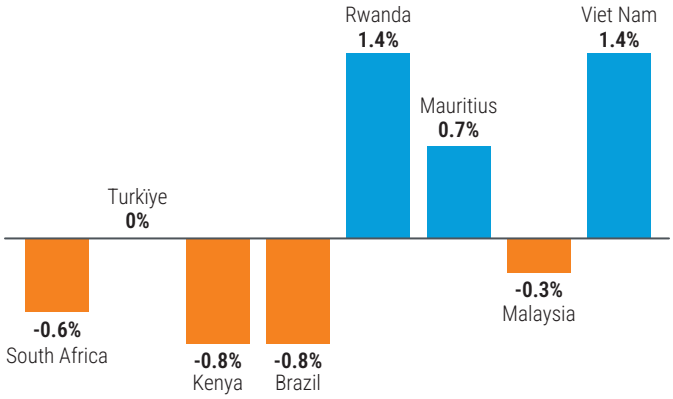
toward services and other sheltered sectors where efficiency gains are limited, reducing the overall contribution of manufacturing TFP. This sectoral change—coupled with energy and infrastructure constraints—helps explain why South Africa's TFP performance over the last decade has been so weak. According to one analysis, South Africa's post-2008 growth slump is largely attributable to negative productivity shocks, exacerbated by issues like electricity load-shedding and governance challenges (Van Rensburg & Morema 2023). The net result is that South Africa's productivity level in 2019 remains below its level in the early 1990s, underscoring a long-term structural problem.

Comparative TFP growth: South Africa vs. peer countries

South Africa's TFP growth has significantly underperformed that of many peer economies. Between 1990 and 2019, South Africa's TFP declined on average, whereas several comparator countries achieved positive gains. Figure 1 illustrates the contrast, showing average annual TFP growth rates over roughly the past three decades for South Africa and selected peers (Marginal Revolution 2025). In South Africa and certain peer countries, TFP growth was negative, unlike the positive TFP gains seen in Rwanda, Vietnam and Mauritius (Penn World Table 10.0 2023).

Figure 1

Average annual total factor productivity growth (1990–2014)



Source: Penn World table 10.0 (2023).

South Africa's TFP shrank by about −0.5% per year during 1990–2014 (Marginal Revolution 2025). This contrasts with peer emerging economies such as Vietnam and Rwanda, which saw robust TFP increases. Vietnam implemented broad economic reforms and opened its economy, yielding an estimated TFP growth of ~1–2% per year in the long run (IMF 2018). In fact, Vietnam's productivity went through phases—rapid gains (over 2% annually) in the 1990s, a slowdown to under 1% in the early 2000s, then a recovery to ~1.7% per year in the 2013–2019 period (IMF 2018).

Among African peers, Rwanda stands out with some of the highest TFP growth: after the mid-1990s post-conflict rebound, Rwanda sustained TFP growth around 1.4–1.8% per year on average (FRED 2025), reflecting institutional reforms and efficiency improvements off a low base. Mauritius—often cited as an African success story—achieved moderate but steady TFP growth (~0.7% per year) over the same period (FRED 2025), aligning with its transition from agriculture to higher-value manufacturing and services.

Overall, South Africa and its LATAM/African peers (Brazil, Kenya) have had stagnating or falling TFP, whereas reform-driven economies like Vietnam, Mauritius, and Rwanda managed productivity increases. Even Turkey—which grew rapidly in the 2000s—relied mostly on factor accumulation, not productivity. One study comparing 1990–2014 found South Africa's TFP growth (−0.53%/yr) to be lower than Brazil's (−0.12%) and significantly below countries like China or Poland (+2–2.5%) (Marginal Revolution 2025). The data underscores that South Africa has fallen behind; whereas some emerging markets realized efficiency gains from industrialisation and reform, South Africa's efficiency has largely stagnated, eroding its competitiveness.

Based on the preceding analysis and the data presented above, a TFP shock of 2%, which is the approximate delta between South Africa's net TFP growth (-0.6%) and those of its best-performing peers (1.4%) is chosen for simulation 4.

Sequencing of simulations

Simulations in a computable general equilibrium model are performed by firstly running a simulation with no assumed changes from the status quo. This is known as 'the baseline scenario' and all alterations to policy are performed in subsequent model runs. The impacts of the policy change/s are assessed by calculating the percentage changes relative to the baseline. In the case of the OG-ZAF model, the baseline is the result of a calibration to South African macroeconomic data.[11]

Each of the three fiscal policy shocks will be modelled separately in their own simulations (simulations 1 -3), and the results presented. This will be followed by a combined simulation (simulation 4), which will incorporate all fiscal policy measures as well as the TFP structural reform shock. The phasing of shocks is given below in Table 4, with the following explanations for each phasing:

- **Fiscal Drag:** was implemented from the 2024 financial year and is present at the same rate in all years.
- **VAT increase:** was posited in 2025 but delayed due to tensions in the coalition government. After the third version of the budget was accepted in June 2025, it had been omitted, but due to the lack of alternatives, is strongly expected to be reintroduced from 2026. Nevertheless, in order to mitigate the political fallout, the 1%

11 The calibrated model documentation and code is available here: https://eapd-drb.github.io/OG-ZAF/content/intro/intro.html

increase will likely be spread over two years, explaining the phasing in the simulation.

- **Government expenditure proportions:** No change is modelled in 2025 because this year required three budget proposals and many compromises had to be made by Treasury. The reprioritisation of current vs investment spending is achieved linearly over the three years 2026-2028. The quantum of the reallocation of spending is assumed to be 2.7%. as in—Treasury reduces general government spending by 2.7% of GDP and raises capital expenditure by the same amount. This change is assumed to be effected linearly over three years: 2026-2028.
- **Restructuring the economy** is a complex process, requiring a state-wide approach and is assumed to be achieved linearly in the four years from 2026 to 2026.

TABLE 4
Phasing of policy interventions in simulations

	2025 (baseline)	2026	2027	2028	2029
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Fiscal Drag	0.01	0.01	0.01	0.01	0.01
VAT	0.15	0.155	0.16	0.16	0.16
alpha_G	0.241	0.234	0.227	0.22	0.22
alpha_I	0.0003	0.0073	0.0143	0.0213	0.0213
Z	1	1.005	1.01	1.015	1.02

Source: Author's calculations.

The phasing within the spending reprioritisation and structural reforms implementation are assumed to be the result of policy lags, while the phasing for VAT is in order to mitigate political fallout, as mentioned above.

SIMULATION RESULTS

Simulations 1 and 2 show separately the consequences of fiscal drag[12] and the VAT increase, respectively. All treasury proposals—fiscal drag, VAT and spending reprioritisation—are simulated in simulation 3, which represents the correct counterfactual to the final simulation—simulation 4—reflecting the treasury proposals plus the structural reforms recommended by the World Bank, IMF and other policy analysts, including the author.

In the results presentations that follow, deltas in the 2025-2044 range could be considered 'medium term' impacts and those of the steady state ('SS') are longer-term impacts. The table of comparative data (Table 5) also shows five-year aggregate impacts ('short term').

Simulations 1 and 2: the approximate equivalence of a 1% VAT increase and the default taxation increase inherent in fiscal drag.

The full justification for the extent of the payroll tax shock attributed to fiscal drag is provided in the Appendix, Annex 1. The two left most columns in Table 5 contain the results for simulations 1 and 2 respectively. These results are striking in that they reflect very similar results for these two, quite different policy measures.

Initially, both policy shocks produce modest negative impacts on key variables, especially consumption and government debt[13]. In the medium term (the 20 year period), the VAT increase leads to a slight positive GDP change of 0.13%, while fiscal drag has a slightly negative GDP impact (-0.04%). Consumption declines under both shocks, though more strongly under fiscal drag (-0.74%) compared with VAT (-0.67%). The latter observation may hold the clue to the slightly more growth-positive impact of VAT over fiscal drag. Fiscal drag removes relatively more spending power from formal sector salaried employees. This group has a higher propensity to save than the final consumption sector impacted by VAT, which includes the informal sector. A smaller impact on savings is marginally more growth positive due to the impact it has on the cost of capital.

Over the short term (the first five years), the two tax policies are dissimilar in GDP, debt and tax impacts because the VAT increase is phased in over half that period, whereas the fiscal drag is in place at the start. Over the medium term (the first 20 years), the equivalence between the two policies becomes apparent. Consumption effects converge, with both policies reducing consumption by approximately 0.7%. Government debt reduction also aligns closely between the two simulations, showing significant medium-term declines of around -5.54% for the VAT scenario and -6.44% for fiscal drag. Total tax revenue increases nearly identically in both scenarios (around 1.6%), highlighting their similar revenue-raising effectiveness.

In the steady-state scenario, the results further confirm the similar economic implications of these policy shocks. The impacts on GDP stabilize at minimal positive levels for both shocks (0.12% for VAT and 0.02% for fiscal drag). Consumption effects remain persistently negative in both scenarios, slightly more pronounced under fiscal drag (-1.10%) than the VAT increase (-0.78%). The tax revenue in the steady-state scenario remains higher for both policies, but slightly stronger under the VAT increase (1.52%) compared to fiscal drag (1.28%).

12 Fiscal drag is a 'policy by omission' in that an expected inflation adjustment—to the personal income tax tables—is omitted in order to deliberately increase the real rate of tax, by tax bracket.

13 Note however, that a 'negative' impact on government debt in this context is a 'positive' outcome from the perspective of fiscal and macroeconomic balance.

These simulation outcomes emphasize that despite different mechanisms of revenue generation, both a VAT increase and fiscal drag have remarkably comparable macroeconomic consequences. They both effectively increase government revenues while exerting persistent negative pressure on private consumption and reducing public debt, suggesting similar economic trade-offs for policy makers considering these options.

Simulation 3: current National Treasury policy proposal

Simulation results are presented in Figure Group 1 and Table 5. Additional plots of variables are provided below these.

It is clear that the current National Treasury policy proposal is inadequate in several aspects:

- **GDP growth remains moribund.** With the large and growing cohort of unemployed, slow or negligible economic growth represents a threat to social stability and cohesion.
- **The tax increases have a strongly negative effect on private consumption, with medium term and long-term (permanent) reductions in the variable.** Thus private consumption is crowded out by debt repayments, current and investment government expenditures.
- **Total government expenditures and government debt both fall, especially in the medium term.** This is due to the hard constraint of a maximum steady-state debt to GDP ratio of 120%. While the ratio can exceed this in the adjustment phase, it is con-

TABLE 5

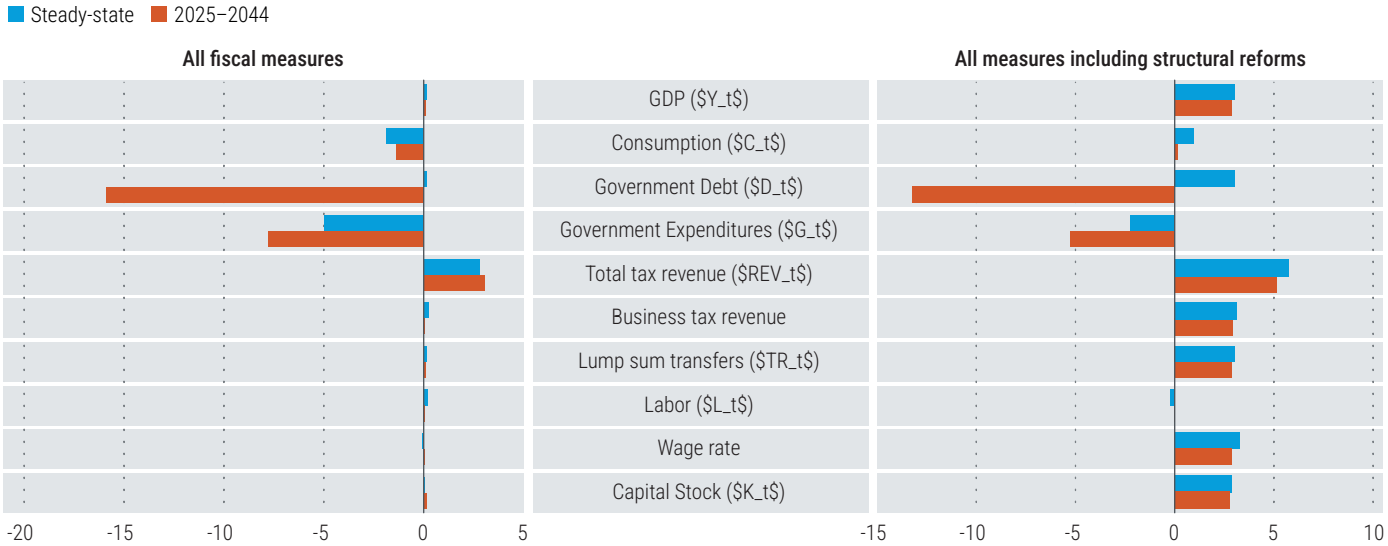
All Simulations, changes from the baseline result: macroeconomic aggregates: 5 year changes, 20 year changes and steady state

	Fiscal Drag			VAT			All Fiscal Policies			All Plus Structural Reforms		
Variable	5 Years	2025-2044	SS	5 Years	2025-2044	SS	5 Years	2025-2044	SS	5 Years	2025-2044	SS
GDP	-0.18%	-0.04%	0.02%	0.08%	0.13%	0.12%	-0.08%	0.11%	0.14%	1.27%	2.87%	3.02%
Consumption	-0.53%	-0.74%	-1.10%	-0.53%	-0.67%	-0.78%	-0.84%	-1.38%	-1.87%	-0.34%	0.18%	0.95%
Government Debt	-1.70%	-9.30%	0.02%	-0.67%	-6.61%	0.12%	-2.44%	-15.86%	0.14%	-2.39%	-13.24%	3.02%
Government Expenditures	-0.18%	-0.04%	1.69%	0.08%	0.13%	1.99%	-5.30%	-7.78%	-4.98%	-4.07%	-5.26%	-2.25%
Total tax revenue	1.65%	1.62%	1.28%	1.16%	1.44%	1.52%	2.88%	3.04%	2.78%	3.72%	5.13%	5.74%
Business tax revenue	-0.19%	-0.06%	0.10%	0.08%	0.11%	0.14%	-0.09%	0.06%	0.24%	1.34%	2.93%	3.12%
Lump sum transfers	-0.18%	-0.04%	0.02%	0.08%	0.13%	0.12%	-0.08%	0.11%	0.14%	1.27%	2.87%	3.02%
Labor	-0.19%	-0.06%	0.09%	0.08%	0.11%	0.14%	-0.08%	0.07%	0.23%	-0.35%	-0.03%	-0.25%
Wage rate	0.01%	0.02%	-0.07%	0.00%	0.02%	-0.02%	0.01%	0.04%	-0.08%	1.62%	2.88%	3.28%
Capital Stock	-0.17%	-0.01%	-0.08%	0.08%	0.17%	0.10%	-0.07%	0.16%	0.02%	1.18%	2.78%	2.89%

Source: Author's calculations.

Figure Group 1

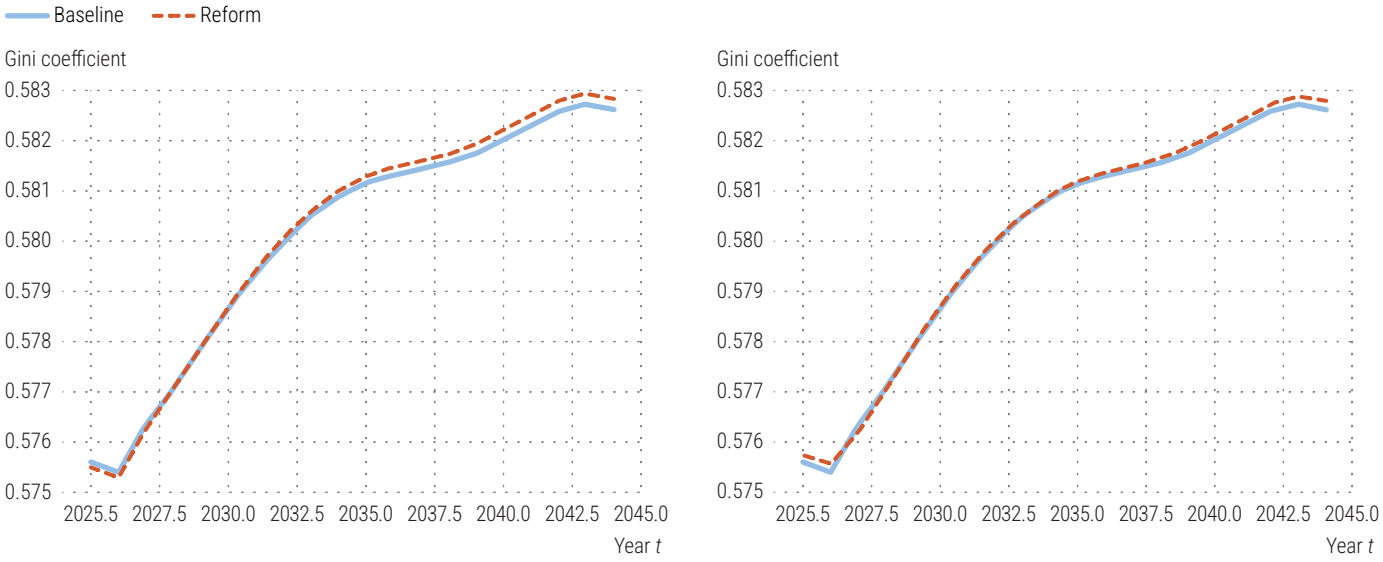
Main aggregates, 20 year changes (2025–2044) and steady-state: changes from the baseline result



Source: Author's calculations.

Figure Group 2

Gini coefficient of before-tax income: fiscal measures/baselina (LHS) vs all measures/reform (RHS)



Source: Author's calculations.

strained to return to this ratio in the steady state. This fall in current government expenditure is expected due to the reprioritisation of current over investment spending and the need to reduce debt with the increased tax intake.

- **Inequity:** indicators such as wage rates, the supply of labour (employment) and the total of lump-sum transfers[14] all reflect little or no change, implying no improvement in South Africa's economic inequality. The country needs policies that improve the lot of the poor and the unskilled and low-skilled labour cohort, in order to address socio-economic inequality.

  The private consumption impacts by income group are visualised in Figure Group 3 (LHS), which juxtaposes the bar charts of changes in consumption by the seven income groups. In fact, the large reductions in private consumption are distributed approximately proportionately across the seven income groups in the model, showing that all segments of society experience negative consumption shocks.

  This pattern is explained by historically observed tax responses in South Africa: a VAT rate increase is mildly regressive unless offset, while a personal income tax (PIT) increase is strongly progressive and falls on the upper-middle and top deciles (Inchauste et al 2017). The combined impact of these two tendencies produces a distributed consumption effect that is pervasively negative, but slightly less so for the lowest income groups.

  A direct measure of inequality is provided by the Gini coefficient measure, which is plotted in Figure Group 2 for simulations 3 and 4. This particular measure is based on after-tax income, and shows a slight worsening of income inequality for both scenarios (the scale is quite compressed so it tends to exaggerate the change). The Gini coefficient for income worsens by a fraction of a percent, which given that consumption for lower income groups improves progressively for simulation 4, suggests that transfers are more favourable in this scenario, with less pressure on government spending.

Simulation 4: National Treasury policy proposal together with productivity boost due to reforms and deregulation

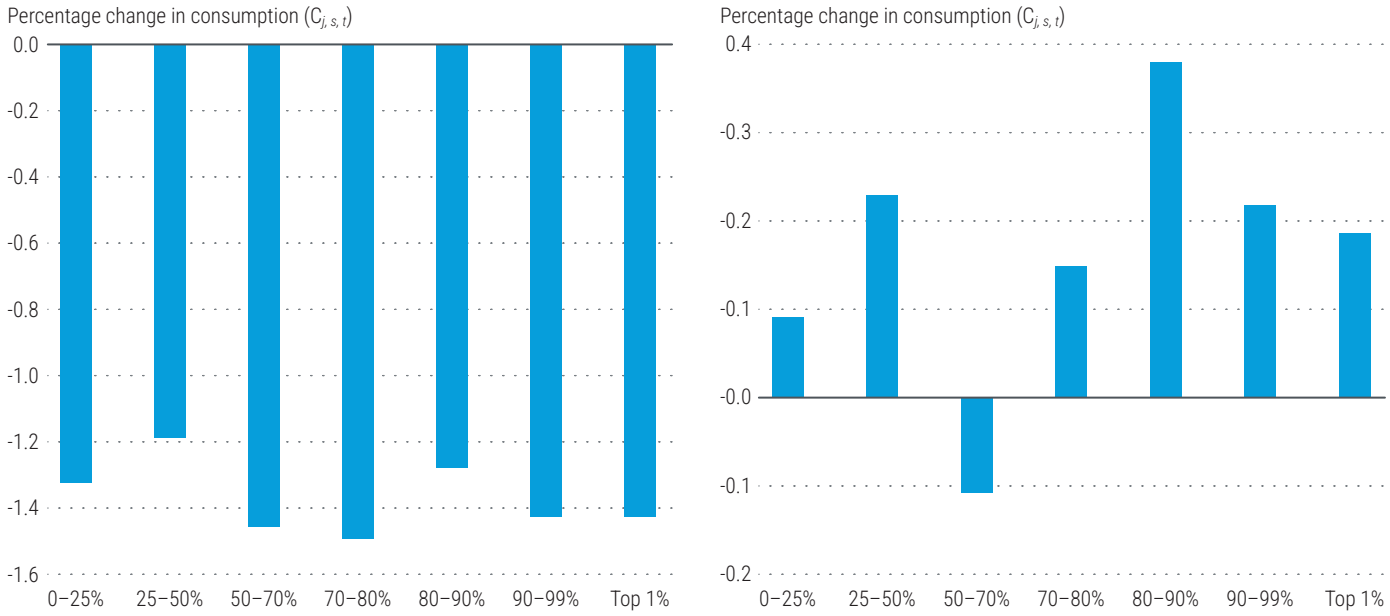
A 2% increase in industrial productivity, achieved through a range of measures (detailed above) including deregulation and regulatory rationalisation, stabilisation of the electricity supply and price increases and improvements to rail and port infrastructure contributes significantly to an improved economic outlook for South Africa. Drawing on the right-hand chart in Figure Group 1 and the final three columns of data in Table 5, the following is evident:

- **GDP growth returns,** with annual growth averaging around 3% for the medium and longer term.
- **While fiscal drag and the VAT increase remain,** negative consumption impacts are now negligible in the medium and longer term.
- **Growth in tax receipts are strong,** providing a better outlook for the management of public debt. The bulk of the tax burden falls on consumers however, given that value-added tax and fiscal drag (personal tax) impact this sector disproportionately.

14 Lump sum transfers must of course match the change in GDP because the ratio to GDP has been fixed by assumption.

Figure Group 3

Simulation 3 (LHS) and simulation 4 (RHS): percentage changes in consumption by income group



Source: Author's calculations.

- **While total government expenditure falls,** this rationalisation is healthy provided that wasteful and inefficient expenditures are being addressed. In this context, the downward adjustment in government expenditures is towards more healthy levels for a developing country and gives the productive sector more room to consume resources and create growth.
- **Inequity:** lump sum transfers and wage rates increase, reducing inequity; however, the supply of labour—unemployment—is not addressed as labour productivity increases obviate the need for the quantum of labour to increase. Indeed, as firms adopt AI technology this exact pattern will be seen—increasing productivity without job growth.

The consumption plot by income group (Figure Group 3, RHS) for simulation 4 is interesting in that it shows only one income group—the 50-70% - not benefitting from the structural reforms in terms of a positive change to their consumption quantum. This is possibly explained by a combination of factors—this group is both above the threshold for transfers and above the threshold for personal tax liability, which becomes increasingly progressive over time in the context of positive inflation and static tax brackets.

Movements in major fiscal variables

Figure Group 4 presents the transition path charts for simulations 3 (LHS) and 4 (RHS) for three major fiscal variables: government debt, transfers (social grant payments to the poor) and total tax revenue.

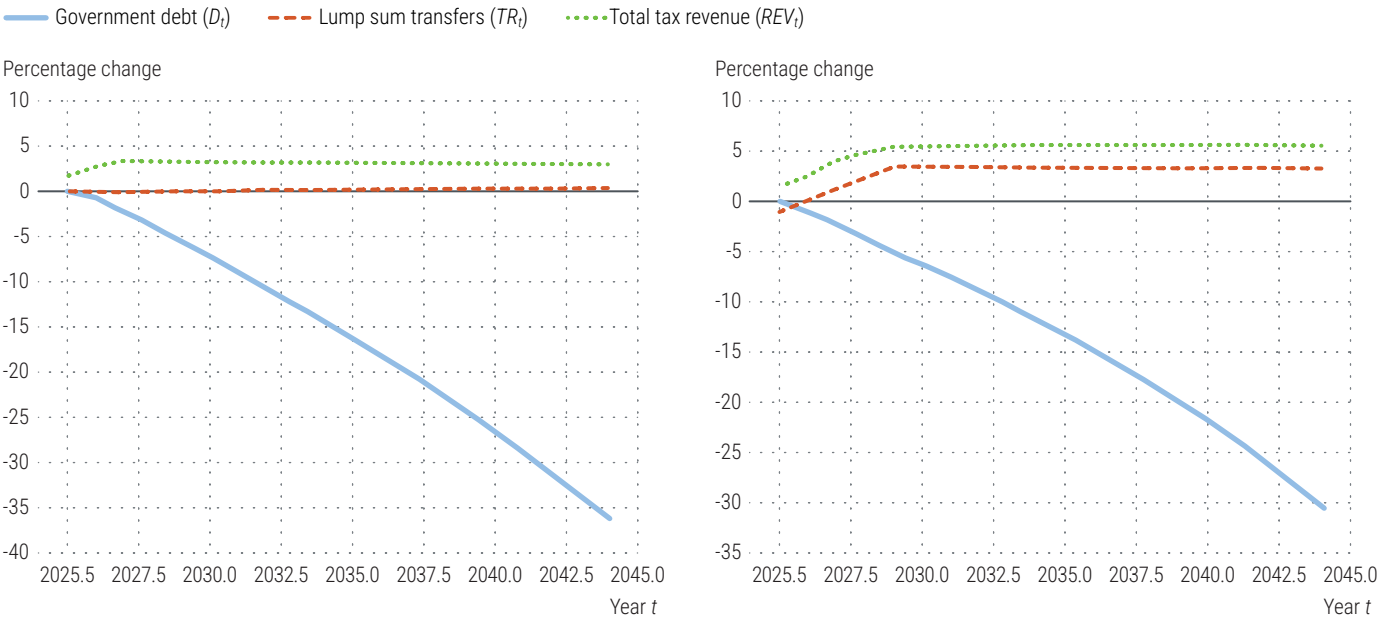
Under current government policies (Simulation 3), the results show a substantial reduction in government debt over the medium term, driven by higher tax revenues resulting from increased VAT and fiscal drag. However, the positive effect on tax revenues is accompanied by zero growth in transfers, indicating reduced social grant payments per capita over the medium to longer term. This suggests a scenario where the fiscal consolidation achieved through taxation and spending reprioritisation comes at the expense of reduced social support.

By contrast, the scenario including structural reforms and enhanced TFP (Simulation 4) presents a more favourable fiscal trajectory. Government debt reduction occurs similarly, but crucially, total tax revenue is significantly higher due to a broader, productivity-driven expansion in the economic base and critically, *positive GDP growth*. More importantly, transfers (social grants) increase under this scenario, reflecting enhanced fiscal capacity to support social spending without compromising debt sustainability.

Comparing the two simulations clearly illustrates the profound difference that productivity-enhancing structural reforms can make, when they drive growth. While both simulations show effectiveness in reducing government debt, only the productivity-enhanced scenario enables simultaneous increases in tax revenues and social transfers. This indicates that structural reforms not only bolster the government's fiscal position through improved economic performance but also support more inclusive growth by protecting and enhancing critical social expenditure.

Figure Group 4

Percentage changes in main fiscal variables: simulation 3 (LHS) and simulation 4 (RHS)



Source: Author's calculations.

Summary insights

The four simulations have salient features that can be summed up as follows:

- **Simulation 1, Fiscal Drag:** Better debt reduction performance (yields more tax income in the short term) than VAT, but more growth-dampening. Consumption impacts indicate it is less regressive than a VAT increase.
- **Simulation 2, VAT:** Less growth-dampening than fiscal drag but debt-reduction effect is also less. Marginally more positive for government expenditure and transfers, purely because it is more growth-positive (baseline public spending proportions are fixed).
- **Simulation 3, All Fiscal Measures:** Reprioritisation of current government expenditures towards public investment has a strongly positive effect on debt reduction but hits private consumption[15] hard and so leads to stagnant growth.
- **Simulation 4, All Plus Structural Reforms:** This is the only scenario that can ensure positive GDP growth in the short and medium term. Debt reduction is still positive and the private consumption gains benefit all income groups with the exception of the entry-level tax-paying group, who are above the threshold for both transfers and personal tax liability.

The only way to address this is to increase growth further and rationalise government spending further. It will probably not be possible to improve the rate of growth much more than indicated in simulation 4, barring a reduction in consumption and personal taxes. Fiscal drag must be addressed[16] and VAT should not be allowed to exceed 15% in the long run. These interventions will help with demand-led growth, reduce crowding out of private consumption, and hopefully assist with the unsustainable public debt to GDP situation.

CONCLUSIONS AND SUMMARY OF RECOMMENDATIONS

South Africa stands at a precarious juncture in its economic history, confronted by an intricate web of fiscal and structural challenges. These include anaemic economic growth, entrenched unemployment, an overstretched tax base, a heavy public debt burden, and declining industrial competitiveness. The analysis presented in this report—underpinned by simulations using the UN's OG-ZAF overlapping generations model—demonstrates that incremental fiscal adjustments alone are insufficient to place the country on a sustainable growth trajectory. A more transformative and coordinated reform agenda is needed to avert a fiscal crisis and foster inclusive development. This refers to the urgent implementation of broad-based structural reforms—across all arms of the state - that will address stagnant productivity growth, low investment and high unemployment.

15 Since transfers are held constant, the impacts to private consumption are not regressive.

16 The rates of personal tax in South African are amongst the highest in the world for a middle-income country and they are especially punitive given the poor record of current service delivery.

Simulation 3, which models the current policy approach of fiscal drag, VAT increases, and expenditure reallocation without broader reforms, suggests limited improvements to macroeconomic performance. While these measures temporarily stabilise public debt and reduce government spending, they significantly dampen private consumption and fail to address unemployment or inequality meaningfully. Economic growth remains marginal, and the overall economic trajectory under this approach remains fragile and unsustainable.

Simulation 4, by contrast, integrates a modest but targeted productivity shock achieved through reforms such as deregulation, infrastructural rehabilitation (notably in energy, rail, and ports), and improvements in the ease of doing business. This scenario produces markedly better outcomes across most macroeconomic indicators. GDP growth averages over 3% over the medium to long term, tax revenues rise without excessively burdening households or businesses, and wage rates and transfers increase, leading to modest gains in equity. It is also clear that medium term public debt declines in this scenario, nonetheless, even under this scenario, the long-term (steady state) sustainability of public debt remains at risk. This indicates that further growth-enhancing and fiscal-efficiency measures are necessary.

These results are tabulated below for easier comparison, in Table 6.

TABLE 6
Summarised results: simulations 3 and 4

Indicator	Simulation 3: Incremental Fiscal Adjustments	Simulation 4: Structural Reform & Productivity Boost
GDP Growth	Marginal; economy remains near stagnation	Averages >= 3% in the medium-to-long term
Public Debt	Temporarily stabilised but resumes upward trend	Medium-term debt declines (negative growth); long-term sustainability risk remains
Private Consumption	Significantly dampened due to higher VAT and fiscal drag	Recovers as household incomes rise; supports demand-led growth
Tax Revenue	Increases mainly through higher rates (burden on households/ businesses)	Increases organically through higher growth and expanded base
Unemployment & Inequality	Little to no improvement	Modest gains due to higher wages and transfers
Macroeconomic Stability	Fragile; risk of renewed fiscal stress	Stronger and more resilient, though further measures needed for long-run debt sustainability

Taken together, these findings suggest that South Africa's fiscal challenges cannot be solved by short-term adjustments. Instead, they require structural changes that address the root causes of weak growth and fiscal stress. The following five recommendations are designed to translate these insights into actionable policy steps:

- **Shift the Policy Focus from Revenue Extraction to Growth Stimulation:** The narrow and saturated tax base limits the capacity for further revenue mobilisation without undermining economic activity. Fiscal policy should therefore prioritise growth-enhancing reforms, which in turn will organically expand the tax base. This includes reversing the effects of fiscal drag and, when feasible, reducing VAT back to at most 15% to support private consumption and demand-led growth.
- **Accelerate Broad-Based Structural Reforms to Raise Productivity:** This is by far the most urgent prerogative, without which the outlook for South Africa's economic path is clearly negative. As demonstrated by Simulation 4, even a modest improvement in total factor productivity (2%) yields substantial macroeconomic benefits. The government should act decisively to reduce regulatory burdens, stabilise the electricity supply, and modernise rail and port infrastructure. These reforms are essential for lowering production costs, improving export competitiveness, and crowding-in private investment.
- **Reorient Public Spending Toward Productive Investment:** A critical aspect of fiscal rebalancing involves reducing inefficient current expenditures and increasing allocations to productive infrastructure. This shift must be accompanied by robust governance mechanisms to ensure efficiency and transparency in public investment.
- **Avoid Counterproductive Tax Increases:** Personal and corporate income taxes are already highly concentrated and vulnerable to erosion through capital flight and emigration (Meyer 2025). Further increases could be self-defeating. Instead, improving compliance, broadening the base, and enhancing administrative efficiency should be the focus of tax policy.
- **Maintain a Binding Fiscal Anchor with a Sustainable Debt Ceiling:** A hard ceiling of 120% for the debt-to-GDP ratio should be adopted as a fiscal anchor. The simulation exercises demonstrate that allowing debt to exceed this level results in sharp fiscal corrections, destabilising consumption and investment. Anchoring expectations through a credible debt ceiling will support investor confidence and macroeconomic stability.

In conclusion, South Africa cannot rely on fiscal consolidation alone to address its macroeconomic challenges. What is needed is a holistic, pro-growth reform strategy that improves competitiveness, fosters employment, and expands the tax base organically. The window for decisive action is narrow. Without a shift in the current policy paradigm, the country risks entrenching a cycle of stagnation and debt distress. But with sound planning, underpinned by robust modelling tools such as OG-ZAF, and a commitment to structural transformation, South Africa can chart a path towards sustainable growth and inclusive prosperity.

REFERENCES

AFDB. 2024. *South Africa Economic Outlook*. African Development Bank Group, accessed at: https://www.afdb.org/en/countries/southern-africa/south-africa/south-africa-economic-outlook

Badsha, B. 2024. *South Africa in one word: Commodities.* M&G Investments, accessed at: https://www.mandg.co.za/insights/articlesreleases/south-africa-in-one-word-commodities/

BMI Country Risk & Industry Research. 2025. *Structural Challenges Will Impede South Africa's 2030 Rail Targe.* Fitch Solutions, accessed at: https://www.fitchsolutions.com/bmi/logistics-freight-transport/structural-challenges-will-impede-south-africas-2030-rail-target-04-03-2025

Botha, R. 2025. *South Africa's debt has skyrocketed—new rules are needed to manage it*. The Conversation. Accessed at: https://theconversation.com/south-africas-debt-has-skyrocketed-new-rules-are-needed-to-manage-it-248355

BusinessTech. 2025. *0.09% of South African companies pay 72.3% of all corporate income tax*. BusinessTech, accessed at: https://businesstech.co.za/news/budget-speech/817005/0-09-of-south-african-companies-pay-72-3-of-all-corporate-income-tax/

Daily Investor. 2025. *New proposed tax can chase wealthy people out of South Africa*. Daily Investor, accessed at: https://dailyinvestor.com/finance/79538/new-proposed-tax-can-chase-wealthy-people-out-of-south-africa/

Daily Maverick. 2025. *Transnet and Eskom still in crisis as Treasury holds firm on SOE bailouts*. Daily Maverick. Accessed at: https://www.dailymaverick.co.za/article/2025-03-12-transnet-eskom-crisis-treasury-soe-bailouts/

Edwards, L. and S. Golub. 2022. *South Africa's International Cost Competitiveness and Productivity: A Sectoral Analysis*. ResearchGate, accessed at: https://www.researchgate.net/publication/228957392_South_Africa's_International_Cost_Competitiveness_and_Productivity_A_Sectoral_Analysis

Evans, M. 2025. *From crisis to renewal: How private investment can turn South Africa's freight challenges around*. Bizcommunity, accessed at: https://www.bizcommunity.com/article/from-crisis-to-renewal-how-private-investment-can-turn-south-africas-freight-challenges-around-476199a

FRED (Federal Reserve Bank of St Louis), 2025. Website data accessed at: https://fred.stlouisfed.org/data/RTFPNAZAA632NRUG#:~:text=1988,01%201.0588034391403198

Gcabo, Rebone et al. 2019. *Modelling value-added tax (VAT) in South Africa: Assessing the distributional impact of the recent increase in the VAT rate and options for redress through the benefits system*. WIDER Working Paper, No. 2019/13, ISBN 978-92-9256-647-0. The United Nations University World Institute for Development Economics Research (UNU-WIDER). Helsinki. Accessed at: https://doi.org/10.35188/UNU-WIDER/2019/647-0

Gumede, W. 2024. *South Africa's massive R1 billion a day headache*. Wits School of Governance. accessed at: https://www.wsg.ac.za/news/south-africas-massive-r1-billion-day-headache

Hiroaki, S. 2024. *Economic impacts of electricity supply shortages in South Africa*, EconStor, accessed at: https://www.econstor.eu/bitstream/10419/311606/1/1914147979.pdf

Inchauste, G., Lustig, N., Maboshe, M., Purfield, C., and I. Woolard. 2017. *The distributional impact of fiscal policy in South Africa*. CEQ Working Paper 29. The World Bank. Accessed at: https://www.commitmentoequity.org/wp-content/uploads/2017/09/CEQ-WP29_Inchauste-Lustig-Maboshe-Purfield-Woolard_South-Africa_REVISED-May2017.pdf

Pain, J., M. Rapapali D. Steenkamp. 2020. *Industry TFP estimates for South Africa*, Occasional Bulletin of Economic Notes 10412, South African Reserve Bank. accessed at: https://ideas.repec.org/p/rbz/oboens/10412.html

IMF. 2018. *Vietnam: selected issues*. IMF Country Report No. 18/216. Washington: IMF. Accessed at: https://www.imf.org/-/media/Files/Publications/CR/2018/cr18216.ashx

IMF Data Mapper, 2025. Accessed at: https://www.imf.org/external/datamapper/profile/ZAF?utm_source=chatgpt.com

IMF. 2024a. *South Africa: Staff Concluding Statement of the 2024 Article IV Mission*. International Monetary Fund, accessed at: https://www.imf.org/en/News/Articles/2024/11/26/mcs-south-africa-staff-concluding-statement-of-the-2024-article-iv-mission

IMF. 2024b. *IMF Executive Board Concludes 2024 Article IV Consultation with South Africa*, accessed at: https://www.imf.org/en/News/Articles/2025/01/29/pr-2519-south-africa-imf-executive-board-concludes-2024-article-iv-consultation

ITA. 2024. *South Africa - Market Challenges.* International Trade Administration, accessed at: https://www.trade.gov/country-commercial-guides/south-africa-market-challenges

Jacobs, S. 2025. *World Bank's plan to save South Africa's economy*. Daily Investor, accessed at: https://dailyinvestor.com/south-africa/78895/world-banks-plan-to-save-south-africas-economy/

Marginal Revolution. 2025. Tables data accessed at: https://marginalrevolution.com/marginalrevolution/2019/04/average-annual-change-in-total-factor-productivity-between-1990-and-2014.html

Meyer, D. 2025. *SA's heavy tax reliance on a limited number of high earners is a critical weakness.* University of Johannesburg News, accessed at: https://news.uj.ac.za/news/opinion-sas-heavy-tax-reliance-on-a-limited-number-of-high-earners-is-a-critical-weakness/

Naape, B. 2019. *Estimating Tax Capacity, Tax Effort and Tax Buoyancy for South Africa*. WIReDSpace, accessed at: https://wiredspace.wits.ac.za/bitstreams/8130c0ee-9a89-44a6-b859-8be8d1e6d581/download

Naidoo, K. and L. Ndukimana. 2020. *Unit Labour Costs and Manufacturing Sector Performance in Africa*. ScholarWorks at UMass, accessed at: https://scholarworks.umass.edu/bitstreams/49648b42-8b60-4013-bd71-59dcd25b92b3/download

National Treasury. 2024a. *REVENUE TRENDS AND TAX PROPOSALS.* National Treasury, accessed at: https://www.treasury.gov.za/documents/National%20Budget/2024/review/Chapter%204.pdf

National Treasury. 2024b. *2024 budget review - government debt and contingent liabilities* - National Treasury, accessed at: https://www.treasury.gov.za/documents/National%20Budget/2024/review/Chapter%207.pdf

Nieuwenhuizen, C. 2019. *The effect of regulations and legislation on small, micro and medium enterprises in South Africa*, accessed at: https://www.tandfonline.com/doi/full/10.1080/0376835X.2019.1581053

O'Neill. 2024. *National debt of South Africa in relation to gross domestic product (GDP) 2019-2029* Statista, accessed at: https://www.statista.com/statistics/578887/national-debt-of-south-africa-in-relation-to-gross-domestic-product-gdp/

Penn World Table 10.0. 2023. *Penn World Tables version 10.0*. Dataverse Nederland. Accessed at: https://dataverse.nl/dataset.xhtml?persistentId=doi:10.34894/QT5BCC

PWC. 2025. *South Africa Economic Outlook - January 2025.* Press Release, accessed at https://www.strategyand.pwc.com/a1/en/press-release/south-africa-economic-outlook-january-2025.html

Research and Markets. 2023. *South Africa Motor Vehicle Industry Report 2023*. GlobeNewswire, accessed at: https://www.globenewswire.com/news-release/2024/03/20/2849619/28124/en/South-Africa-Motor-Vehicle-Industry-Report-2023-Competitive-Environment-Outlook-Industry-Associations-Local-and-International-Influencing-Factors.html

Reuters. 2025. *Third time lucky? South Africa needs to plug $4.1 billion budget hole*. Accessed at: https://www.reuters.com/world/africa/third-time-lucky-south-africa-needs-plug-41-billion-budget-hole-2025-05-16

StatsSA. 2024. *SA economy grows in the fourth quarter*. Statistics South Africa, accessed at: https://www.statssa.gov.za/?p=18124

Thakoor, V.V. 2020. *Market Power, Growth, and Inclusion: The South African Experience*, accessed at: https://www.elibrary.imf.org/view/journals/001/2020/206/article-A001-en.xml

Trace. 2020. *South Africa's crippling electricity problem*. Oxford Policy Management, accessed at: https://www.opml.co.uk/insights/south-africas-crippling-electricity-problem

Trading Economics. 2025. *South Africa Unemployment Rate.* Trading Economics, accessed at https://tradingeconomics.com/south-africa/unemployment-rate

Van Rensburg, T. and K. Morema. 2023. *Reflections on load-shedding and potential GDP*. SARB Occasional Bulletin of Economic Notes June 2023. Pretoria: Reserve Bank. Accessed at: https://www.reservebank.co.za/content/dam/sarb/publications/occasional-bulletin-of-economic-notes/2023/reflections-on-load-shedding-and-potential-gdp-june-2023.pdf

Venna, L. 2025. *Unpacking SA's 2025 budget speech — challenges, dynamics and implications*. Daily Maverick, accessed at: https://www.dailymaverick.co.za/article/2025-03-16-unpacking-south-africas-2025-budget-speech-challenges-dynamics-and-implications/

Visser. 2025. *Budget will leave South Africans bruised and bloodied.* Moneyweb, accessed at: https://www.moneyweb.co.za/mymoney/moneyweb-tax/budget-will-leave-south-africans-bruised-and-bloodied/

Worku, Z. 2016. *The impact of over-regulation on small enterprises*. ResearchGate, accessed at: https://www.researchgate.net/publication/311335079_The_impact_of_over-regulation_on_small_enterprises

APPENDIX

Fiscal drag: establishing a range for simulations

The means by which a metric is obtained in order to shock *tau_payroll* is as follows:

1. Inflation is assumed at 3%, which is the current rate at time of writing (June 2025). Wages and salaries are assumed perfectly indexed.
2. The SA tax tables for 2024 (and 2025 and 2026) are used in order to calculate payroll tax due for eight different income categories.
3. These tax amounts are deflated in 2025 to obtain the real percentage increase in tax for each of the eight income categories.
4. The simple average of these real increases is taken as the metric for *tau_payroll* in the fiscal drag 'reform' simulation.

Government baseline spending proportions: establishing ranges for simulations based on an analysis of peer countries

South Africa's fiscal composition—marked by high general current government expenditure and minimal public investment—stands in stark contrast to that of several comparable middle-income countries. As of the most recent data, South Africa's general current government expenditure is approximately 27% of GDP, while government investment (public gross fixed capital formation) is only around 0.3% of GDP (sources provided below). This composition reflects a budget heavily weighted toward recurrent spending, notably on wages, social transfers, and debt servicing, with limited fiscal space allocated to capital formation.

By comparison, Kenya, although grappling with fiscal pressures and debt obligations, allocates around 5–6% of GDP to public investment, while general current expenditure is somewhat lower than South Africa's, averaging about

TABLE 7
Calculating fiscal drag metric for simulation

Tax Tables				Simulation							
Lower Bound (R)	Upper Bound (R)	Base Tax (R)	Increment (%)	Income (R), (2024)	Income (R), (2025, +3%)	Tax Payable 2024 (R)	Tax Payable 2025 (R)	Additional Tax (R)	% Increase	Additional tax, deflated (R)	Real % Increase
			0.18	150 000	154 500	27 000	27 810	810	0.5%	786	0.5%
237 101	370 500	42 678	0.26	250 000	257 500	46 032	47 982	1 950	0.8%	1 892	0.8%
370 501	512 800	77 362	0.31	350 000	360 500	71 007	74 262	3 255	0.9%	3 157	0.9%
512 801	673 000	121 475	0.36	450 000	463 500	98 867	103 727	4 860	1.1%	4 714	1.0%
673 001	857 900	179 147	0.39	550 000	566 500	131 177	137 612	6 435	1.2%	6 242	1.1%
857 901	1 817 000	251 258	0.41	750 000	772 500	207 019	216 244	9 225	1.2%	8 948	1.2%
857 901	1 817 000	251 258	0.41	1 000 000	1 030 000	309 519	321 819	12 300	1.2%	11 931	1.2%
1 817 001		644 489	0.45	2 000 000	2 060 000	726 839	753 839	27 000	1.4%	26 190	1.3%
								SIMPLE AVERAGE	**1.04%**		**1.01%**

Source: Author's calculations.

20–22% of GDP. This allows for more robust capital formation, particularly in transport and energy infrastructure, despite Kenya's lower overall GDP per capita.

Mauritius, a more advanced upper-middle-income country, maintains general government current expenditure of approximately 22–24% of GDP and public investment of around 3–4%, reflecting a more balanced allocation with a focus on sustaining competitiveness through infrastructure, health, and education.

Egypt, with a similarly large and interventionist state sector, spends around 22–23% of GDP on current expenditure, including sizeable subsidies and public-sector wages, but also maintains public investment rates of 4–5% of GDP. This investment is directed towards major infrastructure and industrial projects, under its Vision 2030 plan, signalling a stronger emphasis on developmental spending than is evident in South Africa.

Turkey has historically maintained public investment around 3–4% of GDP, while its general current expenditure is more comparable to South Africa's, at 25–27%. The Turkish model, however, channels investment into manufacturing support, transportation infrastructure, and export competitiveness, areas in which South Africa has lagged due to persistent underinvestment.

Regarding Malaysia and Vietnam, both economies have pursued growth-oriented public investment strategies. Malaysia typically invests about 4–5% of GDP, with a current expenditure ratio of approximately 21–23%, striking a balance between social spending and capital outlays. Vietnam is especially notable, with public investment consistently exceeding 6% of GDP, among the highest in its peer group. General current spending, by contrast, remains relatively constrained at around 20%, enabling the state to prioritise industrial upgrading, logistics, and rural development.

Rwanda, despite being a low-income country, offers important lessons for its developing country peers. With strong donor support and disciplined fiscal management, Rwanda allocates 5–6% of GDP to public investment, particularly in infrastructure and digital economy development, while keeping current expenditure below 20% of GDP. Its development strategy prioritises capital investment as a foundation for long-term growth and productivity.

South Africa's extremely low level of government investment relative to its current expenditure is an outlier among its peers. Most middle-income countries invest at least 4–6% of GDP in public infrastructure, while maintaining current expenditure in the 20–25% range. South Africa's expenditure profile, dominated by consumption rather than investment, represents a major constraint on growth potential and economic transformation. Rebalancing towards higher public investment—without jeopardising fiscal sustainability—is essential for addressing its infrastructure bottlenecks, supporting industrial competitiveness, and unlocking inclusive growth.

Based on the above analysis of South Africa and its peers, and the data presented below, the two magnitudes chosen for the spending proportion shocks are as follows:[17]

1. Baseline current government expenditure proportion: from 24.1% to 22%
2. Baseline public investment proportion from 0.3% to 2.13%.

Note that this leaves the proportion of expenditures on transfers unchanged in the budget.

Data sources: expenditure proportions

Data was drawn from variety of sources as provided below in Table 8.

TABLE 8
Data sources for government expenditure estimates, latest year available (%GDP)

Region/ Country	Spending (% GDP)	Public Investment (% GDP)	Source(s)
South Africa	~32.6 (Total); ~27.6 (Current)	very low (~0.3 net)	IMF (DataMapper), CEIC (imf.org)
Kenya	~29	~5–6	IMF / World Bank, World Factbook
Mauritius	~25	~3–4?	IMF / World Bank
Egypt	~32	~6	Wikipedia / Coface
Turkey	~35	~3–4	IMF / World Bank
Malaysia	~29	~4–5	IMF / World Bank
Vietnam	~31	~6+	IMF / World Bank
Rwanda	~27	~5–6	IMF / World Bank

Source: Listed in column 4.

Additional Simulations

Table 9 below contains results for two additional simulations, being spending reprioritisation with fiscal drag (i.e. fiscal measures less the VAT increase) as well as the structural reforms package with no fiscal measures.

It is clear from this data and that presented earlier for simulations 1-4 that:

- Without the VAT increase, the reduction in government debt is substantially lower.
- Without the fiscal policy package, the structural reforms package on its own is unable to lower government debt. Also, total tax revenue is less than half of what is taken in for the full policy package, for the medium term.

17 The initial values for the spending parameter variables affected by these shocks is dictated by the most current calibration of the OG-ZAF model.

TABLE 9
Additional simulations: changes from the baseline result

Variable	Spending Reprioritisation plus FD			Structural Reforms Only		
	5 Years	2025-2044	SS	5 Years	2025-2044	SS
GDP	-0.2%	0.0%	0.0%	1.4%	2.8%	2.9%
Consumption	-0.5%	-0.7%	-1.1%	0.7%	1.6%	2.9%
Government Debt	-1.7%	-9.3%	0.0%	0.0%	2.9%	2.9%
Government Expenditures	-5.4%	-7.9%	-6.9%	1.4%	2.8%	2.9%
Total tax revenue	1.7%	1.6%	1.3%	0.9%	2.0%	2.9%
Business tax revenue	-0.2%	-0.1%	0.1%	1.5%	2.9%	2.9%
Lump sum transfers	-0.2%	0.0%	0.0%	1.4%	2.8%	2.9%
Labor	-0.2%	-0.1%	0.1%	-0.2%	-0.1%	-0.5%
Wage rate	0.0%	0.0%	-0.1%	1.6%	2.8%	3.4%
Capital Stock	-0.2%	0.0%	-0.1%	1.3%	2.6%	2.9%

Source: Author's calculations

These simulations confirm that the best path for the economy is the combination of fiscal measures and structural reforms.

Run scripts

Simulation 1: Fiscal Drag

```
# Parameter change for the reform run
    updated_params_ref = {
        "tau_payroll": [0.01], # fiscal drag
    }
```

Simulation 2: VAT

```
# Parameter change for the reform run
    updated_params_ref = {
        "tau_c": [[0.15],[0.155],[0.16]], # change VAT tax rate
    }
```

Simulation 3: All fiscal measures

```
# Parameter change for the reform run
    updated_params_ref = {
        "tau_c": [[0.15],[0.155],[0.16]], # change VAT tax rate
        "tau_payroll": [0.01], # fiscal drag
        "alpha_G": [0.241, 0.234, 0.227, 0.22], # change
        government spending share
        "alpha_I": [0.0003, 0.0073, 0.0143, 0.0213], # change
        investment share
    }
```

Simulation 4: TFP boost together with all fiscal measures

```
# Parameter change for the reform run
    updated_params_ref = {
        "tau_c": [[0.15],[0.155],[0.16]], # change VAT tax rate
        "tau_payroll": [0.01], # fiscal drag
        "alpha_G": [0.241, 0.234, 0.227, 0.22], # change
        government spending share
        "alpha_I": [0.0003, 0.0073, 0.0143, 0.0213], # change
        investment share
        "Z": [[1],[1.005],[1.01],[1.015],[1.02]], # change
        productivity
    }
```


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For more information, please contact Alfonso Acosta Gonçalves, EAPD/DESA (acostagoncalves@un.org). The content, findings, interpretations, and conclusions expressed do not necessarily represent the views of the United Nations or the Member States.