

## Measuring the macroeconomic impacts of COVID-19 in South Africa

### Executive Summary

Since the onset of the COVID-19 pandemic, government has been forced to balance, on the one hand, the need to implement policies aimed at protecting the health and safety of its population, and on the other, the need to minimise the negative economic consequences of the various levels of the nationwide lockdown. Alongside worsening inequality, poverty and unemployment, South Africa faces its most severe recession. To assess the impact of COVID-19 on the macroeconomy, the Commission employed quantitative analysis to measure the effects on the supply system, demand patterns, long-run potential output and, ultimately, economic growth. From the results, it is evident that the South African economy has suffered from declines in total factor productivity (TFP) contribution to economic growth, increased unemployment and structural inefficiencies in certain sectors, all of which contribute to disrupted supply chains. Aggregate demand was also adversely affected through weak investment amid uncertainty, as well as decreased consumption in goods and services resulting from income losses. Furthermore, estimates of long-run potential output project a downward trend for economic growth. Overall, South Africa's economic recovery is likely to be prolonged.

The Commission therefore recommends active engagement between the three spheres of government, clear and tangible reforms for implementing the economy's structural transformation, and the promotion of public investment, particularly in infrastructure and reform, in order to boost growth and employment, and crowd-in private investment. Additionally, it is recommended that the 2022/23 Division of Revenue should be more specific in supporting local demand and localised product procurement in order to support value chains.

### Background

The COVID-19 pandemic and the sudden imposition of the nationwide lockdown have triggered the most significant recession ever recorded in South Africa's economic history.



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*The vision of the Commission is to provide influential advice for equitable, efficient and sustainable intergovernmental fiscal relations between national, provincial and local spheres of government. This relates to the equitable division of government revenue among three spheres of government and to the related service delivery of public services to South Africans.*

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Before the onset of COVID-19, the South African economy was already amid a technical recession. Inefficiency in public sector service provision, combined with the pandemic’s shock on the overall productivity in the economy, has led to the country facing its highest level of unemployment, deepening poverty and escalating inequality.

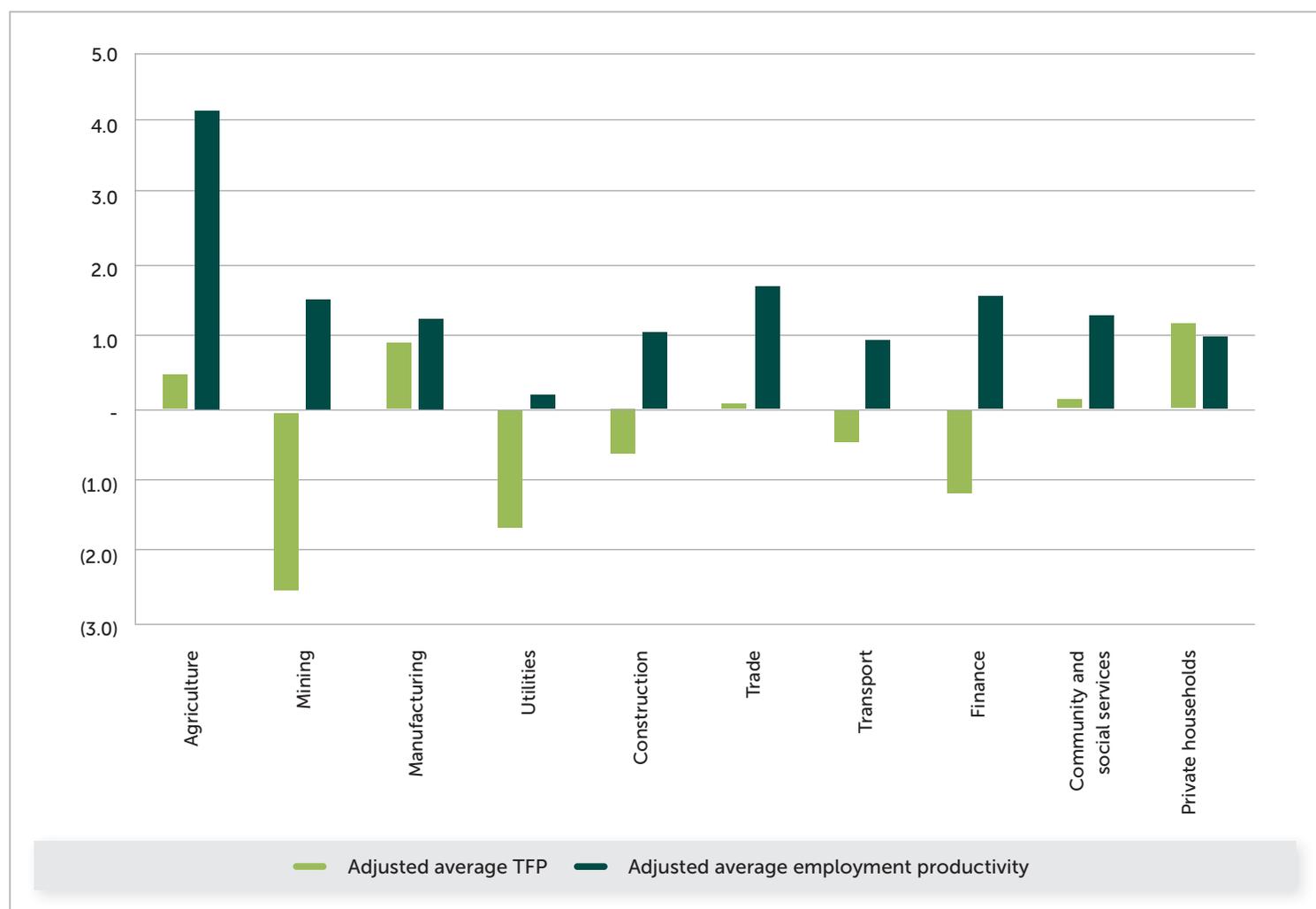
With the most recent empirical data, primarily sourced from the South African Reserve Bank (SARB) and Statistics South Africa (Stats SA), this research provides an examination of the economic impact of COVID-19 in order to inform policies for recovery in South Africa. A quantitative approach of financial programming, descriptive analysis and macro-econometric techniques of simple time series is adopted. This approach measures changes in domestic factors that affect both supply and demand, and predicts long-run potentials of output that inform South Africa’s growth trajectory.

## Research findings

### 1. Supply and productivity

Figure 1 presents the adjusted means of TFP contribution to economic growth and employment productivity as elasticity of each sector, from the time of the global financial crisis of 2008–2009 until the fourth quarter of 2020.

**Figure 1: Adjusted means of total factor productivity and employment elasticity, 2009 until the fourth quarter of 2020 (in percentage)**



Source: South African Reserve Bank (2021), Statistics South Africa (2021) and the Commission’s calculations

Note: Adjusted means are means corrected for the 95% confidence interval. Employment elasticity is calculated as the percentage growth rate of employment over the percentage growth rate of GDP growth in the respective industry.

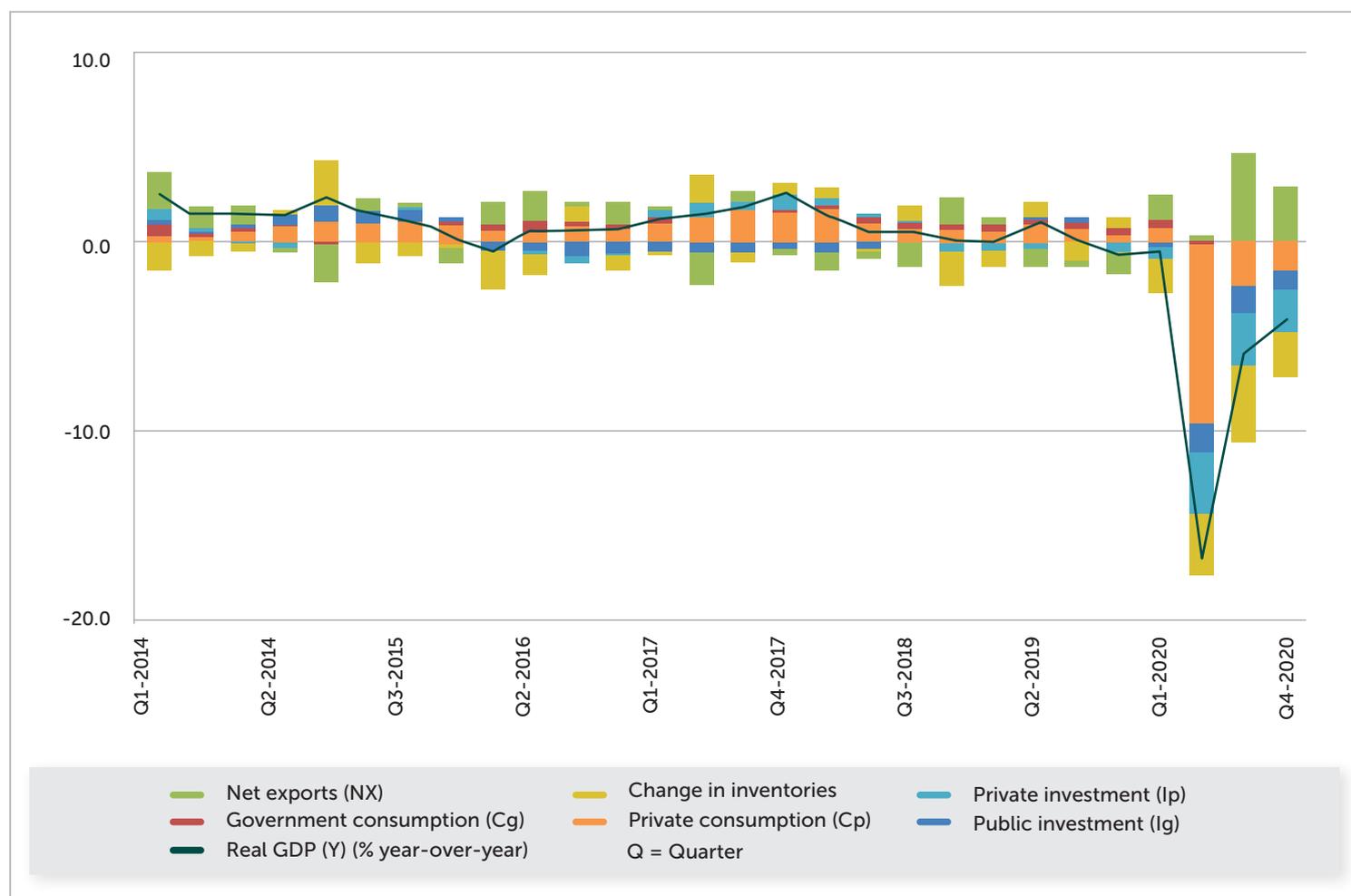
Agriculture, manufacturing and private households' adjusted means of TFP are positive, as are their average employment elasticities. This synchronisation indicates that more employment in these sectors may result in more productivity and economic growth. However, the desynchronisation between TFP contribution and employment elasticity (productivity) in other sectors indicates structural inefficiencies. Mining's TFP contribution to growth is the lowest compared to other industries and corresponds negatively to growth, despite high employment elasticity. Most concerning is that utilities (electricity and water) – which are vital to the country's social and economic infrastructure for economic growth – also have a negative TFP, with a near-zero employment elasticity. The three critical deficiencies that hold back TFP growth and efficiency are the lack of employability-targeted education and appropriate in-demand skills training or apprenticeship, inadequate and unreliable basic infrastructure and utilities to support households to supply labour, and a non-competitive, highly concentrated market.

Mass unemployment is another noticeable impact of the pandemic. With the easing of lockdown restrictions and people emerging from their homes to seek employment in the labour market, the number of economically active and unemployed individuals increased by more than 2.2 million in the third quarter of 2020 and by 701 000 individuals in the fourth quarter.

## 2. Aggregate demand

There are three main channels through which the COVID-19 pandemic impacts demand activities. Firstly, the lockdown levels led to drastic changes in household demand for goods and services as consumption. Secondly, the increased levels of uncertainty impacted investment decisions. Thirdly, the disrupted global production and supply chain affected South African imports and exports (see Figure 2).

**Figure 2: Contributions to demand growth, Q1-2014 to Q4-2020 (in percentage, year-over-year)**



Source: South African Reserve Bank (2021) and the Commission's calculations

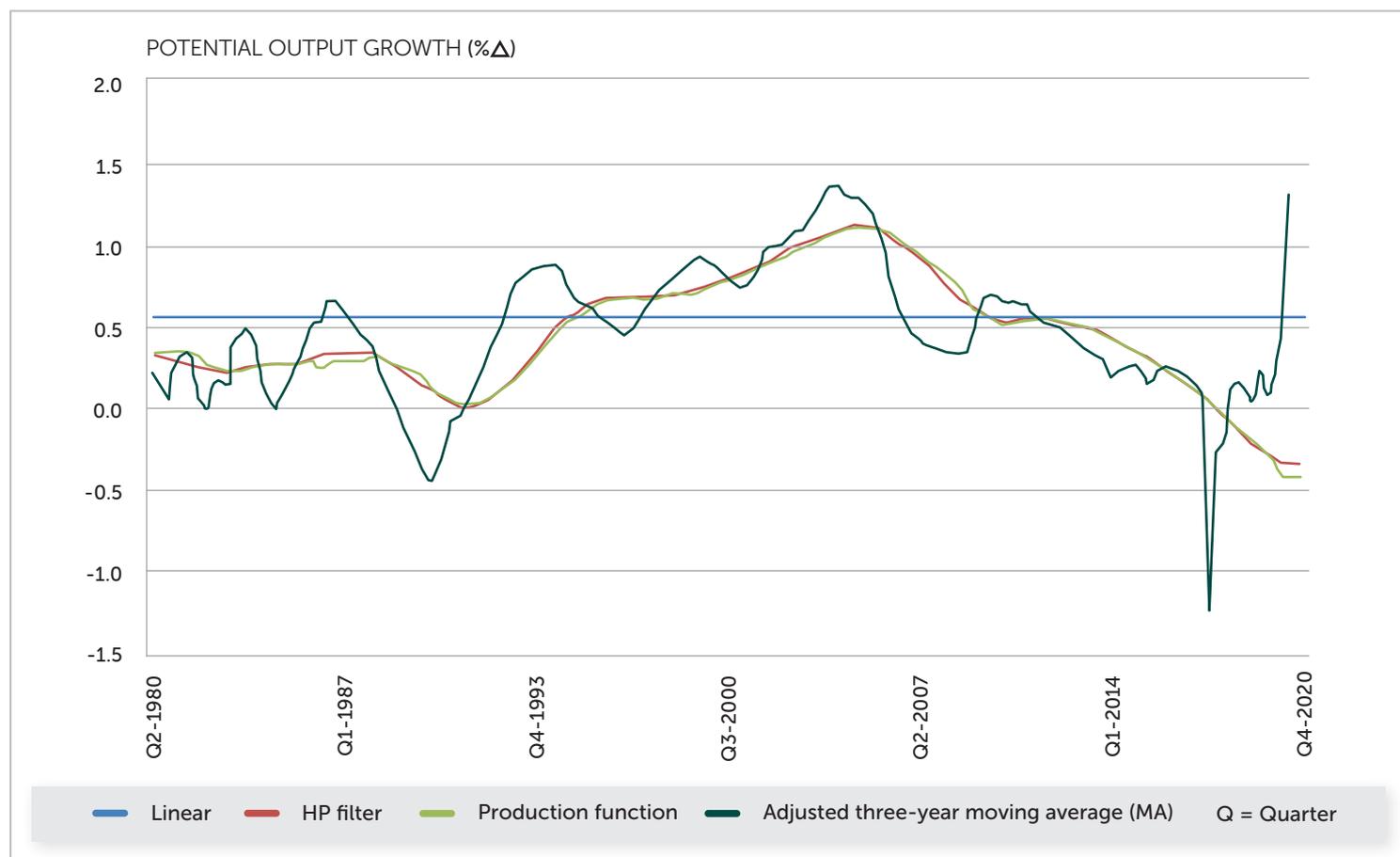
The COVID-19 shock affected the consumption patterns of private households in terms of durable and non-durable goods and services, where durable goods were impacted most severely. It is evident that the loss of income reduced household consumption and changed the pattern of consumption towards myopic or non-durable goods.

Prior to COVID-19, South Africa’s economic growth was primarily consumption-driven. In Quarter 2 of 2020, shocks to consumption and investment, most notably in private consumption, contributed to the fall in aggregate demand and in the growth of gross domestic product (GDP). Relative improvements in Quarter 3 and Quarter 4 indicate that the economy is slowly returning to its regular consumption and investment patterns, although still contracting relative to the pre-COVID-19 period. Additionally, a continued depletion of inventory stock and lack of imports undermine a swift recovery in growth through consumption and demand. The risk of a protracted economic recovery is compounded by the slow and marginal increase in private and public investment. The only component that remained positive (and miniscule in contribution) throughout the pandemic was government consumption, although this may crowd out other demand consumptions.

### 3. Long-run, potential output

Estimates in Figure 3 show close estimations of potential output using the production function and Hodrick-Prescott (HP) filters<sup>1</sup>, which project a downward trend of economic growth into the recession territory, at -0.5% as potential growth. Even the optimistically naïve, linear projection of potential growth shows a long-term average of 0.6% growth for the period under review. The adjusted (limiting to non-outliers) three-year forward-moving average shows that – at best – potential long-term growth is to be at 1.3%.

**Figure 3: Long-run, potential GDP growth, linear, HP filter, production function and three-year forward moving average, Q2-1980 to Q4-2020**



Source: South African Reserve Bank (2021) and the Commission’s calculations

<sup>1</sup> The Hodrick-Prescott filter (a data-smoothing technique applied during analysis).

## Conclusion and recommendations

There is little evidence – from either the supply or the demand side – to justify South Africa’s assertion to recover quickly from the COVID-19 shock. The pandemic exacerbated existing structural fragilities and growth weaknesses in the domestic economy. Government expenditure alone will not be sufficient to revert the overall decline in the economy on the demand side. Inventory stock is depleting faster than it can be replenished by production and imports, thereby undermining the likelihood of short-term economic growth. Additionally, investments by the private and public sectors are still lower than their pre-COVID-19 levels, recovering much too slowly as a result of these fundamental risks. Given these and looking ahead, the long-term potential output of South Africa’s economic recovery is likely to be protracted and uncertain. The likelihood of sustained economic recovery is implausible as the COVID-19 shock has made permanent changes to economic behaviour by exacerbating the South African economy’s structural inefficiencies.

### **The Commission makes the following recommendations:**

1. Active engagements between the three spheres of government are encouraged to ensure the formalisation and alignment of provincial and local government economic reconstruction and development plans with the Economic Reconstruction and Recovery Plan (ERRP), with resource commitments in the 2022/23 Division of Revenue.
2. The 2022/23 Division of Revenue should, in promoting economic growth, be more specific in supporting local demand and localised product procurement in order to support value chains. The Minister of Finance should explore the use of the budget as an instrument to incentivise localised product procurement.
3. Government should adopt clear and tangible reforms for effecting the economy’s structural transformation by reinforcing market competition to improve efficiency and productivity. This transformation includes reconciling all costs of operations, wages and salaries such that they are more market related. Inefficient state-owned companies (SOCs) should be held accountable to the public for their institutional failures, with a clear deadline of resolve and final conditions of a bailout.

### **References:**

South African Reserve Bank (SARB). 2021. Quarterly Bulletin data for Q4:2020. Pretoria: SARB.  
Statistics South Africa (Stats SA). 2020. Quarterly Labour Force Survey, Q4:2020. Pretoria: Stats SA.

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