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** The surnames are listed in alphabetical order.*

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Journal of Global Analysis

Growth Dynamics in South Africa: Key Macroeconomic Drivers and Policy Challenges

By Themba G. Chirwa* and Prof. Nicholas M. Odhiambo**

Abstract

In this paper we examine which key factors at the macroeconomic level are associated with the economic growth performance of the South African economy. These drivers have been identified by assessing the economic events that occurred during the period 1960-2013. During this period, the South African economy went through two economic and political systems: an apartheid system that covered the period 1948-1993; and a democratic system from 1994 to date. Regardless of the economic system implemented, we find the accumulation of physical capital, human capital development, international trade, real exchange rate growth, and inflation as the most significant macroeconomic drivers of economic growth in South Africa. We also find that the weak performance of the South African economy in recent years has been grossly affected by declining trends in the accumulation of capital stock, low quantities and quality of human capital, worsening balance of payments position, and real exchange rate instability.

Keywords: South Africa; Open Economic Growth; Macroeconomic Drivers

JEL Classification: E65, O55

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Growth Dynamics in South Africa: Key Macroeconomic Drivers and Policy Challenges

Introduction

An important finding in a research studied in 2005 is that growth episodes are highly unpredictable and are associated with increases in investment, trade and real exchange rate movements. Though political regime changes and economic reforms are statistically significant predictors of a particular growth acceleration, no significant relationship is found between a couple of growth accelerations and political changes or economic reforms initiated. It is also argued that growth episodes within an economy's long-run growth path may be influenced by predictors such as external factors, domestic economic policies and political events.¹ In the same study, using a threshold of eight years as a sufficient period for a nation to attain a sustained higher economic growth path, out of 110 countries sampled, only 60 recorded at least one growth episode during the period 1957-1992. Within the sub-sample of Sub-Saharan African countries, no growth accelerations were experienced in the Republic of South Africa since the 1950s to early 1990s.² In fact, comparing real GDP growth within the study period, 1960-2013, the South African economy experienced almost the same economic growth rates during the apartheid period 1960-1993, with an average real GDP growth of 3.3% per annum (p.a.), and the period 1994-2013 where the economy recorded an average real GDP growth rate of 3.1% p.a.³

The South African economy, ranked 32 out of 184 countries, is one of the upper-middle income economies of the world. In 2013, the South African economy registered a real GDP per capita of US\$6,090 at 2005 constant prices.⁴ Regardless of attaining such a level of economic performance, the South African economy still experiences a volatile economic growth trajectory. The experience is in spite of having gone through a democratic transition in 1994, where expectations were high that such a transition from apartheid to a democratic dispensation would propel the economy to greater heights. This expectation arose when the international community lifted economic sanctions after South Africa ended its long and political armed struggle. Despite all such efforts, economic growth since the democratic dispensation in 1994 has been modest.⁵

Some scholars have identified other equally important macroeconomic variables that affected South Africa's economic growth trajectory. These include inflation, interest rates, exchange rates, and fiscal deficits.⁶ This raises the question as to what could have been the proximate and fundamental causes of such economic performance apart from the traditional neoclassical determinants of growth – accumulation of physical capital and human capital. In addition, what macroeconomic drivers are important that would have explained such a performance of the South African economy? This analysis cannot be achieved through a growth-accounting estimation only but through a thorough review of the economic policies adopted with an emphasis on historical perspectives.

The aim of the paper is, therefore, to examine the key macroeconomic drivers of economic growth in the Republic of South Africa during the period 1960-2013. These drivers are examined within the context of two political regimes that existed: the apartheid

regime through the period 1948-1993, and the democratic transition period covering the period 1994-2013. The rest of the paper is discussed as follows: Section Two examines the key macroeconomic drivers of economic growth identified, based on domestic economic policies and political conditions experienced in South Africa during the period 1960-2013. Section Three discusses policy challenges affecting the South African economy. Lastly, section Four concludes the paper.

The Macroeconomic Drivers of Growth in South Africa

Accumulation of Physical Capital

Investment is a fundamental determinant that is crucial to the development of any economy in the world. Growth accounting decompositions from the standard neoclassical growth theory, the endogenous growth theory, and the new growth empirical studies, all support the significance of accumulation of physical capital.⁷ The investment ratio has been one of the most important drivers of economic growth in the South African economy.⁸ South Africa's experience overall shows a declining trend in the accumulation of physical capital during the study period, 1960-2013. This is also supported by a declining economic growth trajectory that reached its lowest level in the 1980s, averaging 1.5% p.a. during the period 1981-1990. During the 1960s, real GDP growth in South Africa averaged 6.0% p.a.; but slightly dropped in the 1970s where the economy recorded an average growth rate of 3.4% p.a.⁹

During the 1960s and 1970s the growth in real GDP was attributed to the growth in mining, industry and manufacturing that improved significantly during this period rising from 37.8% of GDP in 1960 to 48.4% of GDP in 1980. However, the trend thereafter declined significantly from its peak in 1980 to 29.9% of GDP in 2013. The main contributing factor leading to the decline of investment in South Africa was due to political unrests, resource allocation inefficiencies, and divestment and disinvestment campaigns that came about as a result of the punitive sanctions imposed during the apartheid period 1948-1993.¹⁰ Even though the South African economy has a strong tertiary sector largely driven by developments in sub-sectors such as finance and insurance, real estate and business services, and general government services; the sector has not resulted in increased long-term capital stock. The growth in primary (agriculture), on the other hand, declined significantly from 11.2% of GDP in 1960 to 2.3% of GDP in 2013.¹¹

Figure 1 illustrates the relationship between total investments and economic growth in South Africa during the period 1960-2013.

Overall, the evidence shows a negative co-movement between real GDP growth and the growth in total investment in South Africa. During the apartheid era, total investment in South Africa declined from a maximum of 37.9% of GDP in 1980 to 18.8% of GDP in 1992. By the year 2006, total investment in South Africa recorded its lowest average at 16.8% of GDP. At the same time, real GDP growth declined from an average of 6.0% p.a. during the 1960s to 1.5% p.a. in the 1980s.¹³ After independence or post-apartheid era, real GDP growth recovered slightly as the economy grew at an average rate of 1.8% p.a. during the 1990s. This improved further to an average of 3.3% p.a. during the period 2001-2013. One of the contributing factors of such poor performance in the 1990s is due to the fact that the South African economy did not recover quickly from the declining trend in total investment which further deteriorated during the 1990s, averaging 20.5% of GDP. Growth in investment slightly improved during the period 2001-2013 to an average of 21.3% of GDP.¹⁴

Overall, the slow recovery in the accumulation of physical capital has contributed towards the weak growth performance of the South African economy. Investment, therefore, plays a significant role in the growth accounting process of the South African economy. As

Figure 1: Total Investment and Real GDP Growth in South Africa: 1960-2013¹²

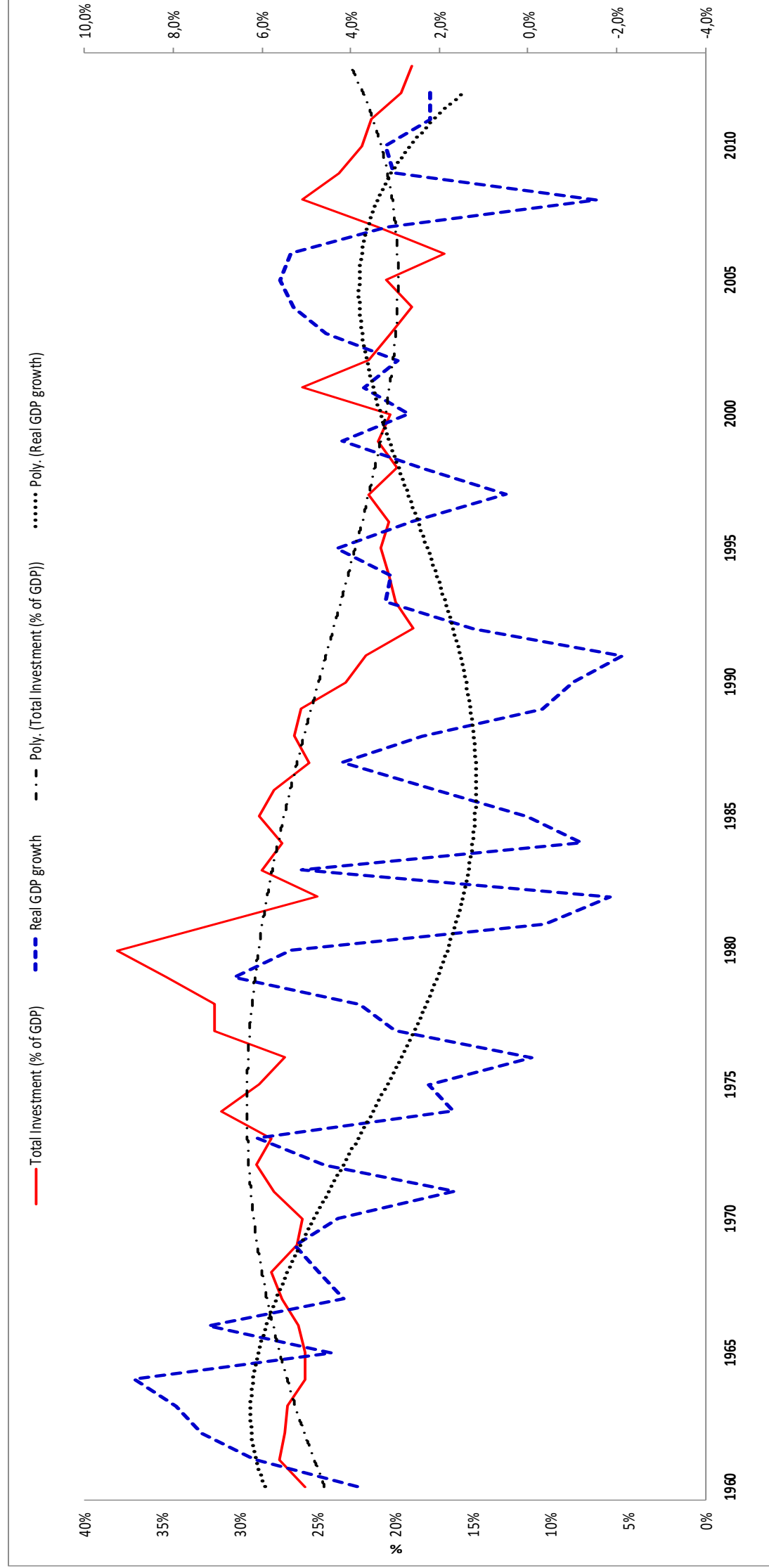
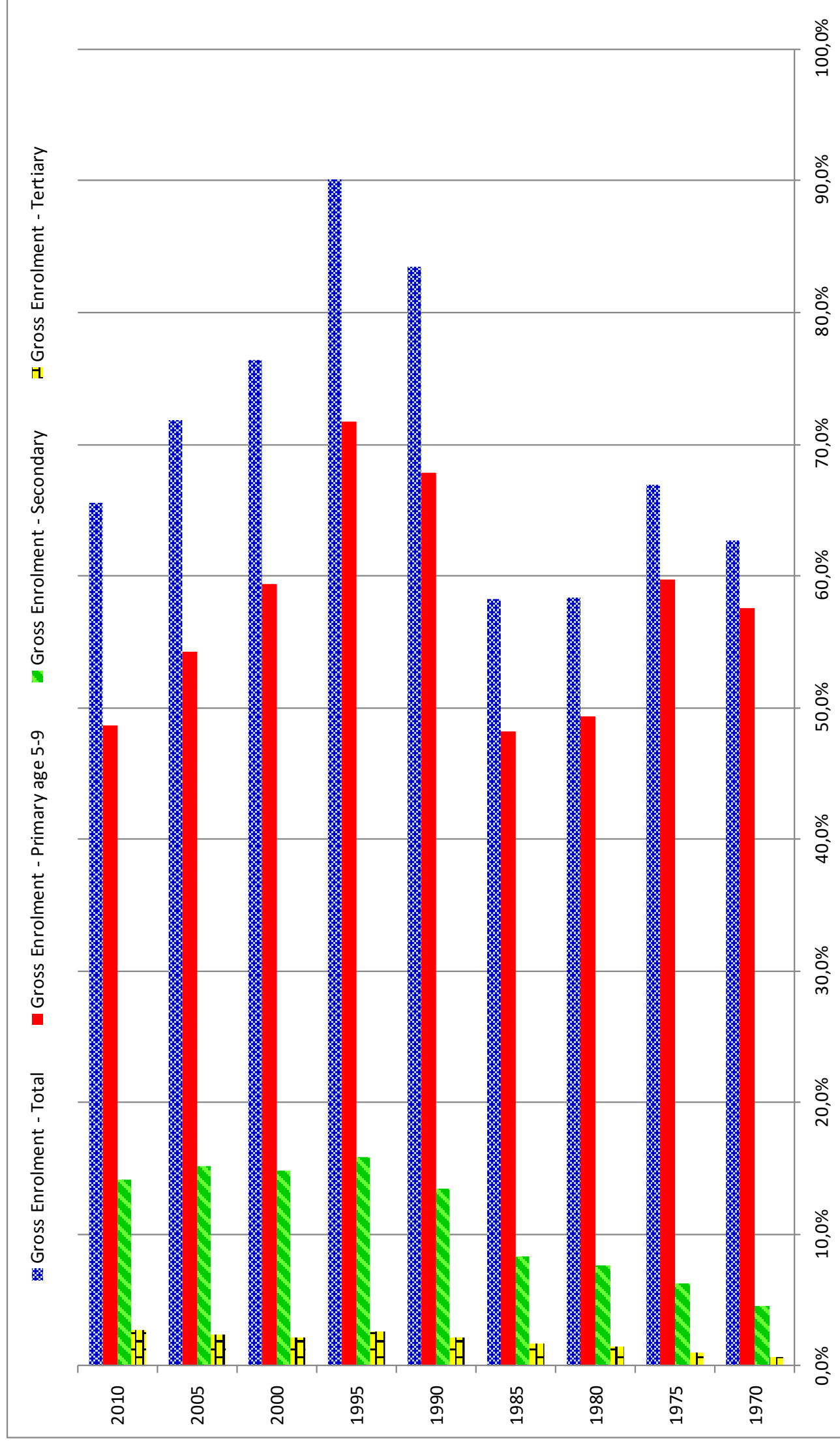


Figure 2: Gross Enrolment Rates in Primary and Secondary Education: 1970-2010²⁵





noted by some scholars, the level of physical capital accumulation is still low by international standards in South Africa to sustain high real growth rates and employment.¹⁵

Human Capital Development

In recent growth literature, a strong theoretical linkage has been established between human capital development and economic growth. The rate of human capital accumulation and the stock of capital are used as determinants of long-run economic growth in the Lucas and Romer models, respectively.¹⁶ Even though the Solow model assumes exogenous technology to be the key determinant of long-run economic growth, the human capital-augmented Solow model predicts that a country that has a high level of human capital accumulation experiences high per capita income.¹⁷ In South Africa, human capital development has been the central focus of South Africa's economic policy since 1994 and an important economic driver of economic.¹⁸ However, during the study period, 1960-2013, human capital was affected by labour market rigidities and repressive education policies that were implemented during the apartheid era.¹⁹ During this period, the growth in the supply of skilled labour was suppressed by restrictive labour laws such as the Bantu Education Act of 1953.²⁰

Human capital accumulation was also affected by the declining contribution of mining, manufacturing and industry that fell from an average of 48.4% of GDP in 1980 to as low as 29.9% of GDP in 2013. Similarly, the contribution of agriculture also fell considerably from 11.2% of GDP in 1960 to 2.3% of GDP in 2013.²¹ Mining, manufacturing and industries became more capital-intensive as a result of skill shortages and this meant that the demand for labour, therefore, moved from unskilled labour to skill-based.²² Another study also reported massive labour shedding, especially in the mining sector that almost halved, retrenching mostly unskilled workers.²³ Labour reforms that were initiated during the post-apartheid period also raised the real cost of labour in production. The strong union participation in wage determination intensified leading to the rise in real wages. Overall, the shortage of skilled labour was identified as a binding constraint of productivity in South Africa.²⁴

Figure 2 below illustrates human capital investments represented by enrolment rates of students as a proportion of total population at primary, secondary and tertiary levels in South Africa.

As illustrated in Figure 2, education in South Africa, just as in many developing countries in Southern Africa, concentrated on the provision of basic education. The trend, however, changed during the post-apartheid period where the oppressive education laws were repealed and the majority of black South Africans started to be enrolled in secondary and tertiary education. Between 1985 and 1995, gross enrolment rates at secondary level almost doubled from 8.3% of total population in 1990 to 9.6% of total population in 1995. By 2013, the gross enrolment rate at the secondary school going age to an average 15.8% of total population.²⁶

Even though tertiary education has also substantially increased since the 1970s, South Africa has a small population of citizens being enrolled in higher learning institutions each year. As of 2013, about 2.9% of total population aged 15-64 were enrolled at tertiary level, which is significantly low. In terms of labour force participation, about 11% of the work-force population completed tertiary education in South Africa.²⁷

In summary, skills and competencies of human capital have a significant influence on productivity and absorption of technology, which are fundamental for economic growth. Thus, a nation with a pool of well-educated people, especially with higher learning, is a prerequisite for attaining a higher level of labour productivity, which is an important factor

of economic growth.²⁸ Most importantly, a nation with a higher education attainment has significant impact on social outcomes such as fertility as well as increased investment in physical capital.²⁹ South Africa has been facing declining trends in school enrolments since gaining independence in 1994. This declining trend in human capital accumulation, as well as low quality education, has been one of the main contributing factors toward the weak performance of the South African economy.³⁰

International Trade

The level of international trade was identified as an important macroeconomic driver of growth in South Africa during the period 1960-2013. Trade is important to economic growth as it contributes towards the accumulation of physical capital and movements in human capital. Trade is also important to a nation as it brings about industrialization, which has been termed as a key concept needed for faster growth in developing economies.³¹ In South Africa trade has been an important macroeconomic driver of economic growth since the 1960s and an important contributor towards the development of its mining, manufacturing and industrial sectors of the economy. The South African government also adopted various forms of trade policies: one related to developing import-substitution industries which took shape in the 1950s and 1960s, and the other related to outward-looking policies of trade which became effective during the post-apartheid period.³²

It is argued that a nation's current account balance is an important macroeconomic measure for economies with a liberalized foreign sector. A current account surplus contributes towards a nation's gross domestic savings while a current account deficit erodes a country's level of gross domestic savings.³³ Furthermore, a current account balance is a net balance between the real sector and foreign sectors of an economy. As such, rather than illustrating a positive relationship between trade and economic growth, the relationship becomes negative.³⁴

Figure 3 below illustrates the relationship between the current account balance and real GDP growth in South Africa during the period 1960-2013. The primary vertical axis on the left represents the percentage change in the current account balance. The secondary vertical axis on the right represents the growth rate of real GDP.

As illustrated in Figure 3, there is a negative co-movement between South Africa's economic growth rate and the current account balance. During the period 1960-2013, as the South African economy grew at an average rate of 3.1% p.a., the current account balance recorded an annual average deficit of -1.0% of GDP.³⁶ During the golden period 1960-1976 where the South African economy experienced an annual growth rate of 5.0% p.a.; the current account deficit recorded was -2.0% of GDP p.a. During the period 1977-1993, which is regarded as a period when the South African economy stagnated, the economy recorded an average economic growth rate of 1.6% p.a. At the same time, the current account balance recorded a surplus that averaged 1.3% of GDP p.a. During the period 1994-2013, the South African economy grew at an average rate of 3.1% p.a., and at the same time, the current account balance registered an annual deficit of -2.2% p.a.³⁷

The evidence provided, thus, show a negative relationship between a current account balance and the rate of economic growth in South Africa. It has also been argued that the South African economy was caught up in a low equilibrium growth path due to supply-side constraints brought in due to the external sector. Domestic productivity has been relatively low as experienced by worsening balance of payments position especially from 1993 onwards.³⁸ In addition, South Africa's international competitiveness continued to decline since the 1990s as evidenced by the trade ratio (exports/imports ratio) that averaged 112.8% of GDP in the 1990s to 101.6% of GDP during the period 2001-2013. Though the

Figure 3: Current Account Balance and Real GDP Growth in South Africa: 1960-2013³⁵

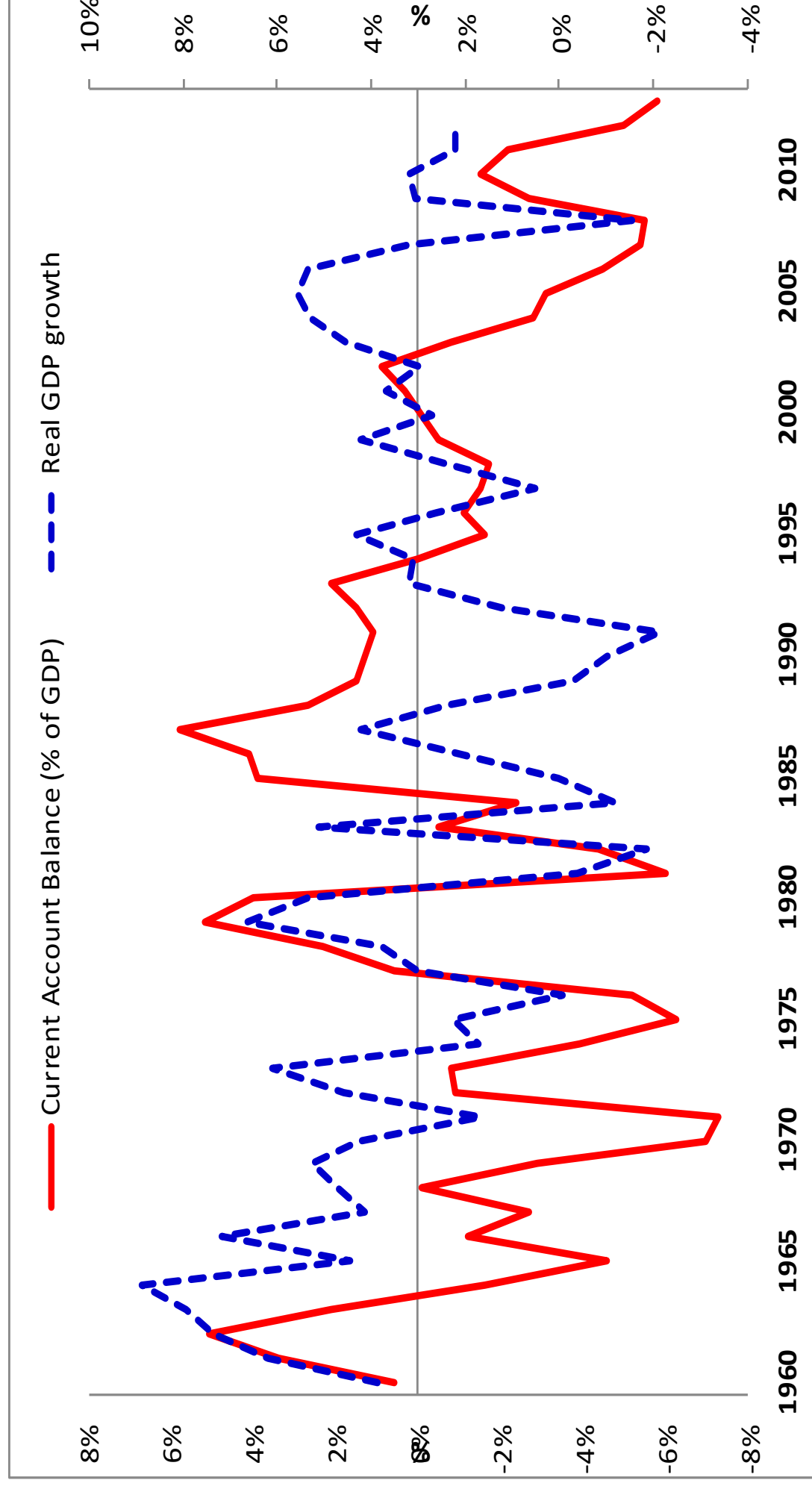
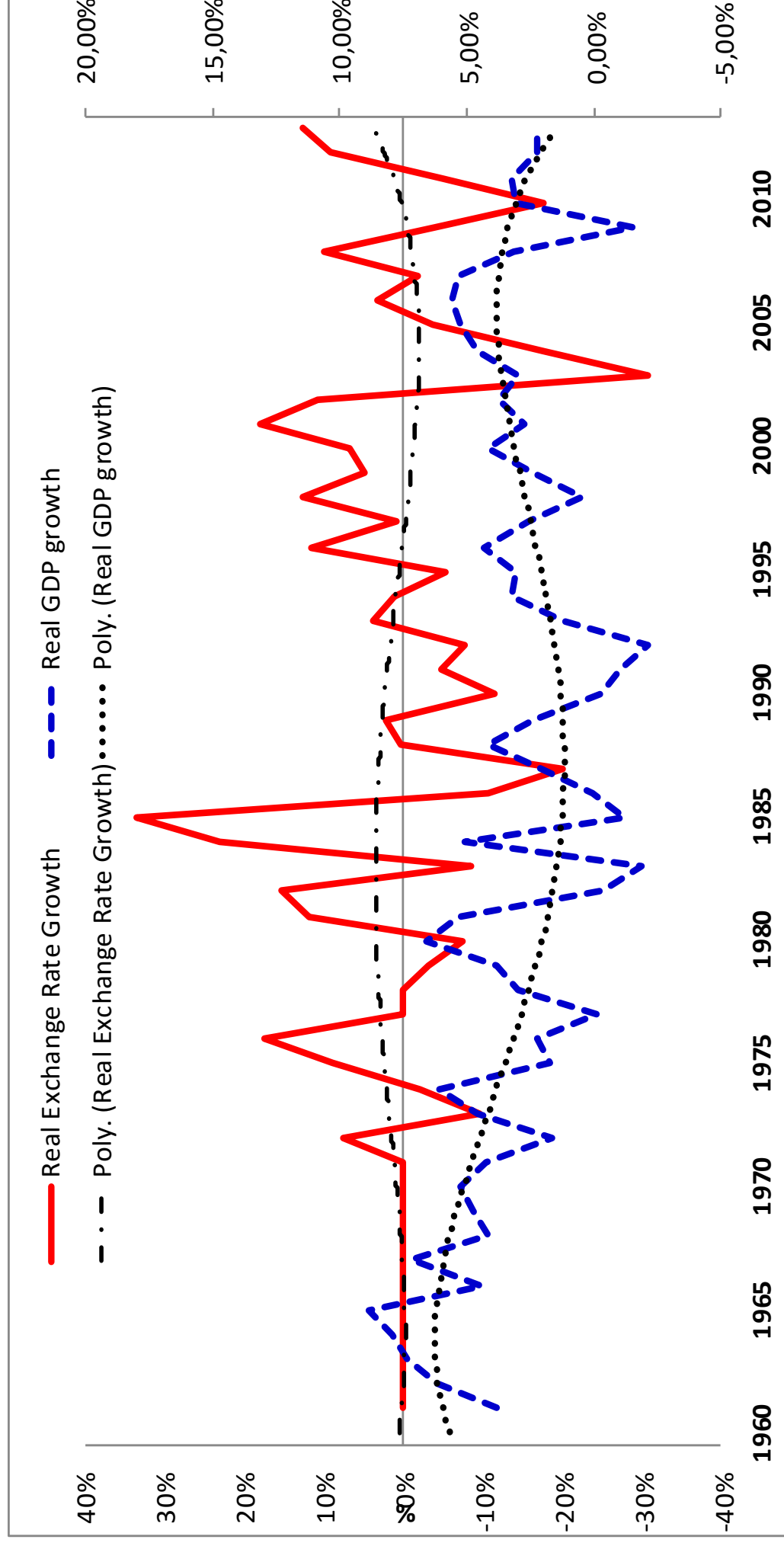


Figure 4: Inflation and Real GDP Growth in South Africa: 1960-2013⁴²





trend has been declining, the South African economy is still a net producer of goods and services on the international market.³⁹

Inflation

The fourth important macroeconomic driver of economic growth in South Africa is inflation. The linkage between inflation and economic growth has been studied extensively by a number of scholars and the evidence show a negative relationship between the two variables. It has been argued that a zero or low inflation rate is an essential condition for an economy to continue benefiting from sustained economic growth.⁴⁰ It is not surprising that the South African government adopted within its monetary policy a target to control inflation as an important macroeconomic driver of economic growth in the 1990s.⁴¹

Figure 4 presents the co-movement between inflation and growth in South Africa covering the period 1960-2013. The growth pattern on the left primary vertical axis shows the percentage change of inflation while the right hand side represents percentage changes in real GDP.

As illustrated in Figure 4, there is a negative co-movement between inflation and the level of economic growth in South Africa. During the period 1960-1973, the South African economy experienced low inflation rates that averaged 3.8% p.a.; during the same period, the economy recorded an average economic growth rate of 5.4% p.a. Between 1974 and 1992, the South African economy experienced an annual inflation rate of 13.7% while the economic stagnated growing at an average growth rate of 1.9% p.a. From 1993-2013, the South African economy recorded a low inflation rate that averaged 6.5% p.a., while the economy grew at an average rate of 3.1% p.a.⁴³ The evidence does support the argument that the level of inflation, thus acts as a tax on the economy. The stability of inflation is, therefore, an important macroeconomic driver of growth in South Africa.⁴⁴

Real Exchange Rate

The fifth important driver of economic growth in South Africa is the stability of the real exchange rate. A currency overvaluation or undervaluation has an effect on a country's economic growth path. In 2010, the South African government identified currency instability as being detrimental to its economic growth path.⁴⁵ An overvalued currency is associated with foreign exchange shortages, current account deficits and inflation, all of which have a negative effect on long-term economic growth. At the same time, though a currency devaluation may be good for promoting exports, it also raised the cost of important imports needed to boost domestic production especially for emerging economies.⁴⁶

There is a negative co-movement between the growths in real exchange rate and real GDP in South Africa. The evidence shows that during periods of high economic growth, the real exchange rate growth is stable. For instance, during the period 1960-1972, the South African Rand was under a fixed exchange rate regime that was supported by the Bretton Woods monetary agreement. During this period, the Rand parity rate was equivalent to R0.71/US\$ and remained fixed till in December 1971.⁴⁷ The period 1971-1985, is characterized as a period when the South African Rand was devaluated on a number of occasions in order to address ensuing balance of payment problems. During the early 1970s, the Bretton Woods system on fixed exchange rates was abolished. However, the South African authorities maintained the fixed exchange rate system where the South African Rand was pegged to the United States Dollar. In 1971, the South African Rand was pegged to the US Dollar. In 1972, the policy changed and the Rand was pegged to the British Pound. Later in the same year, the policy changed back to the US Dollar.⁴⁸

The first devaluation of the Rand was at a rate of 7.5% which was announced in 1972. Between 1972 and 1973, the South African economy experienced a stable foreign exchange sector and, based on projected sound economic environment, the Government announced an independent managed floating exchange rate system in June 1974. Under this new system, the South African Rand was pegged to a basket of currencies under a crawling-peg system. In June 1975, the South African Rand was re-pegged to the US dollar which ran till May 1979. Between 1975 and 1976, the balance of payments position deteriorated where the current account deficit recorded an average of -5.8% p.a. This put pressure on the existing foreign reserves and in 1976 the Government devalued that Rand by 17.6% from 0.74/US\$ to 0.87/US\$. The new value was maintained until 1979 when a dual exchange rate regime was established that introduced a crawling-peg commercial Rand and a free floating financial rand.⁴⁹

The introduction of this new system was made after recommendations adopted from the De Kock Commission interim report. In this report, the fixed exchange rate system that pegged the Rand to the US dollar was not conducive to the economic growth process of South Africa.⁵⁰ The dual exchange rate system was implemented by the South African authorities till January 1983. In February 1983 to August 1985, based on the recommendations made by the De Kock Commission, the South African authorities abolished the financial Rand and a unitary exchange rate with a managed-float of the Rand was introduced.⁵¹

In 1984, the South African economy faced a new wave of socio-political unrests which led to the imposition of financial and economic sanctions by the United States of America and the European Community. The punitive sanctions led to disinvestment and divestment campaigns which affected on a larger scale South Africa's ability to meet its international commitments. Foreign credit facilities were withdrawn and the Government had to respond by imposing restrictions on debt repayments. In September 1985, the dual exchange rate regime was reintroduced that combined a managed-float commercial rand and a free-floating financial Rand. The South African authorities also reintroduced exchange controls on capital transfers for both residents and non-residents. This system of exchange rate management continued to be in place till February 1995.⁵²

During the early 1990s, the punitive financial and economic sanctions were removed and allowed the South African government to become a borrower from the international capital markets. In March 1995, a unitary exchange rate system was reintroduced and the financial Rand was once again abolished. However, some exchange control mechanisms were still applicable especially on foreign investments held by South African residents. During the period 1996-1998, the South African Reserve Bank continued to intervene in the foreign exchange market in order to contain the depreciation of the South African Rand through the forward foreign exchange market. The unitary exchange rate mechanism with a managed-float Rand was maintained till January 2000. In February 2000, the South African Reserve Bank announced for the first time, a unitary exchange rate policy regime with a freely-floating Rand supported by inflation targeting framework. This system is still being implemented to date and the focus has moved from the exchange rate to inflation-targeting to ensure that real interest rates remained positive. This meant that the South African Reserve Bank ceased all its foreign exchange market interventions. However, some exchange control mechanisms are still being adopted.⁵³

In summary, real exchange rate growth is an important macroeconomic driver of economic growth in the South African economy. The evidence shows that though devaluations and revaluations are essential to stabilize the balance of payments position, instability of real exchange rate growth has been negatively associated with unsustainable economic growth rates in the South African economy during the study period.

Policy Challenges Affecting Economic Growth in South Africa

We identify four macroeconomic policy challenges that affected the South African economy, which may continue to have an effect on the future growth of the South African economy. These include: low accumulation of long-term physical capital; low rates of human capital development; worsening current account deficits; and real exchange rate instability.

Low Accumulation of Long-term Physical Capital

Traditionally, the accumulation of long-term capital stock has been the most important macroeconomic driver of economic growth for any country in the world. Both neoclassical and endogenous growth models have studied this driver extensively.⁵⁴ Some studies recommend that in terms of international standards, a country that accumulates annually an investment ratio to GDP of not less than 20% experiences higher economic growth rates.⁵⁵

Based on available data, the evidence from South Africa shows that overall the rate of physical investment has been declining over time. In the 1960s, the South African economy experienced high annual economic growth rates that averaged 6.0% p.a.; the highest rate was attained in 1965 that averaged 8.9%. Similarly, the investment ratio recorded was an average of 26.6% of GDP p.a.; the highest physical investment ratio to GDP was attained in 1980, averaging 37.9% of GDP. In the subsequent periods, the South African economy witnessed declining physical investment ratios and economic growth rates.⁵⁶ In the 1970s, there was a slight increase in the investment ratio that averaged 30.8% of GDP while the economy registered an average economic growth rate of 3.4% p.a.; the highest growth rate recorded was in 1974 at 6.1%. In the 1980s, the situation worsened and is regarded as a period when the South African economy registered its lowest rate of economic growth averaging 1.5% p.a. Similarly, the investment ratio had declined to an average of 27.0% of GDP; and recording an average of 18.8% of GDP below the recommended threshold in 1992.⁵⁷

During the post-apartheid period, the 1990s are regarded as a period when the South African economy was in transition towards recovery. During this period, the South African economy registered a slight improvement in the economic growth rate averaging 1.8% p.a.; but still the economy was caught up in a low growth path. The investment ratio continued to decline, averaging 20.5% of GDP, from 21.9% in 1991 to 20.3% of GDP in the year 2000. The situation improved during the period 2001-2013 where the economy grew at an average rate of 3.3% p.a. Though the investment ratio marginally improved to an average of 21.3% of GDP p.a. the South African economy registered the lowest investment ratio recorded during the study period of 16.8% of GDP in 2006.⁵⁸

The levels of investment in South Africa are, therefore, marginally within international standards and this is a cause for concern. We isolate two factors that may have contributed towards a low accumulation of long-term capital stock. The first relates to the declining contribution of the secondary sector to GDP – i.e., mining, manufacturing and industry sectors. During the period of study, the secondary sector in South Africa almost halved from an all-time maximum of 48.4% of GDP in 1980 to as low as 29.9% of GDP in 2013. During the apartheid period, 1960-1993, the investment ratio was affected by disinvestment and divestment campaigns brought in by punitive financial and economic sanctions imposed by the international community.⁵⁹

The second factor relates to the development of the tertiary sector that has increased from 45.4% of GDP in 1980 to as high as 68% of GDP in 2013. South Africa is regarded as having a well-developed financial sector in Africa.⁶⁰ The conditions generated in South Africa especially towards the end of the 1990s created a safe haven for credit booms

where the South African Reserve Bank floated its local currency to operate freely while at the same time adopting an inflation-targeting framework. The latter led to achieving low inflation but resulted in high positive real interest rates. Between 1994 and 1999, the South African economy experienced high positive real interest rates that averaged 9.6% p.a. During the period 2000-2013, real interest rates remained positive averaging 4.4% p.a.⁶¹

While many industrial economies such as the United States of America and other developed economies in Europe reduced their interest rates to almost zero, emerging economies like South Africa did not reciprocate the same way. This creates interest differentials that attract short-term rather than long-term capital inflows. The accumulation of short-term capital inflows (or hot money flows) puts pressure on the local currency which becomes overvalued thereby making local exports to be less competitive. As a result, the economy fails to attract the relevant long-term capital needed to sustain long-run economic growth.⁶²

The monetary policy on inflation-targeting pursued by the South African Reserve Bank adopted in 2000 has contributed significantly to high positive real interest rates in the economy.⁶³ High positive real interest rates, therefore, attract speculative short-term investments which put pressure on domestic inflation and overvaluation of the local currency. Given such a situation Central Banks are forced to intervene in a flexible exchange rate regime by buying dollars on the market to curb appreciation of the local currency thereby violating central bank independence.⁶⁴ The inflation-targeting policy, therefore, needs to be put under review to determine its effectiveness to attract the necessary long-term investments needed for sustainable economic growth in the South African economy.

Low Human Capital Development and Income Distribution

The second challenge affecting economic growth in South Africa has been the low level of skills and knowledge of the South African citizens and real wage rigidity. Human capital development plays an important role and has been one of the key determinant in economic growth models.⁶⁵ Labour productivity is associated with economic growth and depends heavily on the stock of well-educated people.⁶⁶

According to the Quarterly Labour Force Survey (QLFS) Statistics of 2014, it is estimated that 64.5% of the total labour force in South Africa have less than a secondary-level qualification; 24.6% have a secondary-level qualification; and 10.4% have a higher or tertiary level qualification. For those who are employed, 25.4% are skilled labour; 46.8% are semi-skilled; and 27.8% are unskilled labour. South Africa is, therefore, one of the countries in Southern Africa with a low level of skilled workers and a small proportion of the workforce who have attained a higher-level qualification. These issues collectively have an impact on labour productivity and the ability to absorb new technology.⁶⁷

Another challenge related to human capital development relates to real wage rigidity. South Africa is one of the countries in the world with strong labour unions and their existence have continued labour market distortions inherited from the apartheid regime through wage bargaining and rights to unskilled workers.⁶⁸ As such equilibrium wages are not determined by firms and the level of involuntary unemployment has remained above the natural rate of unemployment in the South African economy. Economists describe this situation as an economy facing an insider-outsider wage bargaining dilemma where employees that are part of a union benefit from high real wages that are not directly linked with labour productivity.⁶⁹ This has resulted in an increase in the real cost of labour in South Africa not consistent with labour productivity and involuntary unemployment has consistently remained high at an average rate of 25.4% in 2014.⁷⁰

In summary, in order for South Africa to increase labour productivity and hence economic growth, there is a need to improve skill levels of its citizens at the tertiary level. Furthermore, the influence of labour unions is to be mitigated if involuntary unemployment is to be reduced.

Increasing Current Account Deficits

The third challenge facing the South African economy relates to increasing current account deficits. A country that experiences a current account surplus is a net lender to the world. As such openness to trade is additive in this case and contributes towards improving a country's foreign reserves that are crucial in stabilizing a country's balance of payment position. The surplus generated from a current account balance act as a source of additional capital inflows needed to increase long-term investment and hence contribute towards the long-run economic growth process of a country. Conversely, a current account deficit erodes a country's foreign reserves, worsens its balance of payments position and becomes a net borrower on the international market. A current account deficit is, therefore, a source of capital outflows which is detrimental towards the accumulation of long-term capital and hence a sustainable economic growth trajectory of a country.⁷¹

During the period of study, 1960-2013, overall the South African economy registered a current account deficit that averaged -1.0% of GDP p.a.; the current account deficit worsened during the post-apartheid period, 1994-2013, averaging -2.3% of GDP p.a.; than the apartheid period, 1960-1993 that averaged -0.3% of GDP.⁷² The South African economy is, thus, a net lender and facing a net capital outflow position. One of the major contributing factors to a net capital outflow position has been South Africa's deteriorating trend of terms of trade. While the trade balance has significantly declined from a surplus of 3.0% of GDP p.a. during the 1960s to as low as 0.3% of GDP p.a. during the period 2001-2013; the terms of trend index in South Africa has declined from an average of 1.02 p.a. in the 1980s to an average of 0.76 during the period 2001-2013.⁷³ Though the South African economy is, therefore, a net producer of goods and services, it is a net borrower on the international market.

The other contributing factor has been real wage rigidities brought about by strong trade unions that have raised the real cost of labour. This has led to underutilization of existing capacity and increased the proportion of involuntary unemployment in the country that is currently at 25.4% of the workforce.⁷⁴ It is, therefore, recommended for the South African authorities to adopt strategies that would promote export expansion and reduce the structural and production bottlenecks that are restricting the growth in exports.

Real Exchange Rate Instability

The fourth challenge affecting the South African economy during the study period relates to the volatility of the real exchange rate. Real Exchange Rate growth, just like inflation, acts as a tax on the economy. Large overvaluation or undervaluation of the local currency has been associated with low economic growth rates. Overvaluations are associated with large current account deficits which lead to balance of payment crises which are detrimental to the economic growth process.⁷⁵ Elbadawi et al. (2011) in fact argue that any substantial real exchange rate misalignment that a country may face is costly to the economy.⁷⁶ As such, stability of the real exchange rate is, therefore, an important macroeconomic objective that a nation should adopt.

Though it is argued that currency depreciations may create economic incentives to boost local exports, wide depreciation margins also raise the cost of imports and doing business.⁷⁷ Since developing and emerging economies like South Africa depend on foreign capital to develop their local industries, wide margins of exchange rate depreciation may eventually hurt rather than boost the economy. The evidence shows that

real exchange rate growth in South Africa has been unstable and is associated with lower levels of investment accumulation and hence low economic growth. It is, therefore, recommended that policies that target the stabilization of exchange rate growth should be pursued by South African authorities.

Conclusion

The paper has examined the important macroeconomic drivers of economic growth in South Africa covering the period 1960-2013. The study has identified that the most important macroeconomic drivers that contributed to the economic performance of the South African economy include the accumulation of physical capital, human capital development, current account deficits, inflation, and the real exchange rate. The performance of these macroeconomic drivers has been influenced by events that occurred under two political regimes: apartheid regime that ran from 1960-1993; and the post-apartheid regime from 1994 to present day.

The apartheid regime was characterized with political unrests, labour market restrictions and imposition of punitive sanctions by the international community. The performance of the economy during this period was not impressive and declined from an average of 6.0% p.a. during the 1960s to an average of 1.5% p.a. during the 1980s. Investment ratios also declined significantly from an all-time high of 37.9% of GDP in 1980 to 18.8% of GDP in 1992. The South African economy also experienced high inflation rates averaging 9.7% p.a. between 1960 and 1993, with the highest rates experienced between 1974 and 1992 that averaged 13.7% p.a.

During the post-apartheid regime that commenced in 1994 to date, the country's focus was on reconstruction and development with an aim of reducing the inequalities that were inherited from the apartheid regime. During this period, the economy grew at an average rate of 3.1% p.a., though lower than projected target of 6.0% p.a. documented in the various economic policies developed during the same period. Investment ratios have also marginally improved averaging 21.1% of GDP p.a., which is at the minimum international standard of at least 20% of GDP.

The study has identified four main policy challenges that affected economic performance in South Africa during the study period. These include low accumulation of physical capital; low rates of human capital development; increasing current account deficits and real exchange rate instability. For long-term growth to be sustainable, it is important for the South African authorities to address these challenges as they are detrimental to the sustenance of the long-term economic growth trajectory. In addition, the evidence provided shows that when modelling economic growth in South Africa, it is important to include additional variables such as current account deficits, inflation and real exchange rate growth as important determinants of economic growth. This is in addition to the traditional determinants such as the accumulation of physical capital and human capital development that have been extensively studied in the economic growth literature.



Notes:

1. See Ricardo Hausmann et al., "Growth Accelerations", *Journal of Economic Growth*, 10, 2005, p. 303-329.
2. Ibid., p. 307
3. The data is obtained from the World Development Indicators dataset, 2015 <http://www.data.worldbank.org>
4. Ibid.
5. See Stan Du Plessis, and Ben Smit, "Economic Growth in South Africa since 1994." *Stellenbosch Economic Working Papers 1/2006*, Unpublished Manuscript, 2006; and Haroon Borat et al., *Economic Policy in South Africa: Past, present and future*. Unpublished Manuscript, December 7, 2013. <http://www.kanbur.dyson.cornell.edu/papers/EconomicPolicyInSouthAfrica.pdf>
6. See Stan Du Plessis, and Ben Smit, "Economic Growth in South Africa since 1994." *Stellenbosch Economic Working Papers 1/2006*, Unpublished Manuscript, 2006
7. See Robert M. Solow, "A Contribution to the Theory of Economic Growth". *Quarterly Journal of Economics*, Vol. 70, No. 1, 1956, pp. 65-94; Paul M. Romer, "Increasing Returns and Long-Run Growth." *Journal of Political Economy*, Vol. 94, No. 5, 1986, pp. 1002-1037; Ross Levine, and David Renelt, "A sensitivity analysis of cross-country growth regressions." *American Economic Review*, Vol. 82, No. 4, 1992, pp. 942-963
8. See Johannes W. Fedderke, "South Africa: Sources and constraints of long-term growth 1970-2000." *Working Paper Series No. 94*, Africa Region, 2005. [www.worldbank.org / afr/wps/wp94.pdf](http://www.worldbank.org/afr/wps/wp94.pdf)
9. The data is obtained from the World Development Indicators dataset, 2015
10. Philip I. Levy, "Sanctions on South Africa: What Did They Do?" *Center Discussion Paper No. 796*, Connecticut: Yale University, 1999. http://www.econ.yale.edu/growth_pdf/cdp796.pdf; World Development Indicators dataset, 2015
11. World Development Indicators dataset, 2015
12. Ibid.
13. Ibid.
14. Ibid.
15. See Stan Du Plessis and Ben Smit, "Economic Growth in South Africa since 1994." *Stellenbosch Economic Working Papers 1/2006*, Unpublished Manuscript, 2006
16. Robert E. Jr. Lucas, "On the Mechanics of Economic Development". *Journal of Monetary Economics*, Vol. 22, No. 1, 1988, p. 3-42; Paul M. Romer, "Endogenous technological change. *Journal of Political Economy*, Vol. 98, No. 5, 1990, S71-S102
17. See N. Gregory Mankiw et al., "A Contribution to the Empirics of Economic Growth". *Quarterly Journal of Economics*, Vol. 58, 1992, pp. 421
18. See The Presidency of South Africa, *The Reconstruction and Development Programme*. Pretoria: Republic of South Africa, 1994; The Presidency of South Africa, *Accelerated and Shared Growth Initiative for South Africa*. Pretoria: Republic of South Africa, 2006; The Presidency of South Africa, *The New Growth Path*. Pretoria: Republic of South Africa, 2010 <http://www.info.gov.za>;
19. Johannes. W. Fedderke and Charles Simkins, "Economic Growth in South Africa." *Economic History of Developing Regions*, Vol. 27, No. 1, 2012, pp. 176-208

20. Ivan Evans, *Bureaucracy and Race: Native administration in South Africa*. Berkeley: University of California Press, 1997, p. 166
21. World Development Indicators dataset, 2015
22. Dani Rodrik, "Understanding South Africa's Economic Puzzles". *CID Working Paper No. 130*. August 2006. <http://www.cid.harvard.edu/cidwp/pdf/130.pdf>; Abhijit Banerjee et al., "Why Has Unemployment Risen in the New South Africa?" *NBER Working Paper Series 13167*, June, 2007. <http://www.nber.org/papers/w13167.pdf>
23. Johannes. W. Fedderke, and Charles Simkins, "Economic Growth in South Africa." *Economic History of Developing Regions*, Vol. 27(1), 2012, pp. 176-208
24. Ibid.; Dani Rodrik, "Understanding South Africa's Economic Puzzles". *CID Working Paper No. 130*. August 2006. <http://www.cid.harvard.edu/cidwp/pdf/130.pdf>; Marna Kearney and Ayodele Odusola, *Assessing Development Strategies to achieve the MDGs in the Republic of South Africa*. United Nations Department for Social and Economic Affairs, March, 2011
25. World Development Indicators dataset, 2015; UNESCO Institute of Statistics, Education (full dataset), 2015 http://www.data.uis.unesco.org/Index.aspx?DataSetCode=EDULIT_DS&lang=en#
26. Ibid.
27. Statistics South Africa, *Quarterly Labour Force Survey: Quarter 3, 2014*. Pretoria: Republic of South Africa. October, 2014. <http://www.statssa.gov.za>; UNESCO Institute of Statistics, Education (full dataset), 2015;
28. Robert J. Barro and Jong W. Lee, "Sources of Economic Growth," *Carnegie Conference Series on Public Policy*, Vol. 40, No. 1, 1994; p. 1-46; Andrea Bassanini et al., "Economic Growth: The role of policies and institutions. Panel data evidence from OECD countries". *Economics Department Working Papers*, No. 283, 2001
29. Robert. J. Barro and Jong W. Lee, *A New Data Set of Education Attainment in the World 1950-2010*, Department of Economics. Harvard University, Cambridge: Massachusetts, 2011
30. Johannes W. Fedderke, , "South Africa: Sources and constraints of long-term growth 1970-2000." *Working Paper Series No. 94*, Africa Region, 2005. [www.worldbank.org / afr/wps/wp94.pdf](http://www.worldbank.org/afr/wps/wp94.pdf)
31. David Dollar and Aart Kraay, "Institutions, Trade and Growth." *Journal of Monetary Economics*, Vol. 50, 2003, pp. 133-162
32. P. D. F. Strydom, "International Trade and Economic Growth: The opening-up of the South African economy." *South African Journal of Economics*, Vol. 63, No. 4, 1995, p. 557
33. Magda Kandil and Joshua Greene, "The Impact of Cyclical Factors on the U.S. Balance of Payments", *IMF Working Paper*, 02/05, 2002
34. Fuat Lebe et al., "The Empirical Analysis of the Effects of Economic Growth and Exchange Rate on Current Account Deficit: Romania and Turkey Samples." *Journal of Applied Quantitative Methods*, Vol. 4. No. 1, 2009, pp. 69-81
35. South African Reserve Bank, "Ratio of Current Account Balance to Gross Domestic Product." <https://www.resbank.co.za/Research/Statistics/Pages/OnlineDownloadFacility.aspx>; World Development Indicators dataset, 2015
36. Ibid.
37. Ibid.



38. G. L. De Wet, , "The Prognosis of Growth and Development in South Africa." *South African Journal of Economics*, Vol. 63, No. 4, 1995, pp. 474-488
39. World Development Indicators dataset, 2015
40. W. Robert J. Alexander, , "Inflation and Economic Growth: Evidence from a growth equation." *Applied Economics*, Vol. 29, 1997, pp. 233-238; Andres, Javier and Hernando, Ignacio. "Does Inflation Harm Economic Growth: Evidence from the OECD." *NBER working papers*, January, 1999. <http://www.nber.org/chapters/c7777>
41. Department of Finance, *Growth, Employment and Redistribution: A macroeconomic strategy*. Pretoria: Republic of South Africa, 1996. <http://treasury.gov.za/publications/other/gear/chapters.pdf>; The Presidency of South Africa, *Accelerated and Shared Growth Initiative for South Africa*. Pretoria: Republic of South Africa, 2006; The Presidency of South Africa, *The New Growth Path*. Pretoria: Republic of South Africa, 2010
42. World Development Indicators dataset, 2015
43. Ibid.
44. Federico Guerrero, "Does Inflation cause poor Long-term Growth Performance?" *Japan and the World Economy*, Vol. 18, 2006, pp.72-89; The Presidency of South Africa, *The New Growth Path*. Pretoria: Republic of South Africa, 2010
45. The Presidency of South Africa, *The New Growth Path*. Pretoria: Republic of South Africa, 2010.
46. Dani Rodrik, "The Real Exchange Rate and Economic Growth". *Brookings Papers on Economic Activity*. Brookings Institute Press, Fall, 2008
47. E. J. Van der Merwe, "Exchange Rate Management Policies in South Africa: Recent experience and prospects". Occasional Paper No. 9, Pretoria: South African Reserve Bank, March, 1996
48. Ibid., 1996
49. Ibrahim A. Elbadawi, and Brian Kahn, Real and monetary determinants of the real exchange rate in South Africa. In *Development Issues in South Africa*. Edited by I. Elbadawi, and T. Hartzenberg, pp. 194-236. London: Macmillan Press, 2000; World Development Indicators dataset, 2015
50. G. De Kock, , *Commission of Inquiry into the Monetary System and Monetary Policy in South Africa: Interim Report*. Pretoria: Government Printer, 1978; E. J. Van der Merwe, "Exchange Rate Management Policies in South Africa: Recent experience and prospects". *Occasional Paper No. 9*, Pretoria: South African Reserve Bank, March, 1996
51. G. De Kock, , *Inquiry into the monetary system and monetary policy in South Africa: Final report*. Pretoria: Government Printer, 1985; Ibrahim A. Elbadawi, and Brian Kahn, Real and monetary determinants of the real exchange rate in South Africa. In *Development Issues in South Africa*. Edited by I. Elbadawi, and T. Hartzenberg, pp. 194-236. London: Macmillan Press, 2000
52. Philip I. Levy, "Sanctions on South Africa: What Did They Do?" *Center Discussion Paper No. 796*, Connecticut: Yale University, 1999 http://www.econ.yale.edu/growth_pdf/cdp796.pdf; Ibrahim A. Elbadawi, and Brian Kahn, Real and monetary determinants of the real exchange rate in South Africa. In *Development Issues in South Africa*. Edited by I. Elbadawi, and T. Hartzenberg, pp. 194-236. London: Macmillan Press, 2000
53. Ibrahim A. Elbadawi, and Brian Kahn, Real and monetary determinants of the real exchange rate in South Africa. In *Development Issues in South Africa*. Edited by I. Elbadawi, and T. Hartzenberg, pp. 194-236. London: Macmillan Press, 2000

54. See Robert M. Solow, "A Contribution to the Theory of Economic Growth". *Quarterly Journal of Economics*, Vol. 70, No. 1, 1956, pp. 65-94; Paul M. Romer, "Increasing Returns and Long-Run Growth." *Journal of Political Economy*, Vol. 94, No. 5, 1986, pp. 1002-1037
55. Andrea Bassanini and Stefano Scarpetta, "The Driving Forces of Economic Growth: Panel data evidence for the OECD countries." OECD Economic Studies No. 33, 2001, pp. 9-56
56. World Development Indicators dataset, 2015
57. Ibid.
58. Ibid.
59. Ibid.; Philip I. Levy, "Sanctions on South Africa: What Did They Do?" *Center Discussion Paper No. 796*, Connecticut: Yale University, 1999 http://www.econ.yale.edu/growth_pdf/cdp796.pdf
60. World Development Indicators dataset, 2015; Nicholas M. Odhiambo, "Finance-growth-poverty nexus in South Africa: A dynamic causal linkage." *The Journal of Socio-Economics*, Vol. 38, 2009, pp. 320
61. World Development Indicators dataset, 2015
62. Ronald McKinnon and Zhao Liu, "Hot Money Flows, Commodity Price Cycles and Financial Repression in the US and the People's Republic of China: The consequences of near zero US interest rates." *Asian Development Bank Working Paper Series No. 107*, January, 2013. <http://www.aric.adp.org/pdf/workingpaper>
63. E. J. Van der Merwe, "Inflation targeting in South Africa". *Occasional Paper No. 19*, Pretoria: South African Reserve Bank, July, 2004
64. Axel Löffler et al., "Limits of Monetary Policy Autonomy by East Asian Debtor Central Banks". CESifo Working Paper 3742, 2012. <http://www.cesifo-group.de/ifoHome/publications/working-papers/CESifoWP>
65. Paul M. Romer, "Increasing Returns and Long-Run Growth." *Journal of Political Economy*, Vol. 94, No. 5, 1986, pp. 1002-1037; N. Gregory Mankiw et al., "A Contribution to the Empirics of Economic Growth". *Quarterly Journal of Economics* Vol. 107, No. 2, 1992, pp. 407-437
66. Robert. J. Barro and Jong W. Lee, *A New Data Set of Education Attainment in the World 1950-2010*, Department of Economics. Harvard University, Cambridge: Massachusetts, 2011
67. Ibid.; Statistics South Africa, *Quarterly Labour Force Survey: Quarter 3, 2014*. Pretoria: Republic of South Africa. October, 2014. <http://www.statssa.gov.za>
68. Gavin Maasdorp, "Economic Survey 1970-2000." In *The Decline of the South African Economy*, edited by S. Jones, Cheltenham, UK: Edward Elgar Publishing, 2002
69. Brian Snowdon, and Howard R. Vane. 2005. *Modern Macroeconomics: Its origins, development and current state*. Edward Elgar, Northampton: Massachusetts
70. Johannes. W. Fedderke, and Charles Simkins, "Economic Growth in South Africa." *Economic History of Developing Regions*, Vol. 27, No. 1, 2012, pp. 176-208; Statistics South Africa, *Quarterly Labour Force Survey: Quarter 3, 2014*. Pretoria: Republic of South Africa. October, 2014 <http://www.statssa.gov.za>
71. Magda Kandil and Joshua Greene, "The Impact of Cyclical Factors on the U.S. Balance of Payments", *IMF Working Paper*, 02/05, 2002



72. South African Reserve Bank, "Ratio of Current Account Balance to Gross Domestic Product." <https://www.resbank.co.za/Research/Statistics/Pages/OnlineDownloadFacility.aspx>
73. World Development Indicators dataset, 2015
74. Johannes. W. Fedderke, and Charles Simkins, "Economic Growth in South Africa." *Economic History of Developing Regions*, Vol. 27, No. 1, 2012, pp. 176-208; Statistics South Africa, *Quarterly Labour Force Survey: Quarter 3, 2014*. Pretoria: Republic of South Africa. October, 2014. <http://www.statssa.gov.za>
75. Dani Rodrik, "The Real Exchange Rate and Economic Growth". *Brookings Papers on Economic Activity*. Brookings Institute Press, Fall, 2008; William Easterly, "National Policies and Economic Growth: A Reappraisal." In *Handbook of Economic Growth*, edited by P. Aghion and S. Durlauf, Amsterdam: Elsevier, 2005
76. Ibrahim A. Elbadawi, et al., "Aid, Real Exchange Rate Misalignment and Economic Growth in Sub-Saharan Africa." *World Development*, Vol. 40, No. 4, 2011, pp. 681-700
77. Ibid.

Bibliography

- Andres, Javier and Hernando, Ignacio. "Does Inflation Harm Economic Growth: Evidence from the OECD." *NBER working papers*, January, 1999. <http://www.nber.org/chapters/c7777>
- Alexander, W. Robert J., "Inflation and Economic Growth: Evidence from a growth equation." *Applied Economics*, Vol. 29, 1997, pp. 233-238
- Banerjee, Abhijit et al., "Why Has Unemployment Risen in the New South Africa?" *NBER Working Paper Series 13167*, June, 2007. <http://www.nber.org/papers/w13167.pdf>
- Barro, Robert J. and Lee, Jong W., "Sources of Economic Growth," *Carnegie-Rochester Conference Series on Public Policy*, Vol. 40, No. 1, 1994, pp. 1-46
- Barro, Robert. J. and Lee, Jong W., *A New Data Set of Education Attainment in the World 1950-2010*, *Department of Economics*. Harvard University, Cambridge: Massachusetts, 2011.
- Bassanini, Andrea and Scarpetta, Stefano, "The Driving Forces of Economic Growth: Panel data evidence for the OECD countries." *OECD Economic Studies No. 33*, 2001, pp. 9-56
- Bassanini, Andrea et al., "Economic Growth: The role of policies and institutions. Panel data evidence from OECD countries". *Economics Department Working Papers*, No. 283, 2001, pp. 1-70
- Bhorat, Haroon et al., *Economic Policy in South Africa: Past, present and future*. Unpublished Manuscript, December 7, 2013. <http://www.kanbur.dyson.cornell.edu/papers/EconomicPolicyInSouthAfrica.pdf>
- De Kock, G., *Commission of Inquiry into the Monetary System and Monetary Policy in South Africa: Interim Report*. Pretoria: Government Printer, 1978.
- De Kock, G., *Inquiry into the monetary system and monetary policy in South Africa: Final report*. Pretoria: Government Printer, 1985.
- De Wet, G. L., "The Prognosis of Growth and Development in South Africa." *South African Journal of Economics*, Vol. 63, No. 4, 1995, pp. 474-488.
- Department of Finance, *Growth, Employment and Redistribution. A Macroeconomic Strategy*. Pretoria: Republic of South Africa, 1996. <http://www.treasury.gov.za/publications/other/gear/chapters.pdf>
- Dollar, David and Kraay, Aart, "Institutions, Trade and Growth." *Journal of Monetary Economics*, Vol. 50, 2003, pp. 133-162
- Du Plessis, Stan and Smit, Ben, "Economic Growth in South Africa since 1994." *Stellenbosch Economic Working Papers 1/2006*, Unpublished Manuscript, 2006, pp. 1-33
- Easterly, William, "National Policies and Economic Growth: A Reappraisal." In *Handbook of Economic Growth*, edited by P. Aghion and S. Durlauf, Amsterdam: Elsevier, 2005.
- Elbadawi, Ibrahim A. and Kahn, Brian, Real and monetary determinants of the real exchange rate in South Africa. In *Development Issues in South Africa*. Edited by I. Elbadawi, and T. Hartzenberg, pp. 194-236. London: Macmillan Press, 2000.
- Elbadawi, Ibrahim A., et al., Aid, Real Exchange Rate Misalignment and Economic Growth in Sub-Saharan Africa." *World Development*, Vol. 40, No. 4, 2011, pp. 681-700.
- Evans, Ivan, *Bureaucracy and Race: Native administration in South Africa*. Berkeley: University of California Press, 1997.



- Fedderke, Johannes W., "South Africa: Sources and constraints of long-term growth 1970-2000." *Working Paper Series No. 94*, Africa Region, 2005, pp. 1-54 <http://www.worldbank.org/afr/wps/wp94.pdf>
- Fedderke, Johannes. W. and Simkins, Charles, "Economic Growth in South Africa." *Economic History of Developing Regions*, Vol. 27, No. 1, 2012, pp. 176-208.
- Frankel, Jeffrey A. and Romer, David, "Does trade cause growth?" *The American Economic Review*, Vol. 89, No. 3, 1999, pp. 379-399.
- Guerrero, Federico, "Does Inflation cause poor Long-term Growth Performance?" *Japan and the World Economy*, Vol. 18, 2006, pp.72-89
- Hausmann, Ricardo et al., "Growth Accelerations", *Journal of Economic Growth*, Vol. 10, 2005, p. 303-329.
- Kandil, Magda and Greene, Joshua, "The Impact of Cyclical Factors on the U.S. Balance of Payments", *IMF Working Paper*, 02/05, 2002.
- Kearney, Marna and Odusola, Ayodele, *Assessing Development Strategies to achieve the MDGs in the Republic of South Africa*. United Nations Department for Social and Economic Affairs, March, 2011.
- Lebe, Fuat et al., "The Empirical Analysis of the Effects of Economic Growth and Exchange Rate on Current Account Deficit: Romania and Turkey Samples." *Journal of Applied Quantitative Methods*, Vol. 4. No. 1, 2009, pp. 69-81.
- Levine, Ross and Renelt, David, "A sensitivity analysis of cross-country growth regressions." *American Economic Review*, Vol. 82, No. 4, 1992, pp. 942-963.
- Levy, Philip I. "Sanctions on South Africa: What Did They Do?" *Center Discussion Paper No. 796*, Connecticut: Yale University, 1999, pp. 1-14 http://www.econ.yale.edu/growth_pdf/cdp796.pdf
- Löffler, Axel et al., "Limits of Monetary Policy Autonomy by East Asian Debtor Central Banks". *CESifo Working Paper 3742*, 2012, pp. 1-32 <http://www.cesifo-group.de/ifoHome/publications/working-papers/CESifoWP>
- Lucas, Robert E. Jr., "On the Mechanics of Economic Development". *Journal of Monetary Economics*, Vol. 22, No. 1, 1988, p. 3-42
- Maasdorp, Gavin, "Economic Survey 1970-2000." In *The Decline of the South African Economy*, edited by S. Jones, Cheltenham, UK: Edward Elgar Publishing, 2002.
- Mankiw, N. Gregory et al., "A Contribution to the Empirics of Economic Growth". *Quarterly Journal of Economics*, Vol. 107, No. 2, 1992, pp. 407-437.
- McKinnon, Ronald and Liu, Zhao, "Hot Money Flows, Commodity Price Cycles and Financial Repression in the US and the People's Republic of China: The consequences of near zero US interest rates." *Asian Development Bank Working Paper Series No. 107*, January, 2013. http://aric.adb.org/pdf/workingpaper/WP107_McKinnon_Liu_Consequences_of_Near_Zero_US_Interest_Rates.pdf
- Odhiambo, Nicholas M., "Finance-growth-poverty nexus in South Africa: A dynamic causal linkage." *The Journal of Socio-Economics* Vol. 38, 2009, pp. 320-325.
- Rodrik, Dani, "Understanding South Africa's Economic Puzzles". *CID Working Paper No. 130*. August 2006. <http://www.cid.harvard.edu/cidwp/pdf/130.pdf>
- Rodrik, Dani "The Real Exchange Rate and Economic Growth". *Brookings Papers on Economic Activity*. Brookings Institute Press, Fall, 2008.

Romer, Paul M., "Increasing Returns and Long-Run Growth." *Journal of Political Economy*, Vol. 94, No. 5, 1986, pp. 1002-1037.

Romer, Paul M., "Endogenous technological change. *Journal of Political Economy*, Vol. 98, No. 5, 1990, S71-S102.

Snowdon, Brian and Howard. R. Vane. 2005. *Modern Macroeconomics: Its origins, development and current state*. Edward Elgar, Northampton: Massachusetts

Solow, Robert M., "A Contribution to the Theory of Economic Growth". *Quarterly Journal of Economics*, Vol. 70, No. 1, 1956, pp. 65-94.

South African Reserve Bank, "Ratio of Current Account Balance to Gross Domestic Product." <https://www.resbank.co.za/Research/Statistics/Pages/OnlineDownloadFacility.aspx> (Accessed on October 17, 2014)

Statistics South Africa, *Quarterly Labour Force Survey: Quarter 3, 2014*. Pretoria: Republic of South Africa. October, 2014. <http://www.statssa.gov.za>

Strydom, P. D. F., "International Trade and Economic Growth: The opening-up of the South African economy." *South African Journal of Economics*, Vol. 63, No. 4, 1995, pp 557-576.

The Presidency of South Africa, *The Reconstruction and Development Programme*. Pretoria: Republic of South Africa, 1994. Retrieved from www.info.gov.za

The Presidency of South Africa, *Accelerated and Shared Growth Initiative for South Africa*. Pretoria: Republic of South Africa, 2006. Retrieved from www.info.gov.za

The Presidency of South Africa, *The New Growth Path*. Pretoria: Republic of South Africa, 2010. Retrieved from www.info.gov.za

UNESCO Institute of Statistics, *Education (full dataset)*, http://data.uis.unesco.org/Index.aspx?DataSetCode=EDULIT_DS&lang=en# (Accessed on May 05, 2015)

Van der Merwe, E. J., "Exchange Rate Management Policies in South Africa: Recent experience and prospects". *Occasional Paper No. 9*, Pretoria: South African Reserve Bank, March, 1996, pp. 1-28

Van der Merwe, E. J., "Inflation targeting in South Africa". *Occasional Paper No. 19*, Pretoria: South African Reserve Bank, July, 2004, pp. 1-19

World Bank, *World Development Indicators 2015*. www.worldbank.org (Accessed on May 5, 2015)

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