SOME POLICY OPTIONS FOR ECONOMIC GROWTH

IN SOUTH AFRICA

by

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DECLARATION

I declare that the dissertation hereby submitted to the University of Limpopo, for the degree of M. Com. Economics has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all material contained herein has been duly acknowledged.

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Abstract

Economic growth remains one of the key macroeconomic objectives of most governments. South Africa witnessed moderate economic growth rates between 1994 and 2006, except for 1998 when the country recorded a sharp decline in economic growth as a result of worldwide financial crisis. The key challenge facing the country is to sustain and improve on the growth performance. South Africa's economic growth has largely been demand -driven as indicated by the dominance of consumption over investment. Growth theorists identify investment, savings, human capital, productivity and R & D as some of the principal drivers of economic growth on the supply side. Investment and savings within the economy remain largely below those of the world's most successful East - Asian countries. Other indicators further reveal that there is still room for improvements on the supply-side of the economy. The growing current account deficits point to the fact that domestic demand is too high for the country's productive capacity. Similarly, the declining enrolment in tertiary institutions and a shift in the structure of production towards high skill services industry call for a policy shift in line with the unfolding trend. Thus, this study proposes some policy options that could be considered to sustain South Africa's economic growth performance.

Key words: Economic Growth, Investments, Human Capital and Productivity

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LIST OF ACRONYMS AND ABBREVIATIONS

- ANC African National Congress
- ASGISA Accelerated and Shared Growth Initiative for South Africa
- DTI Department of Trade and Industry
- FDI Foreign Direct Investment
- GEAR Growth, Employment and Redistribution
- GDE Gross Domestic Expenditure
- GDP Gross Domestic Product
- GNI Gross National Income
- IMF International Monetary Fund
- NPI National Productivity Institute
- NZ New Zealand
- OECD Organisation for Economic Cooperation and Development
- RDP Reconstruction and Development Programme
- RSA Republic of South Africa
- SARB South African Reserve Bank
- SETA Sector Education and Training Authority
- StatsSA Statistics South Africa
- UN United Nations
- UNESCO United Nations Educational, Scientific and Cultural Organisation
- UNSD United Nations Statistical Department
- WEF World Economic Forum

CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 Introduction

South Africa, like most of the developing nations of the world, is plagued by various economic and social problems arising mainly from a low economic growth rate. These problems, which include poverty, unemployment and lack of access to basic amenities such as pipe borne water, electricity and modern sanitation facilities, were exacerbated by the apartheid policy. The policy legalised political, economic and social discrimination against a huge section of the population comprising Blacks, Coloured and Indians. The advent of the new political order in 1994 brought much hope to these previously disadvantaged race groups, with an expectation that the new democratic dispensation will usher in a period of economic prosperity for all.

Fallon and Pereira de Silva (1994: 40) note that a key challenge facing South Africa after the transition to democracy is identifying growth opportunities that could also reduce unemployment and poverty, the process guaranteeing increased access to basic services and equitable income distribution. They mean that a continued perpetuation of extreme inequality in terms of income, wealth and access to social facilities constitutes a great threat to the economic, political and social stability of the country.

The new political regime based its hope of economic transformation and development on the acceleration of the growth prospect of the country. Many government economic growth strategy documents such as the Reconstruction and Development Programme (RDP), Growth, Employment and Redistribution (GEAR) and most recently the Accelerated and Shared Growth Initiative for South Africa (ASGISA) have emphasised economic growth as one of the core goals of the South African government. Perhaps, identifying the trends of the South African growth performance may guide future policy orientation.

1.2 **Problem definition**

The need to stimulate a higher growth rate has been in the forefront of economic debates in South Africa in recent times. The government economic blueprints have set varying economic growth rate targets to be met at different periods, but these have continuously been elusive. The GEAR strategy document, for example, set a target of 6% economic growth rate for the economy for the year 2000, but only the rate of 4.15% was achieved (RSA, 1996; SARB, 2001).

The low level of economic development as manifested in the continuing low standard of living of the majority of the population calls for a more concerted effort to redress the poor growth situation. It is important that any attempt to tackle the problem will require making available a huge array of goods and services. This, according to De Wet (1995), requires a higher level of economic growth than what is experienced in the country. This argument had earlier been advanced by Reid (1989: XI) that economic growth offered a better means of improving the welfare of nations.

It has further been argued that in order for the country to achieve the United Nations' Millennium Development Goal of halving extreme poverty by the year 2015, it would be necessary to achieve a growth rate of above the 6% mark (Lewis, 2001; UN, 2000). This is in line with the economic growth rate that the government has set for itself in the ASGISA policy document which envisaged an annual average growth rate of at least 4.5% between 2005 and 2009, and 6% or higher between 2010 and 2014 (Mlambo-Ngcuka, 2006).

Abedian and Standish (1992: 22) contend that the policies put in place by the previous South African governments led to economic underdevelopment and inhibited economic growth. They argue that much of the growth and development witnessed in the country was largely due to the rich economic resource endowments of the country rather than suitable economic strategies. De Wet (1995) has in a similar line of argument noted that the economic policies pursued until the early eighties were not conducive to long term growth and development.

It has been further suggested that attempts to stimulate higher economic growth through the adoption of demand stimulating policies have not yielded the much-desired result. Casteleijn (2001) maintains that the demand management approach by the South African authorities through expansionary monetary and fiscal policies have often resulted in higher inflation, increased external deficits, and the crowding out of the private sector.

The general policy orientation adopted by the new government in 1994 is also a subject of criticism. The economic programmes are described as being full of inconsistencies, and characterised by a wide divergence between the delivery of basic needs, the investment needed to deliver on those basic needs and the economic growth rate. The relevance of public investment as the key to accelerated economic growth has also been questioned (Lundhal, 1999: 2, 16).

In view of the inability of the economy to grow at the desired rate, it can thus be argued that a pressing problem facing the South African transformation and economic development agenda is how to accelerate and sustain the pace of growth of the economy to meet the government mandate of halving poverty and unemployment by 2014 as required by the United Nations Millennium Development Goals (UN, 2000; Mlambo-Ngcuka, 2006). This will obviously require identifying and pursuing important policies that could boost economic growth in South Africa. Similarly, policies inhibiting economic growth in the country could be reviewed and possibly dropped.

1.3 The objectives and importance of the study

This study investigates the South African economic growth performance in the post 1994 period, highlighting its pattern and the contributing factors. It equally attempts to contextualise the South African growth process within the country's historical experience and its macro economic environment. In addition, the study identifies policy implications of successive government economic policies with a view to attempt formulating future policy. Economic growth remains one of the key macroeconomic objectives of the South African government. The goal of achieving a better life for the citizens depends largely on achieving a fast and sustainable economic growth rate. It is thus important to understand the underlying factors for growth in order to be able to formulate appropriate policies around those factors. Another major significance of this study will lie in its attempt to identify relevant resources from which policy makers can draw to achieve a continued increase in the South African economic performance. Finally, it is envisaged that the outcomes of the study would provide a framework for further in-depth research into growth related problems in South Africa.

1.4 Research Methodology

The success of any research project depends on the right conceptualisation of what is being studied, the appropriateness of the methodology adopted, and the correct application of the methodology to clarify and possibly solve identified problems.

This research is based on the review of some important theories of economic growth, as well as the drivers and determinants of economic performance. A good understanding of basic economic theory is an indispensable tool in economic analysis. The importance of theories generally lies in the fact that they suggest explanations that corroborate observed facts, as well as assist in understanding the working of an economy (Todaro, 1992: 34).

A comprehensive review of the relevant literature in the area of economic growth has been undertaken to form the background to the study. This literature includes articles, monographs, journals, annual reports and textbooks. The data reflecting the trends and performance in economic growth has been sourced from the database of local institutions such as the South African Reserve Bank (SARB), Statistics South Africa (StatsSA), the National Treasury, the National Productivity Institute¹ (NPI) and the Department of Trade and Industry (DTI). Other sources including the United Nations Statistical Department (UNSD), International Monetary Fund (IMF) and the World Bank have been approached for additional data. The World Wide Web has also been an invaluable source as the various search engines on the Internet have been fully employed to gather further information. Due to the broadness of the area of economic growth, and the time and logistical constraints envisaged, the scope of the research will be limited to those key factors as identified in the theories. Nevertheless, it is hoped that the study will add value to the body of knowledge in the area of economic growth.

1.5 Outline of the study

The study is structured into five chapters as follows:

Chapter one is the introduction to the study. It discusses the objectives and importance of the study. It also outlines the method of investigation of the subject matter. Chapter two presents the theoretical part of the study. The first section of the chapter looks at the concept of economic growth, its measurement, and contrasts it with the notion of economic development. The second section takes a look at the various theories of economic growth that are directly relevant to the study, while the

¹ The National Productivity Institute is now known as Productivity South Africa (Productivity SA)

third section focuses further on some identified factors that contribute to economic growth both on the supply and demand sides.

Chapter 3 provides the historical background to the study, and equally reviews the South African macroeconomic environment and developments. Some of the key growth strategies formulated and adopted by the government in the period 1994 to 2006 are also briefly highlighted. Lastly, the overall growth performance of the country is reviewed including the trends of key variables.

Chapter four discusses economic policy options that may be adopted by the government. These options are proposed based on the current economic growth strategy frameworks and the prescriptions by the economic growth theories reviewed.

Chapter five summarises and concludes the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Economic growth: definition and measurement

Economic growth refers to an increase in the real value of production and income within a national economy over a specified period of time (Gills, et al, 1983: 8). This increase has to be sustainable and long term in nature (Todaro, 1994: 106). Economic growth can also be simply defined as a process which leads to an increase in the real Gross Domestic Product (GDP) of a country, and which is measurable and comparable within two periods (van den Bogaerde, 1972: 19). Dornbusch *et al* (1998: 4) define economic growth as a long-term increase in the productive capacity of the economy. This involves the expansion of the productive base of the economy through qualitative and quantitative changes in the resources utilized in the production process. Furthermore, the expansion is accompanied and fuelled by advancing technology, and changes in institutional and ideological environment (Kapustin, 1980: 130).

According to Usher (1980:1), the rate of economic growth entails more than just a statistical figure but rather a 'summary measure of all favourable developments in the economy'. Economic growth generates positive feelings, and is assumed to be an indicator of economic progress and the success of economic policy. Poor economic growth on the other hand leads to disenchantment and is an indication of the inadequacy of economic policy.

Usher (1980:2) points out that a measure of economic growth is fraught with difficulties as any recorded improvement in growth rate that cannot be correlated with

actual improvement in the individual family income and welfare is a source of misinformation. Acceptable measures of economic growth would most importantly need to take into consideration issues such as the difference in relative prices over time, changes in the nature and forms of goods and services between two periods, the invention of new products that had hitherto not been in existence, and the changes in the environment over time.

The common measures of economic growth include the Gross Domestic Product (GDP), GDP *per capita*, Gross National Income (GNI), Gross Domestic Expenditure (GDE) and Labour productivity growth. While these measures do not adequately resolve all the issues around acceptable criteria for the measurement of economic growth, they offer a pragmatic basis to review the economic progress attained by a country between two periods.

2.1.1 Gross domestic product (GDP)

The GDP represents the market value of all goods and services produced within the boundary of a country before the depreciation of fixed capital is taken into account. It consists of both new products and the replacements of old production factors. In calculating the GDP, only the final goods and services are taken into account, and the market value is derived through multiplying the quantities of goods and services by their respective unit prices (Evans, 2004: 28).

The GDP measured in current prices over a period is referred to as the nominal GDP. The nominal GDP does not take into account the effect of inflation and its distortionary impact on the GDP figure (Blanchard, 2003: 24). The adoption of the real GDP figure circumvents this problem with constant prices from a predetermined base year used to multiply the quantities of outputs for all the years under review. The percentage change in the real GDP of a country during yearly intervals, after eliminating price distortion, thus provides a better measure of economic growth (Abel & Bernanke, 2005:45).

2.1.2 Gross domestic product (GDP) per capita

The GDP *per capita* takes into account the population. It is calculated by dividing annual or period GDP at current market prices by the population figure. A variant of this measure is the growth in real GDP *per capita* which is calculated as the growth rate of total GDP, computed in constant prices, divided by the growth of total population (Kitov et al, 2007). When the rate of population growth exceeds the real GDP growth rate, then the real GDP *per capita* falls. The opposite is the case when the rate of population growth is lower than the GDP growth rate. A shortcoming of the GDP *per capita* as a measure of growth is its inability to reflect how the increase in production is actually distributed among the population (Blades, 1980: 73).

2.1.3 Gross national income (GNI)

The GNI represents the summation of all the incomes earned by the citizens and / or residents of a particular country within a specified period. In other words, it represents the total income that accrues to all those factors of production owned by the citizens and / or residents of the country (Case & Fair, 2004: 398). Unlike the GDP which measures only the value of final goods and services produced within a country in the

period, the GNI takes into account all the incomes earned by the country's factors of production both from within and outside the country.

2.1.4 Gross domestic expenditure (GDE)

GDE is the total value of all the expenditure on goods and services within a country. It is calculated as the Gross Domestic Product plus imports, but excludes exports (Fourie, 1997: 176). Buyers of goods and services within the country can be categorised into three broad groups: the households who purchase goods and services for their own use; the economic agents, mostly firms, that engage in investments and build up inventories for future sale or production purposes; and the government, which purchases goods and services for the benefit of the citizens (Roux, 1990: 9).

2.1.5 Labour productivity growth

Labour productivity measures the ratio of the product of labour at a given period to the input of the current labour. Improvement in labour productivity serves as a useful indicator of economic growth and the efficient use of the other factor inputs in the production process. It is therefore regarded as an essential condition for economic growth (Kapustin, 1980: 132).

2.2 Economic growth and development

The concepts of economic development and economic growth have often been used interchangeably. The concept of development is sometimes linked to growth in the *per capita* income of a country (Hall, 1983: 2). More often, though, economic development is interpreted to comprise an increase in the value of output in an economy, and a fundamental change in its structure and social institutions. It also encompasses a decrease in the share of agriculture in national output; a rising share of

industry; an expansion of consumption from necessities to durables, including luxuries; urbanisation; the reduction of inequality; and the eradication of poverty in general (Todaro, 1994:16; Gills *et al.*, 1983: 8).

Thirlwall (2003: 20) states that economic development should further be seen in terms of the expansion of entitlements and capabilities that are not properly captured in the aggregate measures of growth in output. Development thus emphasises not only economic growth but also the composition of output and the economic environment in which the output is produced.

Economic growth as a subset of economic development is a necessary but not a sufficient condition for development. For any meaningful development to take place there must be an increase in the quantity and quality of output available in the economy, accompanied by structural changes (Todaro, 1992:98). The structural changes particularly apply to the distribution of economic opportunities and wealth arising from economic growth amongst the different strata of the society.

2.3 Theories of economic growth

Over the years, different models and theories of growth have emerged. These growth theories seek to explain the long run behaviour of the economy, and why and how economies grow (Dornbusch *et al.*, 1998: 19). This section focuses primarily on the classical growth theories derived from the works of early writers such as Adam Smith, Thomas Malthus and David Ricardo. However, mention will be made of other growth models such as the neo-classical writings dominated by the Solow - Swan model because of its production approach to economic growth. Equally important and worth mentioning is the Harrod -Domar model that espouses the post -

Keynesian ideas on the relationship between the savings rate, productivity and growth rate. Finally, a mention is made of the theory of endogenous growth associated mainly with the writing of Paul Romer (1986). It is envisaged that the theories will assist us understand more clearly South Africa's growth performance.

2.3.1 The Classical School

2.3.1.1 The Smithian Model of Growth

Adam Smith, in his major work titled "*An inquiry into the Nature and Causes of the Wealth of Nations*", published in 1776 laid the foundation for the debate on economic growth. Eltis (1984: 68 -70) comments that Smith's major contributions to the theory of economic growth were anchored on the importance of increasing returns based on the division of labour; the ability of the market to absorb surplus production; and the role of profit, which acts as stimuli for further investment.

Smith posits a supply – side model of economic growth that identified labour, land and capital as the three factors of production. Rostow (1990:35,508) notes that in Smith's model, the growth of output is driven by growth in the quantity of factors of production and the evolution of technology.

This model is represented by the simplest production function below:

Y=f(L, K, T)(2.1)

Where, Y, output is a function of Labour, L; Capital, K; and Land, T.

And deriving from equation 2.1

 $gY = \phi (gL, gK, gT, gF)....(2.2)$

Equation 2.2, which incorporates the productivity of the factors into the production function, indicates that any growth in output (gY) is driven by population growth

(gL), investment growth (gK), land growth (gT) and increases in overall productivity (gF).²

Smith argues that investment and capital accumulation result in the growth of output. He wrote:

> 'every increase or diminution of capital, therefore naturally tends to increase or diminish the real quantity of industry (sic), the number of productive hands, and consequently the exchangeable value of annual produce of the land and labour of the country, the real wealth and revenue of all its inhabitants' (Smith, 1776:431).

Rostow (1990: 39) reports that in Smith's analysis, increased capital accumulation and investment enlarge the market. This further leads to an increase in the demand for labour, which in turn leads to an increased wage level. The increased wage level and accompanying prosperity then lead to increases in population and effective demand.

Terreblanche (1970) points out that the sources of finance for investment are of paramount interest to Adam Smith. It is further argued that Smith held the opinion that there is an identity between savings and investments; that savings rise with increases in income; and that all savings are invested. Furthermore, individuals in the pursuit of self-interest accumulate savings. Similarly, Adam Smith was of the opinion that the profit motive is central to the investment decisions and investment would continue for only as long as profit is above the minimum rate necessary to induce savings (McConnell, 1943:88).

² Smith is of the opinion that growth in land available could only be made possible as a result of conquest of new territories or the application of technology, which makes existing land more productive.

Smith further believes that the contribution of labour to increase in output can be achieved either by increasing the quantity or the quality of labour. He wrote:

> 'the annual produce of the land and labour of any nation can be increased in its value by no other means, but by increasing either the number of its productive labourers or the productive powers of those labourers who had before been employed' (Smith, 1776:438).

Rostow (1990:37) contends that the Smithian model associates increases in the productivity of labour with the quantity of capital available for labour to work with and the level of education of labour. Furthermore, the model regards the augmentation of capital as a means of increasing the quantity of labour that can be employed (McConnell, 1943:88).

According to Smith, a freely competitive market guided by the forces of demand and supply is important for economic growth. This enables the free movement of production resources for optimal allocation between industries. The model indicates that a country's laws, institutions and fiscal policies also affect the growth prospects of its economy. O'Brien (1975:32) points out that Smith canvasses for a minimal government intervention save for 'the three sovereign duties as (sic) including defence, justice, and public works and institutions'. Smith argues that excessive public consumption could destroy capital and that taxation may induce the owner of the capital to move it out of the country (Smith, 1776:118).

Adam Smith regards technology as an engine of growth as these facilitate division of labour and specialisation, which lead to increased productivity (Eltis, 1984: 72). Smith believes that there are more productivity increases in manufacturing than in the primary production process. He argues that economies must take advantage of the increasing returns enjoyed by industry and the opportunities for raising productivity associated with it (Rostow, 1990: 39). Smith is also of the opinion that free trade is crucial for economies because trade enlarges the market, and the export market in particular has the potential to absorb the higher output from manufacturing (O'Brien, 1975:170). Smith's model suggests a self-reinforcing growth process whereby increased capital accumulation allows for the expansion of the market, which leads to increased profits and further investments (Rostow, 1990:35).

2.3.1.2 Malthus Theory of Effective Demand

Thomas Malthus emphasises the impact of rapid population growth and the importance of demand in economic growth (Winch, 1987:19, 83; Eltis, 1984:140). He argues that increasing the productive capacity is of no use if there is no demand for the increase in output (O'Brien, 1975:214). Malthus argues further that demand for output could only be increased through the improvement in domestic and foreign trades. He means that by widening the market, the use of technology and the subsequent increase in productivity can boost national income (Rostow, 1990:63).

Malthus established a link between demand, profit and growth. He argues that an increase in demand causes a rise in price and, assuming a slowly rising cost of production, would lead to increased profit, thus encouraging further investments and growth. He argues that people are inspired by the prospects of profits, and these release the latent entrepreneurial energy of the society (Eltis, 1984:149; 151).

Malthus is of the view that inventions are an endogenous response to an induced demand for them. He notes that profitability determines the rate of general technical advance and inventions as the prospect of profit is a significant incentive to pursue improvements (Rostow, 1990:63; Eltis, 1984:149).

On the impact of population on national income, Malthus points out that there is a tendency for population, if not checked, to grow faster than the means of subsistence. He argues that this would lead to stagnation in *per capita* income of countries at the subsistence level due to diminishing returns to agriculture. He argues further that any increase in *per capita* resulting from technological progress would lead to more births, thus forcing *per capita* income back to previous levels. Malthus however acknowledges that an increase in population is an important and necessary condition to increase demand (Rostow, 1990:55; Todaro, 1992:201)

2.3.1.3 Ricardo's Model of Growth

In 1817, about forty decades after Smiths publication, David Ricardo in his book "*Principles of Political Economy and Taxation*" wrote extensively on the role of capital accumulation and investment in the growth process. Ricardo maintained that output growth is a function of physical inputs that go into the production process (Rostow, 1990:77). Ricardo echoes the views of Adam Smith on the importance of greater accumulation of capital on economic growth and development. According to Ricardo (1951: 151),

'As the capital of a country is diminished, its production will be necessarily diminished'.

Ricardo acknowledges that capital accumulation results from savings, generated as a result of increased revenues or as a consequence of diminished consumption (Ricardo, 1951: 131). Profit also plays an important role in the Ricardo model. He argues that investment and capital accumulation depend on the rate of profit. An increasing rate of profit would lead to a higher rate of investment and capital accumulation, which in turn would translate to a higher growth rate (Eltis, 1984:324).

According to Ricardo (1951: 278), raising the efficiency of labour similarly had the tendency to increase the rate of growth. He identifies technical progress as one important factor that could increase the efficiency of labour and lead to increased output. Ricardo explains that technological progress leads to an increase in the output of labour, which then lowers the cost of labour and raises the rate of profit. The increase in the rate of profit favours faster accumulation of capital, which in turn

increases the demand for labour and higher wages, and increased aggregate demand (Eltis, 1984: 211). Ricardo lays a great emphasis on international trade as an important catalyst for economic growth (Pressman, 2006:51). Similarly, Ricardo argues that institutional factors such as the political system, market structure and socio-cultural values have significant impacts on the process of capital formation and investment (Terreblanche, 1970).

2.3.2 Harrod – Domar Post Keynesian growth Model

The Harrod – Domar model establishes the relationship between the savings rate, the productivity of capital and the economic growth rate (Ray, 1998: 55). The model states that the output of any economic unit is a function of the amount of capital invested in it. The model also affirms the importance of savings and investments in the process of economic growth (Todaro, 1997: 72).

The Harrod –Domar model further states that the growth rate of national income is positively related to the savings rate and negatively related to the capital - output ratio. It also notes that the quantity of additional output from an additional unit of investment, i.e. the rate of growth of national income for a particular level of savings, depends on the productivity of capital³. The model attributes the low level of economic growth in many economies to the relatively low levels of new capital formation in those economies (Todaro, 1994, 70 - 72).

³In this case, the productivity of capital will be the inverse of the capital – output ratio. This is the rate of output per capital or the rate of output per investment.

2.3.3 The Neo- Classical School: Solow – Swan Model of Embodied Technical Progress.

The Neo – Classical growth theory revolves around a production function. The theory is supply side oriented, and attempts to disaggregate the sources of growth based on the contributions of factors of production. It emphasises a relationship between the factor inputs on one hand and output on the other (Wyckoff, 1981: 432). The Solow – Swan model presents a production function describing the relationship between a country's stock of factors of production and the level of its gross national product.

The model is built on the simple neo-classical production function and is presented as follows:

$$Y = AK^{\alpha} N^{\beta}$$
 (2.3)

where Y, denotes output, K and N denotes capital and labour respectively, and, A, a scale factor representing technology assumed to grow at a steady rate.

The Solow- Swan model assumes constant returns to scale and

in equation (2.3)

$$\alpha + \beta = 1 \tag{2.4}$$

where α , the elasticity of output with respect to capital, and β , the elasticity of output with respect to labour equals 1. The model's constant return to scale characteristic means that 1 percent increase in the quantity of capital (K) and labour (N) will lead to a corresponding 1 per cent increase in output (Mankiw, 2007:56).

The Solow- Swan model allows for embodied technical change. This assumes that increases in output is not due to only an increase in the quantity of factors of production but also to changes in the quality and the composition of the factors. The model states further that the growth of output in the long-run steady state is determined by the rate of growth of the labour force and the rate of growth of productivity by labour. It is argued that in the absence of continuing improvements in technology that enhance productivity, per *capita* growth would eventually cease.

The Solow – Swan model similarly predicts the convergence of all economies. The model states that economies with less capital - per - worker relative to their long run capital – per - worker state tend to have higher rates of return because the introduction of more capital to an existing level of labour increases the productivity of labour. These economies enjoy faster growth rates thus making it possible for the economies at the bottom of the growth scale to catch up with those on top. The attainment of convergence is however conditional upon the differences in the savings and population growth rates, and the position of the production function which influences a country's output per worker (Barro and Sala -i- Martin, 2004: 17).

2.3.4 The new theory: Endogenous growth

The endogenous growth theory derives mainly from the works of Romer (1986) and offers an alternative view on the long-run prospects for growth Romer posits that economic growth is driven by the accumulation of knowledge, a side product of investment. This means that new investment leads to an increase in the stock of knowledge, which in turn eliminates the tendency for diminishing returns to capital (Hagemann & Seiter, 2003: 1). The theory similarly recognises the importance of international trade and the benefits from trade openness. It regards the flow of benefits

resulting from technology spillovers due to the stock of knowledge embedded in imported capital goods as a strong element of the endogenous growth (Agènor, 2000: 506). Critics have condemned the endogenous growth model for dwelling mainly on the factor that sustains growth without adequately addressing the problem of how to initiate it (Thirlwall, 2003: 11).

2.4 Supply side drivers of economic growth

The sources of economic growth have the potential to cause national income to increase from one period to another (Denison, 1967: 7). These sources vary in their importance from period to period and from country to country, and operate through the demand and supply sides of the economy (Steyn, 2000: 56).

As espoused in the theories reviewed in the previous section, the supply side determinants of economic growth encompass the quantity and the quality of a country's factors of production. The factors of production include physical capital, human capital and entrepreneurship. An increase in production requires not only an increase in the quantity of these factors but also an improvement in the quality of the factors. The quality of the factors is often referred to as their productivity (Reppas & Christopoulos, 2005; Lewis, 1955: 164).

2.4.1 Accumulation of physical capital

Capital accumulation and its impact on economic growth feature prominently in all the theories of economic growth. The capital created by investments in plants and equipments constitutes a major determinant of growth. The rate of investment in physical capital determines the ability to expand the production capacity of an economy (Gills *et al.*, 1983: 42).

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Physical capital accumulation has a positive effect on human capital and technical progress. An increase in the stock of physical capital leads to a future increase in the productivity of human capital. Physical capital accumulation also serves as the conduit pipe for the introduction of technical progress into the productive system (Caballe & Santos, 1993; Thirlwall, 2003: 238).

The ability of an economy to accumulate physical capital depends strongly on its rates of saving and investment. Empirical investigations have confirmed the centrality of the investment rate to the accumulation of physical capital, and have established it as the single most robust variable in cross – sectional growth studies (Levine & Renelt, 1992; De Long & Summers, 1993).

Investment however can only be made possible through domestic savings and foreign capital (Gills *et al.*, 1983: 42). Inflow of capital from abroad often fills in the gap between domestic savings and domestic investment. While these foreign investments are not totally without problems, they come with additional benefits which impact greatly on the economic growth process.

Generally, investments have the potential to raise a country's productivity through enhanced competition. If foreign firms are involved, they can transfer new technology and managerial expertise to local firms (De Mello Jr., 1997; Bosworth & Collins, 1999). Empirical studies have confirmed the existence of a direct relationship between foreign investment and the growth of productivity in countries such as Japan (Urata & Kawai, 2000), United Kingdom and West Germany (Barrel & Pain, 1997), and South Africa (Arzeki, Ahmed & Funke, 2003).

2.4.2 Investment in Human capital

Human capital refers to the education, skills and expertise embodied in the labour force. Human capital can also be ascribed to those factors such as knowledge, skills and health that can be embodied in labour to raise its productivity (Hall, 1983: 133; Thirlwall, 2003: 74). It is argued that for any meaningful and sustainable economic growth to take place there must be an acceptable level of human capital development (Denison, 1967: 45; Knight, Loayza & Villanueva, 1993).

Investment in human capital takes different forms. These include expenditure on health facilities, formally organised education, on-the –job and institutional training and retraining, study programmes and adult education. Empirical evidence supports the position that improvements in health, nourishment, skill and education lead to an increase in people's contribution to economic growth *via* the increase in the productivity and the earnings of labour (Ranis *et al.*, 2000; Bloom, Canning & Sevilla, 2004).

Furthermore Knight *et al.*, (1993) in their panel study of 72 developing countries and 22 OECD countries found that human capital is significant to growth and raises the productivity of capital investment. Table 2.1 below presents a summary of the dimensions of human capital and their importance.

Activity	Importance
Health, primary and secondary education, and	raise the productivity of workers, rural and
nutrition	urban
Secondary education, including vocational	facilitates the acquisition of skills and
	managerial capacity
Tertiary education	supports the development of basic science, the
	appropriate selection of technology imports
	and the domestic adaptation and development
	of technologies
Secondary and tertiary education	also represent critical elements in the
	development of key institutions, of
	government, the law, the financial system,

 Table 2.1
 Dimensions of human capital and their importance

Source: Ranis et al., (2000)

Lucas (1988) points out that the higher the level of education of the workforce the greater the contribution of human capital to productivity and growth. A bettereducated work force will be quick to learn the most efficient production practices, and will be better at utilizing them. It is also more likely to innovate and assimilate new technology than poorly educated ones, thus affecting the general level of productivity. The education and skills of a country's labour force also considerably influence the nature and growth of its exports; the nature of its factor endowment; and the composition of its trade, thereby exerting substantial influence on its growth pattern (Nelson & Phelps, 1966).

Bloom *et al.* (2004) identify two major ways through which good health filters into economic growth. One way is the increase in labour productivity due to improvements in health and nutrition, and the second is through capital accumulation. Nutrious food, good shelter, and preventative and curative health measures improve the quality of human health as well as prevent death and reduce the incidence and severity of

serious afflictions that can reduce the productivity of labour. The savings rate, and thus the process of capital formation are also largely influenced by the health and general well-being of the working population (Hall, 1983: 172 -173).

2.5 The demand side drivers of economic growth

A country's aggregate demand represents the total demands for goods and services produced in the economy (Dornbusch & Fischer, 1978: 12). Included in this demand are domestic demand (consumption, investment and government demands) and foreign demand (exports). The demand for goods and services is deemed important for economic growth particularly because of its relevance to the decision to expand or reduce output and the productive capacity (Chandra & Sandilands, 2003: 256).

The relationship between output and aggregate demand in the simplest form can be represented in the following equations:

$$Y = A \tag{2.5}$$

$$A = C + I + G + NX$$
 (2.6)

therefore
$$Y = C + I + G + NX$$
 (2.7)

where Y stands for output; A for aggregate demand; C for consumption demand; I for investment demand; G for government demand; and NX for net export. Factors such as the conduct of government monetary and fiscal policies, and consumer and investor confidence, which affect aggregate demand, thus affect the level of output (Dornbusch *et al.*, 1998: 85).

2.6 Other factors facilitating economic growth

Appiah & McMahon (2002) emphasise the importance of strong and democratic political institutions in the economic growth process. The government makes the rules that guide economic activities. It is also a referee if there are conflicts in interpreting the rules (Kuznets, 1981: 59). Social infrastructures such as government policies and institutions promote the environment conducive to skills development and for firms to accumulate capital and produce output. Along with efficient and effective political institutions, good economic institutions are similarly vital for economic growth. The financial system, the labour market structure and the flexibility of the institutional framework significantly affect resources allocation thereby enhancing or at the worst inhibiting economic growth (Ranis *et al.*, 2000).

There is equally a positive link between economic growth and macroeconomic stability (Fischer, 1993). Good macroeconomic management facilitates production and creates appropriate levels of net return on physical capital thus making investments attractive (Jayasuriya & Wodon, 2005). For example, fiscal policies through the manipulation of overall government expenditures and receipts exert a strong influence on aggregate demand, ensure the adequacy of the basic and economic infrastructures that facilitate production, and contribute to the improvement in the productivity of human capital (Harberler, 1974: 11; Mlambo & Oshikoya, 2001).

Similarly, urbanisation influences economic growth through its positive impact on productive efficiency (Szirmai, 2005: 31, 164). Urbanisation increases widespread reception of unfamiliar knowledge, new values and skills, and ensures rapid diffusion of knowledge and innovation (Adelman, 1978: 146). Cities make access to education, health services and infrastructure easier. Large population presents a peculiar

challenge in the growth process. On the one hand, it offers a potentially more productive manpower base and an increase in the size of market. On the other hand, it may lead to a reduction in savings; dilution of capital per head; and the reduction of the marginal product of labour in agriculture. It may further put a strain on government budgeting; and lead to congestion and overcrowding thus the degradation of the environment with severe consequences for economic growth both in the short and long terms (Gylfasson, 1999: 1046).

Good infrastructures such as efficient communication system, regular power supply and excellent transport facilities contribute to growth indirectly through their effects on the marginal productivity of capital (Fedderke and Bogeti, 2006). Empirical studies confirmed that investments by the public authorities in transport, communication and energy are positively related to growth (Easterly & Rebelo, 1993; Ebohon, 1996)

The economic growth process within a particular country is not only influenced by factors that are located within the particular economy, but also by factors which are outside it and which it has little or no control over. The growth of export trade relaxes balance of payment constraint on domestic demand, enhances the ability of a country to import those factors that go into the productive activities and provides additional stimulus to the growth of local demand thus facilitating economies of scale (Todaro, 1994: 114).

2.7 Conclusion

The theories of economic growth presented in this chapter from the classical school to the endogenous theory identified certain factors as being crucial in stimulating and sustaining the growth process. Broadly, the theories propose increases in the quantity of the factors of the production viz labour and capital, augmented by increasing technology and skills to increase their productivity. Similarly, the existence of effective demand through both domestic and foreign trade is regarded as an incentive for increased production and output, and further investment.

The importance of capital accumulation through investments and savings are central to the growth prescriptions of the classical school, the Solow – Swan model and the Harrod – Domar model. The role of the rate of profit in stimulating further investment and the contribution of labour and capital productivity were equally attached great importance. The endogenous growth model further acknowledged the importance of knowledge accumulation, a product of investment and a major driver in the growth of output. It is argued that all of these will have to be within a conducive socio – cultural, political and economic environment for a country to achieve and sustain economic growth. The absence of legitimate central governments in Somalia and, until recently, in Zaire (now Democratic Republic of Congo) has been cited as instances where the absence of a stable political environment has hampered both foreign and intra-Africa investments (Ilorah, 2004).

CHAPTER 3

AN OVERVIEW OF THE SOUTH AFRICAN ECONOMY

3.1 Introduction

This chapter provides a background of the South African economy. The first part focuses on the structure of the economy. The second part looks at the major macroeconomic developments within the economy in the period 1994 - 2006. The third part discusses some key economic policy frameworks adopted by the South African government to promote economic growth in the country since the advent of the multiparty democracy in 1994. In some cases the period preceding 1994 is included in the discussion for the sake of comparison.

The analysis in this chapter relies to a large extent on the online databases of the Statistics South Africa (StasSA), the South African Department of Trade and Industry (DTI), the World Bank, the South African Reserve Bank (SARB), the United Nations Statistics Department (UNSD) and UNESCO Institute for Statistics.

3.2 An overview of the economy

3.2.1 Background to the economy

Historically the primary sector had formed the backbone of the South African economy. From the early 1900s until the great depression of 1929, agriculture and mining were the main drivers of the economy. The discovery of the mineral resources in the late 19th century actually laid the foundation for the modern economy. However, agriculture played a pivotal role in the development of the economy by providing the much-needed capital to fund the development of the mines after the discovery of Gold and Diamond in the late 19th century (Natrass, 1988:23).

The mining industry in turn spurred the development of the manufacturing sector around the same period. The accumulation of excess capital and the gradual spread of technology in the mining sector contributed significantly to the growth of manufacturing. The South African government further put in place measures such as tariff regimes and import – substitution policy to further support the development of the manufacturing sector (Natrass, 1988: 163; 236).

Similarly, political developments in the country also played an important role in shaping the outlook of the economy. The introduction of the apartheid policy of racial segregation brought about a racial dimension to the ownership and access to economic resources and opportunities, making it more or less impossible for black people to accumulate capital. The policy similarly aggravated the relatively low level of savings and investment in the country, and the high cost of doing business associated with the location of infrastructural developments in certain areas for clearly uneconomical reasons (Kritzinger – Van Niekerk, Eckert & Vink, 1992).

Nevertheless, the apartheid policy influenced the orientation of the government and contributed to the industrialisation process. Funds were poured into projects that were capable of the following: ensuring military dominance in the Southern African region - Armaments Corporation of South Africa (ARMSCOR); ensuring self-sufficiency in the provision of energy - South African Coal, Oil and Gas Corporation (SASOL), Atomic Energy Corporation (AEC) and Electricity Supply Corporation of South Africa (ESKOM); and promoting national food security in the light of economic and political sanctions that were imposed on the country (Lundhal, 1999:48). The post

1994 economic policies such as the Reconstruction and Development Programme (RDP); the Growth, Employment and Redistribution (GEAR); the Micro - Economic Reforms Policy of 2002; and the Accelerated and Shared Growth Initiative for South Africa (ASGISA) constitute a radical departure from the apartheid influenced economic policies as they sought to include the larger populace in economic policy planning and implementation.

3.2.2 Economic growth performance

The South African economy achieved a turn around in 1993 after a decade of poor economic performance. The lifting in 1993 of most of the remaining economic sanctions imposed on the country signalled the re-admission of the country into the international community and provided the necessary stimulus for the economy. It boosted business confidence and international trade relations. These, coupled with the relatively lower interest rate regime and improved consumer confidence resulted in an economic growth rate averaging 2.99% during 1994 – 2006 compared to a growth rate of around 1% in the preceding decade. The low growth performance recorded in 1998 has been attributed directly to the 'adverse developments in the global financial conditions' (Stals, 1998). The East Asian financial market crisis of 1997 in particular impacted on the South African real economic sector in 1998. See Table 3.1 below showing the country's growth performance during the period 1984 – 2006.

Table 3.1 South Afric	a's economic growt	th performance,	1984 - 2006

	1984 - 1993	1994	1998	2002	2006	1994 – 2006
GDP	1.035	3.23	0.52	3.67	4.99	2.99
GDE	1.034	5.31	-0.14	4.86	8.72	3.60
GNI	1.176	5.12	-0.26	5.13	6.33	3.14
GDP						
per						
capita	-1.099	1.09	-1.58	1.85	3.64	1.35

Source: SARB online database

The growth rates of the GDE, GNI and GDP per capita similarly increased within the periods, with the growth rate of the GDE in the period 1994 - 2006 tripling the growth rate during 1984 - 1993. The growth of the GDP per capita has not however matched the GDP growth on account of the fast increasing population.

3.2.3 The Supply sector

Generally, the country's structure of production has followed the same pattern as in most developed countries where the share of the primary sectors in total output has declined and the share of services has increased as the economy evolved. Over time, the South African economy has gradually become less dependent on primary commodities, with the share of the primary sector in total output steadily declining. See Table 3.2 below showing the contribution of major sectors to the GDP.

	1970 – 1979	1980 -1989	1990 - 1999	2000 - 2006
Primary sector	17.83	14.06	12.25	9.97
Agriculture	3.60	3.41	3.36	2.93
Mining	14.23	10.64	8.89	7.03
Secondary sector	26.01	26.67	24.63	23.71
Manufacturing	19.33	20.67	18.99	18.38
Electricity	1.66	2.29	2.81	2.50
Construction	5.03	3.71	2.84	2.83
Tertiary sector	56.16	59.27	63.11	66.33
Wholesale Retail Trade	13.89	13.92	13.61	14.81
Transport / storage	6.70	7.17	8.04	10.45
Financial intermediation	14.97	16.03	17.57	20.36
Community / social /personal	4.80	5.15	5.80	5.99
General government services	15.81	17.00	18.10	14.71
Total GDP (millions)	485329.06	637765.81	730665.06	938389.29

Table 3.2 Percentage contributions by productive sectors to GDP, 1970 – 2006.

Source: SARB online database

The share of the primary sector in the GDP fell from 17.83% in 1970 -1979 to less than 10% in 2000 – 2006 largely on account of the decline in the output of the mining industry. Similarly, the share of the secondary sector in the economy declined, though marginally, from 26.01% in 1970 - 1979 to 23.71% in 2000 - 2006. This is attributable partly to the contraction in the manufacturing sub-sector and a slow down in the construction sub-sector. The rapid expansion of activities in the services industry, particularly the transport/storage and financial intermediation boosted the share of the tertiary sector in the economy. The tertiary sector alone accounted for more than 66% of all production in the economy during the period 2000 - 2006.

The rate of growth in the tertiary sector output has had a pull effect on the overall economic growth rate. The introduction of new telecommunication operators, the expansion of the network of Telkom and the upgrade of the existing transport infrastructure particularly boosted the sector.

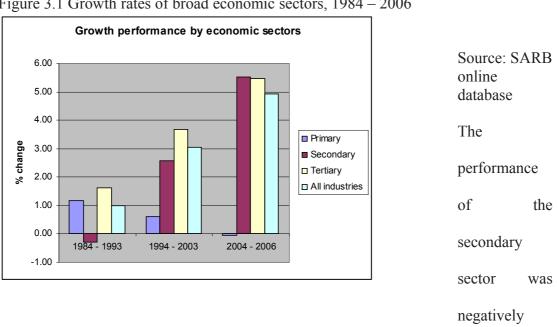


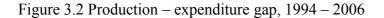
Figure 3.1 Growth rates of broad economic sectors, 1984 – 2006

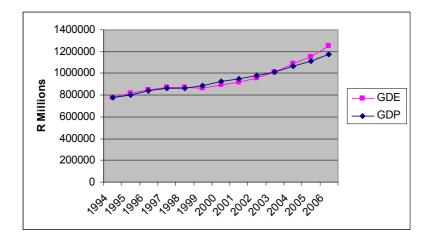
impacted on by the campaign for disinvestment by multi-national corporations

(MNC's) and intermittent strikes in the period before 1994. The resuscitation of manufacturing activities after 1994 coupled with increased construction activities boosted production in the secondary sector and minimised what could have been a drag effect on economic growth by the declining growth rate of the primary sector in recent times.

3.2.4 Aggregate demand components

The analysis of economic activities from the supply side and demand side represented by the GDP and GDE respectively shows clearly that economic growth has largely been demand driven since 2003 (see fig. 3.2). The excess of consumption over expenditure indicates an imbalance between production and demand in the economy and the existence of dis-saving in the economy, with domestic demand being satisfied from abroad. This in simplest term implies that not enough of current income is being put aside for investments.





Source: SARB online database

Consumption expenditure, comprising household consumption and general government consumption, collectively account for over 80% of aggregate demand in the economy. The sustained growth in household consumption is driven by many factors including a general rise in disposable income of households, high level of consumer confidence, low levels of interest rate and a moderate inflation. The accelerated service delivery programme of the government and the military armaments acquisition on the other hand fuels government consumption. Generally, household consumption represents a pull factor on economic growth as its growth rates have consistently on the average exceeded the GDP growth rates (see table 3.3).

	Averag	ge real grow	wth rate	Contribution to real growth		
	(percentage	s)	rate of GDP (percentages)		
	1984 –	1994 –	2004 –	1984 -	1994 –	2004 –
	1993	2003	2006	1993	2003	2006
Household				139.75		
consumption	1.60 (3)	3.54 (5)	6.87 (4)	(1)	71.93 (1)	91.43 (1)
Government				-44.92		
consumption	2.95 (2)	1.59 (6)	5.65 (5)	(5)	7.08 (4)	22.35 (3)
Private	-0.82			100.68		
investments	(4)	5.60 (3)	10.99 (2)	(2)	16.85 (2)	27.97 (2)
	-5.52			65.17		
Public investments	(5)	4.29 (4)	9.82 (3)	(3)	9.74 (3)	9.43 (4)
General government	-6.04	3.70	7.04	33.44	2.87	3.97
Public corporation	-4.10	6.16	13.71	31.73	6.87	5.46
Inventory investments	- 2658.24 (6)	76.37 (1)	36.76 (1)	- 158.65 (6)	4.22 (5)	5.20 (5)
	(0)	10.07 (1)	00.70(1)	(0)		0.20 (0)
Net Exports Export of goods and	65.23		-213.04	-2.03		
services	(1)	44.94 (2)	(6)	(4)	-9.81 (6)	-56.37 (6)
Imports of Goods	3.79	4.22	5.46	23.96	35.25	28.83
and services	3.77	5.96	14.54	25.99	45.06	85.20
GDP	1.04	2.99	4.98	100	100	100

Table 3.3 Average real growth rates and contributions to real GDP growth of components of demand, 1984 – 2006

Source: SARB online database and own calculation

Investment demand, made up of private, public and inventories investments, ranks second largest of the components of demand after consumption. Decomposing investment demand into the subunits, table 3.4 reveals that the share of private gross fixed capital formation in aggregate demand increased from 9.71% in 1984 – 1993 to 13.02% in 2004 - 2006. On the other hand the share of the public fixed investment declined during the same period and its growth rate also lagged behind the growth rate of the private fixed capital formation (see table 3.3). Inventories investments represent the smallest and the most volatile part of all investments subcategories in aggregate demand. At growth rates of 76.37% in the period 1994 - 2003 and 36.76% in 2004 - 2006, the growth in inventories investment was not strong enough to significantly affect the overall growth rate of the GDP as it contributed only 4.22% and 5.20% respectively to the GDP growth due to its very small share in the GDP.

	Share of each component in GDP (percentage)					
	1984 – 1993	1994 - 2003	2004 – 2006			
Final consumption by households	60.84 (1)	63.41 (1)	65.87 (1)			
Final consumption by general government	21.30 (2)	19.24 (2)	19.33 (2)			
Private gross fixed capital formation	9.71 (3)	11.08 (3)	13.02 (3)			
Public gross fixed capital	6.22 (4)	4.53 (4)	4.86 (4)			
formation General government	3.87	2.66	2.77			
Public corporation	2.35	1.87	2.09			
Changes in inventories	-0.81 (6)	0.74 (6)	1.20 (5)			
Net Exports	2.75 (5)	1.00 (5)	-4.28 (6)			
Export of goods and services Imports of Goods and	21.19	26.62	26.41			
services	18.44	25.63	30.70			
Expenditure on GDP	100	100	100			

Table 3.4 Relative shares of components of demand in GDP, 1984 – 2006

Source: SARB online database and own calculation

Net exports ranked the least after consumption and investments in terms of its shares in aggregate demand and contributed the least to the GDP growth rates since 1994. Net export grew at 44.94% between 1994 and 2003, but due to imports overtaking exports, it contracted sharply in 2004 -2006 with a negative growth rate of -213.04%. The low share of net exports in total GDP dampened its impact on the GDP growth rate despite the strong movements in its growth rate. In view of the fact that the expansion in the economy is not led by export growth, it can be argued that lack of tradable investment opportunities could be a binding constraint on the economy.

3.2.5 Investment, savings and FDI

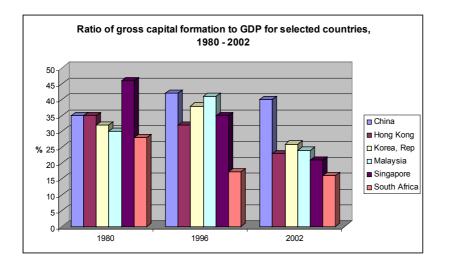
The country's stock of fixed capital has continued to grow, albeit at a very modest rate. The percentage of the GDP that goes to capital formation on the other hand remains largely stagnant at around 18.5%. Unlike the world's fastest growing economies such as China, Malaysia and Singapore, which invest more than 20% of their GDP in capital formation, South Africa's gross domestic investment on the average has consistently fallen below the 20 % mark (see fig. 3.3).

Table 3.5 Summary	of investments.	FDI and	savings	aggregates,	1984 - 2006
5	,	,	\mathcal{O}	00 0 ,	

	1984 -1993	1994 - 2003	2004 - 2006
Gross fixed capital formation growth	-2.87	5.15	10.66
(% change)			
Ratio of gross fixed capital formation	15.05	15.42	17.8
to GDP (%)			
Fixed capital stock growth (%	1.23	1.24	2.63
change)			
Ratio of gross capital formation to	18.5	18.5	18.8
GDP (%)			
Ratio of gross saving to GDP (%)	20.8	18.1	14.3
Ratio of foreign direct investment to	-2.2	0.4	4.5
GDP (%)			

Source: SARB online database and own calculation

Figure 3.3 Gross Capital Formation as percentages of GDP for selected countries



Sources: World Bank, 1998; World Bank, 2004; SARB online database

Savings within the economy, crucial for investment, have been on the downward path with the ratio of gross savings to GDP falling to 14.3% in 2004 – 2006 from 20.8% in 1984 – 1993. This compares poorly to those of the world's fastest growing economies of Asia. In 2005, for example, 14.5% of South Africa's GDP went into savings compared to 47.6% for China, 47.1% for Singapore and 31.2 % for Hong Kong (see fig 3.4).

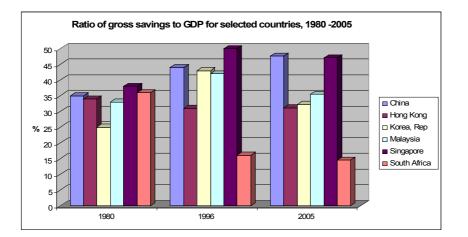


Figure 3.4 Ratios of gross savings to GDP for selected countries.

Source: World Bank, 1998; World Bank, 2004; SARB online database

The share of household savings in total savings for South Africa has also fallen substantially to a dis-saving of -2.51% in the period 2004 - 2006. The share of corporate savings, as shown in table 3.6, on the average has however increased making up about 90% of total savings within the economy in the period 2004 - 2006.

Table 3.6 Share of components of savings in gross savings (%), 1984 – 2006

	1984 - 1993	1994 – 2003	2004 – 2006
Household savings			
	36.38	14.86	-2.51
Corporate savings			
	63.62	85.14	89.83
Net savings by general			
government	-42.49	-46.73	-13.82

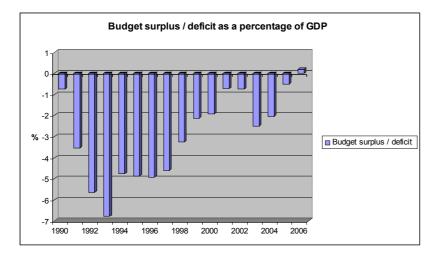
Source: SARB online database and own calculation

Foreign Direct Investment (FDI) has traditionally filled the gap between domestic savings and investment requirement for capital formation. In 2006, 6.4% of total gross domestic formation was financed by the inflow of foreign capital compared to 1.7% in 1995. The increase in global liquidity and the opening up of the economy after political reform contributed to the inflow of foreign capital into South Africa. The acquisition of substantial interests in local companies by foreign investors such as the privatisation of Telkom in 1997; the buy-out of the De Beers minority shareholders, the Anglo American company, in 2001; and the purchase of a substantial holding in ABSA Bank in 2005 by the Barclays bank accounted for a substantial part of the inflow (SARB, 2005).

3.2.6 Fiscal and monetary developments

Government fiscal policy since 1994 revolves around the reduction of the budget deficit to about 0.5% of GDP through reduction of government consumption expenditure as a percentage of GDP; the avoidance of a continuous increase in the overall tax burden; and finally the reversal of the decreasing public investment (Strydom, 2000; Abedian, 2005).

Figure 3.5 General Government budget balance, 1990 – 2006



Source: SARB Online database

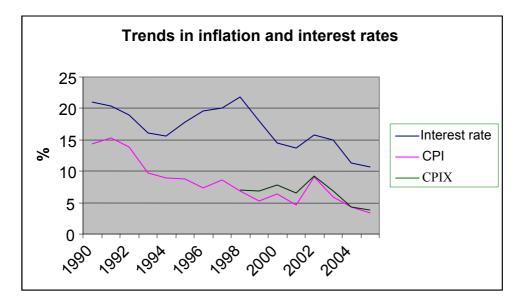
Improvements in tax administration and a stricter expenditure control in government spending facilitated the turn around of government finances from a budget deficit of 6.79% of GDP in 1993 to a surplus of 0.19% in 2006, and the ratio of the national government debt to GDP declining from 50% in 1995 to 33% in 2006.

The M3 representing the broad money supply increased from 244.2 million rand in 1994 to 1.3 billion rand in 2006. The growth in money supply along with the increase in demand for credit led the reserve bank to hike interest rates beginning from 1994, which peaked at 24.5% in 1998. Generally, the country witnessed a gradual decline in the inflation rate between 1994 and 2006 after a period of double-digit inflation. The

significant appreciation of the rand, prudent fiscal and monetary stance of the government, and the moderate wage settlements kept inflation within the target range of 4-6 percent until late 2006.

The reserve bank adopted the policy of inflation targeting as the centrepiece of its monetary operations in 2000 after shifting from the strategy of money supply guidelines (du Toit, 2002: 46). The use of interest rates as the central anchor of the inflation-targeting framework has been criticised for pulling down the pace of growth in output and employment in the economy (Pollin, Epstein, Heintz and Ndikumana, 2006).

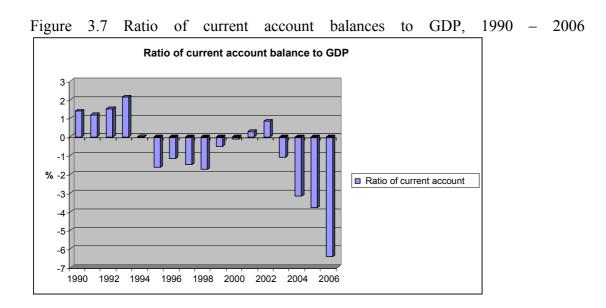
Figure 3.6 Trends in inflation and interest rates



Source: Computation based on data from StatSA online database (various years), IMF /UNSD (various years)

3.2.7 External trade and exchange rate

South Africa's current account deficit has been on the rise and reached 6% of GDP in 2006. The increase has largely been due to the sudden upsurge in consumption by the middle class and the appreciation of the local currency (Frankel, Smit and Sturzenegger, 2006). The global commodity boom and the emerging market boom boosted the local currency. Furthermore, as foreigners invest in South African equities, the rand prices of equities were pushed up, and this inadvertently led to the appreciation of the local currency. On long term basis the exchange rate of the rand has been relatively stable since 1994 except for an episode of rapid depreciation in the later part of 2001 on account of speculative attack on the currency (Hodge, 2005).



Source: SARB online database

The value of South Africa's international trade has continued to rise since 1994. Exports, consisting mainly of primary commodities such as gold, diamonds, platinum, coal and iron ore grew by 71% from R181, 238 million in 1994 to R311, 195 million in 2006, with the share of manufactured goods in total export also improving. Similarly, imports made up of mainly capital goods, raw materials and high technology goods grew by 126% from R174, 377 million to R393, 687 million within the same period (SARB online database). Ndlela & Nkala (2003) argue that

the predominance of primary goods in South Africa's export trade is a sign of structural weakness of the economy and makes the country highly susceptible to instability in global commodity prices. In spite of the boom in the commodity market in recent times, the country's terms of trade has deteriorated as increases in global prices of imported oil have surpassed the increases in the prices of South African mineral exports.

3.2.8 Human capital development and employment performance

The development of the country's human resources base has continued to attract substantial funding from the government. The fund committed to education and health needs keeps on growing in absolute terms. Health spending by the government in real terms increased from 14,475 million rand in 1994 to 39, 635 million rand in 2004 representing a 174% increase on the 1994 spending. Similarly, education spending between the same period rose by about 177% from R29 756 million to R82, 556 million. The share of education and health in the total government spending averaged 20% and 9.6% respectively in the period 1994 - 2004 (SARB online database).

Notwithstanding the sharp increase in educational spending, enrolment ratios in the country's educational institutions have been more or less constant but for very marginal changes as revealed in table 3.7. The temporary upsurge in the ratios recorded in 1996 could be attributed to the enthusiasm caused by the opening up of the educational system to people of all races.

Table 3.7 Enrolment ratios at primary, secondary and tertiary educational levels (%)

	1991	1996	1999	2002	2004
Primary (NER ⁴)	90	n/a	94	90	89.4
Secondary (GER ⁵)	69	94	89	90	90
Tertiary (GER)	12	19	14	15	15

Sources: UNESCO Institute for Statistics online database; World Bank, 1998; World Bank, 1999; World Bank, 2004; WEF, 2006.

The comparatively low level of enrolment in tertiary institutions feeds into the employment performance of the country. The contraction in the primary and secondary productive sectors of the economy has led to the shedding of jobs in those sectors. On the other hand, the expanding services sector due to its nature requires highly skilled individuals and has not been able to absorb the mass of low skilled individuals disengaged from the mining and the manufacturing sectors (Rodrik, 2006).

	1970 -1979	1980 - 1989	1990 - 1999	2000 - 2006
Public Authorities	4.93	2.3	-0.57	0.16
Private Sector	2.73	2.7	-0.17	0.40
Non - Agricultural				
sector	3.16	2.6	-0.26	0.34

Table 3.8 Employment growth rates for selected sectors of the economy

Source: SARB Online database

The decade 1990 – 1999 particularly witnessed a negative employment growth rate in almost all the sectors of the economy (see table 3.8). The contributing factors include the pre - existing substantially unused capacity by many firms, the reduction in the number of workers as part of cost-cutting strategies to enhance international

⁴ Net enrolment ratio (NER) is the number of pupils in the theoretical age group who are enrolled expressed as a percentage of the same population

⁵ Gross enrolment ratio(GER) is the number of pupils enrolled in a given level of education regardless of age expressed as a percentage of the population in the theoretical age group for that level of education

competitiveness in the face of globalization, shortage of skills and the increasing rate of capital intensity in production. It has also been suggested that the increase in wages because of trade unions agitations, aggravated by the minimum wage policy and affirmative action legislations also dampened the demand for labour in recent times (Wakeford, 2004).

3.2.9 Factor productivity contribution to economic growth

Productivity remains one of the main drivers of output in the economy. du Plessis and Smit (2006) report that total factor productivity accounted for the growth in output between 1995 - 2004 overtaking the contribution of labour which was dominant in the preceding decade. See Table 3.9 below.

Number	Period	Output growth	Capital contribution	Labour contribution	TFP
Without Human	1985 – 1994	0.8	0.45	0.63	-0.28
Capital	1995 - 2004	3.0	0.62	0.62	1.76
Labour adjusted by	1985 - 1994	0.8	0.45	1.11	-0.76
years of schooling	1995 - 2004	3.0	0.62	0.88	1.50
Labour adjusted by	1985 - 1994	0.8	0.45	1.49	-1.14
skill level	1995 - 2004	3.0	0.62	0.95	1.43

Source: du Plessis and Smit (2006)

The rate of increase in real GDP exceeded the rate of increase in the total real fixed capital stock for most of the period since 1994 except in 1998, and this was the case in all industries except mining. This implies that capital productivity is on the rise as a lower quantity of capital stock is absorbed in the production of increasing outputs. Similarly, productivity of labour has been positive since 1993 from a background of wide swings in productivity in the 1980's partially on account of recurrent industrial unrest and political crisis during the previous regime. Growth in labour productivity averaged 0.5% between 1994 and 1999 and 2.37 % between 2000 and 2006.

Increasing capital intensity of production, notwithstanding the abundant labour in South Africa, is one of the reasons for the resurgence of productivity in the manufacturing sector in recent years as labour productivity is usually higher in the capital-intensive sector (Natrass, 2001).

3.3 Post 1994 economic growth framework

At the onset of the new political order in 1994, South Africa because of its past political history had evolved to become a country of two nations. The first nation is a modern state, comparable to the advanced nations of the world, well resourced in terms of its exposure to advanced levels of financial, technological, communication and transportation infrastructure; and the second nation, a marginalized economy, characterized by limited resources, lack of access to economic opportunities and the absence of infrastructure.

Generally, the economy was beset with an array of problems including a stagnant GDP growth, a falling *per capita* GDP, falling investment and savings, a declining formal sector employment, insufficient capital inflows and an investment climate that was clearly not attractive to external investors (Stals, 1995; Dobson, 2002). The economic growth rate of around 3%, which was just one percent above the population growth rate of 2% during 1994 - 2004, was not considered adequate for a significant improvement in living standards (Pollin *et al.*, 2006).

The major challenges facing the new multi racial democratic government in 1994 revolved around how to integrate the first and second economies, increase economic growth, eliminate or reduce economic inequalities and redress the skewed distribution of wealth that existed because of the past exclusion of a majority of the population from gainful economic activities. The government devised successive programmes to stimulate economic growth and address the identified problems. The programmes in successive order include the Reconstruction and Development Programme (RDP); Growth, Employment and Redistribution (GEAR); Micro - Economic Reforms Policy of 2002; and the Accelerated and Shared Growth Initiative for South Africa (ASGISA).

3.3.1 The Reconstruction and Development Programme (RDP)

The RDP adopted in 1994 provided a broad outline of the new government's social and economic policy. It had as its core objective the fulfilment of the basic needs of all South Africans and the stimulation of long-term growth of the economy (Lundhal, 1999:54). The programme aimed at reconciling economic development, which is essentially meeting the needs of the South African people, with economic growth, a desire of the capital class (Hjort & Ramadiro, 2004).

The RDP focused primarily on the establishment of an environment that is conducive for an increased rate of private investment. The government intended to achieve a successful RDP and at the same time avoid any damaging challenge to the capitalist class that had amassed large amounts of wealth during the previous political order. The programme acknowledged the potential of the capitalist class to partner with the new state to provide finance and skills to propel the attainment of RDP objectives (Hjort & Ramadiro, 2004). In line with its commitment to respect private ownership of the means of production, the financing requirements for the RDP were to be met through taxation, government borrowing, privatisation of public enterprises and foreign aid (ANC, 1994). Furthermore, the programme outlined broad strategies to be implemented in order to facilitate the development of the industrial and trade sectors which were considered as being crucial to the economic growth process. They included the encouragement of faster technological development, elimination of barriers to effective competition and promotion of trade liberalisation. The RDP also advocated for greater access to education and support for small and medium – sized enterprises as a means of increasing the productivity of the South African economy and its ability to compete globally (Lundhal, 1999:54).

The success of the programme lies specifically in its ability in providing political stability in the country at a time of major political transformation. This, according to Terreblanche (1999), resulted in private enterprises being able to generate a solid profit and thus achieve an impressive rate of return on their investments. Terreblanche maintains that the success of the programme was limited by the poor conception of the programme and the largely utopian and unrealistic targets set for the programme was constrained by fiscal and organisational challenges. The failure of the programme to attract FDI and boost fixed domestic investment, coupled with the global instability in the emerging markets and the Asian crisis, led to the establishment of the GEAR framework in 1996 as a replacement.

3.3.2 The Growth, Employment and Redistribution (GEAR) policy

The GEAR policy was formulated in 1996 first as a follow-up on and later a replacement of the RDP. The policy framework had a clear goal to stimulate the GDP growth to 6% and facilitate the creation of 400,000 jobs annually by the year 2000. These targets are hinged on the attainment of a 10% rise in non-gold export; an average of 12 % growth in private sector investment between 1995 and 2000; a public sector investment annual growth rate of 10% by 1998; gross domestic savings - GDP ratio of 22%; and gross domestic investment at 26 % of GDP ($\Re_{3}\Re_{1996}$).

The policy programme identified certain binding constraints to economic growth in South Africa that needed to be addressed. These included the currency volatility and the inappropriate level of the exchange rate; inadequate logistics and the high cost of doing business due to infrastructure investment backlog; and essential skills shortages. Other constraints identified included high level of entry barriers to industry, limited competitions and high cost of key inputs in the production process; excessive and multiplicity of regulatory requirements and compliance issues; and deficiencies in the state capacity, organisation and leadership (\mathfrak{FSF}_{1996}).

The policy framework proposed specific strategies to be implemented in addressing the constraints identified. These included the reduction of budget deficit to boost business confidence and encourage investment in the economy; the implementation of tight monetary policy through high interest rates in a bid to keep inflation low; and maintaining the value of the rand. Furthermore, the government was to promote trade liberalisation by removing all obstacles to trade, and reduce tariffs to keep inflation low and make South African companies more competitive and productive.

Other strategy propositions included the removal of exchange controls in order to attract investments into the country; increased but regulated flexibility of the labour market; improved productivity through ensuring that increases in wages do not exceed increase in labour productivity; education and training of the workforce to increase their productivity and attract more investment; and finally the restructuring towards privatisation of public assets that are not considered strategic to warrant government involvement (RSA, 1996; Lundhal, 1999: 102).

The GEAR policy has been credited for its success in ensuring a degree of macro economic stability within the country as demonstrated by the reduction of the fiscal deficit to a target level and the moderation in inflation growth rate (Nattrass, 2001). Other successes recorded by the programme included a modest improvement in the economic growth rate; a reduction in income inequality; and moderate improvements in exports performance and the inflow of Foreign Direct Investment (FDI) (Fine and Padayachee, 2001: 270 - 74).

In spite of its relative success the GEAR growth model has been criticised on the basis that it was not backed by any empirical evidence for its suitability for the South African context since no solid research on it was conducted (Naidoo, 2001). Similarly, the assumptions on which most of the strategies were based are regarded as faulty. For example, Nattrass (2001) points out that the model assumed that investors would respond well and quickly to a lower budget deficit. Contrary to expectation, the drop in deficit was largely accompanied by a sharp increase in real exchange rate, sluggish private investment, and employment and output performances considered below the set targets. Nattrass (2001) concludes strongly that the GEAR strategy 'exercised a major, and independently negative impact on growth and investment'.

Other criticisms of GEAR concern its failure to guarantee the commitments of private investors to the country with many of the country's major conglomerate such as Anglo-American moving their primary listing overseas (Fine and Padayachee, 2001: 270 - 74). The fall in output and employment, particularly in the textile and clothing industry, as a result of the abolition of foreign exchange control and the lifting of restrictions on import is equally cited as part of the shortcomings of the GEAR policy framework. Furthermore, it is argued that the excessive focus of GEAR on macroeconomic stability to the detriment of human capital investment is a serious oversight in the formulation of the policy (Terreblanche, 1999).

3.3.3 Microeconomic reforms - 2002

The limited success achieved by GEAR prompted the initiative for microeconomic reforms of 2002 as a means of stimulating further growth in output at the firm level. The microeconomic reform strategy as in previous strategies seeks ways to remove obstacles to faster economic growth. Its objectives included the deepening of the structural changes in the economy with a view to increase the level of savings, investments and job creation; the strengthening of the institutional capacity to deliver services and products that will facilitate social and economic development; and the improvement in the overall efficiency of the economy (Dobson, 2002).

Microeconomic constraints identified in the economy included inefficiency and the lack of competitiveness amongst firms due to the tariffs charged by some of the state - owned enterprises; inadequate basic infrastructures such as roads and communications especially in the underdeveloped sections of the country; and mismatch in the supply and demand for labour as a result of low levels of skills and education of the labour force. Inadequate technology base in the economy was similarly identified as a serious challenge, due to the low *per capita* expenditure on information technology; inadequate investment in research and development; inadequate technology infrastructure; and a low level of awareness of science by the populace (Dobson, 2002).

In addressing the above-mentioned constraints, specific measures were proposed. In the area of technology in particular, the government proposed to increase the funding for strategic areas such as biotechnology, strengthen the research activity in the private sector, address the issues of intellectual property and indigenous knowledge, and establish strong centres of excellence in tertiary institutions. Other proposed interventions included increased funding to enhance human resources development; improving access to finance through the coordination and subsequent integration of existing financing vehicles such as Khula and the National Empowerment Fund; and the promotion of and support for alternative financial institutions, second tier institutions and community based saving schemes. To improve the infrastructure the government proposed putting in place an integrated system of planning and implementation encompassing national departments, parastatals, and provincial and local governments (Mphahlwa, 2004).

The microeconomic reform strategy has achieved a measure of success. Vickers (2003) identifies certain key microeconomic reforms achieved as including the

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negotiation of a new labour relations dispensation with the trade unions, the introduction of new legislations and implementation framework in respect of skills development such as the National Skills Fund and the Sector Training Authorities, and the development of a new small business development institutional framework integrating all the existing institutions into a single unit. Hirsch (2004) shares the view that the micro economic reform is well on course as evidenced by the successful sector-specific strategies in the vehicle manufacturing and tourism industries. He however maintains that there is room for further improvements in view of the weak performances of the potential labour absorbing industries such as the clothing and textiles, footwear, wood and wood products, and food processing.

3.3.4 The Accelerated and Shared Growth Initiative for South Africa (ASGISA)

The government introduced the ASGISA programme to build on the limited success achieved by previous growth policy frameworks in meeting the targeted economic growth rate and new jobs creation (Mlambo- Ngcuka, 2006). According to Frankel, Smit and Sturzenegger (2006) the programme basically seeks to consolidate the gains of post transition economic stability and at the same time accelerate growth in order to create employment and improve the livelihoods of all South Africans.

The ASGISA strategy framework established certain specific goals and periods to achieve these. These included halving poverty from about one third of households in 2004 to less than one-sixth of households in 2014; halving unemployment from about 30% in 2004 to less than 15% by 2014; and finally achieving growth rates averaging over 4.5% between 2004 and 2009 and not less than 6% after 2010 (Mlambo – Ngucka, 2006).

The strategy framework for ASGISA is based on a diagnostic method of analysis. The method holds that there are certain common characteristics shared by all successful economies such as sound fiscal and monetary policies and management, and good governance. Similarly, the method acknowledges that each country faces specific challenges and constraints that are peculiar to it and which have the potential to inhibit its transition from a mediocre economy to a growing one (Mlambo – Ngucka, 2006). Hirsch (2006) argues that ASGISA represents a process that mainly emphasises those "critical path" issues that are necessary for shared growth which if left unaddressed will stop shared growth.

The main challenges and constraints identified within the framework, and which ASGISA aims to address include the imbalanced growth trajectory, with economic growth based on commodity prices, strong inflows and strong customer demand thus leading to the strengthening of the currency. These have made exports outside the commodities sector largely difficult and increased the country's potential vulnerability to world economies. Other specific challenges identified within the economy included barriers to entry and competition in some sectors of the economy; the relative volatility of the currency; regulatory environment and burden on the SMMES; shortage of skilled labour and disjointed spatial settlement patterns; and seemingly deficiencies in state organization and capacity (Hirsch, 2006)

The ASGISA policy has equally attracted a lot of criticism. Frankel, et al (2006) observe that ASGISA relies too heavily on capital accumulation and that there is little evidence to indicate that local firms will be committed to expand investment to the magnitude required. They argue that a reliance on foreign savings could widen

external imbalance and induce vulnerability of the current account. On the other hand, a reliance on domestic resources may lead to a rise in interest rate and the 'crowding out' of other investments (ibid).

Furthermore, the policy emphasis on the role of the state in spearheading the growth process may be seen as an evidence of a weakness in conceptualising the ASGISA growth strategy. This is clearly in contradiction to the often referred inadequate planning, coordinating and administrative capacity of the government machinery. Similarly, the policy orientation of the ASGISA growth strategies as it concerns education and skills development appears too narrow. The issue of improvements in basic education obviously is not given the attention it deserves as a critical foundation for the development of skills.

3.4 Conclusion

South Africa enjoyed a moderate economic growth between 1994 and 2006. This was a turn around from the poor growth recorded in the preceding period. It is a widely echoed sentiment that the growth performances were positively influenced by the country's sound macro economic management. Several concerns, however, have emerged in respect of the current growth trajectory and the underlying macroeconomic fundamentals.

Domestic demand has been growing at what is deemed as an unsustainable rate and this has led to the widening of the current account deficit. Furthermore, the economy is experiencing an inflation growth outside the target range. The management of the movements in the real exchange rate by the SARB has been minimal since it focuses more on inflation targeting and the use of interest rates in correcting any deviation from the targeted rate. This has resulted in interest rates hike. In addition, job creation within the economy has been minimal and is not in line with the modest economic growth achieved. The contractions in the primary and secondary productive sectors of the economy further worsen the employment prospect. All these clearly indicate the need for a continuous review of the growth policies and strategies in order to pro-actively manage the underlying economic dynamics.

CHAPTER 4

POLICY OPTIONS FOR FUTURE GROWTH STRATEGIES

4.1 Introduction

This chapter presents and discusses some broad policy options that might provide a framework for the formulation of future growth strategies and a basis for the review of current policies. Many of the policy suggestions in the chapter are linked to the prescriptions that are contained in the various literature on economic growth studied. Others arose directly from the observed trend in the country's economic structure and performance, and the underlying macro - economic fundamentals. The policy discussions also take into consideration the criticisms and the shortcomings identified in previous and present growth strategies.

4.2 The Main Priority Areas

4.2.1 Investment, Savings and Foreign Direct Investment (FDI)

Most of the government's past and present growth strategies place a huge emphasis on increasing investment as a prerequisite for economic growth. This emphasis is in line with the thinking of most economic growth theorists. The South African investment performance has however not improved to the expectation of policy makers. Studies reveal that the ratio of investment/GDP ratio has remained below 25%, with the effect on the overall rate of savings discouraging. The FDI has continued to fill in the shortfall but has thus far remained insufficient.

Specific policy consideration to boost investment may include the review of the existing system of loan guarantees. By expanding the loan guarantees system and relaxing the qualification criteria, the government would be easing the constraints on

the ability of firms to access finance for investment purpose. Similarly, the scope of the lending activity and focus of the existing development financial institutions should be widened substantially. Their mandate should be refocused mainly towards providing adequate finance for new business opportunities and ideas that can stimulate further investment. Furthermore, the government can give directions to financial institutions in channelling funds to identified growth sectors, particularly in the services industry. This may be done by mandating financial institutions to channel a minimum stipulated percentage of their loan assistance to the identified industrial sectors (IMF, 2008).

The emphasis on consumption over investment by South Africans is a clear confirmation of minimal domestic savings. Policy initiatives in this regard may focus on a wide range of incentives to encourage savings. Specifically, the government must take a drastic step to limit the transaction costs associated with banking services. This has to be done taking into consideration the need to respect free enterprise. Similarly, the transaction costs incurred on investments with insurances and pension funds need to be revisited (Gross, 2001). Furthermore, traditional instruments for mobilisation of savings such as stokvels need to be encouraged and assisted to transform into legally recognised cooperatives (Bernanke, 2004).

Ensuring a continuous inflow of foreign capital is crucial in the short to medium term. Policies must be evolved that would encourage foreign direct investment into the country. The privatisation of non-core state assets must be reconsidered as a vehicle for the promotion of foreign direct investment. The existence of tradable investment opportunities will go a long way in stimulating additional net inflow of foreign capital. In this regard, a stable economic and institutional environment would sustain international investors' confidence in the country and simultaneously boost local investments (Gelb et al, 2007).

4.3.2 Skills development

Aligning the skills requirement of the economy to the broad economic growth agenda of the government requires that the government at all levels and the stakeholders in the country develop a policy framework that link human capital development to current labour market (ILO, 2008). The declining enrolment in tertiary institutions and a shift in the structure of production towards high skill services industry call for a policy shift in line with the unfolding trend. An increase in government spending in education, particularly in the areas of basic mathematics and physical sciences, will lay a solid foundation for increasing the skills base of the country. The extra funding injected can also be used to train more educators and to establish specialised institutions in the mathematical and physical sciences subject areas (MacCormick, 2008).

It is noteworthy that the government is moving in the right direction by collaborating with the private sector through the establishment of the Sector Education and Training Authorities (SETAs). Certain policy reforms with regard to the SETAs will need to be put in place to enhance their ability to achieve the goal of developing skills by making them more flexible and responsive (OECD, 2008 :130). Specifically, firms should be allowed to freely determine their membership of any SETA by allowing ease of entry and exit. This will provide a mechanism for correction of problems, and stimulate a robust competition amongst the SETAs in meeting the skill requirements of their member firms.

Another important area of policy consideration is the immigration of highly skilled workers (NZ, 2004:69). The government may consider relocating the processing and determination of work permits from the home affairs department to the department of trade and industry. The department in line with its mandate to promote economic growth will be able to align the skilled immigrants policies to the country's needs. The home affairs department may be mandated the responsibilities of only documenting and issuing work permits. It may also be necessary to put in place an easy and structured mechanism for issuing work permits to immigrant - applicants who are in possession of postgraduate degrees from reputable institutions. Another aspect of the skill policy may entail putting in place appropriate measures to stop the emigration of highly skilled whites while at the same time encouraging the return of skilled individuals that have emigrated. The review of the affirmative action policy may help in this direction (Ehle, 2006).

4.3.3 Infrastructure development

In view of the massive infrastructure requirements of the country, it is important that private investments in the provision of infrastructure should be encouraged. This can be done through the provision of several incentives like tax breaks and removal of constraining administrative bureaucracy (William, 2006). Khan & Khumar (1997) argue that private capital is more productive than public capital. This argument supports the implementation of innovative public – private partnership arrangements such as asset leasing, contract management and concessioning to fully realise the economic benefits of infrastructural investments.

4.3.4 Macro economic policy

Broadly, the current macroeconomic strategy of the South African government particularly the fiscal prudence and inflation targeting has provided much needed stability in the economy. However, its impact on savings within the economy needs to be reconsidered. In view of this, it may be necessary to reform the fiscal policy so that it could foster greater contribution to national savings and bring down the growth of domestic demand. This could be achieved by targeting a larger fiscal surplus, which in turn will enable the SARB to achieve the targeted inflation regime with a lower interest rate. The turn around in government finances as indicated by the budget surplus and the eradication of government borrowing requirement achieved in 2006 would have to be sustained as a sharp reversal in macro economic outlook often send conflicting signals to investors (Petrakos et al, 2007).

The policy of inflation targeting on the balance is a well thought out one because of the widely reported negative impact of high price level on the growth process. It is well documented that '...high inflation......distorts decisions that individuals make about investment, savings, and production; leading eventually to slower economic growth' (Saunders, 2003). The dilemma here would be the need for the policy authorities to reconcile the use of interest rates as a tool to contain inflation with the need to stimulate investments within an environment of low interest rate. The SARB may need to review the operations of the inflation-targeting policy, and be more responsive to fluctuations in the real exchange rate as this tends to impact on the level of inflation. Policy options may include reviewing the target band of inflation in line with economic realities (du Plessis, 2005).

The growing current account deficits points to the fact that domestic demand is too high for the country's productive capacity. In broad terms the government needs to review the direction of the current growth policy by pushing for a supply oriented approach rather than a demand oriented one such as improvements in the infrastructure and skill base of the economy (Abedian et al, 2006). The large and growing current account deficit in recent times poses several challenges to the economy. Whilst South Africa has been able to manage the situation through the continuous inflow of capital, a sudden stop of inflows as a result of, for instance, dampened demand for mineral commodities might precipitate a crisis for the country's external balance. It will thus be necessary to encourage the diversification of the exports base from primary products, and expand the capacity for manufactured exports (Ashafa, 2007).

In addition to the earlier mentioned risk posed by instability in exchange rate to price levels, it equally poses a tremendous challenge to monetary policy formulation. Excessive appreciations may lead to some industries losing output and profit, and shedding jobs. A competitive and stable exchange rate will stimulate the channelling of resources into the export-oriented manufacturing industries. Policy formulation may focus on the building up of external reserves. Furthermore, the government may seek to minimise the share of the capital inflows that are short term and the attendant uncertainties and contagion risks that go with these (Einchegreen, 2008).

4.3.5 Trade policy

It is important that the country's trade policy remains focussed on the promotion of trade liberalisation. A high ratio of trade to GDP is generally good for economic growth as it reduces the frequency and the severity of currency crises (Kandiero &

Wadhawan, 2003). It also has the potential to stimulate FDI as well as give confidence to investors. Export friendly policies such as tax rebate as incentives to producers should be promoted and complex compliance issues discouraged. Perhaps, the authorities should also promote export guarantee schemes to accommodate small-scale businesses (Chemingui & Jabsheh, 2008; Oyejide, 2007).

4.3.6 Research and development

Increasing productivity at the firm level will require the lowering of costs and improving the level of efficiency of businesses, both of which to some extent depend on advancement in technology. Policies that promote at least minimal level of education and the general enlightenment of the citizenry will go a long way in influencing the acceptance of technical progress (NZ, 2004:73). Productivity at the industry level can further be improved through better technology, introduction of new ideas and better education and training. The government could put policies in place that promote subsidising of Research and Development in the private sector, expanding access to higher education particularly in the areas of science and technology, and improving cooperation between research institutes and enterprises. Greater effort should also be directed towards experimental research rather than laboratory based research. This will greatly improve the linkage between scientific and technological research, and economic activity at the firm level (Hu et al, 2007).

4.3.7 Role of competition and regulatory framework

At the micro level any attempt to improve productivity will equally involve increasing the level of competition, thus improving efficiency and thereby lowering input costs (NZ, 2004:71). Policy initiatives around the standardisation of regulatory framework for price determination by the publicly owned utilities and economic services

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industries such as Eskom, Transnet and Telkom may prove useful in this regard. More often than not prices are outcomes of a negotiated process with big customers thereby putting small industry users at a dis-advantage by effectively cross subsidising large users and weakening their competitive positions.

Similarly the existence of 'natural monopolies' in certain industries constitutes an obstacle to the lowering of costs and improvement in productivity. For example, the practice of import parity pricing by which local products' prices are determined based on international prices rather than domestic production cost is not conducive for local economic growth. A policy framework needs to be put in place to discourage the practice. It is crucial that all stakeholders such as business, consumers and government develop a sense of awareness of the importance of fair competition for the country's economic well being. Platforms should also be created to generate awareness, and encourage debates and inputs into the competition policy process (Cuts, 2008).

The government needs to strengthen the competition regulatory institutions and the anti-competition laws. Greater competition amongst firms will go along way in improving resources allocation amongst competing uses and serve to improve technical efficiency. More vigorous competition will encourage innovation and enhance better corporate management, and at the same time will help to contain inflationary pressures as excessive margins are depressed (OECD, 2006:16). Proactive review of anti-competition laws in line with the determination of the competition tribunal will assist in this direction (Teo, 2003).

4.3.8 Public service and administration

Recent growth strategies such as the GEAR and ASGISA place a great emphasis on the role of the public service in facilitating the economic growth process. It is thus important that policy formulation by the public service must be transparent, stable and predictable to the extent that they allow private investments to be planned and responses to be designed for anticipated changes in the policy environment. In addition, policy implementation must be transparent and credible to engender confidence in the country's long-term economic viability and its political stability. Political institutions must be seen to ensure good governance, promote fairness and justice, discourage crime and graft, and promote an environment conducive for the smooth functioning of institutions that support economic growth (Crase & Dollery, 1999).

Improving the capacity of the public service to deliver support and excellent service to private initiatives is also crucial. In addition to the training and retraining of public servants, it may be a worthwhile venture to put in place a form of certification standards for departments whose primary responsibilities are crucial for private sector economic initiatives. Such may include Companies and Intellectual Property Registration Office (CIPRO) and the South African Revenue Service (SARS) amongst others. This will lead to the gradual improvement of government services over time (Bertucci, 2006).

4.3.9 Labour dispensation

At the micro level, the contribution of labour legislations and the trade unions to the slow absorption of labour in the production process must be critically examined. Against the background of employers' position on the existence of a myriad of labour regulations that impose additional compliance requirements on firms, the government must review the laws without necessarily exposing workers to unfair labour practices by employers (Bhorat & Lundall, 2004). The trade unions must also be taken into confidence in government policy formulation to stem the increase in wage agitations which affect the profitability of firms and their ability to absorb labour, thereby denying the country the potential contribution of labour to economic growth especially considering its abundance in South Africa (NZ, 2004:66).

4.3 Conclusion

The main thrusts of all growth strategies revolve around putting in place policies that ensure macro economic stability, enlarge the productive capacity of the economy while at the same time stimulating a higher productivity at the firm level. On the supply side, the expansion of the quantity of the physical and human capital available within the country is crucial to increase the pace of economic growth. It is also necessary to continuously improve the quality of these resources in order to increase their productivity. On the demand side, the expansion of aggregate demand would stimulate the expansion of the productive capacity in the long run in response to demand. All these bring to the centre of the debate the capacity of the state, and the ability and willingness of policy makers to influence and provide a conducive environment for economic growth.

CHAPTER 5

SUMMARY AND CONCLUSION OF THE STUDY

5.1 Summary of the study

South Africa has achieved a moderate but encouraging economic performance since the advent of the new political dispensation in 1994. The GDP grew at an average rate of 2.99% in the first ten years of the new democracy, and 4.98% over the following three years. Other indicators of economic performance such as the GDP *per capita*, GDE and GNI also showed robust results.

The study confirms that the South African growth path is in line with most of the developed countries that have seen an increase in the share of services in their GDP, and a declining role of the primary sectors. The tertiary sector, in line with its increasing share in the economy, enjoyed on the average increasing growth rates that exceeded the overall economic growth rates, and remained a key driver of economic growth in South Africa.

Literature on economic growth states that growth results from either the increase in the quantity of resources utilised in the production process or increase in the efficiency of the resources, thereby resulting in more output from a fixed quantity of input (Mehta, 1970: 90).

The South African macro economic environment has been relatively stable thus providing a conducive atmosphere for growth. Budget deficit was eliminated in 2006 based on government's fiscal discipline and financial prudence. Similarly, consumer price inflation came down from the high figures of around 18% witnessed in the late 1980s. The rand exchange rate was relatively stable for the better part of the period under review as a result of moderate foreign capital inflows. However, the firmness in the exchange rate gave rise to undesirable consequences as the country witnessed an acceleration of the growth of import over export.

Fixed capital formation maintained a positive growth since 1994, though its ratio to the GDP continues to decline and is less than the ratio for the world's fastest growing economies such as China, Malaysia and Singapore. The infrastructure component of the fixed capital formation however performed slightly better. As with capital formation, the ratio of domestic savings to the GDP continued to decline, and was lower than the ratio for world's fastest growing economies earlier mentioned. FDI on the other hand played a crucial role in filling the investment – savings gap in the economy.

Skills shortages continue to pose problems in the economy. The increased share of the tertiary sector in the economy requires a new category of skilled workers to meet the labour requirement. The trend towards capital-intensive production had made more capital available for labour to work with thus the need for more skilled labour.

The study reveals further that recent economic growth performance was consumption driven with household consumption contributing most to the GDP growth. This is partly responsible for the country's widening current account deficit. The share of net export in the GDP also shrunk and was negative between 2004 and 2006 with imports exceeding exports.

To meet the challenges of growth the government put in place strategies and policy measures designed to take into account the impact of the aforementioned factors, namely low level of investments and saving, skills shortage, inadequate infrastructure, and shrinking exports on economic growth. These policy measures included the RDP, GEAR, Micro –Economic Reforms and lately the ASGISA.

The study also presents some priority areas for further growth strategies. To stimulate savings in the economy, it suggests that the transaction cost associated with banking services and the multitude of taxes on insurance and pension payouts be reviewed. In addition, the traditional instruments for mobilisation of savings such as stokvels need to be encouraged and assisted to transform to legally recognised cooperatives. It is further suggested that the privatisation of non-core state assets must be reconsidered as a vehicle for the promotion of foreign direct investment. Infrastructure development through the provision of several incentives like tax breaks and removal of constraining administrative bureaucracy, implementation of innovative public – private partnership will contribute to the stimulation of investment in the economy.

In the area of skills improvement, it is suggested that the government should increase its spending on education, particularly in the areas of basic mathematics and physical sciences. Firms should be allowed to freely determine their membership of any SETA by allowing ease of entry and exit in order to increase competition and efficiency of the SETAs. The government may also consider relocating the processing and determination of work permit from the dysfunctional home affairs department to the department of trade and industries. Similarly, there is the need to put in place an easy and structured work visa (permit) issuing mechanism, and stem the emigration of skilled workers.

Other policy suggestions include making export tax rebate easily accessible and devoid of complex compliance issue; expansion of the exports guarantee scheme to accommodate small scale businesses; subsidising Research and Development in the private sector; and the standardisation of regulatory framework for price determination by the publicly owned utilities and economic services industries such as Eskom, Transnet and Telkom. The government may also put in place policies to discourage the practice of import parity pricing and strengthen the competition regulatory frameworks. In addition to the training and retraining of public servants, it may be desirable to put in place a form of certification standards for departments that are crucial for private sector economic initiatives.

5.2 Concluding remark

The subject of economic growth is a widely researched one with numerous recommendations and suggestions already documented. Abel and Bernanke (2005:211) indicate that there are no sets of magical formulas that can be used to guarantee a faster economic growth rate. They support their position with the argument that some countries are still poor despite the tremendous amount of literature and empirical research on economic growth.

The need to stimulate economic growth calls for policy makers to constantly evaluate progress made towards this desirable goal. The existing body of knowledge on economic growth serves to provide a framework within which policy orientation can be formulated and determined. However, the peculiar characteristics and

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circumstances of the South African economy indicate that a 'one size fits all' approach may not necessarily work for the country and policies that have been formulated and implemented in other countries may not deliver the desired result for the country.

It follows that most of the policy recommendations merely provide a broad framework within which further studies can be undertaken and sector specific policies can be designed. The economic environment is constantly changing and policies that are applicable at a period in time might need to be re-evaluated and reviewed at different stages of economic growth. Detailed policy formulation would thus require a continuous monitoring of developments in the economy in order to align policies to these developments, albeit within a broad framework guided by earlier empirical studies, the literature on economic growth, and patterns and trends identified by this study. It is hoped that the broad policy areas outlined in this study will provide further guidance for policy makers to review existing policies and strategies, and fashion out measures that would be relevant to the present and future growth requirements of South Africa.

LIST OF REFERENCES

ANC (African National Congress). 1994. *The Reconstruction and Development Programme: A Policy Framework*. [Online] Available from: www.anc.org.za/rdp/rdpall.htm. [Accessed: 2007-08-05]

Abedian, I. 2005. *Fiscal and Monetary Policy Management in South Africa 1994 – 2005*. [Online] Available from: http://www.aprm.org.za/docs/APROct05.pdf [Downloaded: 2006-09-11].

Abedian, I., De Wet, W. & Pitso, L. 2006. *Sustainable Macroeconomic Balance and the Implications for Monetary Policy in South Africa*. [Online] Available from: http://www.esaf.org/internet/Publication.nsf/LADV/89640885A90008694225729D00 3055BD/\$File/Abedian.pdf [Downloaded: 2009-05-25]

Abedian, I. & Standish, B. 1992. The South African economy: an historical overview. In: Abedian, I. & Standish, B. (eds.) *Economic growth in South Africa: selected policy issues*. Oxford: Oxford University Press.

Abel, A. B. & Bernanke, B.S. 2005. *Macroeconomics*. 5th ed. Boston: Pearson Addison Wesley.

Adelman, I. 1978. *Theories of economic growth and development*. California: Stanford University Press.

Agénor, P. 2000. The economics of adjustment and growth. California: Academic Press.

Aghion, P., Banerjee, A. & Piketty, T. 1999. Dualism and macroeconomic volatility. *Quarterly Journal of Economics*, **1**14(**4**):1359–1397. [Online] Available from: EBSCOHost: http:// ejournals.ebscohost.com/ [Accessed: 2006-05-04].

Appiah, E. N. & McMahon, W. W. 2002. The social outcomes of education and feedbacks on growth in Africa. *Journal of Development Studies*, 38(4):27-68.

73

[Online] Available from: Academic Onefile: http://oasis.unisa.ac.za/ [Accessed: 2007-05-7].

Arzeki, R., Ahmed, F. & Funke, N. 2003. Foreign direct investment and portfolio flows: is South Africa different? *Mimeo*. Washington DC: International Monetary Fund.

Ashafa, S. G. 2007. *National Revenue Funds – Their efficacy for fiscal stability and inter-generational equity*. Manitoba: International Institute for Sustainable Development. [Online] Available from: http://www.iisd.org/pdf/2007/trade_price_nat_rev_funds.pdf [Downloaded: 2009-05-29]

Barrel, R. & Pain, N. 1997. Foreign direct investment, technological change and economic growth within Europe. *The Economic Journal*, 107(445):1770 – 1786. [Online] Available from: JSTOR: http://oasis.unisa.ac.za/ [Accessed: 2006-08-12].

Barro, R. J. & Sala -i- Martin, X. 2004. *Economic Growth*. Massachusetts: MIT Press.

Bernanke, B. S. 2006. *Community Development Financial Institutions: Promoting Economic Growth and Opportunity*. Remarks at the Opportunity Finance Network's Annual Conference, Washington, D.C. on 1 November 2006. [Online] Available from:http://fraser.stlouisfed.org/historicaldocs/cbbb/download/65551/bernanke_20061 101.pdf [Downloaded: 2009-05-29].

Bertucci, G. 2006. *State Capacity Building for Economic Growth, Poverty Reduction and Social Equity: The Case of Peru.* [Online] Available from: http://unpan1.un.org/intradoc/groups/public/documents/un/unpan023840.pdf [Downloaded: 2009-05-29].

Blades, D. W. 1980. What do we know about levels and growth of output in developing countries? A critical analysis with special reference to Africa. In:

Mathews, R. C. O. (ed.) *Economic Growth and Resources*. Proceedings of Fifth World Congress of the International Economic Association held in Tokyo, Japan. Vol. 2. New York: St. Martin's Press.

Blanchard, O. 2003. *Macroeconomics*. 3rd ed. Upper Saddle (New Jersey): Prentice Hall (Pearson Education).

Bloom, D. E., Canning, D. & Sevilla, J. 2004. The effect of health on economic growth: A production function approach. *World Development*, 32 (1): 1-13. [Online] Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-11-24].

Bhorat, H. & Lundall, P. 2004. Employment, Wages and Skills Development: Firm-Specific Effects – Evidence from a Firm Survey in South Africa. *South African Journal of Economics*. 72(5):1023 – 1056.

Bosworth, B. P. & Collins, S. M. 1999. Capital flows to developing economies: Implications for savings and investment. *Brookings Papers on Economic Activity* (1):143-180.

Boyer, R. 2004. *The Future of Economic Growth. As New Becomes Old.* (The Saint-Gobain Centre for Economic Studies Series). Northampton (Massachusetts): Edward Elgar Publishing.

Caballe, J. & Santos, S. M. 1993. On endogenous growth with physical and human capital. *Journal of Political Economy*, 101(6):1042 – 1067. [Online] Available from: JSTOR: http://oasis.unisa.ac.za/ [Accessed: 2006-05-19].

Case, K. E. & Fair, R. C. 2004. *Principle of economics*. 7th ed. Upper Saddle River (New Jersey): Pearson Prentice Hall.

Casteleijn, A. 2001. *South Africa's monetary policy framework*. Presentation to the Conference on Monetary Policy Frameworks in Africa, Pretoria, September 17 – 19. [Online] Available from: http://www.reservebank.co.za. [Accessed: 2006-01-10].

Chandra, R. & Sandilands, R. J. 2003. Does investment cause growth? A test of an endogenous demand – driven theory of growth applied to India 1950 – 96. In: Salvadori, N. (ed.) *Old and new growth theories. An assessment.* UK Cheltenhan: Edward Elgar Publishing.

Chemingui, M. & Jabsheh, F. 2008. *The Role of Trade Policies in Economic Growth and Diversification in Kuwait.* Paper presented at the ERF 15th Annual Conference. 23rd – 25th November 2008. Marriott Cairo Hotel, Cairo, Egypt. [Online] Available from: www.erf.org.eg/CMS/getFile.php?id=1319 [Accessed: 2009-05-29]

Crase, L. & Dollery, B. 1999. *Economic Growth, Administrative Reform and the Ncholo Report in the New South Africa*. University of New England, School of Economic Studies. Working Paper Series in Economics. No 99-2 [Online] Available from: http://www.une.edu.au/economics/publications/ECONwp99-2.PDF [Downloaded: 2009-05-29].

Cuts, 2008. *Competition Policy and Economic Growth – Is there a Causal Factor?* Briefing Paper No. 4/2008. [Online] Available from: http://www.cutsinternational.org/pdf/CCIER-2-2008.pdf [Accessed: 2009-05-29].

Debelle, J., Masson, P., Savastano, M. & Sharma, S. 1998. Inflation Targeting as a Framework for Monetary policy. *Economic Issues*. No 15. Washington D.C.: International Monetary Fund. [Online] Available from: http://www.imf.org/external/pubs/ft/issues/issues15/index.htm [Accessed: 2009-05-29].

De Long, J. B. & Summers, L. H. 1993. How strongly do developing economies benefit from equipment investment? *Journal of Monetary Economics*, 32 (3): 395-415. [Online] Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-05-04].

De Mello Jr., L. R. 1997. Foreign direct investment in developing countries and growth: A selective survey. *Journal of Development Studies*, 34(1):1–34. [Online] Available from: Academic Onefile: http://oasis.unisa.ac.za/ [Accessed: 2006-07-22].

Denison, E.F. 1967. Why growth rates differ. Washington: The Brookings Institution.

De Wet, G. L. 1995. The prognosis for growth and development in South Africa. *South African Journal of Economics*, 63(4): 263 – 270.

Dobson, W. 2002. *A guide to the microeconomic reform strategy*. A discussion paper from the DTI of South Africa. May 2002. [Online] Available from: http:// www.info.gov.za/otherdocs/2002/mic_econ_ref.pdf [Downloaded: 2006-05-09].

Dornbusch, R. & Fischer, S. 1978. Macroeconomics. New York: McGraw-Hill.

Dornbusch, R., Fischer, S. & Startz, R. 1998. *Macroeconomics*. Singapore: Mc Graw – Hill Books.

Du Plessis, S. A. 2005. Proposals for Strengthening the SARB'S Inflation Targeting Regime. *South African Journal of Economics*, 73(2):337-354.

Du Plessiss, S. and Smit, B. 2006. *South Africa's growth revival after 1994*. [Online] Available from: http://www.ekon.sun.ac.za/wpapers/2006/wp012006/wp-01-2006.pdf [Downloaded: 2007-02-25].

Du Toit, J. 2002. *The Structure of the South African economy*. Rivonia: The South African Financial sector forum.

Easterly, W. & Rebelo, S. 1993. Fiscal policy and economic growth: An empirical investigation. *Journal of Monetary Economics*, 32(3):417 – 458. [Online] Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-02-24].

Ebohon, O. J. 1996. Energy, economic growth and causality in developing countries, a case study of Tanzania and Nigeria. *Energy Policy*, 24(5):447–453. [Online] Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-02-24].

Ehle, G. M. 2006. Skills Migration and Economic Development: A South AfricanCase Study. Paper presented at the annual meeting of the International StudiesAssociation, Town & Country Resort and Convention Centre, San Diego, California,USA[Online]Availablefrom:http://www.allacademic.com/meta/p100635_index.html [Accessed: 2009-05-29].

Eichengreen, B. 2008. *The Real Exchange Rate and Economic Growth*. Commission on Growth and Development Working Paper No. 4. Washington, DC: International Bank for Reconstruction and Development / World Bank. [Online] Available from: http://www.growthcommission.org/storage/cgdev/documents/gc-wp-004_web.pdf [Downloaded: 2009-05-29].

Eltis, W. 1984. *The classical theory of economic growth*. London: The Macmillan Press.

Evans, M. K. 2004. Macroeconomics for managers. Oxford: Blackwell Publishing.

Fallon, P. & Pereira de Silva, L. A. 1994. *South Africa: Economic performances and policies*. The World Bank Southern Africa Department Discussion Paper no 7. Washington D.C.: World Bank.

Fedderke, J. W. & Bogeti, Z. 2006. *Infrastructure and growth in South Africa: direct and indirect productivity impacts of 19 infrastructure measures*. Paper delivered at the Conference on Accelerated and Shared Growth in South Africa: Determinants, Constraints and Opportunities, Johannesburg, 18 – 20 October.

Fine, B. & Padayachee, V. 2001. A sustainable growth path. In: Coetzee, J.K., Graaf,J., Hendricks, F. & Wood, G. (eds.) *Development, theory, policy and practice*.Oxford: Oxford University Press.

Fischer, S. 1993. The role of macroeconomic factors in growth. *Journal of Monetary Economics*, 32(3): 485 – 512. Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-05-04].

Fourie, F. C v N. 1997. How to think and reason in Macroeconomics. Capetown: Juta & Co.

Frankel, J., Smit, B., & Sturzenegger, F. 2006. South Africa: Macroeconomic Challenges after a Decade of Success. *CID Working Paper No. 133*. [Online] Available from: http://www.treasury.gov.za/publications/other/growth/02-Macroeconomic%20Policy/01-SOUTH%20AFRICA%20-%20NACROECONOMIC %20CHALLENGES%20AFTER%20A%20DECADE%20OF.pdf [Downloaded: 2007-04-25].

Gelb, A., Ramachandran, V. & Turner, G. 2007. Stimulating Growth and Investment in Africa: From Macro to Micro Reforms. *African Development Review*, 19(1):26-51.

Gross, D. M. 2001. Financial Intermediation: A contributing factor to Economic Growth and Employment. [Online] Available from: http://www.ilo.org/public/english/employment/finance/download/gross.pdf [Downloaded: 2009-05-29].

Gills, M., Perkins, D. H., Roemer, M. & Snodgrass, D. R. 1983. *Economics of development*. New York: W. W. Norton.

Gylfasson, T. 1999. Exports, inflation and growth, *World Development*, 27(6):1031–1057. Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-05-04].

Hagemann, H. & Seiter, S. (eds.) 2003. *Growth theory and growth policy*. London: Routledge.

Halls, P. 1983. *Growth and development. An economic analysis*. Oxford: Martin Robertson & Company Ltd.

Harberler, G. 1974. *Economic growth and stability. An analysis of economic change and policies.* Los Angeles: Nash Publishing.

Hirsch, A. 2004. *State must review priorities and step up performance*. [Online] Available from http://www.sarpn.org.za/documents/d0000936/P1052_Hirsch_State_Priorities.pdf [Downloaded: 2009-12-09].

Hirsch, A. 2006. Accelerated and Shared Growth Initiative – South Africa. A strategic Perspective. [Online] Available from: www.idc.co.za/Conference %20Papers/2006/Africa%20Development%20Finance%20Week/AlanHirsch.pdf [Downloaded: 2007-03-21].

Hjort, L. & Ramadiro, B. 2004. A Long Walk to Nowhere - Ten Years of Democracy in South Africa. *Swedish Marxist quarterly Roda Rummet, No. 1, 2004 [Online]* Available from: www.http://www.aidc.org.za/?q=book/view/585 [Accessed: 2006-10-05].

Hodge, D. 2005. Volatility of the Real Exchange Rate of the Rand: 1990 – 2004.
[Online] Available from: http://www.employment-policy.net/uploads/documents/docs/4224_Hodge_Volatilityoftherealexchangerate.pdf
[Downloaded: 2006-12-05].

Hu, B., Wang, L., & Yu, X. 2007. R&D and Economic Growth in China on the basis of data envelopment analysis: Evidence from Hebei Province, PRC. *Journal of Technology Management in China*, 2 (3):225 – 236. [Online] Available from: Emerald: http://oasis.unisa.ac.za/ [Accessed: 2009-05-29].

ILO (International Labour Organisation). 2008. Conclusion on Skills for Improved Productivity, Employment, Growth and Development. International Labour Conference, 2008. International Labour Office: Geneva. [Online] Available from: http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---

ifp_skills/documents/publication/wcms_103457.pdf [Downloaded: 2009-05-29].

IMF (International Monetary Fund) 2008. South Africa - Financial System StabilityAssessment.[Online]Availablefrom:

http://www.treasury.gov.za/publications/other/imf/IMF%20South%20Africa %20Financial%20System%20Stability%20Assessment%202008.pdf [Downloaded: 2009-05-29].

Ilorah, R. 2004. NEPAD: The Need and Obstacles. *African Development Review*, 16 (2):223-251.

Jayasiruya, R. & Wodon, Q. 2005. Measuring and Explaining the Impact of Productive Efficiency on Economic Development. *The World Bank Economic Review*. 19 (1):121–140.

Kandiero, D. & Wadhawan, S. 2003. Institutional Quality, Openness, and Investment in Africa. *South African Journal of Economic and Management Sciences*, 6(2): 346 -368 [Online] Available from: SA ePublications: http://oasis.unisa.ac.za/ [Accessed: 2009-05-29].

Kapustin, E. 1980. Economic growth and labour productivity. In: Mathews, R. C. O. (ed.) *Economic Growth and Resources*. Proceedings of Fifth World Congress of the International Economic Association, Tokyo, Japan. Vol. 2. New York: St. Martin's Press.

Khan, M. S. & Kumar, M. S. 1997. Public and Private Investment and the Growth Process in Developing Countries. *Oxford Bulletin of Economics and Statistics*, 59(1):
69 – 88 [Online] Available from: Blackwell-Synergy: http://oasis.unisa.ac.za/ [Accessed: 2009-05-29]

Kitov, I. O., Kitov, O. I., & Dolinskaya, S. A. 2007. *Modelling the real GDP per capita in the USA: cointegration test*. MPRA Paper No. 2739 [Online] Available from: http://mpra.ub.uni-muenchen.de/2739/1/MPRA_paper_2739.pdf [Downloaded: 2009-05-29].

Knight, M., Loayza, N. & Villanueva, D. 1993. *Testing the neoclassical theory of economic growth*. IMF Staff Papers, September.

Kritzinger- Van Nierkerk, L.K., Eckert, J.B. & Vink, N. 1992. *Towards a democratic economy in South Africa: An approach to economic restructuring*. Unpublished Report. Development Bank of South Africa. [Online] Available from: www.freemarketfoundation.com/htmupload/PUBDoc397.doc. [Accessed: 2006-10-23]

Kuznets, S. 1981. *Modern Economic Growth and the Less Developed Countries*. Conference on Experiences and Lessons of Economic Development in Taiwan. Taipei: Institute of Economics. Academic Sinica.

Levine, R. & Renelt, D. 1992. A sensitivity analysis of cross-country regressions. *The American Economic Review*, 82(4):942 – 963. [Online] Available from: JSTOR: http://oasis.unisa.ac.za/ [Accessed: 2006-11-02].

Lewis, J.D. 2001. *Policies to promote growth and employment in South Africa*. World Bank Southern Africa Department Discussion Paper: 16. [Online] Available from: http://www.tips.org.za/f2001/Lewis.pdf [Downloaded: 2005 -03 -13].

Lewis, W. A. 1955. *The theory of economic growth*. London: George Allen and Unwin.

Lucas, R. 1988. On the mechanics of economic development, *Journal of Monetary Economics*, 22(1): 3 – 42. [Online] Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-02-24].

Lundhal, M. 1999. *Growth or stagnation? South Africa heading for the year 2000.* (The making of modern African series). England (Aldershot): Ashgate Publishing Ltd.

MacCormick, J. 2008. *Working Smarter: Driving Productivity Growth through Skills*. New Zealand Treasury Productivity Paper 08/06. April 2008. [Online] Available from: http://www.treasury.govt.nz/publications/research-policy/tprp/08-06/tprp08-06.pdf [Downloaded: 2008-09-12]

Mankiw, G. 2007. Macroeconomics. 6th ed. New York: Worth Publishers.

McConnell, J. W. 1943. *The Basic Teaching of the Great Economists*. New York: Garden City Publishing.

Mlambo, K. & Oshikoya, T. W. 2001. Macroeconomic factors and investment in Africa. *Journal of African Economies*, 10, AERC Supplement 2:12 – 47. [Online] Available from: Oxford Journals: http://oasis.unisa.ac.za/ [Accessed: 2007-09-06].

Mlambo-Ngcuka, P. 2006. *A Catalyst for Accelerated and Shared Growth – South Africa. (Asgisa).* Background Document. Media Briefing by the Deputy President. 6 February 2006. [Online] Available from: http://www.info.gov.za/speeches/briefings/asgibackground.pdf [Downloaded: 2007-01-25].

Mphalwa, M. 2004. Economic and Employment Cluster: Parliamentary media briefing by the Minister of Trade and Industry (RSA). 24th May. [Online] Available from: http://www.info.gov.za/speeches/2004/04052413151001.htm [Accessed: 2007-01-07].

N Z (New Zealand) National Treasury. 2004. New Zealand Economic Growth: An Analysis of Performance and Policy. [Online] Available from: http://www.treasury.govt.nz/publications/researchpolicy/tp/economicgrowth/economicgrowth.pdf [Downloaded: 2008-03-16]

Naidoo, R. 2001. Kick –starting and broadening the growth path. *Naledi Policy Bulletin*. Vol. 4 No 1. [Online] Available from: http://www.naledi.org.za/pbull/vol4no1/v4n1a3.htm [Accessed: 2004-06-07].

Natrass, J. 1988. *The South African economy, its growth and change*. 2nd ed. Cape Town: Oxford University Press

Natrass, N.2001. High Productivity Now:A critical review of South Africa'sGrowthStrategy.[Online]Availablefrom:

http://www.transformation.ukzn.ac.za/archive/tran045/tran045002.pdf [Downloaded: 2005-03-13]

Ndlela, T. & Nkala, P. 2003. *A structural analysis of the sources and dynamics of macroeconomic fluctuations in the South African economy*. Paper prepared for the TIPS Annual Forum, September 8 – 10. [Online] Available from: http://www.tips.org.za [Accessed: 2006-11-08]

Nelson, R. R. & Phelps, E. S. 1966. Investment in humans, technological diffusion, and economic growth. *American Economic Review*, 56(1/2): 69–75. [Online] Available from: http://oasis.unisa.ac.za/ [Accessed: 2006-11-02]

OECD (Organisation for Economic Cooperation and Development). 2006. *Promoting Private Investment for Development: The Role of the ODA*. DAC Guidelines and Reference Series. Paris: OECD. [Online] Available from: http://www.oecd.org/dataoecd/23/40/36566902.pdf [Downloaded: 2008-09-12]

OECD (Organisation for Economic Cooperation and Development). 2008. *South Africa Economic Assessment*. OECD Economic Surveys. Volume 2008/15 [Online] Available from: http://www.finance.gov.za/publications/other/OECD%20-%20South %20Africa%20Economic%20Assessment.pdf [Downloaded: 2009-01-15]

O'Brien, D. P. 1975. The Classical Economists. Oxford: Clarendon Press.

Oyejide, T. A. 2007. Relaxing Export Supply Capacity Constraints and Promoting Export Expansion and Diversification in Africa: The Role of Special Export Development Strategies. *African Development Review*, 19(1):96-122.

Panico, C. 2003. Old and new growth theories: what role for aggregate demand? In: Salvadori, N. (ed.) *Old and new growth theories, an assessment*. UK Cheltenhan: Edward Elgar Publishing Ltd.

Petrakos, G., Arvanitidis, P. & Pavleas, S. 2007. *Determinants of Economic Growth: Experts' View*. DYNREG Working Papers 20/2007. [Online] Available from:

http://www.esri.ie/research/research_areas/international_economics/dynreg/papers/W orking_Paper_No._20.pdf [Downloaded: 2008-08-03]

Pollin, R., Epstein, G., Heintz, J. & Ndikumana, L. 2006. An Employment - targetedeconomic programme for South Africa. UNDP International Poverty Centre Brazil.[Online]Availablefrom:http://www.undp-povertycentre.org/pub/IPCCountryStudy1.pdf. [Downloaded: 2006-12-08]

Pressman, S. 2006. Fifty Major Economists. 2nd ed. Oxon: Routledge.

RSA (Republic of South Africa). 1996. Growth, Employment and Redistribution: A Macroeconomic Strategy. [Online] Available from: http:// www.info.gov.za/otherdocs/1996/gear.pdf. [Downloaded: 2006-07-22]

Ranis, G., Stewart, F. & Ramirez, A. 2000. Economic growth and human development. *World Development*, 28 (2): 197 – 219. [Online] Available from: EBSCOHost: http://oasis.unisa.ac.za/ [Accessed: 2006-08-02]

Ray, D. 1998. Development economics. New Jersey: Princetown Press University.

Reid, G. C. 1989. *Classical Economic Growth. An Analysis in the Tradition of Adam Smith.* Oxford: Basil Blackwell.

Reppas, P.A. & Christopoulos, D. K. 2005. The export-output growth nexus: Evidence from African and Asian countries. *Journal of Policy Modelling*, 27 (8): 929
940. [Online] Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2006-02-24].

Ricardo, D. 1951. On the Principles of Political Economy and Taxation. In: Sraffa, P. (ed.) *The Works and Correspondences of David Ricardo – Volume 1*. Cambridge: University Press.

Rodrik, D. 2006. *Understanding South Africa Economic Puzzles*. [Online] Available from: http://ksghome.harvard.edu/~drodrik/Understanding%20South%20Africa.pdf [Downloaded: 2007-01-24]

Romer, P. M. 1986. Increasing returns and long-run growth. *Journal of Political Economy*, 94(5):1002–1037. [Online] Available from: JSTOR: http://oasis.unisa.ac.za/ [Accessed: 2006-11-02].

Rostow, W.W. 1990. Theorists of Economic Growth from David Hume to the Present.With a Perspective on the next Century. New York: Oxford University Press.Roux, A. 1990. Everyone's guide to the South African economy. Cape Town: Struik Timmins.

SARB (South African Reserve Bank). 2001. *Quarterly Bulletin - March 2001*. No 219. Pretoria: SARB.

SARB (South African Reserve Bank). 2005. *Quarterly Bulletin - December 2005*. No 238. Pretoria: SARB.

SARB (South African Reserve Bank) online database. Available from: http://www.reservebank.co.za.

Saunders, S. 2003. The Experience of Inflation Targeting in Australia: Lessons for South Africa. *South African Journal of Economics*, 71(2): 215-221.

Smith, A. 1776. *The Wealth of Nations*. In: Cannan E. (ed.) Bantam Classics 2003. New York: Bantam Dell.

Stals, C. 1995. *The economic response to political reforms in South Africa*. Address given at the luncheon of the United States-South Africa Business Council, New York. 1995/10/12. [Online] Available from: http://www.reservebank.co.za [Accessed: 2006-07-19].

Stals, C. 1998. *The Current Economic Situation and Factors Influencing Monetary Policy in 1999.* Address presented at the International Conference arranged by ABN Amro and Kagiso Financial Services, Johannesburg. 03/11/1998. [Online] Available from:

http://www.icbs.co.za/Internet/publication.nsf/Print/5A58870ADCCCF61642256B30 00363C6F/?opendocument [Accessed: 2008-05-03]

StatSA (Statistics South Africa) online database. Available from: http://statssa.gov.za.

Steyn, F. G. (ed.) 2000. *Introduction to economic theory and policy in South Africa*. Pretoria: University of Pretoria, Bureau for Economic Policy and Analysis.

Strydom, P. 2000. *The Effectiveness of South African Fiscal Policy*. [Online] Available from: https://www.fnb.co.za/economics/econhtml/profpeetstrydom/TheEffectivenessOfSout hAfricanFiscalPolicy.htm [Accessed: 2005-02-13]

Szirmai, A. 2005. *The dynamics of socio-economic development, an introduction*. Cambridge: Cambridge University Press.

Teo, C. 2003. *Competition Policy and Economic Growth*. Paper presented at the ASEAN Conference on Fair Competition Law and Policy in the ASEAN Free Trade Area, Bali. 4 – 8 March 2003. [Online] Available from: http://www.jftc.go.jp/eacpf/04/singapore p.pdf [Downloaded: 2008-05-19]

Terreblanche, S. J. 1970. The relative contribution of tangible and human capital formation to economic growth. *South African Journal of Economics*. 38(1): 36–46.

Terreblanche, S.J. 1999. The ideological Journey of South Africa: From the RDP tothe GEAR Macro- economic Plan. Paper delivered at a special ME99 workshop on'Globalisation, Poverty, Women and the Church in South Africa'. 16 February 1999.[Online]Availablefrom:

http://web.uct.ac.za/depts/ricsa/confer/me99/procs/pro_terr.htm [Accessed: 2005-11-23].

Thirlwall, A. P. 2003. *Growth and development with special reference to developing economies*. 7th ed. New York: Palgrave Macmillan.

Todaro, M. P. 1992. *Economics for a developing world, an introduction. Principles, problems and policies for development.* New York: Longman Publishing.

Todaro, M. P. 1994. Economic development. 5th ed. Essex: Longman Group.

Todaro, M. P. 1997. Economic Development 6th ed. Essex: Addison Wesley Longman.

UN (United Nations), 2000. *United Nations Millennium Declaration*. Resolution Adopted by the General Assembly Fifty – Fifth Session. 18 September 2000. [Online] Available from: http://www.un.org/millennium/declaration/ares552e.pdf [Downloaded: 2004-04-09].

UNESCO online database. UNESCO Institute for statistics. [Online] Available from: http://www.uis.unesco.org.

Urata, S. & Kawai, H. 2000. Intrafirm technology transfer by Japanese manufacturing firms in Asia. In: Takatoshi, A & Krueger, O. (Eds.) *The role of foreign direct investment in East Asian economic development*. Chicago: Chicago University Press.

Usher, D. 1980. The measurement of economic growth. Oxford: Basil Blackwell.

Van den Bogaerde, F. 1972. Elements of macro-economics. Pretoria: J. L. van Schaik.

Ventelou, B. & Bry, X. 2006. The role of public spending in economic growth: Development methods. *Journal of Policy Modelling*, 28, (4): 403-413. [Online] Available from: Science Direct: http://oasis.unisa.ac.za/ [Accessed: 2008-05-09]. Vickers, B. 2003. *Investment Climate Reform in South Africa*. A Contribution to WDR 2005 on Investment Climate, Growth and Poverty. [Online] Available from: http://siteresources.worldbank.org/INTWDR2005/Resources/477407-1096581040435/dfid_vickers_7.pdf [Downloaded: 2009-12-09].

Wakeford, J. 2004. *Productivity, Wages and Employment in South Africa's Manufacturing Sector, 1970-2002.* School of Economics, University of Cape Town, Development Policy Research Unit. Working Paper 04/85 ISBN 0-7992-2241-0.

WEF (World Economic Forum). 2006. *Global competitiveness report 2006 – 2007*. World Economic Outlook. New York: Palmgrave Macmillian.

William, B. 2006. Fiscal Incentives and Urban Regeneration in Dublin 1986 -2005. *Journal of Property Investment & Finance*, 24(6):542 -558 [Online] Available from:
Emerald: http://oasis.unisa.ac.za/ [Accessed: 2008-09-12].

Winch, D. 1987. Malthus. Oxford: Oxford University Press.

World Bank. 1998. World Development Indicators 1998. Washington DC: World Bank.

World Bank. 2004. World Development Indicators 2004. Washington DC: World Bank.

World Bank. 2005. *Economic growth in the 1990's, learning from a decade of reform*. Washington DC: World Bank.

Wyckoff, F. C. 1981. *Macroeconomics. Theory, evidence and policy*. Englewood Cliffs, New Jersey: Prentice Hall, Inc.