Halving Poverty and Unemployment in South Africa: Choices for the next 10 years

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24 May 2007

Research Report prepared for Oxfam GB

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ABSTRACT

Three years ago, South Africa embarked on its second decade of democracy, announcing objectives that included halving both the unemployment rate and the poverty rate by 2015. Meeting these objectives poses major policy challenges. This paper formally establishes key requirements for an accelerated poverty reduction process, which is also similar to the findings of pro-poor growth literature (Kakwani et al 2003). The proposed framework integrates the role of employment and social policy as a critical nexus between growth and poverty reduction. A micro-simulation model of tax and transfers, with links to macroeconomic performance, is used to compare and contrast the effectiveness of ten policy scenarios to halve poverty and unemployment by 2015. Among the findings are: (a) both reductions in income inequality and high growth rates are necessary pre-requisites for an accelerated poverty reduction path; (b) to realise the unemployment and poverty goals, the labour market needs to be pro-poor in terms of employment allocation and income; additionally, the employment elasticity of growth should reach 0.60, and (c) the social security system needs to be substantially expanded. These findings inform the paper's presentation of the basic tenets of a pro-poor economic policy framework. Overall, the paper suggests an active pro-poor role for the state.

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1. INTRODUCTION

Three years ago, South Africa embarked on its second decade of democracy, announcing objectives that included halving both the unemployment rate and the poverty rate by 2015. Meeting these objectives poses major policy challenges. Halving the current unemployment rate requires that the economy generate about 3.7 million new employment opportunities during the next nine years. This is one and a half times the number of jobs that were created between 1995 and 2004.[1] At the same time, halving the current poverty rate requires serious economic restructuring and commitment of resources. The aims of this study are to show how the unemployment rate and the poverty rate can be halved by 2015, and to present an outline of a supportive policy framework.

The paper is organised as follows. Section 2 presents a summary of the economic development debate that has led to the emergence of the concept of pro-poor growth. Section 3 summarises the debate on pro-poor growth and provides a formal presentation of the channels through which growth and poverty are linked. It develops a measure of the contribution of each channel to changes in poverty, and an aggregate measure of their overall effect on poverty. It then uses the findings to develop the necessary conditions for a pro-poor growth path. Section 4 applies the methodology that was developed to examine the implications of diverse economic scenarios for halving poverty and unemployment rates during the next nine years. We use a micro-simulation model of South Africa to simulate the impacts of different scenarios and compare their potential outcomes. Finally, Section 5 uses the findings of previous sections to present an economic policy approach that internalises the requirements for fostering growth that is pro-poor in South Africa.

2. FROM MUTUAL BENEFITS TO PRO-POOR GROWTH

Development theory and practice have gone through important changes during the last 25 years, with the emergence of such concepts as ‘human development’, ‘sustainable development’ and ‘pro-poor growth’. New thinking in development theory and practice

[1] According to the October Household Survey (Statistics South Africa 1995), the official employment stood at 9,186,000. The September Labour Force Survey 2004 reported total employment at 11,643,000.

has gradually shifted the focus towards the welfare of current and future generations. In this context, increasing attention is paid to the analytical, empirical and policy links between growth, income distribution and poverty. This section provides a brief overview of the historical context of the new thinking on development.

A. Mutual Benefits: A Rising Tide Will Raise All Boats[2]

During the 1950s, the development debate centred on industrialisation, informed by the 'catching up' (or modernisation) perspective of development, whose underlying notion was mutual benefit. The issue of how to industrialise led to an important debate on the roles of market and planning, the desirable degree of openness to trade and investment, the correct blend of capital intensive and labour intensive technology, whether to prioritise industry or agriculture, and whether to move through an unbalanced or balanced growth trajectory. Hotly debated issues included the relative role of the state, balanced or unbalanced growth, and whether the path to industrialisation should be gradual or would depend on a 'big push'.

The development debate gradually shifted to deeper questions during the 1960s. There were those who argued that, within the current socio-economic system, a poor country's path to development was inherently in conflict with the interests of developed countries; moreover, that the underdevelopment of a large number of countries was part of the historical processes of development of developed countries. Thus, the future 'development' of poor countries is achievable, but necessitates a degree of separation from the dominant world economic system (Wallerstein 1979, Amin 1988).[3] On the other hand, the mainstream side of the debate believed that the underlying interdependencies between developed and underdeveloped countries did not amount to a systemic impediment to the development of the latter. They believed in mutual benefit, and their mantra was that a 'rising tide would raise all boats'.

According to Sutcliffe (1995), even though there were still differences in perspectives on development, the different sides shared more or less similar views. That is, (1) as in

[2] This section is based on Sutcliffe 1995.
[3] These positions are known as world systems theory, dependency theory, neo-Marxism, structuralism, etc.

developed countries, development would be characterised by industrialisation, the use of productive technology, high average standards of living, efficiency, etc; (2) there is a close or even automatic relationship between the economic aspects of development (e.g., growth and rise in productivity) and meeting basic needs and human welfare; (3) development involves social, economic and political (domestic or international) concerns, but not necessarily natural ones such as the physical environment; (5) development would implicitly lead to equalisation between countries through levelling up and not through redistribution, and (6) development would be a permanent state.

However, the above understanding of the prospect and processes of development, notwithstanding differences in views, found it difficult to explain the multifaceted development experiences of the 1960s and 1970s, which included some successes and many failures. More and more empirical data on country experiences showed persistence and even a worsening of inequality and poverty. This began to highlight the conceptual gap between the contemporary understanding of the benefits of 'development' and the human welfare benefits. This gradually gave way to the existing critical approach and the emergence of new thinking on development.[4]

B. 'Human Development' is the End

A new debate began to emerge, with different views on how the goal of development could be reached. Streeten (1981) and Stewart (1985) advocated the attainment of basic human needs as a primary rather than a secondary objective of development; others focused on the problems of individual and group poverty rather than the underdevelopment of nations (e.g. Lipton (1977). The common characteristic of these approaches was to view development in terms of "what happens to people rather than to abstractions like nations"[5], and to define human well being as the purpose and goal of development. This reverses the earlier idea that welfare is a by-product or necessary outcome of economic development, as defined earlier. It argues instead that the need for economic development should be justified by its contribution to welfare.

[4] A series of articles by Dudley Seers (1977, 1979) were an important part of this process.
[5] Sutcliffe 1995, p.239.

A substantial body of literature has emerged during the last twenty years, generating lively debate on different aspects of human development (HD) among researchers and policymakers. The Human Development Report of the UNDP, published annually since 1990, has been a major contributor and driving force behind the new thinking on development.[6] It has contributed to the debate by demonstrating that development involves consideration of much more than just economics, and by focusing on 'human poverty' as distinct from 'income poverty' (HDR, 1997); capabilities and choices (HDR, 1995); public policies to make new technologies work for human development (HDR, 2001); globalisation and rising new insecurities in people's lives (HDR, 1999); the needs of 'under-consumers' against 'over-consumers' (HDR, 1998); human security rather than the security of national borders (HDR, 1994), and links between growth and human development (HDR, 1996).

There have, at the same time, been major coordinated international efforts to define the issues related to HD, and to urge national and international commitments to the realisation of its goals. Important amongst these was the 1992 United Nations Conference on Environment and Development (UNCED) in Brazil, which produced what has come to be known as the Earth Summit Agenda 21. Sustainable development became the organising principle for Agenda 21, attempting, as it did, to cover many areas of sustainability and development.

In the mid-1990s, the World Summit on Social Development (WSSD) adopted a Declaration and Programme of Action that "pledged to make the conquest of poverty, the goal of full employment and the fostering of stable, safe and just societies their overriding objectives."[7] Among the agreements of the WSSD were those dedicated to the eradication of poverty, support for full employment as a basic policy goal and the achievement of equality and equity between men and women.[8]

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[6] S. Fukuda-Parr *et al* (2002) provides an excellent review of contributions of HDR in the area of human development.

[7] United Nations, Copenhagen Declaration and Programme of Action, the World Summit for Social Development, 6-12 March 1995, United Nations Department of Public Information, p. vii.

[8] Ibid, p. vii.

At both these and other major conferences, poverty eradication was made a priority and became one of the major objectives. At the end of the last decade of the 20th century, the world's political leaders committed themselves to a set of goals at the Millennium General Assembly in 2000. The principal objective of what became the Millennium Development Goals (MDG) was to bring about a significant reduction in human poverty. Therefore, a hallmark of the 1990s was to highlight the importance of eradicating poverty.

Despite its success in redefining the principle objective of development, the usefulness of HD as a developmental approach depends on analysis that explains how the current socio-economic system can be steered to respond effectively to human needs and provide for human wellbeing.

Thus, the recent emergence of a massive literature on pro-poor growth and pro-poor economic policies can be viewed as a response to calls for policy frameworks that internalise the realisation of HD objectives.

3. Pro-Poor Economic Growth and Policies

The historical context that underlies the literature on pro-poor growth and policies includes the widely recognised increased poverty and inequality outcomes of the trickle-down development approach and the policy practices of structural adjustment programmes over the last three decades (Box1). However, the new literature represents a highly heterogeneous effort by both mainstream and non-mainstream analysts to define what is meant by 'pro-poor', and to incorporate the analysis of poverty in the traditional discourse on macroeconomic issues and policies.

Structural Adjustment Program

Structural adjustment policies encompass a set of short-run stabilisation measures and longer run adjustment policies that are implemented together or sequentially. The stabilisation policies include following measures:

- fiscal policies aimed at reducing the public budget deficit;
- monetary policies aimed at reducing the inflation rate or the money supply;
- wage and price policy to control inflation in support of the above policies;
- exchange rate policies to reduce the balance of payment deficits.

The adjustment policies comprise policies designed to alter the working of the product and factor markets by removing price controls and subsidies through a process of liberalization and deregulation. Structural adjustment programme (SAP) policies include trade liberalization to strive for freer trade; deregulation to make enterprises more profitable, and privatisation of publicly owned enterprises. Needless to say, some aspects of adjustment policies (e.g., privatisation of state enterprises) complement parts of stabilization policies (e.g., deficit reduction).

Historically, the stabilisation and adjustment policies of SAPs have, in many countries, produced low rates of economic growth, environmental degradation, together with increased unemployment rates, income inequality and poverty. These results have been linked to the dynamic outcomes of the overall framework and policies of SAPs. This includes, for example:

- setting monetary and fiscal objectives and targets that result in the undercutting of public services, reduce internal demand, aggravate unemployment, and frustrate efforts to increase investment in infrastructure, SMME development and human development;
- using tariff reductions as de facto industrial policy. Accelerated import tariff reductions often result in a flood of imports that undermine domestic industrial and agricultural producers;
- reducing labour protections and benefits by adopting labour market liberalisation measures.

A. The Debate on Pro-Poor Growth

Pro-poor growth refers to the interrelationship between growth, inequality and poverty (Kakwani, Khandker and Son 2003:4). There are at least two main views on what is meant by pro-poor growth. These are distinguished by the ways they utilise the 'absolute' or 'relative' notions of pro-poor growth. The former considers only the incomes of the poor and the rate at which absolute poverty is reduced. The latter refers to relative changes in the incomes of the poor and their impact on poverty.

Therefore, the position adopted by one group (advanced by the UNDP among others) argues that redistribution needs to take its place firmly beside growth as the means to address poverty. Kakwani and Pernia (2000) argue that, if the trickle-down development approach of the neo-liberal policies results in growth (rise in average per capita income),

it will also reduce poverty, but the rate of poverty reduction will be much slower. Rapid poverty reduction necessitates enhancing growth that delivers proportionally greater benefits to the poor than to the rich, i.e. a reduction in inequality (Kakwani et al 2003, HDR 2005). More recently, the Human Development Report also uses the concept of 'progressive growth' to define a growth pattern in which average incomes are growing, but the incomes of poor people are growing even faster. Therefore, progressive growth is viewed as a positive-sum process in which nobody loses and the poor gain proportionally more (HDR 2005).

The second position, which is frequently advanced by World Bank economists and the International Monetary Fund (IMF), is that any growth is pro-poor. Proponents of this position argue that increasing inequality is not a problem as long as the poor gain in the process.[9] In other words, any increase in the incomes of the poor is evidence of pro-poor growth (regardless of their gains relative to the income gains of the non-poor income gains). An influential paper in this group is by Dollar and Kraay (2000), published by the World Bank. Its central message is captured in its title, "Growth is good for the poor". Even though the paper does not claim that growth is the only factor that matters for poverty reduction, it centres on the primacy of growth as a means of addressing poverty.[10] This is consistent with the traditional neo-liberal view of income inequality, which is not really treated as a concern since, in well functioning markets, individuals earn rewards equal to their contribution to output, i.e., their marginal product. So the rich are rich because they are more productive, and the opposite holds for the poor.[11]

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[9] An example of this type of thinking is found in a World Bank sponsored comparative analysis of 21 case studies (Lal and Myint, 1996).

[10] If the Dollar and Kraay paper had been a "just a research exercise", Oxfam observes, it could have been "dismissed as weak and largely irrelevant." Sending the message that it did ("leave it to the markets" and let the benefits of growth "trickle-down"), and bearing as it did, "the imprimatur of the World Bank", (Oxfam, 2000) it aroused a storm of protest (Dagdeviren *et al*, 2000; Lübker *et al*, 2000; Oxfam, 2000; Wade, 2001).

[11] The above two positions also underlie an intense ideological battle. For example, as Wade (2001) shows, the 'controversy' that followed the publication of the article by Dollar and Kraay (2000) reflected an ideological struggle within the Bank to push equity considerations well into the second place behind growth, even when research at the Bank was beginning to show that hoped-for impact of Bank lending on poverty was not being achieved (Easterly, 2001), and that "inequality … matters to the pace of poverty reduction that is achieved at any given rate of growth." (Ravallion, 2001, p.17).

The World Bank, which started with the 'weaker' definition of pro-poor growth (using the 'absolute' pro-poor growth approach) has, in recent years, gradually come to recognise the importance of reducing inequality as a means of fighting poverty. This is evident from the 'poverty-growth-inequality triangle' described by Bourguignon (2004), which points out that changes in poverty are a function of growth in mean income, changes in the distribution of income and initial distribution. Overall, as Klasen (2003) notes, the literature suggests that pro-poor growth policy should put a significant emphasis on reducing inequalities in order to accelerate poverty reduction, increase growth, and enhance the poverty impact of such growth.

The next section develops a formal presentation of a different nexus between growth and poverty, which is used in section 4 to analyse the implications of diverse growth scenarios for halving poverty and unemployment rates in South Africa by 2015.

B. Channels to Pro-Poor Outcomes

What are the channels through which growth and inequality impact on poverty? To answer this question, we need to be able to identify the relevant channels, develop a measure of the contribution of each channel to changes in poverty and, if possible, provide an aggregate measure of their overall effect on poverty. It is also desirable to go one step further and use the findings to develop the necessary conditions for a pro-poor growth path.

As discussed in the previous section, poverty reductions, especially rapid reductions in poverty, depend on two important factors. First, the size of the economic growth rate: that is, the higher (lower) the growth rate, the larger (smaller) the poverty reduction will be. Second, changes in inequality that generally accompany economic growth: that is, a rise (fall) in inequality decreases (increases) the impact of growth on poverty reduction. Kakwani *et al* (2003) derives a measure of *total elasticity of poverty* that captures the net effect of the above two factors on the overall poverty index, and uses it to define the formal conditions for pro-poor growth. In the following pages, we adopt a different formal approach to derive a similar measure of total elasticity of poverty and conditions

for pro-poor growth.[12] The approach is informed by the need to include explicitly the links between poverty and both the labour market and government's poverty related expenditures. Osmani (2002) defines these channels as the personal income channel and social provisioning channel. The former refers to the growth of the economy, which through employment, translates into higher personal income amongst the poor. The latter refers to the resources generated by growth (e.g. taxes) that can potentially be used by a society to provide services to the poor.

Following Kakwani (1993, 2003), the general class of poverty measures (v) can be fully represented by a poverty line (z) that captures the country's minimum standard of living, the mean household income (y) and the Gini index (G) as a measure of inequality. Therefore:

$$v = v(z, y, G) \qquad \text{with} \quad \partial v/\partial z>0;\ \partial v/\partial y<0;\ \partial v/\partial G>0 \qquad [1]$$

In equation 1, the mean household income (y) is defined as the average household income after tax and includes current transfers from general government.

The next equation expresses mean household income as a function of employment, E, and government's cash and in-kind transfers to households, S. Therefore, we can write:

$$y = y(E, S) \qquad \text{with } \partial y/\partial E>0;\ \partial y/\partial S>0 \qquad [2]$$

In equation 2, variable E captures the impact of the level of employment in the economy and the associated rate of compensation (i.e. total compensation of employees) on the mean household income. It, therefore, reflects both the quantity and quality of employment in the economy.[13] Our assumption is that the average household income is a positive function of both the level of employment in the society and its quality. Therefore, for example, it is assumed that, *ceteris paribus* (all things being equal), the

[12] Kakwani *et al* (2003) uses a measure of the average deprivation in the society for which he uses f(x) as probability density function of individual income (x) that is a random variable.
[13] The quality of employment refers to those attributes of employment that have potential impacts on returns on labour, such as formal versus informal employment, union membership, and sectoral and occupational differences.

average household income increases (decreases) when the share of total employment in formal, manufacturing or unionised sectors of the economy increases (declines).[14]

In equation 2, variable S captures the impact of cash and non-cash government transfers to households on the mean household income.[15] It is closely related to the concept of the social provisioning channel used by Osmani (2002 and 2004). According to equation 2, an overall rise in employment – *ceteris paribus* – is expected to be accompanied by an overall increase in mean household income. Similarly, mean household income is expected to increase – *ceteris paribus*– as a result of the state's cash and in-kind transfers to households.

The next equation expresses total employment (E) as a function of the size of the economy, which is represented by the *real* gross domestic product (GDP). It is assumed that employment will increase (decrease) with the rise (fall) of GDP and suggests that economic growth is central to any employment, and as we will see later, poverty reduction focused strategy.[16] Thus:

$$E = E(GDP) \qquad \text{with } \partial E/\partial GDP>0 \qquad [3]$$

Finally, the last equation of the model captures one of the basic empirical relationships between the Gini-coefficient measure of inequality (G) and mean household income. Since mean household income is directly related to the size of the economy, studies have found that a positive or negative relationship between inequality and growth implies a parallel relationship between inequality and mean household income (Kuznets, 1955; Blank, 1989; [17] Arnand and Kanbur, 1984; and Deininger and Squire, 1998). Therefore,

[14] In 2006, compensation of employees constituted a little less than three quarters of household current income (Reserve Bank, March 2007, S-128).
[15] In 2005, government's total cash and in-kind transfers to households amounted to about R220 billion. The cash transfer was almost R80 billion, or one third of the total amount (Reserve Bank, June 2006, S-137).
[16] Osmani (2002) points out, without economic growth, there can be no sustained expansion in employment. Only a growth-induced shift in employment will make it possible for the poor to enjoy rising income – either through reduced unemployment/ underemployment or through higher returns on labour. The only way employment can be expanded in a stagnant economy is either by depressing the returns to labour or by increasing the rate of unemployment. Neither route is good for the poor.
[17] For reference see Chuhay (2004).

equation 4 postulates that income distribution in a country is a function of mean household income:

$$G = G(y) \qquad \text{with } \partial G/\partial y <> 0 \qquad [4]$$

As will be discussed later, it is not possible to express *a priori* the sign of the relationship between mean household income and inequality.

The total differentials of the above equation system yield:

$$\begin{aligned} dv &= \frac{\partial v}{\partial z} dz + \frac{\partial v}{\partial y} dy + \frac{\partial v}{\partial G} dG \\ dy &= \frac{\partial y}{\partial E} dE + \frac{\partial v}{\partial S} dS \\ dE &= \frac{\partial E}{\partial GDP} dGDP \\ dG &= \frac{\partial G}{\partial y} dy \end{aligned} \qquad [5]$$

Assuming that the poverty line (z) is kept constant in real terms, the above system can be reduced to one central expression that captures the channels through which changes in the real growth rate of the economy impact on the poverty index:

$$\rho = \frac{dv/v}{dGDP/GDP} = (\varepsilon_y^v + \varepsilon_G^v \varepsilon_y^G)\varepsilon_E^y \varepsilon_{GDP}^E + (\varepsilon_y^v + \varepsilon_G^v \varepsilon_y^G)\varepsilon_S^y \varepsilon_{GDP}^S + \varepsilon_G^v \varepsilon_{GDP}^G \qquad [6]$$

Where:

ρ = total elasticity of poverty as a measure of the overall rate of decline in the poverty index, due to a 1 percent real increase in GDP.

ε_y^v = poverty elasticity (partial elasticity) of mean household income as a measure of the rate of decline (increase) in the poverty index, as a result of a small increase (decrease) in mean household income. It is expected to be negative, $(\partial v/v)/(\partial y/y)<0$.

ε_G^y = poverty elasticity of the inequality index, using Gini index. $(\partial v/v)/(\partial G/G)>0$ is expected to be positive, suggesting that the poverty index declines (increases) with reductions (rises) in inequality.

ε_y^G = inequality elasticity of mean income can be either positive or negative.

ε_E^y = income elasticity of employment is expected to be positive (equation 2).

ε_{GDP}^E = employment elasticity of growth is assumed to be positive (equation 3).

ε_S^y = income elasticity of social provisioning is assumed to be positive (equation 3).

ε_{GDP}^S = social provisioning elasticity of growth can be either positive or negative.

ε_{GDP}^G = inequality elasticity of growth which can be either positive or negative.

Equation 6 can be expressed in a more compact form as:

$$\rho = \psi + \varphi + \kappa\gamma \qquad [7]$$

Where:

ψ represents a combination of elasticities related to the employment nexus between growth and poverty. It is a measure of how much a small increase in GDP reduces poverty through employment. It captures both the income and the inequality effects. In the rest of this paper, we refer to ψ as the *poverty elasticity of employment.*

φ represents a combination of elasticities related to the social provisioning nexus between growth and poverty. It is a measure of how much a small increase in GDP reduces the poverty rate through the social provisioning channel. It captures both the income and the inequality effects. In the rest of this paper, we refer to φ as the *poverty elasticity of social provisioning.*

κ measures the direct effect of 1 percent increase in GDP on inequality (Gini index).

γ measures the increase in the poverty index as a result of a small increase in the inequality index.

Equation 7 shows clearly how a 1 percent increase in GDP is channelled through employment and social provisioning to impact on mean household income and inequality, which in turn impacts on the total poverty rate.

In Equation 7, κ captures whether growth is inherently accompanied by rising or declining inequality. Kuznets (1955) suggests that inequality initially worsens as economic development takes off; but, in the later stage of development, inequality begins to improve. Recent empirical studies have questioned this proposition (Anand and Kanbur 1984; Deininger and Squire 1998) and have found no support for Kuznets' inverted U-shaped pattern of income inequality. Recent studies (Kakwani and Son 2002, Bourguignon 2004) have argued that it is not possible to state *a priori* the sign and magnitude of κ, since how κ changes depends on a country's initial level of economic development, inequality and policies.

In order to separate the channels through which changes in inequality impact on poverty, equation system [5] is summarized differently to derive the following equations:

$$\rho = \frac{dv/v}{dGDP/GDP} = \varepsilon_y^v(\varepsilon_E^y\varepsilon_{GDP}^E + \varepsilon_S^y\varepsilon_{GDP}^S) + \varepsilon_G^v(\varepsilon_y^G\varepsilon_E^y\varepsilon_{GDP}^E + \varepsilon_y^G\varepsilon_S^y\varepsilon_{GDP}^S) + \varepsilon_G^v\varepsilon_{GDP}^G \quad [8]$$

or

$$\rho = \mu + \sigma \quad [9]$$

Where:

$\mu = \varepsilon_y^v(\varepsilon_E^y\varepsilon_{GDP}^E + \varepsilon_S^y\varepsilon_{GDP}^S)$ represents the *growth elasticity of poverty* (Kakwani, 1993), which is the percentage change in poverty due to a 1 percent increase in economic

growth, provided that the growth process does not change inequality (i.e. the benefits of growth are distributed equally among everyone in the country).

$\sigma = \varepsilon_G^y(\varepsilon_y^G \varepsilon_E^y \varepsilon_{GDP}^E + \varepsilon_y^G \varepsilon_S^y \varepsilon_{GDP}^S) + \varepsilon_G^y \varepsilon_{GDP}^G$ represents the *inequality elasticity of poverty*. It is an aggregate measure of all the channels through which a 1 percent increase in GDP impacts on poverty through its impact on inequality. In other words, it is a measure of how much the changes in the total poverty index relate to changes in inequality, given a 1 percent increase in GDP.

Equation 9 shows that the total poverty index is equal to the sum of two combinations of elasticities. The first (μ) is an extension of Kakwani's concept of growth elasticity of poverty (Kakwani, 1993). It measures percentage change in the poverty index that results from the impact of a 1 percent increase in GDP on employment and social provisioning, provided that the growth process does not change inequality.

The second combination of elasticities (σ) – a measure of the inequality elasticity of poverty – is the sum of different channels through which a 1 percent increase in GDP impacts on poverty through its net effects on inequality. σ captures three channels through which growth impacts on inequality. The first and second measures capture the impacts of growth on inequality through employment and social provisioning channels ($\varepsilon_y^G \varepsilon_E^y \varepsilon_{GDP}^E, \varepsilon_y^G \varepsilon_S^y \varepsilon_{GDP}^S$). The third measures the direct effect of growth on inequality (ε_{GDP}^G).

Kakwani, Khandher and Son (2003) show that economic growth is pro-poor (pro-rich) if the change in inequality that accompanies growth reduces (increases) total poverty. In the above system, this implies the growth is pro-poor if both total elasticity of poverty (ρ) and the growth elasticity of poverty (μ) are negative and $|\rho| > |\mu|$. These two criteria for pro-poor growth are satisfied under the following conditions and assuming that the mean household income elasticity of growth is positive ($\varepsilon_{GDP}^y > 0$)[18]:

[18] This implies that total household income in the economy is expected to grow at a faster rate than the growth rate of the number of households in the country.

a) if $\varepsilon_{GDP}^{S} > 0$ and $\varepsilon_{GDP}^{G} < 0$ (therefore $\varepsilon_{y}^{G} < 0$), both μ and σ will be negative, which implies that |ρ|>|μ|. This implies that the pro-poor growth conditions are met if government's spending on social provisioning increases with economic growth, and if, at the same time, economic growth is accompanied by a decline in inequality. Relative to other possibilities, under these conditions, *ceteris paribus*, the pro-poorness channels of the growth process will be the most extensive.

b) if $\varepsilon_{GDP}^{S} > 0$ but $\varepsilon_{GDP}^{G} > 0$ (therefore $\varepsilon_{y}^{G} > 0$), both μ and σ will be positive, which implies that ρ>μ>0. This implies that the growth process is not pro-poor (is pro-non poor) because poverty is expected to worsen through economic growth, both directly and through the increase in inequality.

c) if $\varepsilon_{GDP}^{S} < 0$ but $\varepsilon_{GDP}^{G} > 0$ (therefore $\varepsilon_{y}^{G} > 0$), most probably, σ will be positive, which implies that a direct effect of a 1 percent increase in GDP is to worsen (increase) inequality, i.e. growth is not pro-poor. The growth elasticity of poverty (μ) is also weakened due to a decline in social provisioning as the economy grows by 1 percent. Overall, the growth path is not pro-poor.

d) if $\varepsilon_{GDP}^{S} < 0$ and $\varepsilon_{GDP}^{G} < 0$ (therefore $\varepsilon_{y}^{G} < 0$), σ will be negative. The negative social spending elasticity of growth means that one component of μ will be positive and the second part will have a negative value. The overall value of μ will, most likely, be negative, thus satisfying one of the conditions for pro-poor growth. This combined with negative ε_{GDP}^{G} implies that the second condition (|ρ|>|μ|) is also satisfied. Therefore, even without a negative correlation between changes in social provisioning and economic growth, as long as the employment intensity of growth is relatively high, the economic growth path will be pro-poor. In this case, a strong poverty elasticity of employment ensures that the poverty elasticity of growth is negative (i.e., reduces poverty) and the negative inequality elasticity of growth ensures that economic growth, by reducing inequality further, facilitates reductions in the poverty index.

C. Growth-Employment Nexus

The third equation in the equation system 5 reflects the total change (the total differential) of the employment equation 3. It can be written as:[19]

$$\hat{E} = \varepsilon_{GDP}^{E} \hat{GDP} \qquad [10]$$

where $\hat{E}$ and $\hat{GDP}$ represent the growth rates of employment and the economy, respectively; and ε_{GDP}^{E} is the employment elasticity of growth.

Equation 10 suggests that the growth rate of employment is proportional to the real growth rate of the economy, where its proportionality is determined by the size of the employment elasticity of growth. Therefore, for a given rate of economic growth, the higher the employment elasticity of growth, the larger will be the rate of growth of employment.

Using equation 10, it is also possible to derive the relationship between the unemployment rate and economic growth. Let:

LF represent the labour force,

ϕ equal the employment rate (E/LF)

θ equal the unemployment rate, (LF-E)/LF

Using the definitions of employment and unemployment rates and equation 10, we derive equation 11 for the rate of change of the employment rate:

$$\hat{\phi} = \varepsilon_{GDP}^{E} \hat{GDP} - \hat{LF}^{0} \qquad [11]$$

Given,

[19] Equation 10 is derived by dividing both sides of the expression dE in equation 5 by E, multiplying the right side by GDP/GDP, and defining $\varepsilon_{GDP}^{E} = (\partial E / \partial GDP)(GDP / E)$.

$$\hat{\theta} = -\beta_0 \hat{\phi} \qquad \beta_0 = E/(LF - E) \qquad [12]$$

that is, as the employment rate increases (decreases), the unemployment rate proportionally declines (increases).

Substituting equation 12 in equation 11 provides:

$$\hat{\theta} = \beta_0 (\hat{LF}^0 - \varepsilon_{GDP}^E \hat{GDP}) \qquad [13]$$

Equation 13 implies that, for a given growth rate of the labour force, the unemployment rate declines (increases), with a higher rate of economic growth and higher employment elasticity of growth. It also implies that the rate of change of the unemployment rate is affected by the initial ratio of employment to unemployment (β). In other words, for a given rate of economic growth, employment elasticity of growth, the growth rate of the labour force, if initially β is high (low), the unemployment rate declines faster (slower).

Our analysis of channels through which growth and inequality impact on poverty highlights the complexity of the underlying relationships and the conditions for pro-poor growth. Moreover, equation 13 captures the relationship between economic growth and the evolution of the unemployment rate. In the next section, we apply the above methodology to examine the implication of diverse growth scenarios for the evolution of poverty and unemployment in South Africa.

4. PROSPECTS FOR HALVING UNEMPLOYMENT AND POVERTY RATES IN SOUTH AFRICA

The South African government is committed to halving unemployment and poverty rates by the year 2015.[20] The presentation in section 3 lays the analytical foundation for an empirical examination of the potential of different economic paths to achieve these objectives. In this section, we define four distinct groups of economic scenarios that are

[20] ANC 2007:3.

designed to open and widen the poverty reduction channels identified in section 3 and estimate their effects on unemployment and poverty rates.

A. The Approach

We use a micro-simulation model of South Africa to simulate the impacts of different scenarios and compare their potential outcomes. The criteria we use are: (a) lowering the poverty rate, the faster the better; (b) reducing the unemployment rate, the faster the better, and (c) decreasing income inequality, the more the better. Moreover, the acceptable paths are expected to (d) possess positive per capita growth, and (e) follow a sensible fiscal position. The model, South African Tax and Transfer Simulation Model (SATTSIM-Plus), was built by Applied Development Research Solutions (ADRS) for the quantitative assessment of the impacts of alternative macroeconomic, tax and transfer scenarios on poverty, distribution and budget trends in South Africa. It includes a macroeconomic performance module, two tax modules (income tax and value added tax), and six social security modules (child support grant, old age pension, disability grant, care dependency grant, basic income grant, and care giver grant). We have used this model to generate projections for the period 2007 to 2015.

The model allows us to specify values for a number of exogenous variables to define and run a new policy scenario. These can be divided into the variables that are subject to policy control and those that fall outside such control. For a given set of future values for a particular macroeconomic trend and policy variable, the model predicts the time paths (within the next ten years) of its endogenous variables. These include: the poverty rate and the poverty gap; income inequality, represented by the Gini-coefficient; the distribution of employment and income among poor and non-poor households; the allocation of social security grants among eligible groups within the population; the budgetary implications of current and alternative grant programmes; government revenues from income tax and value added tax, and the employment and unemployment

rates. In short, the model links the welfare outcomes of alternative tax and social security policies with different assumptions about the country's macroeconomic performance.[21]

B. How Can the Unemployment Rate Be Halved by 2015?

The South African population is expected to grow by about 3.5 million between 2007 and 2015, or by an average annual rate of less than 1 percent (0.8%).[22] During the same period, it is estimated that the labour force will grow by about 1.65 million, assuming that the labour force participation rate remains at the 2006 rate of 56 percent.

Given these basic demographic trends, and assuming that the economy will grow at an average annual real rate of 5 percent between 2007 and 2015,[23] how can the economy generate enough jobs to gradually reduce the unemployment rate by half by 2015? Secondly, what are the poverty and inequality effects of different employment creating scenarios?

To answer these questions, Group A scenarios are designed, using different assumptions about the employment intensity of the growth paths (ε_{GDP}^{E}):

Scenario A1: Low employment intensive growth path

The specifics of scenario A1 are as follows:

- The economy will grow in real terms at an annual rate of 5 percent.
- The average annual inflation rate will be 5 percent.
- The employment elasticity of growth, ε_{gdp}^{E}, will be 0.20 between 2007 and 2015. This means that a 1 percent increase in the real growth of the economy is expected to generate a 0.2 percent increase in total employment.

[21] For more information about the model used for this paper, please contact the author at asghar@wider.unu.edu.
[22] We have used the population projections of Statistics South Africa for 2007 to 2011. For the period 2012 to 2015, we have used own population projection using StatsSA data.
[23] The government's growth projections for the next 9 years, including 2007, are as follow: 5 percent growth until 2009 followed by 6 percent growth rates for the period 2010 to 2015. To simplify, we have adopted 5 percent average annual real growth rate between 2007 and 2015.

- The poverty line of R669 per month per adult equivalent for 2006 will be annually adjusted to the inflation rate.[24]

- The current distribution of income between poor and non-poor households and government's current income tax, value added tax and social welfare programmes remain unchanged over the next nine years.

- The real value of different grants and their related means tests remain constant over the next nine years. This implies that the grant amounts and the means test are adjusted annually to the inflation rate.

- The annual additions to total employment are allocated between the poor and the non-poor, using their current share of employment – about 15 percent and 85 percent respectively.

- The differences between the average salaries of the employed poor and the employed non-poor remain constant in real terms. Salaries of both groups are assumed to increase annually in real terms by 3.5% percent.

Scenario A2: Medium employment-intensive growth path

Scenario A2 is the same as scenario A1, with only one exception. The growth process is assumed to be twice as job creating as in scenario A1. Specifically, the employment elasticity of growth is assumed to be 0.40.

Scenario A3: High employment-intensive growth path

The specifics of scenario A3 are the same as for scenario A1, except that the growth path of the economy is associated with much higher job creation. For scenario A3, the

[24] The estimation of the poverty line is based on (a) the calculation of the minimum dietary requirements of adult individuals, (b) the estimation of the share of food in total expenditure of the bottom 20 per cent of the South African population, and (c) the application of the Orshansky (1965) method of estimating poverty thresholds by dividing the cost of the minimum dietary requirement for a person by the above share.

employment intensity of growth is set at 0.60, which is considered high by international standards.[25]

Findings on the impact of Group A scenarios on employment:

- The first scenario (A1) will generate about 1.1 million new employment opportunities between 2007 and 2015. This is about half a million fewer than the expected increase in the size of the labour force in the same period. Therefore, under this scenario, the unemployment rate is expected to increase by 0.6 percent by 2015, which is an undesirable outcome.

- By doubling the employment-intensity of growth from 0.20 to 0.40, simulation results show that scenario A2 will be able to create more employment opportunities than the expected increase in the labour force in the next nine years. As a result, the unemployment rate is expected to decline from 25.8 percent in 2006 to 19.7 by 2015 (Table 1). Therefore, scenario A2 will also be unable to reduce the unemployment rate by half by 2015.

- It is only when the growth process is associated with a much higher rate of employment every year that the economy will be able to create enough jobs to halve the unemployment rate by 2015. Scenario A3 reflects a growth path that is capable of generating about 3.7 million additional employment between 2007 and 2015, and reducing the unemployment rate from 25.8 percent to 12.4 percent during this period (Table 1). Therefore, with scenario A3, the economy will generate enough employment annually to gradually reduce the unemployment rate by half by 2015.

Findings on impact of Group A scenarios on poverty

The simulation results show that:

- The doubling and tripling of the employment intensity of growth in Group A scenarios partially expands employment opportunities for the unemployed poor. However, since the pattern of allocation of new employment is unchanged, the

[25] For a cross country comparison of employment elasticity of growth see Islam 2004.

economic paths that underlie Group A scenarios benefit the non-poor proportionally more than the poor. Consequently, only 15 percent of new employment opportunities and their related income are allocated annually to poor families.

- Higher employment intensity of growth results in higher mean household income (equation 2), which in turn directly and indirectly helps increase the pace of poverty reduction (equation 1) (Table 2). The direct effect is through poverty elasticity of income (ε_y^v), which is relatively higher (in absolute value terms) in scenario A3; the indirect effect is through income inequality, which is also relatively higher (in absolute value terms) in scenario A3 (Table 3).

- Higher employment-intensive growth is also accompanied by the greater effectiveness of growth in reducing poverty through the social provisioning channel. This is mainly due to the decline in the unemployment rate. As a larger number of jobs are created and members of poor households obtain employment, the depth of poverty declines, increasing the ability of social welfare programmes to move poor households out of poverty. Therefore, simulation results show that the poverty elasticity of social provisioning (φ), which in this case captures the ability of social grants to move poor households out of poverty, is higher for the economic path that is more job creating (Table 3).

- The economy in scenario A3 is also more effective in reducing inequality than the low employment-intensive growth path (scenario A1). Therefore, the Gini-coefficient will be lower with scenario A3 in 2015 than with scenarios A1 or A2 (Table 2). This is mainly due to a relatively larger increase in household mean income as the economy generates a high level of new employment opportunities every year under scenario A3.

- Scenario A3 is more effective as it reduces the overall poverty index through a reduction in income inequality. This is reflected in scenario A3's higher (in absolute value term) inequality elasticity of poverty (σ) (Table 4).

Overall, the economic path with the highest employment intensity of growth (scenario A3) is almost twice as effective as scenario A1 in reducing poverty (Table 2);[26] but it is also quite insufficient to halve the poverty rate by 2015. The three scenarios in group A demonstrate that, given the current structure of the labour market, halving the unemployment rate by creating large numbers of employment opportunities (about 3.7 million between 2007 and 2015) will be insufficient for halving the poverty rate at the same time.

Moreover, the economic path of scenario A3 may be unsustainable, since about three-quarters of the annual new employment opportunities are expected to go to non-poor households already experiencing a much lower rate of unemployment. This means that the dynamic of the current scenarios is predicted to generate further expansion of the wage gap and worsening inequality and poverty. The solution is to make the employment creation process more pro-poor in order to (a) avert increases in the excess demand for employment in the non-poor households, and (b) accelerate the pace of poverty reduction.

C. From Halving Unemployment to Halving the Poverty Rate

The focus of the next set of scenarios (Group B) is to explore further the potential of using labour market reforms to achieve our twin goals. Specifically, the question is: if the job creation process becomes significantly pro-poor, will that be sufficient to halve both the unemployment and poverty rates by 2015?

In section 3, we showed that the evolution of the poverty index relates, in a complex manner, to the dynamic of inequality. Due to its underlying assumptions, Group A scenarios have a relatively low impact on reducing inequality. Their impact on poverty is mainly the result of employment-induced poverty elasticity of growth (ψ).

The Group B scenarios build on scenario A3 and add two types of pro-poor measures to the labour market. The measures are designed to make both the annual allocation of new employment opportunities and the wage rates associated with different types of employment gradually pro-poor. This would change the thrust of the economic path so

[26] The relevant total elasticity of poverty are –1.095 and –1.923.

that the poor begin to benefit proportionally more than the non-poor from the expansion of the labour market (Table 5).

Scenario B1:

Scenario A3, with an annual 1 percent increase in the allocation of new employment opportunities to the unemployed from poor families, and an annual 0.5 percent increase in the average real salary of new employment opportunities for the unemployed poor. Therefore, the poor households' share of total new employment increases from 15 percent in 2006 to 24 percent in 2015 (Table 5).

Scenario B2:

Scenario A3, with an annual 2 percent increase in the allocation of new employment opportunities for the unemployed from poor families, shows an annual 1 percent increase in the average real salary of new employment opportunities for the unemployed poor. Therefore, the poor households' share of total new employment increases from 15 percent in 2006 to 33 percent in 2015 (Table 5).

Analysis of Findings

Since Group B scenarios are built on scenario A3, they meet the goal of halving the unemployment rate by 2015. At the same time, relative to scenario A3, the pro-poor measures in Group B help increase the effectiveness of the three poverty channels:

- The poverty elasticity of employment (ψ) increases (in absolute value terms) from -1.009 in scenario A3 to -1.125 in scenario B2. This implies that the increased pro-poor allocation of new employment and the annual real increase in the average salary of the employed from poor families make the job-creating aspect of the growth process more poverty reducing (Table 3).

- The increase in the poverty elasticity of social provisioning (φ) implies that the social security system will become relatively more effective in moving recipient

families out of poverty, as more and better employment opportunity for the poor help reduce the depth of poverty.[27]

- Finally, relative to scenario A3, Group B scenarios, especially scenario B2, decrease income inequality due to their higher mean household income and gradual reductions in the wage gaps between the poor and the non-poor. Consequently, Group B scenarios are relatively more effective in reducing poverty through the inequality channel. This implies relatively higher inequality-elasticity of poverty (σ) and $\lambda=\gamma\kappa$ (Tables 3 and 4).

Overall, the results of Group B scenarios show that the economic path that includes a more pro-poor labour market measures embodies a stronger employment, social provisioning and inequality nexus between poverty and growth (ψ, φ, λ). Therefore, relative to scenarios A3 and B1, the growth process in scenario B2 is more effective in reducing poverty ($\rho_{B2} > \rho_{B1} > \rho_{A3}$). However, even though poverty rate declines from 44 percent to 30.4 percent in scenario B2, the pace of poverty reduction is not sufficient to halve the poverty rate by 2015 (Tables 2 and 3).

The results of Group B scenarios suggest that we need to go beyond labour market reform and examine the possibilities of releasing the capacity of social provisioning to help directly (through raising the income of the poor, i.e., increasing the growth elasticity of poverty, μ) and indirectly (through reduction in inequality, i.e., increasing the inequality elasticity of poverty, σ) increase the pace of poverty reduction.[28]

D. Effective Ways to Halve Both Unemployment and Poverty Rates

In South Africa, there is an ongoing debate about the need to establish a comprehensive social security system that expands current government programmes.[29] The social provisioning component of the model presented in section 3 captures the links between social welfare programmes and reductions in inequality and poverty. Group C scenarios

[27] Poverty gap remains basically unchanged in scenario A3. However, in scenario B2, poverty gap declines by 1.3 percent.
[28] Please note that changes in the elasticities are in terms of their absolute values.
[29] Department of Social Development 2002.

explore the implications of expanding the current social protection system in South Africa, in terms of both coverage and financial support. Since the current South African social security system has been a successful policy tool in reducing poverty, our working assumption is that the expansion of the current social security system has the potential to help achieve an economic path capable of achieving the goal of halving the poverty rate. Therefore, the key question is whether reasonable extensions of the social security system can help halve the poverty rate by 2015.

Scenario C1*:*

The same as scenario B2, except that the age requirement for the child support grant is extended to include children younger than 18 years old, starting in 2007. The amount and adjustment of all grants remain the same as in scenario B2 (Table 5).

Scenario C2:

Scenario C2 adds to scenario C1 a new grant programme for unemployed adults (i.e. adult grant). For the purposes of simulation, scenario C2 adopts the adult grant programme from 2007, setting the amount of the grant at R500 a month. The annual adjustment of the adult grant will be the same as for the other grants (Table 5).

Scenario C3:

The same as scenario C2, except that all grant amounts are allowed to increase by 2 percent above the inflation rate every year, starting in 2007 (Table 5).

Analysis of Simulation Results (Scenario C1)

Scenario C1 brings an additional 1.9 million children from poor families under the social grant umbrella. Consequently, the budget for the child support grant increases by about R5 billion a year. However, the extension of the child support grant, which also increases the disposable income of poor families, is estimated to raise value added tax revenue by about R0.5 billion a year in the earlier periods, and by about R1 billion a year in the later periods. Therefore, the net budgetary impact of scenario C1 is between R4 billion and R4.5 billion a year.

Given the pro-poor bias of the child support grant, scenario C1 helps increase the average income of poor families by about R1,000 a year, and reduces overall income inequality, the poverty rate and the poverty gap by 2015. Therefore, relative to scenario B2, the poverty rate will be 0.7 percent lower in 2015 (Table 2).

Overall, the economic path that reflects scenario C1 is a more effective route to halving the current poverty rate than are the earlier scenarios, which did not include the expansion of the child support grant. This is reflected in a higher, in absolute value terms, total elasticity of poverty (ρ=-2.313) than the corresponding elasticity for scenario B2 (ρ = -2.145). The main contributions to this outcome are the increases in the poverty elasticity of social provisioning (φ)[30], and the inequality-linked poverty elasticity of growth ($\lambda=\gamma\kappa$).[31] Relative to scenario B2, the absolute value of the former elasticity increased from 0.457 to 0.493; in the latter case, it increased from 0.563 to 0.607. Overall, the poverty rate declines from 44 percent in 2006 to 29.3 percent in 2015 (Tables 2 and 3).

Scenario C1 highlights the relative importance and potential of social security to combat poverty. At the same time, it shows that the extension of the scope of child support is not a sufficient measure to help halve the current rate of poverty by 2015. Therefore, scenario C1 paves the way for the next scenario.

Analysis of Simulation Results (Scenario C2)

The debate on the need for a comprehensive social security system in South Africa includes the call for the expansion of the current grant system to provide support to poor or unemployed adults between 18 years old and the retirement age. The purpose of scenario C2 is to add an adult grant programme to the current social security system and assess its impacts. Therefore, in scenario C2, in addition to the extension of the child support grant (scenario C1), we introduce an adult grant programme for unemployed men and women. The grant is designed to help 'broadly defined' unemployed adults and to

[30] which captures the social provisioning nexus between poverty and growth.
[31] The referred increases in the elasticities are in terms of their absolute values.

cover men aged between 18 to 64 and women aged between 18 and 59.[32] The grant amount starts at R500 a month in 2007 and is expected to adjust annually to the inflation rate, like the other grants (Table 5).

For 2007, the model estimates that there are almost 5.6 million unemployed adults.[33] Over time, however, the net effect of the evolution of the population and the rise in employment that underlies scenario C2 show a gradual decline in the overall number of those eligible for the adult grant. By 2015, the number of those eligible for the adult grant is estimated to have decreased by about 2 million persons.

The adult grant requires an initial disbursement of R33.6 billion in the first year of its introduction. However, even though the nominal value of the grant adjusts annually to the inflation rate, the total cost of the grant is expected to decline gradually, due to the gradual fall in the number of those eligible for the grant. Therefore, in 2015, the cost of the adult grant is estimated at R32.8 billion. At the same time, the disbursement of the grant generates an estimated annual increase of between R2.5 and R3 billion in total revenue from income tax and value added tax.

The adult grant helps establish an economic path with a faster rate of poverty reduction. As a result, by 2015, the poverty rate is expected to be 1.6 percent lower than the result from scenario C1. The poverty gap also declines substantially (by 3.1 percent relative to scenario C1) between 2007 and 2015 (Table 2).

Overall, the economic path of scenario C2 results in lower poverty rates than previous scenarios, since it embodies multiple improvements in poverty reduction channels. In this case, all the three composite elasticities associated with the employment, social provisioning and inequality nexus between growth and poverty (ψ,φ, and λ) improve with the introduction of the adult grant. Consequently, with scenario C2, the total elasticity of poverty (ρ) will be higher than for previous scenarios and poverty rate declines from 44 percent to 27.7 percent by 2015. Despite its desired effects, the

[32] The 'broad' definition was used since the objective is to reduce poverty. At the same time, the scenario can be redefined in terms of who should receive such a grant.
[33] The estimated number of unemployed adults does not include the disabled adults.

simulation results show that the introduction of an adult grant programme in scenario C2 is not sufficient to lower the poverty rate sufficiently to reach the objective of halving the poverty rate by 2015.

Analysis of Simulation Results (Scenario C3)

The simulation results of scenario C2 show that, despite the expansion of the social security system and the annual full adjustment of all grants to the inflation rate, the magnitude of social grants relative to GDP declines gradually from its peak of 5.7 percent in the first year of implementing the measures (2007) to 3.7 percent of GDP in 2015.[34] Similarly, the share of total grants to the sum of income tax and value added tax declines substantially. The reason for the relative decline in the cost of social grants is that scenario C2 (and all the previous scenarios) keeps the real value of grants constant, even though the economy is assumed to grow in real terms at an average annual rate of 5 percent.

Scenario C3 takes note of this finding and expands on scenario C2 by allowing the amount of all grants, including the adult grant, to adjust partially to the real rate of growth of the economy. The partial adjustment is set at 2 percent annually. This is considered a financially acceptable measure.

The simulation results of scenario C3 include:

- A relatively larger increase in the average income of poor families and their share of total household income.[35] As a result, the income inequality index declines from 0.584 to 0.575. The growth elasticity of poverty (μ) and specially the inequality elasticity of poverty (σ) are higher with scenario C3, indicating the increased pro-poorness of the scenario (Table 4).

- A sharp rise in the cost of total grants relative to GDP in the first year of implementing scenario C3. However, the cost of the grants relative to GDP declines

[34] The total amount of all grants increases from 3.8 percent of GDP in 2006 to 5.7 percent of GDP in 2007 since we have assumed that the above measures will all be implemented from 2007.
[35] This is relative to results of scenario C2.

gradually to about 4.4 percent of GDP in 2015, which, compared to 2006, is only 0.7 percent higher. Therefore, the economic path that supports scenario C3 annually provides larger resources for social provisioning through social welfare programmes, which is reflected in a relatively higher social provisioning elasticity of growth (ε^{S}_{GDP}).

- As a result of the increase in the real value of grants, and relative to scenario C2, the poverty rate declines by 2.2 percent – from 27.7 percent under scenario C2 to 25.4 percent. The depth of poverty, measured by the poverty gap, also declines by a little more than 2 percent.

Overall, relative to scenario C2, the economic path of scenario C3 is more effective in reducing poverty. This is reflected in its relatively higher overall total elasticity of poverty (ρ), which implies that, compared to scenario C2, the same rate of economic growth is expected to reduce the poverty index by a larger amount ($(|\rho_{C3}| = 2.917 > |\rho_{C2}| = 2.566)$. This is due to scenario C3's relatively stronger employment, social provisioning and inequality nexus between poverty and growth, which are reflected in the greater magnitude of the relevant elasticities (ψ, φ, and λ) (Table 3).

Scenario C3 reflects an economic path that realises the objective of halving the unemployment rate and, at the same time, brings the economy closer to meeting the objective of halving the poverty rate. However, scenario C3's projection of the poverty rate for 2015 (estimated at 25.4 percent) still falls short of the expected target of 22 percent (Table 2). Following are two final scenarios that incorporate additional measures to scenario C3 in order to meet the two goals.

Final Scenarios

If the amounts of the different grants are allowed to grow annually at the rate of 4 percent in real terms, this revised version of scenario C3 will be sufficient to reduce the poverty rate to 22.6 percent, which is almost half of the estimated current poverty rate of 44 percent (Table 2). The measure initially adds a little more than one billion rand to the cost

of the social security system. Overtime, however, as the amounts of grants grow, the overall social security budget for this scenario will be R30 billion higher than scenario C3 by 2015.

Another approach would be to augment scenario C3 with non-cash transfers to poor households. The Group D scenario examines the impacts of in-kind social transfers on poverty.

In equation 1, the variable 'mean household income' (y) was defined to include income from employment and both the cash and in kind government transfers to households.[36] Social transfers in-kind consist of individual goods and services that are provided as transfers in-kind to individual households by government entities. They can be divided into two types: those where beneficiary households actually purchase the goods or services themselves and are then reimbursed, and those that the relevant services provide directly to the beneficiaries. The appeal to policy makers of transfers in-kind over transfers in cash is that the resources transferred can be targeted towards meeting specific needs, such as education or health, and must be used in the ways that their providers intend. The South African government spent R150 billion on social transfers in-kind to households in 2006.[37]

In equation 2, we used the concept of social provisioning (S) as one of the determinants of the household mean income. Group C scenarios used one category of social provisioning (i.e. cash transfers) to examine the effectiveness of South Africa's current grant system and its extension to help halve the poverty rate by 2015. For the next scenario (scenario D), we examine the impact of expanded in-kind social transfers to poor households as part of social provisioning.

[36] To measure the value of goods and services provided to households as transfers in kind, the government's final consumption expenditure is divided into collective consumption expenditure (defence, justice, etc) and individual consumption expenditure (education, health, etc.).
[37] This is recorded in the Current Income and Expenditure of General Government and also in the Current Income and Expenditure of Households (Reserve Bank, Quarterly Bulletin).

Scenario D:

Scenario D is the same as scenario C3, plus an annual lump sum addition to the current social transfers in-kind to fund specific government targeted (near-cash) basic services to mainly poor households. The scenario includes an initial injection of R20 billion (1 percent of estimated nominal GDP for 2007) into the government's in-kind transfer budget to expand current government services and introduce new services to poor households. The amount is expected to increase by 2 percent in real terms every subsequent year. This injection is expected to reach R34.4 billion (0.86 percent of nominal GDP) by 2015. We have assumed that the adjusted disposable income of the poor will benefit by an equivalent of 80 percent of the above addition to the government's in-kind expenditure (Table 5).

In terms of areas of support to poor families, the above injection to the in-kind budget is expected to be used as a transportation subsidy or transportation voucher for the unemployed, and to include other types of in-kind support to poor households that indirectly help increase their disposable income, such as subsidies for medicine, food aid (school feeding), and expanded free essential services. [38]

Analysis of Simulation Results (Scenario D)

Relative to scenario C3, the simulation results of scenario D show:

- A greater decline in the inequality measure (Gini index) and the poverty gap. Relative to scenario C3 (with a Gini coefficient of 0.575 and a 14 percent poverty gap), Gini coefficient declines to 0.560 and the poverty gap declines to 8.3 percent (Table 2).

- An increased contribution of the social provision channel to poverty reduction, which is evident from relatively higher poverty elasticity of social provisioning, φ. It increases (in absolute value terms) from 0.621 in scenario C3 to 1.492 in scenario D (Table 3).

[38] See Meth 2007 for a detailed analysis of important gaps in current services to the poor.

- A stronger redistributive thrust, which underlies the increased effectiveness of the scenario in reducing poverty. The growth elasticity of poverty for this scenario is -1.320 while the distribution elasticity of poverty is -2.258. This suggests that the inequality reducing channels of the scenario have greater effects on reducing the total poverty index than do the increasing mean household income channels of the scenario (Table 4). To express this differently, in scenario D the impact of the decline in income inequality on poverty is 1.7 times the poverty effect of the increase in mean household income.

- An increased effectiveness of the employment creation to reduce poverty. This is important since it shows how scenario D, that has significantly larger impacts on reducing the poverty gap, makes it possible for a larger number of poor families to move out of poverty as they find employment. This is captured by the relative increase in poverty elasticity of employment (ψ), compared to scenario C3.[39]

Overall, the rate of poverty declines from 44 percent in 2006 to 21.2 percent in 2015 (Table 2). This means that the economic path that underlies scenario D has the potential to reduce both the unemployment and poverty rates by half by 2015. As a reminder, scenario D is based on and requires (Table 5):

(a) an annual real growth rate of 5 percent between 2007 and 2015;

(b) employment elasticity of growth of at least 0.60 to generate 3.7 million new jobs during the period;

(c) transformation of the economy so that the labour market benefits the poor proportionally more than the non-poor, in terms of distribution of new employment and employment related income;

(d) extension of the child support grant to poor children between the ages of 14 and 17;

[39] Poverty elasticity of employment increased (in absolute value terms) from 1.531 in scenario C3 to 2.985 in scenario D.

(e) introduction of an adult grant programme for unemployed adults, with an initial grant amount of R500 per month;

(f) a real annual increase in the value of all grants by 2 percent;

(g) expansion of the current government in-kind transfers to poor households in the form of transportation subsidies, food aid, subsidy for essential services, etc. The proposal is to increase the budget for in-kind social transfers by R20 billion in the first year, followed by an annual real increase of 2 percent.

The implementation of scenario D has important implications for macroeconomic, industrial and social security policies, and for the allocation of resources. For the economy to grow in real terms at 5 percent a year, to generate a high rate of employment (about 3.7 million new jobs) that is pro-poor, and to provide for a major expansion of the social security system, the government will need to play an active role in designing and implementing growth, employment and social security policies that are strongly pro-poor. For example, financing the expansion of the social security system along the lines of scenario D requires the adoption of a combination of measures that include deficit financing (e.g. equivalent to about 2 percent of the GDP), budget reprioritisation, elimination or major curtailing of programmes that effectively subsidise the income of non-poor households, and changes in income, wealth and value-added taxes.

In this context, the next section is devoted to important features of a pro-poor policy framework with the potential to implement policies – such as scenario D policies – to achieve the twin goals of halving the poverty and unemployment rates by 2015.

5. TOWARDS A PRO-POOR DEVELOPMENT POLICY ARCHITECTURE

Sections 3 and 4 showed that, on the one hand, the combined goals of halving the unemployment and poverty rates depend on both the magnitude of the growth rate (the higher the growth rate, the larger the decline in poverty) and the distribution of the benefits of growth (poverty declines faster when more growth benefits go to the poor than

to the non-poor). Therefore, achieving high growth rates does not necessarily translate into a high reduction in poverty. On the other hand, the scenarios clearly highlight the relative importance of policy interventions to foster pro-poor growth and outcomes.

The aim of this section is to present an economic policy approach that can be considered a pro-poor approach, since it internalises the requirements for fostering growth that delivers proportionally greater benefits to the poor than to the non-poor. This is important as many discussions on pro-poor policies effectively reflect the orthodox macroeconomic policy prescriptions. In these presentations, it is usually the requirements of the orthodox macroeconomic framework that are prioritised and allowed to define a poverty reduction agenda. Moreover, in many instances they also ignore or insufficiently integrate policy issues related to high employment creation.

We need, therefore, to overcome the intellectual hurdles of mainstream views and policy prescriptions if we are to open up the space to design a developmentally suitable policy framework. Our aim is to present a basic guideline that will inform the specifics of a pro-poor set of policies. To the extent that halving the poverty and unemployment rates depend on the macroeconomic policy framework, the approach to industrial development, labour market reforms and the establishment of comprehensive social security system, our basic policy guideline needs to reflect the coordination of these policies.

A. Pro-Poor Macroeconomic Policies

In South Africa, macroeconomic policy was significantly biased towards stabilisation and liberalisation from 1996 to 2001. In recent years, however, fiscal policy has become relatively less restrictive. The importance of growth and redistribution for employment creation and poverty reduction underscores the pertinent role of a macroeconomic policy framework to foster high rates of growth and channel a disproportionate share of its benefits to the poor.

Pro-Poor Fiscal Policy: The central aim of a pro-poor fiscal policy should be to help establish a growth path that embodies simultaneous progress towards minimising income inequality and achieving full employment. Its necessary elements are (a) counter-cyclical

policies, (b) a strong public investment programme, and (c) measures to re-orient the private sector.

(a) Counter-cyclical policies: A major challenge is to avoid pro-cyclical fiscal policy, either to cushion the impact of adverse shocks, or to adapt to government revenues that are pro-cyclical, drop during recessions and increase during expansions.

In this context, how can the government establish a counter-cyclical fiscal policy? On the one hand, this requires that the monetary authorities support the pro-poor fiscal policy goal and, together with the fiscal authorities, design a coordinated counter cyclical macroeconomic policy framework for the country. On the other hand, it is necessary to establish the needed 'fiscal space' to sustain strong public investment and expanded social security programmes over economic cycles (see below). One suggestion is to create a fiscal stabilisation fund that could be used to smooth public spending over economic cycles (Islam 2003). This can be financed from excess revenues that are collected by the government during a given year (e.g. SARS's overshooting of its projected tax collection) or during periods of growth (e.g. current fiscal surplus) or during commodity price boom (e.g. rise in gold prices).[40]

(b) strong public investment: another defining element of a pro-poor fiscal policy is a strong public investment programme. Given the historical under-investment in new infrastructure and the low maintenance of existing social infrastructure, many of the capital inputs required – education, training, communications, transportation and other elements of social and physical infrastructure – have a significant 'public good' character that precludes their being adequately supplied by private firms. Only the public sector (at national, provincial and local levels) can realistically be expected to take responsibility for the necessary social and infrastructure investment.

Public sector investment can become even more pro-poor by, for example, ensuring that such investment is relatively less capital intensive than private sector investment. This helps increase the employment-creating thrust of the growth process. To foster such an

[40] This is similar to holding international reserves in liquid foreign assets to safeguard the economy against fluctuations in capital flow (Islam 2003).

outcome, public investment needs to include: a) public works projects that directly hire the poor; b) the creation of infrastructure assets that give the poor access to markets and lower their production costs, and c) social sector assets such as schools and health clinics that increase the productiveness of the poor.[41]

It is within this overall context that the UN Millennium Project (2005) emphasises the need for a 'big push' strategy in public investment to help countries break out of their poverty traps, meet the MDG goals and set economies on a sustainable growth path. The Project identifies seven main areas for public investment: rural development; urban development; health systems; education; gender equality; environment and science, and technology and innovation.

Given the importance of strong public investment for pro-poor fiscal policy, it is necessary to complement the idea of creating a fiscal stabilisation fund with additional measures to generate the required fiscal space. This can be made possible through one or more of the following two options: raising the revenue share in GDP and/or using the fiscal deficit.

Increasing the revenue share in GDP is the most effective way to create fiscal space and, at the same time, reduce inequality. The very high income and wealth inequality in South Africa makes it possible to press for a strong progressive income and company tax, value added tax and wealth tax systems. The high-income section of the population, who are expected to increase their contribution to the fiscal space for pro-poor public investment, will be considerably compensated in a number of ways. As the main owners of small and larger private sector enterprises, they will be important beneficiaries of public investment in many of the capital inputs required for efficient productive activity in a modern economy. Such investments, along with a counter cyclical policy approach, will help their sources of income through increased capacity utilisation, capital and labour productivities and profitability.

Finally, using the fiscal deficit to finance social and infrastructural investments to create the necessary financial space for pro-poor fiscal policies is currently a viable option in

[41] Roy *et al* 2005.

South Africa. An important guiding principle is that increasing expenditure on social sectors, especially in terms of a relative increase in allocations to these sectors, is almost always pro-poor. At the same time, it helps increase both the rate and sustainability of the country's long-term growth.

(c) Measures to reorient the private sector: The third element of a pro-poor fiscal policy includes government procurement policies and investment incentive measures to increase the volume of private sector investment, influence the composition of investment, and increase the chances of future growth patterns being redistributive and job creating.

Pro-poor investment needs to go beyond the public sector. There is a need to reward investment by businesses whose activities reflect support for a more broadly based transformation of ownership, improved income distribution and a reduction in the unemployment rate. Specific criteria can be developed to determine the eligibility and extent to which businesses can be given differential tax incentives, access to subsidies and access to government procurement.[42]

Monetary Policy: If the above fiscal policy measures are to produce the desired outcomes, monetary policy authorities need to balance their concern for inflation with a concern for economic growth.[43] Ensuring the monetary policy commitment to foster growth is of prime importance.[44] This is because, as a major macroeconomic instrument, monetary policy has limited influence in terms making growth pro-poor. However, in support of an expansionary fiscal policy, it can indirectly foster growth that is pro-poor. As a general rule, if inflationary pressures are weak, this support should take the form of

[42] The South Africa Human Development Report (2003) proposes that businesses can be given above benefits depending on the extent to which (a) they have restructured, or are going through an ownership restructuring process that is resulting in a broad-based distribution of company ownership amongst their employees and the public as a whole; (b) their capital productivity growth rates exceed increases in their after-tax rates of profit (i.e., as a measure of improvement in income distribution), and (c) their real output grows faster than their labour productivity growth rates (i.e., as a measure of significant employment generation).

[43] Similarly, Weeks *et al* (2005) suggests the following guideline for the monetary policy, 'foster growth and counter inflation when necessary'.

[44] In scenarios that were developed in section 4, we assumed 5 percent real annual growth rate during 2007 to 2015. Reaching such a rate and sustaining it over years require monetary policy commitment to directly promote growth and policy coordination with the Treasury.

low interest rates and an expanding monetary supply, which is also the basis for supporting a counter-cyclical macroeconomic policy[45].

For a growth accommodating monetary policy, the interest rate should be used as a long-term investment instrument rather than for short-term stabilisation. More specifically, to sustain economic growth, the long-term interest rate should not be greater than the maximum sustainable rate of growth of per capita income.

In this context, nominal GDP targeting, for example, offers an important improvement over inflation targeting or money supply targeting. The advantage is that this gives weight both to inflation and to real GDP growth. This paves the way towards reorienting monetary policy that supports economic growth.

In addition to its potential impacts on growth, relatively lower interest rates under nominal GDP targeting have further positive developmental effects. For example, to the extent that government bonds are held by the relatively prosperous portion of the population, lowering interest rates can improve income distribution; at the same time, lower rates reduce the size of domestic debt service in the budget, thus helping establish additional fiscal space for pro-poor government expenditure.

In addition to the above guideline for monetary policy, government can increase the portion of deficit that is money financed. This is considered the least anti-poor method of financing deficits, since with bond financing the deficit redistributes public revenue from the population as a whole to the wealthy in the form of interest payments. At the same time, to deal with balance of payments constraints, monetary authorities need to consider the adoption of a policy of managed currency depreciation in order to establish a stable and moderately undervalued real exchange rate that helps generate extra exports.

Finally, the above macroeconomic policy framework for pro-poor growth requires adopting a guarded approach to capital mobility. Domestic and international supporters of the 'Washington Consensus' have long advocated deep economic integration, including both trade and capital account liberalisation in South Africa. However, it is well known

[45] National Human Development Report of South Africa (2003) and Weeks *et al* (2005).

that short-term capital mobility increases the risk of financial crisis and economic recessions.[46] At the same time, capital account liberalisation has, in many countries including South Africa, allowed the interests of domestic and global financial capital to influence a country's macroeconomic policy in favour of low inflation and fiscal conservatism. Therefore, during the past decade, there has been a growing international debate on how to safeguard the economy from the potential damages of short-term capital mobility. Such controls would entail a combination of taxes and quantitative restraints.[47]

The above fiscal and monetary policy measures will enhance the pro-poor growth potential of the economy, ensure that fiscal and monetary policies are coordinated to respond positively to the need to sustain high growth rates, give necessary consideration to the monetary authority's concern about inflation, and safeguard the economy from the risk of financial crisis and pressures to forego pro-poor policies.

B. Employment Generation Policies

The findings of the economic scenarios in section 4 make it clear that, in order to halve both the unemployment and poverty rates by 2015, the labour market needs to become pro-poor (in terms of the allocation of new jobs and the evolution of wages) and the employment intensity of economic growth needs to increase substantially. Using policies to transform the economy so as to generate about 3.7 million new jobs (that are also pro-poor in terms of allocation and rewards) during the next nine years presents a significant challenge to policymakers. The following policy suggestions are offered in order to help develop a country specific package of measures to achieve the above objectives:[48]

Adopting policies to increase the labour intensity of production:[49] Central to a successful re-orientation of the economy is the need to ensure that the general production processes

[46] William Easterly et al (1999:43) claims that "… countries with more open capital accounts are more likely to go into recessions".
[47] Chang (2005:162) suggests that policymakers should adopt a conservative stance on liberalization. That is, liberalise only when the benefits are unambiguous and cannot be reasonably achieved through other means. He argues that any benefits associated with financial liberalisation must be carefully weighted against its costs (namely, increased levels of systemic risk, volatility and short-termism, all of which increase financial fragility, and thus the chance of financial crisis).
[48] Additional resources include Islam (2004) and ILO (2003).
[49] For further analysis and empirical findings see, Islam (2004).

become significantly more labour intensive. Examples of policy measures in this area include:

(a) The promotion of employment-intensive social and infrastructural investments. ILO (2000) proposes a public investment policy that stresses 'labour-based' rather than 'equipment-based' production methods.[50]

(b) The identification of targeted, time-structured and conditional incentives to promote labour-intensive production in the private sector.

(c) The withdrawal of explicit or implicit subsidies that systematically favour capital-intensive and/or large-scale enterprises.

(d) The adoption of tax and incentive measures to engender structural transformation of employment towards manufacturing and other non-farm sectors.

(e) Agricultural interventions to promote increased acreage under labour-intensive crops.

(f) The promotion of alternative ownership and production arrangements, such as co-operatives and equity arrangements that use labour-intensive methods of production.

In a number of these areas, the restructuring of diverse public enterprises can lead the way. Moreover, government procurement policy, at both national and provincial levels, should put greater stress on procuring goods and services from companies that seek to use labour more extensively in their areas of activity. Overall, commitment to halving the unemployment and poverty rates should reward sectors of the economy on the basis of their contributions to these national developmental goals and not on the basis of their industrial competitiveness on the global market.

Adopting measures to enhance the economy's capacity to utilise more labour: It is necessary to develop sector strategies that aim directly at promoting labour absorption.

[50] See ILO (1999) for a case study of using labour-based production method.

Such sector strategies should not be seen as separate from an employment strategy, but as vehicles for the realisation of the employment promotion objective. Sectoral strategies need to be internally coherent, as well as in terms of how they link together nationally and regionally. Supportive policies in this regard generally focus on the following: enabling polices; pricing; inputs; innovation and technology; information; infrastructure; the development of regulatory regimes and institutions; incentive structures; the identification of specific activities or groups to be targeted, and resource mobilisation.

Examples of relevant policy measures in this regard are:

- The facilitation of access to credit by disadvantaged individuals and communities through the reform of financial institutions, a lowered interest rate and/or the selective promotion of prescribed asset and/or investment policies.

- Land reform through restitution, tenure reform and redistribution.

- Design of projects that target poor labour tenants, farm workers, women and emerging farmers, giving them access to land for residential and productive use.

- Targeted provision of subsidised credit and extension services for labour-absorbing large, medium and small-scale activities that enhance employment creation.

- Use of an employment subsidy programme to encourage the private sector to increase its employment of first time jobseekers, and the retraining and/or hiring of retrenched employees.

Promoting sectoral programmes with high level of employment multiplier: Employment opportunities can be expanded through the promotion and consolidation of value chains or sectoral linkages as new economic activities are promoted. Pro-active policy measures include:

- Support for the development of activities that fill gaps in the value chain (distribution, marketing, financial intermediation, input provision, research and

development, technological capabilities, etc.) for select activities in agriculture, manufacturing and services.

- Tight coordination of public investment projects to maximise their impact on mutually re-enforcing activities in the private sector.

- Development of regional clusters of economic activities, especially in depressed areas of the economy.

- Special employment and public works programmes for those who cannot immediately be absorbed into productive employment. Such public works should focus on carefully chosen activities of a 'public good' nature, which will enhance social infrastructures that support private sector productivity.

C. Trade and Industrial Policy

Further liberalisation of the economy – in terms of flows of goods, services and capital – must be carefully managed and sequenced. There is a need for critical assessment of the underlying tenets of the argument for liberalisation, and a need to monitor carefully its speed and extent in the context of creating jobs and achieving a higher standard of living for the country's disadvantaged majority. Such analysis is vitally important, particularly given the experience of countries that have, in the last two decades, adopted full-scale economic liberalisation.

In this context, there is a good case for protecting or supporting sectors that generate large positive externalities such as technological spillovers. By encouraging import substitutes, protection can expand the domestic traded goods sector. The means of expansion operates by reducing the propensity to import, thereby reducing leakage from the domestic economy. The objective of protection in an economy with underemployment is to reduce the propensity to import competitive goods, not to reduce the actual volume of imports.[51] If the policy is successful, the rise in domestic incomes should encourage more imports of complementary and subsequently competitive goods.

[51] See also Jahed 2007.

In the direct and indirect formulation of industrial policy, the following needs to be given the highest priority: (a) meeting basic needs; (b) generation of employment; (c) education and training; (d) sectoral policy; (e) infrastructural provision and measures to ensure spin-offs; (f) reform of the financial system to secure finance for industry; (g) monitoring and control of foreign investment flows, particularly outward investments by conglomerates of South African origin; (h) minimum labour standards and the narrowing of wage differentials; (i) macroeconomic policy; (j) regional integration; (k) restructuring of state assets, and (l), the reform of institutions that make industrial policy, so that the allocation and coordination of responsibilities across government departments is rationalised and coherent.[52]

Chang (2002) suggests specific measures related to some of the above set of priorities. His recommendations can be summarised in the form of a guideline for developing pro-poor trade and industrial policy:

- *Develop policies and measures to overcome the following challenges facing the development of SMMEs*: access to finance; marketing of products and services; access to adequate and appropriate infrastructure; access to title deeds; insufficient skills in manufacturing, and access to technological support and advice.

- *Provide protection to certain strategic industries*. In order to prevent de-industrialisation associated with free trade policy recommendations, and establish the long-term foundation for a vibrant industrial sector, strategic industries need to be identified (in terms of employment creation, export generation, etc.), and measures such as tariffs, quotas and subsidies used for their development.[53] These measures are also suggested by Jahed (2007) and Carim (2005).

- *Coordinate other policies with the industrial strategy*. The objective is to ensure that the government's overall policy framework provides short and long-term

[52] For more details see Fine 1997.
[53] For more on the short term and long term costs and benefits of this policy approach see Chang 2002 and Helleiner 1994.

supports for industrial development. Government policies related to education, infrastructure, health, public investment and technology policy need to support industrial policy.[54]

- *Specify clear performance targets and incentives*: Defined realistic performance targets, rewards and penalties are essential in order to minimize "the possibility of implementation failure".[55]

- Clarify the mandates of state owned enterprises and hold their management accountable to those mandates.

- Use FDI as a strategic means to promote technology and knowledge transfers and stimulate innovation by domestic researchers. Moreover, tie the FDI policy to the national development and/or industrial policy plans.

- As much as possible, reduce reliance on foreign bank loans and adopt policies that discourage – rather than prohibit – the use of foreign loans as a source of finance.

D. Comprehensive Social Security System

In March 2002, the report of the Committee of Inquiry into a Comprehensive System of Social Security for South Africa was delivered to Cabinet. It provides a comprehensive attempt to bring together the different elements of a fragmented social security system in order to provide recommendations that could ultimately lead to comprehensive social protection. The simulation results of our policy scenarios in section 4 support the main conclusions and recommendations of the Committee's report, particularly the Committee's position that an appropriate social security system for South Africa must prioritise the needs of people without any income or with insufficient income, and must encompass those engaged in informal sector. This, for example, implies an extension of the child support programme to poor children aged between 14 and 18 years, who are not currently covered by the grant. It also implies an extension of the social security system

[54] For more on this topic see Helleiner (1994) and Jahed (2007).
[55] Chang (2002) provides examples for Japan, Korea and Taiwan.

to provide income support to poor adults or to poor unemployed adults aged between 18 and the retirement age for households where no-one is employed.

In addition to expanding the scope for the eligibility for social grants, the real value of social grants (after adjustment for inflation) also needs to increase in the medium term. The combination of both measures is needed to ensure that the government's social grant system contributes effectively to the fight against poverty.

6. CONCLUSIONS

The aims of this study were to show how the unemployment rate and the poverty rate can be halved by 2015, and to present an outline of a related supportive policy framework. Our findings support the argument that a combination of labour market and social provisioning measures and outcomes are necessary to achieving the above twin goals. Moreover, these measures and outcomes need to be pro-poor in the sense that policies should increasingly target the poor, and that the poor should benefit disproportionally from the country's economic path. In this context, our findings confirm the international consensus that, for an economy with high rates of poverty and inequality, unless the growth process embodies reductions in inequality, it will be unfeasible to achieve *accelerated* poverty reductions.

It was also argued that the above findings should inform the economic policy framework in the sense that the country's agenda for accelerated poverty and unemployment reductions should not be compromised by the requirements of an orthodox policy framework. Therefore, the paper presents the basic tenets of a pro-poor economic policy framework that also includes the coordination of policies on which halving poverty and unemployment depend. These include the macroeconomic policy framework, the approach to industrial development, the labour market and the social security system. Overall, the findings suggest an active pro-poor role for the state.

7. REFERENCES

Amin, S. (1989). Eurocentrism, New York: Monthly Review Press.

ANC (African National Congress), (2007). "Economic Transformation for a National Democratic Society", Policy Discussion Document, pp.1-22

Anand, S.and Kanbur, S.M.R. (1984). "The Kuznets Process and the Inequality Development Relationship", *Journal of Development Economics,* Vol. 40, pp. 25-52.

Blank, R.M. (1989). "Disaggregating the Effect of the Business Cycle on the Distribution on Income", *Econometrica,* Vol.56, pp.141-163.

Bourguignon, F. (2004). "The Poverty-Growth-Inequality Triangle", Paper Presented at the Indian Council for Research on International Economic Relations, New Delhi, February.

Chang, H. (2002). Kicking Away the Ladder-Development Strategy in Historical Perspective. Anthem Press, London.

Chuhay, R. (2004). *The Business Cycle Behavior of GINI Coefficient of the Income Distribution.* A Thesis Submitted to the National University Kyiv-Mohyla Academy, Ukraine.

Cornia, G.A. (2002). "Poverty and Inequality in the Era of Liberalization and Globalization", In H.Van Ginkel et al. Human Development and the Environment: Challenges for the United Nations in the New Millennium. New York: United Nations University Press.

Dagdeviren, H.,Van der Hoeven, Rolph and J. Weeks, (2000). "Redistribution Matters: Growth for Poverty reduction", Working Paper Series No. 99, Department of Economics, School of Oriental and African Studies, University of London, October.

Deininger, K. and L. Squire, (1998). "New Ways of Looking at Old Issues", *Journal of Development Economics,* Vol. 57, pp. 259-87.

Department of Social Development, Pretoria, (2002). "Transforming the Present-Protecting the Future": *Report of the Committee of Inquiry into a Comprehensive System of Social Security for South Africa,* (Consolidated Report).

Dollar, D. and A. Kraay, (2002). "Growth is Good for the Poor", World Bank, Development Research Group.

Easterly, W. (2001). "The Effect of International Monetary Fund and World Bank Programs on Poverty", World Bank Policy Research Working Paper 2517.

Easterly, W., R. Islam and J. Stiglitz, (1999). *Shaken and Stirred: Volatility and Macroeconomic Paradigms for Rich and Poor Nations,* XII World Congress of the IEA, Buenos Aires, August.

Fine, B. (1997). "Industrial Policy and South Africa: A Strategic View", NIEP Occasional Paper Series, No. 5, April.

Fukuda-Parr, S., C. Lopes and K. Malik, (2002). Capacity for Development: New Solutions to Old Problems, (eds.), Earthscan Publications, pp.1-21.

Helleiner, G. (1994). Trade Policy and Industrialization in Turbulent Times, Routledge.

International Labour Office (1999). *Decent Work,* Geneva.

International Labour Office (2000a). *Employment-intensive Investment in Infrastructure: Jobs to Build Society*, Geneva: ILO.

International Labour Office (2000b). *World Labour Report: Income Security and Social Protection in a Changing World,* Geneva: ILO.

International Labour Office (ILO) (2003). *Working out of Poverty.* Report of the Director-General for the International Labour Conference, Geneva: ILO.

Islam, I. (2003). " Labour Market Policies, Economic Growth and Poverty Reduction: Lessons and Non-lessons from the Comparative Experiences of East, South East and South Asia", Issues in Employment and Poverty, Discussion Paper 8, Recovery and Reconstruction Department, International Labour Office, Geneva, April.

Islam, I. (2002). "Poverty, Employment and Wages: An Indonesian Perspective", In *Labour Market Policies and Poverty Reduction Strategies in Recovery from the Asian Crisis.* Report of a Seminar held in Jakarta, 29 April- 1 May. ILO, Bangkok.

Islam, R. (2004). "The Nexus of Economic Growth, Employment and Poverty Reduction: An Empirical Analysis", International Labour Office, January.

Jahed, M. (2007). "Pro-poor Trade and Industry Policies: Considerations for South Africa", Oxfam South Africa, Johannesburg.

Kakwani, N. (1993). "On a Class of Poverty Measures", *Econometrica,* Vol.48, No.2, pp.437-446.

Kakwani , N. (2000). "On Measuring Growth and Inequality Components of Poverty with application to Thailand ", *Journal of Quantitative Economics.*

Kakwani, N. and E. Pernia, (2000). "What is Pro-poor Growth", *Asian Development Review,* Vol. 16, No.1, pp. 1-22.

Kakwani, N. and H. Son, (2002). “Pro Poor Growth and Poverty Reduction: The Asian Experience”, The Poverty Center, Office of Executive Secretary, ESCAP, Bangkok.

Kakwani, N., S. Khandker and H. Son, (2003). “Pro Poor Growth Strategies in Africa: Poverty Equivalent Growth Rates with applications to Korea and Thailand”, Economic Commission for Africa, Economic Policy Research Center, Expert Group Meeting, June.

Klasen, S. (2003). “In Search of the Holy Grail: How to Achieve Pro-Poor Growth”, Ibero-America Institute for Economic Research, George-August-Universität Göttingen, Discussion Paper No. 96, October.

Kuznets, S. (1995). “Economic Growth and Income Inequality”, *American Economic Review*, Vol. 45, pp. 1-28.

Lal, D. and H. Myint, (1996). The Political Economy of Poverty, Equity and Growth: A Comparative Study, Oxford: Clarendon Press.

Lipton, M. (1996). “Rural Reforms and Rural Livelihoods: The Contexts of International Experience” In M. Lipton, M. de Klerk and M. Lipton (eds). Land, Labour and Livelihoods in Rural South Africa, Durban: Indicator Press.

Lübker, M., G. Smith, and J. Weeks (2000). “Growth and the Poor: A Comment on Dollar and Kraay, Center for Development Policy and Research, University of London, School of Oriental and African Studies, October.

Meth, C. (2007). “What is pro-poor growth? What are some of the things that hinder its achievement in South Africa?” Oxfam South Africa, Johannesburg.

Orshansky, M. (1965) "Counting the Poor: Another Look at the Poverty Profile", *Social Security Bulletin*, Vol. 28, No. 1, January 1965, pp. 3-29 — reprinted in *Social Security Bulletin*, Vol. 51, No. 10, October 1988, pp. 25-51.

Osmani, S. R. (2002). “Exploring the Employment Nexus: Topics in Employment and Poverty”, A Report prepared for the Task Force on the joint ILO-UNDP Programme on Employment and Poverty.

Osmani, S. R. (2004). “The Employment Nexus between Growth and Poverty: An Asian Perspective.” A Report prepared for the Swedish International Development Agency (SIDA), Stockholm and the United Nations Development Programme (UNDP), New York. (mimeo).

Oxfam. (2000). “Growth with Equity is good for the Poor”, (A Response to Dollar and Kraay), Oxford, June.

Ravallion, M. (2001). "Growth, Inequality and Poverty: Looking Beyond Averages", *World Development,* Vol. 29, No.11, pp. 1803-1815.

Roy, R. and A. Heuty (2005). "Investing in Development: The Millennium Development Goals, Aid and the Sustainable Capital Accumulation, Columbia School of International and Public Affairs Review, Spring, Vol. 58, No. 2.

Seers, D. (1977). "The New Meaning of Development", *International Development Review*.

Seers, D. (1979). "The Birth, Life and Death of Development Economics", in *Development and Change*.

Statistics South Africa, (1995). *October Household Survey.* Statistics South Africa: Pretoria.

Stewart, F. (1985). Development and Modernization – Basic Needs in Developing Countries. John Hopkins University Press, Baltimore.

Streeten, P., S. Burki, M. Ul Haq, N. Hicks and F. Stewart, (1981). First Things First: Meeting basic human needs in developing countries, Oxford University Press.

Sutcliffe, B. (1995). "Development after Ecology" In V. Bhaskar and A. Glyn (eds). The North the South and the Environment: Ecological Constraints and the Global Environment. London: Earthscan.

United Nations Conference on Trade and Development (2002). *World Investment Report.* New York and Geneva.

United Nations Copenhagen Declaration and Programme of Action, (1995). The World Summit for Social Development 6-12 March.

UNDP (1994). 1994 Human Development Report "New Dimensions of human security", New York: Oxford University Press.

UNDP (1995). 1995 Human Development Report "Gender and human development", New York: Oxford University Press.

UNDP (1996). 1996 Human Development Report "Economic growth and human development", New York: Oxford University Press.

UNDP (1997). 1997 Human Development Report "Resisting new forces of Poverty in a changing World", New York: Oxford University Press.

UNDP (1998). 1998 Human Development Report "Consumption for human development", New York: Oxford University Press.

UNDP (1999). 1999 Human Development Report "Globalization with a human face", New York: Oxford University Press.

UNDP (2000). 2000 Human Development Report South Africa: Transformation for Human Development. Pretoria.

UNDP (2003). 2003 Human Development Report South Africa: The Challenges of Sustainable Development: Unlocking People's Creativity. Oxford University Press, Cape Town.

UNDP (2005). 2005 Human Development Report "International cooperation at a crossroads: Aid, trade and security in a unequal world. New York: Oxford University Press.

UNDP. World Population Prospects. Department of Economical and Social Affairs (UNDESA). United Nations Population Division.

UN Millennium Project (2005). Investing in Development: A Practical Plan to Achieve the Millennium Development Goals, London: Earthscan.

United Nations Volunteers (2001). Volunteering and the United Nations System. Bonn: UN Volunteers.

Wade, R. (2004). "Is Globalization Reducing Poverty and Inequality?" *World Development*, Vol. 32, No.4, pp.567-589.

Wade, R. (2001). "Winners and Losers." *The Economist* 26 April.

Wallerstein, I. (1979). The Capitalist World –Economy. Cambridge University Press.

Weeks, J. and R. Roy (2005). "Making Fiscal Policy Work for the Poor", UNDP, January.

World Conference on Environment and Development (1987). Our Common Future. Oxford: Oxford University Press.

World Summit for Social Development (1995). *The Copenhagen Declaration and programme of Action.* New York: United Nations.

Table 1. Policy Scenarios and Evolution of Unemployment Rate (2007-2015)

Scenarios	Indicators	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
A1	Employed	12,451,098	12,571,663	12,695,190	12,809,410	12,932,317	13,054,484	13,178,972	13,305,849	13,432,494	13,558,539
	Unemployed	4,323,877	4,416,666	4,492,499	4,566,205	4,617,680	4,658,115	4,702,016	4,749,426	4,803,087	4,863,493
	Unemployment Rate	25.8%	26.0%	26.1%	26.3%	26.3%	26.3%	26.3%	26.3%	26.3%	26.4%
A2	Employed	12,451,098	12,690,932	12,933,680	13,182,953	13,435,450	13,694,584	13,957,394	14,227,745	14,500,710	14,788,651
	Unemployed	4,323,877	4,297,397	4,254,009	4,192,662	4,114,547	4,018,015	3,923,594	3,827,531	3,734,871	3,633,382
	Unemployment Rate	25.8%	25.3%	24.8%	24.1%	23.4%	22.7%	21.9%	21.2%	20.5%	19.7%
A3	Employed	12,451,098	12,813,377	13,186,389	13,571,378	13,967,476	14,373,092	14,795,490	15,573,140	15,742,055	16,133,264
	Unemployed	4,323,877	4,174,952	4,001,300	3,804,237	3,582,521	3,339,507	3,085,497	2,804,717	2,493,526	2,288,768
	Unemployment Rate	25.8%	24.6%	23.3%	21.9%	20.4%	18.9%	17.3%	15.5%	13.7%	12.4%

Source: ADRS model of South African Tax and Transfer Simulation Model (SATTSIM-Plus)

Table 2. Evolution of Poverty and Inequality Indicators (2007-2015)

Scenarios	Indicators	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
A1	Poverty Rate	44	39.7	39.2	39.0	38.7	38.4	38.0	37.7	37.3	37.0
	Gini Coefficient	0.658	0.660	0.659	0.657	0.656	0.655	0.654	0.653	0.652	0.651
A2	Poverty Rate	44	39.4	38.6	38.1	37.1	36.5	35.6	34.9	34.4	33.9
	Gini Coefficient	0.658	0.658	0.655	0.651	0.647	0.643	0.639	0.634	0.632	0.630
A3	Poverty Rate	44	39.1	37.6	36.7	35.7	34.9	34.1	33.2	32.7	31.8
	Gini Coefficient	0.658	0.656	0.650	0.643	0.637	0.633	0.628	0.614	0.612	0.606
B1	Poverty Rate	44	39.1	37.6	36.7	35.6	34.7	33.8	32.5	31.8	31.2
	Gini Coefficient	0.658	0.656	0.650	0.643	0.636	0.632	0.629	0.611	0.608	0.605
B2	Poverty Rate	44	39.1	37.5	36.7	35.5	34.4	33.2	32.2	31.1	30.4
	Gini Coefficient	0.658	0.656	0.650	0.643	0.636	0.631	0.628	0.622	0.604	0.600
C1	Poverty Rate	44	38.4	36.9	35.9	34.7	33.3	32.1	31.1	30.0	29.3
	Gini Coefficient	0.658	0.652	0.646	0.639	0.632	0.627	0.623	0.618	0.600	0.596
C2	Poverty Rate	44	35.4	34.2	33.5	32.4	31.2	30.3	29.3	28.2	27.7
	Gini Coefficient	0.658	0.631	0.626	0.621	0.616	0.612	0.609	0.604	0.588	0.584
C3	Poverty Rate	44	35.2	33.7	32.5	31.1	30.0	28.9	27.9	26.7	25.4
	Gini Coefficient	0.658	0.630	0.624	0.617	0.611	0.606	0.602	0.596	0.579	0.575
C4	Poverty Rate	44	34.9	32.7	31.4	29.9	28.5	27.0	25.5	23.7	22.6
	Gini Coefficient	0.658	0.630	0.621	0.613	0.606	0.600	0.594	0.588	0.570	0.564
D1	Poverty Rate	44	32.0	30.5	29.2	27.7	25.3	24.6	23.5	22.3	21.2
	Gini Coefficient	0.658	0.618	0.610	0.604	0.597	0.592	0.588	0.582	0.565	0.560

Source: ADRS model of South African Tax and Transfer Simulation Model (SATTSIM-Plus)

Table 3. Total Elasticity of Poverty and Policy Scenarios

Calculation of Elasticities		Group A Scenarios			Group B Scenarios		Group C Scenarios				Group D Scenario
		A1	A2	A3	B1	B2	C1	C2	C3	C4	D1
ε_y^v	Poverty elasticity of income	-0.273	-0.332	-0.343	-0.363	-0.380	-0.407	-0.437	-0.483	-0.540	-0.593
ε_G^v	Poverty elasticity of inequality	14.273	5.395	3.527	3.641	3.530	3.557	3.310	3.333	3.418	3.498
ε_y^G	Inequality elasticity of income	-0.019	-0.062	-0.097	-0.100	-0.108	-0.114	-0.132	-0.145	-0.158	-0.169
ε_E^y	Income elasticity of employment	6.526	3.676	2.739	2.688	2.563	2.582	2.670	2.743	2.828	2.743
ε_{gdp}^E	Employment Elasticity of Growth	0.161	0.341	0.536	0.541	0.577	0.577	0.577	0.577	0.577	0.577
ε_S^y	Income elasticity of social provisioning	0.870	1.034	1.214	1.203	1.223	1.058	0.659	0.510	0.408	0.388
ε_{gdp}^S	Social provisioning elasticity of growth	0.491	0.491	0.491	0.491	0.491	0.572	0.950	1.262	1.624	1.658
ε_{gdp}^G	Inequality elasticity of growth	-0.020	-0.077	-0.143	-0.145	-0.159	-0.171	-0.203	-0.230	-0.258	-0.268
ρ	**Total Elasticity of Poverty**	-1.095	-1.586	-1.923	-2.013	-2.145	-2.313	-2.566	-2.917	-3.361	-3.578
	Calculation of Compound Elasticities										
ψ	Employment induced Pov elast of growth (poverty elasticity of employment)	-0.574	-0.832	-1.009	-1.056	-1.125	-1.213	-1.346	-1.531	-1.763	-1.877
φ	SP induced poverty elast of growth (poverty elasticity of social provisioning)	-0.233	-0.338	-0.410	-0.429	-0.457	-0.493	-0.547	-0.621	-0.716	-0.762
κ	Inequality elasticity of growth	-0.020	-0.077	-0.143	-0.145	-0.159	-0.171	-0.203	-0.230	-0.258	-0.268
γ	Poverty elasticity of inequality	14.273	5.395	3.527	3.641	3.530	3.557	3.310	3.333	3.418	3.498
λ	inequality induced elasticity of growth	-0.287	-0.416	-0.504	-0.528	-0.563	-0.607	-0.673	-0.765	-0.882	-0.939
ρ	**Total Elasticity of Poverty**	-1.095	-1.586	-1.923	-2.013	-2.145	-2.313	-2.566	-2.917	-3.361	-3.578

Source: South African Tax and Transfer Simulation Model (SATTSIM-Plus), ADRS

Table 4. Pro-Poor Growth Indicators

Indicators		Group A Scenarios			Group B Scenarios		Group C Scenarios				Group D Scenario
		A1	A2	A3	B1	B2	C1	C2	C3	C4	D1
μ	Growth Elasticity of Poverty	-0.404	-0.585	-0.709	-0.743	-0.791	-0.853	-0.947	-1.076	-1.240	-2.238
σ	Inequality Elasticity of Poverty	-0.691	-1.001	-1.214	-1.271	-1.354	-1.460	-1.620	-1.841	-2.121	-3.731
ρ	Total Elasticity of Poverty	-1.095	-1.586	-1.923	-2.013	-2.145	-2.313	-2.566	-2.917	-3.361	-5.969

Notes: *Growth elasticity of poverty (Kakwani 1993)* is the percentage change in poverty due to a 1 percent increase in economic growth, provided that the growth process does not change inequality (i.e. the benefits of growth are distributed equally among everyone in the country). *Inequality elasticity of poverty is a measure of how much the total* poverty index changes as a result of changes in inequality that accompany the growth process. The growth is pro-poor (pro-rich) if the change in inequality that accompanies growth reduces (increases) the total poverty. Therefore, the growth is pro-poor (pro-rich) if the total elasticity of poverty is greater (less) than the growth elasticity of poverty (Kakwani *et al* 2003).

Source: South African Tax and Transfer Simulation Model (SATTSIM-Plus), ADRS

Table 5. Distinguishing Features of Economic Scenarios

	Features	Group A Scenarios			Group B Scenarios		Group C Scenarios				Group D Scenario
		A1	A2	A3	B1	B2	C1	C2	C3	C4	D1
1	Average annual real growth rate of 5 percent	X	X	X	X	X	X	X	X	X	X
2	Average annual inflation rate of 5 percent	X	X	X	X	X	X	X	X	X	X
3	Low employment intensity of Growth (employment elasticity of growth equals 0.20)	X									
4	Medium employment elasticity of growth (employment elasticity of growth equals 0.40)		X								
5	High employment elasticity of growth (employment elasticity of growth equals 0.60)			X	X	X	X	X	X	X	X
6	Pro-poor allocation of new employment				X	X	X	X	X	X	X
7	Pro-poor increase in average salaries					X	X	X	X	X	X
8	Extension of child support grant to poor children up to 17 years old						X	X	X	X	X
9	Adult grant for the unemployed							X	X	X	X
10	Annual real increase in grant amounts								X	X	X
11	Increase in government in-kind social transfers to poor households									X	X