



Evidence-based Employment Scenarios

Elements of Scenario Building:
Do Sources of Job Creation Matter?

M. Altman
November 2006

**Elements of employment scenario building:
do sources of job creation matter?**

Dr. Miriam ALTMAN

**Executive Director
Employment Growth & Development Initiative
Human Sciences Research Council (HSRC)**

November 2006



employment growth & development initiative

Human Sciences Research Council

November 2006

Produced by: Dr. Miriam Altman

Contact: Dr Miriam Altman
Executive Director, EGDI

E-mail: maltman@hsrc.ac.za

Tel: +27 12 302 2402

Contents

Contents	3
Executive Summary.....	4
1. Introduction.....	6
2. Elements of scenarios: categorising the role of different sectors	6
2.1 Poverty alleviation.....	7
2.2 The public service	7
2.3 'Follower services' in the formal economy	8
2.4 Resource-based sectors	8
2.5 'Dynamic goods and services	9
3. Assembling scenarios	11
4. Concluding remarks	20

Tables

Table 1 – Scenario 1 and 2: 'Business as usual'	13
Table 2 – Scenarios 3 and 4	18
Table 3 – Summary of employment outcomes under four scenarios	19
Table 4 – Average wage earnings under two difference scenarios	19
Table 5 – The distribution of formal sector earnings by sector.....	20

Executive Summary

The assembly of employment scenarios is a multi-faceted exercise. Using the broadest brush strokes, there must be a consideration of where and by what means jobs might feasibly be created, appropriate supportive labour market and social protection policies, and the political economy questions surrounding these choices and trade-offs. Employment relates to ‘everything’ and so employment policy debates can sometimes seem unfocused. For this reason, we begin the scenario building exercise by focusing on identifying potential lead employment sectors, and by what means they might be stimulated. There are plenty of examples of countries with sufficient numbers of skilled people who are out of work to show that it is necessary to consider how employment might be expanded in the first place. This paper therefore sketches some basic elements that need consideration in building employment scenarios from the “demand side”. For the moment, it is assumed that the ‘supply side’ will respond appropriately to any demand side stimuli. In other words, let us assume that labour at the required skill level and quantities could be available for any type of demand.

From an employment creation perspective, there are five broad sources of job creation, including:

- Poverty alleviation activities, ranging from EPWP to self-help survivalist activities.
- The public service.
- Resource based sectors
- ‘Follower’ industries, such as retail or construction, which are relatively low paying.
- ‘Dynamic’ goods and services industries that take advantage of growing global markets. These sectors ultimately tend to depend less on the state and pay higher wages. Examples include business process outsourcing, finance and large parts of manufacturing. It can also include high-value agriculture such as cut flowers. These also include capital-intensive minerals-related export industries, such as mining, iron & steel or heavy chemicals, which do not really create much employment.

Four initial scenarios are sketched, with the aim of stimulating debate. They all assume that nothing will go wrong significantly in South Africa’s growth path. Scenario 1 and 2 show what would happen if employment continued growing approximately as it had over the past 5 to 8 years. Scenario 1 shows that ‘all things staying the same’ would result in an unemployment rate of 21%. Scenario 2 shows the distribution of employment if the shortfall of 1.5-million jobs were created in the public service and EPWP opportunities.

Scenario 3 suggests a situation where there is more active stimulation of domestic-oriented industries, such as retail, personal services or the informal sector.

Scenario 4 shows what might happen if there were more substantial growth in traded goods and services.

Public sector employment fell in the 1990s and has been stagnant in the 2000s. By 2004, it employed about 9% of the labour force, compared to about 14% in Latin America, 11% in East Asia and 17% in industrialised countries. While there is no specific size a public sector should be, scenarios 3 and 4 assume that Government maintains the current ratio of public sector workers to total employment. The main purpose is to ensure effective delivery. But this assumption has an important impact on wage earnings since the public sector pays relatively higher wages to lower skill categories.

Scenario 3 requires fewer economic policy trade-offs and closely emulates SA's current track. Most microeconomic interventions would be focused on stimulating domestic-oriented formal and informal sectors. But there are longer term economic and social costs. Scenario 3 does less to build employment-oriented dynamic products sectors, and the impact is seen dramatically when the scenario is extended for a longer period of time; for example, in this scenario the informal sector becomes a very significant employer. Moreover, in Scenario 3, lower paying sectors expand, so that over time the size of the working poor (here measured as those earning less than the equivalent of R2,500 in 2004) grows quite dramatically. Without the growth in the public sector, Scenario 3 would have found 70% of the workforce earning less than R2,500 per month, up from 65% in 2004. Scenario 4 has 63% of the workforce in the category of working poor. Both Scenario 3 and 4 paint highly optimistic pictures of potential sector employment growth rates, and yet neither of these address the low wage problem.

Two important issues arise: first that there is little doubt that the more people work in traded sectors, the better off the workforce will be. Yet, this would be the most challenging path to follow, as discussed in the following paper prepared for this workshop (Altman, 2006a). Second, all scenarios require substantial commitment to deepening the system of social protection.

1. Introduction

The assembly of employment scenarios involves a number of elements. Using the broadest brush strokes, there must be a consideration of where and by what means jobs might feasibly be created, appropriate supportive labour market and social protection policies, and the political economy questions surrounding these choices and trade-offs. Employment relates to ‘everything’ and so employment policy debates can sometimes seem unfocused. For this reason, we begin the scenario building exercise by focusing on identifying potential lead employment sectors, and by what means they might be stimulated. There are plenty of examples of countries with sufficient numbers of skilled people, who are out of work to show that it is necessary to consider how employment might be expanded in the first place. This paper therefore sketches some basic elements that need consideration in building employment scenarios from the “demand side”. For the moment, it is assumed that the ‘supply side’ will respond appropriately to any demand side stimuli. In other words, let us assume that labour at the required skill level and quantities could be available for any type of demand.

The paper sketches four scenarios for the purpose of stimulating debate. The first two look at what would happen if employment grew approximately as it has over the past 5 to 8 years. The first scenario misses the unemployment target, and the second scenario meets it by expanding public employment and expanded public works programmes (EPWP). The third scenario involves more active stimulation of inward-oriented industries. The fourth scenario creates more employment through traded sectors. The focus on 2014 poses some limitations on the exercise, since the implications of any scenario may only really become evident over a longer period of time.

Currently about 65% of working people earn less than R 2,500 per month – these people are called ‘working poor’. The paper concludes by looking at whether any of these scenarios help to reduce this problem.

2. Elements of scenarios: categorising the role of different sectors

There are certain broad sectors that should feature in any employment scenario. These include those aimed at poverty alleviation, the public service, ‘follower’ services (mostly private sector non-traded services such as retail) and dynamic goods and services production (such as manufacturing, financial sector or tourism).

2.1 Poverty alleviation

No matter how successful employment policy is, it is quite certain that severe unemployment and under-employment will persist. The problem has simply become too big for market-based solutions to solve the problem within the next 10 to 20 years. The 'problem' includes both severe unemployment and very low levels of remuneration from market-based employment. Therefore, it is certain that the continued expansion of the system of grants, and much more convincing expansion of extremely low productivity, non-market services such as EPWP-type projects in government construction, care, self-help projects and survivalist activities, will be essential to any employment and poverty policy.

- The expansion of grants is now an administrative decision as the delivery infrastructure has improved considerably. The main questions include: How much should be spent on grants? What are the trade-offs between poverty alleviation and work incentives?
- The expansion of very low productivity non-market services is an administrative decision, such as social sector expanded public works projects. Currently, it is estimated that about 120,000 people may work in community care, and about 200,000 people may be in construction-related EPWP (September LFS, 2006). The main questions include: How much should be spent on these services? What are the positive and negative labour market effects? Is there a willingness to invest deeply in administrative capability in localities, CBOs, etc. to enable the required reach?
- The expansion of very low productivity market services is more complicated, as it is not an administrative decision. These activities include self-help survivalist informal activity. Much more convincing intervention will be needed to stimulate low productivity, market-oriented, essentially non-traded services (e.g. taxis, informal retail, hairdressing, etc.). Their expansion is constrained, not only by internal constraints (e.g. lack of finance or skill) but also by market concentration. Little is known about how the more marginalised parts of sectors grow relative to their larger counterparts (e.g., how might informal retail grow as shopping malls penetrate the townships?). Presumably some combination of demand side (e.g. incentive packages to workers, etc.) and/or supply side measures (e.g. low interest loans, etc.) could be considered.

2.2 The public service

The public service can play an important role in job creation and in underpinning low skill wages. In South Africa, the public service has also been important as a first recruiter of black graduates. There is no specific size that the public sector should be. Some less-developed economies may have a larger civil service which is an important source of formal employment – almost akin to a social insurance policy in countries that lack sufficient sources of stable employment (e.g. see Rodrik, 2000). In some countries it is used as a way of absorbing graduates and of reducing social tensions. The figures vary depending on the source, but it could be said that the public service

in Latin America and East Asia respectively accounts for about 14% and 11% of the labour force. These figures are much higher when taken in proportion to the non-agricultural labour force, rising to 18% and 20% respectively.

It is, however, perhaps surprising that industrialised countries have, on average, higher proportions of their labour force employed in the public service (about 17%) (Marinakas, 1994; Rodrik, 2000). Economies such as Sweden or Norway that have strong welfare states employ a large proportion (more than 30%) of the formal workforce (Hammouya, 1999), and at some points in time this has been an explicit or implicit part of their employment solution.

South Africa's public service is smaller: it employs about 9% of the labour force, about 10% of the non-agricultural labour force and accounts for about 18% of formal employment. In South Africa, public employment contracted in the 1990s (it was previously equal to 15% of the labour force in 1995), and has been stagnant in the 2000s.

The choice to expand public employment is a purely administrative or political choice.

2.3 'Follower services' in the formal economy

Some activities are really spin-offs from other activities and from growing incomes. This includes activities like retail, wholesale, fuel attendants or motor vehicle repair. This is an increasingly important source of employment growth in South Africa and globally, as shown by the 10 international case studies being prepared by Prof Al Berry for the HSRC (with some interim results presented in Berry, 2006).

These types of sectors accounted for about 17% of total South African employment in 2004, or 20% of formal employment. This is already quite substantial by global standards. It has grown dramatically in recent years, partly in response to falling interest rates and lower price of imported consumer goods. But how much more could it grow? These sectors are very poorly understood in development thinking, and so this question is very difficult to answer.

Construction can also be an important source of employment growth. Its growth depends critically on both public and private sector demand. In part, its continued expansion relies on the ability of supplier industries to provide inputs efficiently. There is also potential to expand into exports, but this will only have an impact on employment if South African workers are built into supply contracts, as is done by Korea and China.

2.4 Resource-based sectors

The resource-based sectors, especially agriculture and mining, are unlikely to be major sources of employment. For decades, employment has been falling in these industries.

The official statistics can be a little misleading. For example, the household surveys show a drop in commercial agricultural employment by about 4% per annum between

2000 and 2005 to about 650,000 workers. The specialist agricultural censuses and surveys run by StatsSA find that commercial agricultural employment may be stagnant at about 800,000 to 900,000 workers. As recently as 1995, there may have been about 1.2 million people in commercial agriculture, accounting for about 14% of total formal employment. By 2005, it accounted for about 7% to 10% of formal employment. This transition is not unusual in the development process, but it did take place too rapidly in a labour surplus economy. Potential employment creation in agriculture is an emotive issue, but whether it could create large numbers of jobs needs to be evaluated. Certainly some major policy shifts would be required.

Mining employment has progressively fallen since the 1980s. According to the censuses done by the Department of Minerals and Energy, there were about 600,000 workers in 1995, dropping to just over 400,000 by 2000. Employment seems to have stabilised since then. The expansion of commodity-related exports mainly depends on global demand, as well as how conducive local conditions are. Some of the local conditions include taxation, relative profitability, the conduciveness of supply contracts from buyers (e.g. eskom contracts with the coal industry), etc.

In terms of remuneration, these sectors are very different. Although commercial agriculture has become more skill intensive, it is an extremely low paid industry. By comparison, mining is quite a high paying industry, with a large percentage of the workforce unionised.

2.5 ‘Dynamic goods and services

The main wild card is the extent to which more dynamic goods and services production that can contribute to decent work might be expanded.

This broad category refers to sectors that could deliver to growing global markets, can have substantial linkages into the local economy, and promote learning. In a developing country context, they are often newer industries that require some stimulation to get them moving and to encourage the formation of clusters. This category includes industries such as manufacturing, financial services, tourism or high-value agriculture.

The critical question is related to the extent that these sectors are stimulated, and what their shape will be.

In the first instance, these sectors can be distinguished as:

- a. Labour-absorbing goods and services (tourism, business services, apparel, furniture, agro-processing, capital equipment, metal fabrication, etc.).
- b. Capital- or skill-intensive goods and services (e.g. finance, medical, beverages, non-ferrous metals, chemicals, etc.).

It goes without saying that any society benefits where a larger proportion of jobs are created in dynamic sectors. Dynamic tradable goods and services are more sustainable and beneficial sources of job creation because they:

- Tend to experience rising terms of trade, relative to commodities.
- Have stronger multiplier/spread effects.
- Can have stronger learning effects.
- Ultimately rely less on public expenditure. Even if there are initial or ongoing support mechanisms, these activities do not rely completely and indefinitely on state procurement. This reliance is dangerous, since a downturn in state revenues will generally result in a cutting of these programmes.
- Pay higher wages, as shown in Table 5.

Currently, the strongest export sectors are the capital-intensive minerals-related sectors such as iron and steel, basic chemicals and non-ferrous metals. Although mining exports have fallen, minerals-related exports expanded dramatically in the 1990s. Capital-intensive, resource-based exports in metals, minerals and chemicals account for over 50% of South Africa's exports. Capital-intensive resource-based manufacturing employs up to 150,000 people. Even taking into account employment multipliers, growth in these sectors are unlikely to be really important contributors to ultimate employment growth. But their output and export growth influence ultimate employment outcomes substantially. This is partly because these sectors are important attractors of total investment and infrastructure spending. More importantly, their weighting in South Africa's export profile means that a global commodity boom can have the impact of appreciating the Rand and discouraging labour-intensive traded sectors.

An employment scenario that relies on commodity-related tradables and very low productivity services will lead to (or entrench) an extremely dualistic society.

The extent to which employment growth is linked to the production of dynamic goods and services is the big outstanding question. It is the most uncertain aspect of any economic strategy, particularly in terms of how to promote know-how and induce the required investment. It may also require those decisions that impose market-related trade-offs; alternatively, the trade-offs might be less than imagined, if there is a willingness to undergo short- to medium-term adjustments.

The elements or instruments to be considered in a policy package might be as follows:

1. At the most basic level, it is inarguable that interventions to underpin economy-wide efficiencies are essential, especially in basic services that are biased to labour-absorbing dynamic trade. This might happen through improvements in the pricing, quality and efficiency of rail, ports or air transport.
2. The value and stability of the currency is an important consideration in veering the economy towards either traded or non-traded sectors. Investment in extractive industry and resources may continue despite exchange rate risk. An overvalued currency will favour non-traded sectors (such as retail) and greater

import dependence. An undervalued currency might promote a shift toward tradables, both in discouraging imports and encouraging exports. But this is only likely to be seen if policy is implemented over time so that businesses see it as credible enough to make major investment decisions.

3. There may be generalised price incentives that raise the profitability and reduce the risk of expanding non-traditional dynamic products. Some of these policies include R&D allowances, incentives for foreign direct investment, investment in critical infrastructure, etc. There are a small number of successful countries that did not depreciate their currency, such as Ireland. Those countries managed to attract substantial foreign direct investment, partly attracted with substantial investment-related infrastructure and market access arrangements.
4. There may be policies to promote more small and medium-sized (SME) business. This is sometimes seen as one way to intensify labour absorption, since SMEs are known to employ more people per Rand invested. However, SMEs also pay about 10% to 30% less than the larger firms (see Woolard and Woolard, 2006). Aside from the obvious SME support services, the expansion of small firms has been stimulated through targeted public and private procurement (e.g. Korea, Japan and Brazil), and through targeted incentives (e.g. R&D incentives in Finland are only offered to SMEs).
5. There is considerable debate about the relative merits of strong sector-specific support programmes. All countries that have forcefully intervened to promote specific sectors have had both success and failures. The higher growth economies were those that managed to succeed in some of these experiments to establish non-traditional activities. A strong stomach is needed for these interventions because they will inevitably be expensive to begin with, with outcomes uncertain for long periods of time. To what extent is there willingness to emulate the effort and cost of the MIDP or the investment in tourism?

3. Assembling scenarios

In the process of building employment scenarios, we want to identify the possible range of outcomes that would reach acceptable levels of poverty and unemployment. We start here with a couple of possibilities, simply to kick off some discussion. This first process should be a creative one, which is not too concerned with plausibility. Some information is, however, given to contextualise possible employment growth through different sectors or policy choices. A deeper reality check, in terms of costs, politics and trade-offs will be done once a fuller range of options is explored. Critically, thinking out-of-the box and dreaming unrealistically may be an important first step. The point is not to say: 'that won't work' but rather 'could that work?'. Having said that, the scenarios presented are not 'off-beam': perhaps because South Africa is so diversified, changes over a 10-year period do not look so dramatic.

The previous paper for this workshop considered possible employment targets (Altman, 2006). We will consider income distribution targets later once more evidence has been assembled. To halve unemployment, about 4.9-million to 6.8-million net

new jobs would be created by 2014, depending on whether the focus is on strict or broad unemployment. This is an average employment growth of about 4.2% p.a. to 5.8% p.a. Remembering that the aim is to halve both unemployment and poverty, the scenarios need to consider not only the number of jobs created, but also their quality. Because poverty is the target, wages or remuneration will be used as the measure of job quality (and not enjoyment, personal fulfilment, safety, standards and so forth).

Table 1 presents employment in 2004 and compares that to two possible scenarios. We are particularly interested in the following categories of industries:

More highly traded sectors:

- Mining and agriculture.
- Manufacturing and dynamic services: these are sectors that can take advantage of growing global markets in dynamic products. In the services sector, this refers to areas like finance and business services or tourism. It can also refer to high-value agriculture, which has many similarities to manufacturing.

Less traded sectors:

- ‘Follower services’ that primarily arise as a spin-off from other activities. This refers to sectors like retail and wholesale.
- Construction.
- Public sector.
- Marginal market-based activities in the informal economy.
- EPWP-type activities in construction and community care.

A **first scenario** asks what would happen if the employment path progresses similarly to the past 5 to 8 years¹. We feel comfortable to suggest that employment has been growing by about 2.5% per annum, about equally contributed by the formal and informal sectors. This rate of employment growth would reduce unemployment to 21%, which is not enough to meet the objective. There would be a shortfall of 1.5-million jobs.

Scenario 2 is the same as scenario 1, but with the shortfall in jobs being met by the public sector and in EPWP opportunities, which are the sectors most easily expanded. In scenario 1, public sector employment grows more slowly than other sectors at 0.5% p.a. (now it is stagnant). In scenario 2, it is assumed that the public sector’s contribution to total employment grows at 1%, so that by 2014 it accounts for just

¹ The formal private sector has led employment growth since 1997, and so it appears that is the year when the economy ‘turned the corner’. So one might look at growth between 1997 and 2005. However, a new household survey was introduced in 2000, so the figures from 2000 to 2005 may be more reliable since they come from the same instrument. (Previously, the October Household Survey ran from 1995 to 1999. The Labour Force Survey was introduced in 2000, and runs every March and September. For consistency, we report only on the September LFS figures).

over 11% of total employment, down from about 14.5% in 2004. To meet the target, almost 1-million jobs are created through EPWP.

Table 1 – Scenario 1 and 2: ‘Business as usual’

Sectors	Employment in 2004	Employment in 2014		
		Scenario 1: same as for 2000-5	Scenario 2: same as for 2000-5 + public empl + EPWP	Growth assumptions (pa)
Agriculture	650,000	590,909	590,909	-1.0%
Mining	425,000	425,000	425,000	0.0%
Manufacturing	1,500,000	1,740,000	1,740,000	1.5%
Leader & high paid services (e.g. finance, tourism, transport)	2,000,000	2,960,000	2,960,000	4.0%
Follower services (e.g. retail, personal services)	1,700,000	2,516,000	2,516,000	4.0%
Construction & utilities	700,000	1,057,000	1,057,000	4.2%
Public sector, private social services & parastatals	1,700,000	1,785,000	1,870,000	0.5%, 1%
Informal sector, domestics, & subsis agric; less EPWP	2,660,000	3,404,800	3,404,800	2.5%
EPWP-type jobs: construction	220,000	370,000	670,000	+150,000, +300,000
EPWP-type jobs: community care	120,000	190,000	1,327,300	+70000, +627,000
Total	11,675,000	15,038,709	16,561,009	
Shortfall		-1,522,291		

So if the current path continues as in the past 5 to 8 years, scenario 2 gives a sense of the scale of job creation needed in poverty alleviation programmes. Although extremely low paid work, the jobs problem would be solved quickly. There are obvious constraints to taking this approach. Administrative capability is one. The second is programme cost. But the third relates to ‘return on investment’. Even if large-scale EPWP is pursued, it is not a sustainable approach as it depends almost entirely on government commitments. These programmes are vulnerable to budget cuts in economic downturns, or where some future government feels less commitment to them. Finally, they are extremely low paid and would contribute minimally to poverty reduction.

A sustainable job creation path will have to be identified for two main reasons. First, the unemployment problem is mainly structural and not cyclical. Second, halving strict unemployment to, say 13% or 14%, is still considered unacceptably high by global standards and should only be seen as an interim target – the ultimate objective should be to get unemployment down to a level closer to 6% to 8%. If EPWP were the main employment solution, government would need to commit ever-expanding resources to employing millions of people in these extremely low-paid, marginal activities that rely wholly on continued public commitment.

So, the solution will lie somewhere else, with less reliance on EPWP and public sector employment than put forward in scenario 2 (albeit more than the current commitment).

Two further scenarios are put forward that would have the result of halving unemployment. Scenario 3 has a high domestic orientation in relation to employment creation. Scenario 4 has a higher outward orientation in respect of employment creation. Scenario 3 does not necessarily have less international trade; however, this trade is more capital intensive in character and has less direct impact on employment. The scenarios present only possible employment structures at half unemployment – they are constructed by allocating the 4.9-million jobs across the seven broad categories identified above.

There are some assumptions that are common to both scenarios:

- ***It is assumed that there are no important setbacks, whether related to the global or domestic economy!***
- Mining employment has been stagnant and agricultural employment has been stagnant or falling slowly. Both scenarios assume that this path continues. A number of factors may influence this, such as continued technology and productivity improvements, gold mining investments coming on-stream, continued expansion in newer metals such as platinum, some growth in high-value agriculture, global demand for commodities and so forth. Having interviewed quite a number of experts and stakeholders in these industries, it seems unlikely that substantial net new employment will be created in these sectors. The policy question might rather be how to slow down employment loss.
- Government commits to expanding EPWP-type activities, creating 800,000 jobs in scenario 3 and 280,000 jobs in scenario 4 in labour-intensive construction and community care.
- It is assumed that Government decides to maintain the proportion of public employees relative to total employment, which was about 14.5% in 2004. This requires an average annual expansion of about 3.5% in public sector employment.

Scenario 3 gives an indication of a more inward-oriented employment path. It says nothing about the proportion of output directed toward trade, only that trade is not very employment-oriented or located in dynamic sectors.

- This scenario assumes that agricultural employment levels off with the introduction of more intense support programmes. For example, if there were a release of state or underutilised land for further agricultural activity, the stimulation of small-scale agricultural activity, and perhaps some support for job creation in commercial farms.
- Manufacturing employment grows by 1.5% per annum, which is about the same rate as that found between 2000 and 2005. About 250,000 jobs are gained.
- ‘Dynamic’ services employment, such as finance and tourism, grows by 2.5% per annum. About 560,000 jobs are gained.
- ‘Follower’ services, such as retail & wholesale and construction, grow by 4.5% per annum. Between 2000 and 2005, they grew by 5% and 11% per annum respectively. About 1.5-million jobs are gained.
- Informal sector employment grows by 4% per annum, creating about 1.3-million jobs.

In this scenario, no major policy changes are made in respect of labour-absorbing manufacturing, and dynamic services are not especially stimulated. It assumes that world growth continues apace, including related demand for commodities, perhaps with a continued volatile and overvalued exchange rate (relative to what would stimulate labour-intensive exports). This would stimulate the retail sector, which in turn stimulates the construction sector. It is possible that extra stimulus would be required of ‘follower services’ and the informal economy: in this scenario, ‘follower services’ contribute almost 23% of all jobs, up from about 20% in 2004. Already, these services contribute a large proportion of South African employment, and further stimulation might require special effort or incentives.

Scenario 4 involves more stimulation of dynamic manufacturing and services sectors, perhaps through a currency depreciation, important improvements in supportive infrastructure and/or targeted sector programmes.

- Agricultural employment falls by the same amount as in Scenario 1, losing about 60,000 jobs.
- Manufacturing employment expands much more dramatically – by 3.3% per annum, which is almost double that found between 2000 and 2005. Almost 600,000 jobs are gained. Our global case studies show that this is probably the absolute upper limit for average annual employment growth in manufacturing.
- ‘Dynamic’ services employment, such as finance and tourism, grows by 6% per annum, creating about 1.6 million jobs. It is not unusual for lead sectors to have a growth rate that is double that of other sectors.
- ‘Follower services’, such as retail & wholesale and construction respectively grow by 3.5% and 3% per annum. About one million jobs are gained. This is rapid growth, but still slower than in scenario 3: perhaps some currency depreciation stimulates the expansion of tradables. This has the affect of reducing real domestic incomes and so there is less purchasing power. This

dampens retail and construction sector growth for at least part of the 10-year period.

- Informal sector employment grows by 2.5 % per annum, creating about 800,000 jobs.

These scenarios are presented in Table 2.

There are important differences between these scenarios. Table 3 summarises the distribution of employment by sector type. In all the scenarios, resource industries become a smaller proportion of total employment, which is a fairly commonplace experience in the development process. The public sector maintains its share of total employment, which requires a policy shift. Highly marginalised and very low paid activities, namely those in the informal sector and EPWP, account for about one-quarter of all jobs in 2004. They account for 32.6%, 30.7% and 24.9% of total employment in scenario 2, 3 and 4 respectively. It is probable that the informal sector could continue to grow at a pace, even if only because of urbanisation and labour market entrants establishing survivalist activities. There are important implications for EPWP: currently these programmes account for 2.9% of total employment. At the other extreme, scenario 2 requires that 12% of all workers are found in these opportunities.

The real difference between the scenarios is the extent to which manufacturing and dynamic services employment expands, relative to that in 'follower services' and the informal economy. If more dynamic sectors grow by about the same rate as at present (Scenario 1 and 2), they will become a smaller share of total employment. In Scenario 4, more policy emphasis generates faster growth rates in newer industries, expanding their contribution to employment. The outwardly oriented scenario 4 has 34% of workers in dynamic goods and services production, compared to 26% in the domestically oriented scenario 3.

Why does this matter, if both scenarios achieve a halving of unemployment? There are potentially two main reasons why this matters.

- First, dynamic goods and services tend to pay higher wages. Table 3 shows the possible impact on remuneration². In 2004, about 65% of the workforce earned less than R2,500 per month. In Scenario 2, 69% of the workforce earns the equivalent of R2,500 or less. This is partly because such a large proportion of jobs are created in EPWP. Had the proportion of public sector workers remained the same, so too would have the proportion of working poor. In Scenario 3, about 67% of the workforce earn R2,500 or less.³ In Scenario 4,

² These calculations are based on weighted average wages from these nine broad sectors sourced from the LFS, 2004. Note that it was also assumed that real wages do not change.

³ This assumes that real wages do not rise or fall. Since 1997, real wages for low- and semi-skilled workers did stagnate. However, it is possible that wages could rise in certain sectors if employment expanded: for example, this might happen if manufacturing and dynamic services employment pick up, particularly under conditions of a skills constraint. Certain sectors, such

which focuses on promoting dynamic products, 63.9% of workers earn less than R2,500. This is a critical dilemma: none of the scenarios solves the 'working poor' problem. However, it is considerably worse in Scenario 1, 2 and 3.

- Second, we must ask how large 'follower services' and the informal sector should really be in a middle-income economy. Perhaps the structural change over 10 years does not appear large. But the real differences would appear over a longer period. For example, if the sector growth rates expressed in Scenario 3 persisted for 20 years, the manufacturing sector would contribute only 8.5% to total employment, whereas the informal sector would have grown to 32%. If Scenario 3 proceeds for 20 years, manufacturing employment contributes 11% and the informal sector only 22% of total employment. After a longer period of time, the different impact on wages will be very noticeable.

as retail, are becoming increasingly organised – if substantial growth continued, these sectors too might succeed in raising wages.

Table 2 – Senarios 3 and 4

Categories	2004	Growth assumptions (p.a.)	Scenario 3: High domestic orientation	Growth assumptions (p.a.)	Scenario 4: More employment from traded sectors
Agriculture	650,000	0.0%	650,000	-1.0%	590,909
Mining	425,000	0.0%	425,000	0.0%	425,000
Manufacturing	1,500,000	1.5%	1,740,000	3.3%	2,070,000
Leader services (e.g. finance, tourism)	2,000,000	2.5%	2,560,000	6.0%	3,580,000
Follower services (e.g. retail)	1,700,000	4.5%	2,635,000	3.5%	2,397,000
Construction & utilities	700,000	4.5%	1,085,000	3.0%	987,000
Public sector, private social services & parastatals	1,700,000	3.5%	2,380,000	3.5%	2,380,000
Informal sector & dom work & subsis agric; less EPWP	2,660,000	4.0%	3,936,800	2.5%	3,404,800
EPWP-type jobs: construction	220,000	+200,000	420,000	+150,000	370,000
EPWP-type jobs: community care	120,000	+609,000	729,200	+236000	356,291
	11,675,000		16,561,000		16,561,000

Source: Labour Force Survey is the source of employment figures for 2004

Table 3 – Summary of employment outcomes under four scenarios

	2004	2014			
Sectors	Current	Scenario 1: same as for 2000-5	Scenario 2: same as for 2000-5 + public empl	Scenario 3: high domestic orientation	Scenario 4: more employment from traded sectors
Mining & agriculture	9.2%	6.8%	6.1%	6.5%	6.1%
Manufacturing	12.8%	11.6%	10.5%	10.5%	12.5%
'Dynamic services'	17.1%	19.7%	17.9%	15.5%	21.6%
Follower services & construction	20.6%	23.8%	21.6%	22.5%	20.4%
Public sector	14.6%	11.9%	11.3%	14.4%	14.4%
IFS & EPWP	25.7%	26.4%	32.6%	30.7%	24.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
% SERVICES/FS	70.3%	75.1%	75.3%	75.5%	75.2%
% MANUF/FS	17.3%	15.7%	15.6%	15.2%	16.7%

Table 4 – Average wage earnings under two difference scenarios

	2004 ⁽¹⁾	2014			
Remuneration per month		Scenario 1: same as for 2000-5	Scenario 2: same as for 2000-5 + public empl	Scenario 3: domestic orientation ⁽²⁾	Scenario 4: dynamic products in trade orientation ⁽²⁾
<R1000	47.2%	48.0%	52.3%	50.0%	46.5%
R1000 – R2500	17.9%	17.9%	16.3%	17.2%	17.5%
>R2500	34.9%	34.1%	31.5%	32.6%	36.2%
Number employed	11.7 m	15.0 m	16.6 m	16.6 m	16.6 m
Strict unemployment rate (rounded)	26.0%	21.0%	13.0%	13.0%	13.0%

Notes:

(1) With the exception of EPWP, each sector has some proportion of workers in any income category. These proportions are drawn from the LFS, 2004.

(2) The proportions of people in any one-income category in Scenario 1 and 2 differ depending on how much employment in that sector grows.

A 1% difference in 2004 is equivalent to 161,000 workers.

Table 5 – The distribution of formal sector earnings by sector

Sector	Wages earned per month		
	1-1000	1000 - 2500	2500 +
Agriculture, hunting, forestry and fishing	85.2%	4.7%	10.1%
Community, social and personal services	20.4%	10.7%	68.9%
Construction	58.0%	22.2%	19.8%
Financial intermediation, insurance, real estate and business	30.0%	15.5%	54.5%
Manufacturing	38.0%	23.6%	38.3%
Mining and quarrying	10.1%	32.6%	57.4%
Private households	95.7%	3.4%	0.9%
Transport, storage and communication	28.3%	16.7%	55.1%
Wholesale and retail trade	56.0%	17.3%	26.7%

Source: LFS, Sept 2004

4. Concluding remarks

Some initial thoughts about framing employment scenarios were offered in this paper, focusing on employment creation. Future work will consider other aspects such as labour market dynamics.

From an employment creation perspective, there are five broad sources of job creation, including:

- Poverty alleviation activities, ranging from EPWP to self-help survivalist activities.
- The public service.
- Resource based sectors
- ‘Follower’ industries, such as retail or construction, which are relatively low paying.
- ‘Dynamic’ goods and services industries that take advantage of growing global markets. These sectors ultimately tend to depend less on the state and pay higher wages. Examples include business process outsourcing, finance and large parts of manufacturing. It can also include high-value agriculture such as cut flowers. These also include capital-intensive minerals-related export industries, such as mining, iron & steel or heavy chemicals, which do not really create much employment.

Four initial scenarios were put forward, with the aim of stimulating debate. Scenario 1 and 2 show what would happen if employment continued growing approximately as it had over the past 5 to 8 years. Scenario 1 shows that ‘all things staying the same’ would result in an unemployment rate of 21%. Scenario 2 shows the distribution of employment if the shortfall of 1.5-million jobs were created in the public service and EPWP opportunities.

It is worth noting that real wages for low- and semi-skilled workers have been flat since the mid-1990s, so ‘all things staying the same’ needs to include this condition as well. If a tightening labour market led to rising wages, there would be some trade-off between wages and employment creation. In a context where 65% of workers earn less than R 2,500 per month, it is desirable that real wages rise. However, it is also desirable that a large number of jobs be created.

Scenario 3 suggests a situation where there is more active stimulation of domestic-oriented industries, such as retail, personal services or the informal sector.

Scenario 4 is shows what might happen if there were more substantial growth in traded goods and services.

Public sector employment fell in the 1990s and has been stagnant in the 2000s. By 2004, it employed about 9% of the labour force, compared to about 14% in Latin America, 11% in East Asia and 17% in industrialised countries. While there is no specific size a public sector should be, scenarios 3 and 4 assume that Government maintains the current ratio of public sector workers to total employment. The main purpose is to ensure effective delivery. But this assumption has an important impact on wage earnings since the public sector pays relatively higher wages to lower skill categories.

Scenario 3 requires fewer economic policy trade-offs and closely emulates the track South Africa is on already. Most microeconomic interventions would be focused on stimulating domestic-oriented formal and informal sectors. But there are longer-term economic and social costs. Scenario 3 does less to build employment-oriented dynamic products sectors, and the impact is seen dramatically when the scenario is extended for a longer period of time; for example, in this scenario the informal sector becomes a very significant employer. Moreover, in Scenario 3, lower paying sectors expand, so that over time the size of the working poor (here measured as those earning less than the equivalent of R2,500 in 2004) grows quite dramatically. Without the growth in the public sector, Scenario 3 would have found 70% of the workforce earning less than R2,500 per month, up from 65% in 2004. Scenario 4 has 63% of the workforce in the category of working poor. Both Scenario 3 and 4 paint highly optimistic pictures of potential sector employment growth rates, and yet neither of these address the low wage problem.

Two important issues arise: first that there is little doubt that the more people work in traded sectors, the better off the workforce will be. Some policy considerations that might underpin the expansion of dynamic sectors are discussed in the following paper prepared for this workshop (Altman, 2006a). Second, all scenarios require substantial commitment to deepening the system of social protection.

References

- Altman, M. (2006) Setting targets for unemployment reduction and employment creation. Paper prepared for the employment scenarios reference group workshop. EGDI, HSRC, Pretoria (November).
- Altman, M. (2006a) Promoting employment in dynamic sectors. Paper prepared for the employment scenarios reference group workshop. EGDI, HSRC, Pretoria (November).
- Altman, M. (2006b) Background to employment scenarios. Paper prepared for the employment scenarios working group workshop. EGDI, HSRC, Pretoria (August).
- Berry, A. (2006) Employment and income distribution experiences of minerals exporters and of countries achieving growth acceleration. Paper prepared for Employment, Growth and Development Initiative, HSRC.
- Davies, R. and D. van Seventer (2006) The economy-wide effects of price reducing reforms in infrastructure services in South Africa. EGDI working paper, Human Sciences Research Council, Pretoria, (February).
- Hammouya, Messaoud (1999) *Statistics on Public Sector Employment: Methods, Structure and Trends*, Sectoral Activities Programme, Salaried Employees and Professional Workers' Branch, Bureau of Statistics Working Papers, International Labour Office, SAP 2.85/WP.144.
- Marinakos, Andres, E. (1994) Public Sector Employment in Developing Countries: An Overview of Past and Present Trends, *International Journal of Public Sector Management*, vol 7 (2), 50 – 68.
- Ngandu, S. (2005) Exchange rates and employment – the experience of fast growing economies. Employment, Growth and Development Initiative, HSRC. Unpublished paper.
- Ngandu, S. (2005a) The Impact of Exchange Rate Movements on Employment: the economy-wide effect of a Rand Appreciation. Employment, Growth and Development Initiative, HSRC. Unpublished paper.
- Rodrik, D. (2000) What Drives Public Employment in Developing Countries? *Review of Development Economics*, 4(3), 229-243.
- StatsSA (2006) Mid-year population estimates, South Africa 2006. Statistical release P0302. Statistics South Africa, Pretoria, (August).
- Valodia, I, L Lebani & C Skinner (2006) 'Low waged and informal employment in South Africa', *Transformation: critical perspectives in Southern Africa*, 60.
- Williamson, J. 2000. Exchange Rate Regimes for Emerging Markets: Reviving the Intermediate Option. Washington, D.C.: Institute for International Economics.