



Labour Markets and Social Policy

A Review of Labour Markets in South Africa:
How Different is the SA Labour Market? International Perspectives and Parallels

G. Edgren

October 2005



**HOW DIFFERENT IS THE SOUTH AFRICAN LABOUR
MARKET? INTERNATIONAL PERSPECTIVES AND
PARALLELS**

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**Employment & Economic Policy Research Programme
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1. Preface

Half a century of apartheid has made its deep imprint on all aspects of the South African labour market, some of which will take generations to delete. It was not only a question of racial discrimination in access to jobs and education, or in setting wages. It was a system that confined a majority of the population to settlements where no other jobs or livelihoods were available than those provided on the conditions laid down by the white establishment, and where only so much education was provided to blacks as was required to perform those jobs. The development strategy of the apartheid regime did not aim to provide jobs for Africans but mainly to preserve the privileged position of whites in the economy. Restrictions on education and job access eased during the last two decades of apartheid, but not enough to change the result of a deeply divided society with a labour market that stunted the human development of Africans. Even though the democratic Government that took the reins of the country in 1994 abolished the apartheid laws and introduced many reforms to rectify the inequities, for many years to come, South Africa's labour market still bear the traces of this long period of repression.

In many ways, this leaves South Africa as a 'special case' in the field of labour market analysis, with large gaps of human development particularly in older generations, a huge degree of underutilisation of its labour force and difficult tensions in its industrial relations. As if this heritage were not enough, the nineties brought another scourge with potentially disastrous consequences for the life and work of the people of this country, in the form of the HIV/AIDS pandemic. For those who study South Africa's labour market, it is often hard to see many useful parallels with developments in other countries, in view of all these dramatic challenges.

In many ways, this leaves South Africa as a 'special case' in the field of labour market analysis, with large gaps of human development particularly in older generations, a huge degree of underutilisation of its labour force and difficult tensions in its industrial relations. As if this heritage were not enough, the nineties brought another scourge with potentially disastrous consequences for the life and work of the people of this country, in the form of the HIV/AIDS pandemic. For those who study South Africa's labour market, it is often hard to see many useful parallels with developments in other countries, in view of all these dramatic challenges.

The topics covered by the paper correspond roughly to the outline of the HSRC Labour Market review and are organised under the following headings:

- Changing economic structures
- Labour market participation
- Education and its economic returns
- The role of the informal economy
- Erosion of human capital due to HIV/AIDS
- The wages-employment trade-off
- Employment protection and competitiveness
- Concluding remarks

2. Introduction

In comparative studies of economic development, South Africa is mostly treated as one among a score of countries that analysts refer to as “emerging economies”. This group of economies is very diverse, and in order to capture the most important factors that influence demand and supply in the labour market, it is necessary to focus the comparisons on countries that have something in common with the South African economy. Because of its history and pattern of economic growth, South Africa has more in common with Latin America than with the rest of Africa, and it is often relevant to compare its structure and the functioning of its economy with countries like Brazil and Mexico, which also have a history of ethnic repression still reflected in big income differences. The transition that South Africa is undergoing after the introduction of democratic governance has interesting parallels with the transition in the CIS (former Soviet Union) and CEE (Central and Eastern Europe) from State planning to a market economy, at least as regards the impact of transition on the labour market. Comparisons with Eastern and Southern Asia do not often show much parallel development but are sometimes useful to compare the effects of choosing different development paths.

The table below shows South Africa’s basic economic data compared to six other middle-income economies. The group has been chosen to cover diversity rather than common patterns of behaviour, and it comprises both bigger and smaller countries, whose income levels differ widely depending on whether the comparison is made at Purchasing Power Parity (PPP) or by nominal US dollar values. Since we are studying both external and internal transactions, either of those standards is applicable to different comparisons. Other countries will be included when they are of particular interest, but it is useful to return to most of these six countries from time to time, to take note of differences as well as similarities.

Table 1: Basic economic data of some middle-income countries

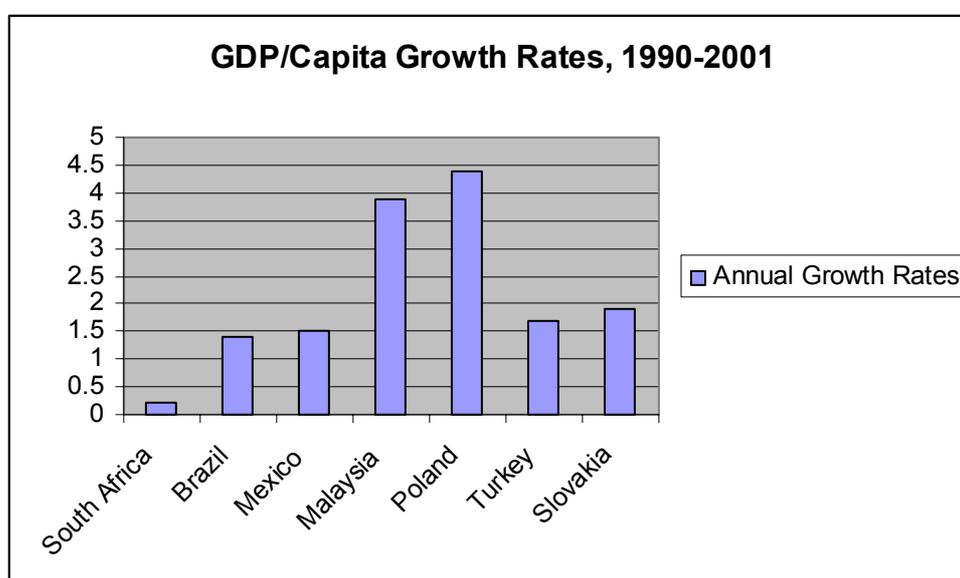
Country	Population million, 2001	Per capita income US\$, 2001	Per capita income \$ PPP, 2001	Gini coefficient	Human Development Index rank
South Africa	44.4	2 820	10 910	59.3	111
Brazil	174.0	3 070	7 040	60.7	65
Mexico	100.5	5 530	8 240	51.9	55
Malaysia	23.5	3 330	7 910	49.2	58
Poland	38.7	4 230	9 370	31.6	35
Turkey	69.3	2 530	5 830	40.0	96
Slovakia	5.4	3 760	11 780	25.8	39

[Sources: UNDP, HDR (2004) and World Bank, WDR (2004)]

In this group of countries, South Africa is medium-size and has a relatively high income, if the comparison is based on domestic purchasing power. The high Gini coefficient of the four first countries has its origins in the availability of mineral resources (and in Malaysia, a plantation economy), combined with ethnic differences. The two CEE countries still show the low income differences characteristic of the former socialist economies. South Africa is an outlier in terms of the Human Development Index (HDI), but this is a recent phenomenon caused by the onslaught of the HIV/AIDS pandemic since the beginning of the 90s. In the 80s, South Africa’s HDR index was closer to the other countries in the group.

The 90s brought a lot of changes to the emerging economies, as a result of changing global patterns of trade and investment, but also as a result of internal policy change. A number of middle-income countries achieved very high rates of economic growth, particularly some of the East and South East Asian economies. China's economy grew by almost 10% per year, the South East Asian economies by more than 7% and the South Asian economies by 5.4% per year according to the World Development Review (WDR). African and Latin American economies grew by an average of 2.6% and 2.9% respectively, barely enough to compensate for population growth. The per capita growth rates of our seven middle-income countries are shown in graph 1. South Africa's per capita growth rate is the lowest in this group, but it corresponds roughly to the average of countries in Sub-Saharan Africa and is only slightly lower than the Latin American average for this period.

Figure 1: GDP/capita growth rates, 1990-2001



[Source: World Bank, WDR (2004)]

The expanding world trade enabled many emerging economies to change their economic structure from being dominated by primary commodities to enjoying a growing share of manufacturing production and exports. This was the case in particular with some Asian economies that achieved a rapid growth of labour-intensive exports, mostly through investments by multinational enterprises. But a number of Latin American and East European countries also underwent structural changes as a result of growing international trade. Like many mineral and oil exporting countries (Venezuela, for instance), South Africa suffered a loss of revenue from primary exports but it managed to compensate this by growing manufacturing exports. The shift to a more open trade regime for some time dampened this growth while industry introduced more capital-intensive modes of production.

Three of the seven countries in table 1 – Mexico, Brazil and Malaysia – were heavily dependent on raw material exports in 1990. Mexico and Malaysia underwent a radical transformation in the 90s, not only by increasing manufacturing but in Malaysia's case also by moving into high-tech lines of production and exports. Although South Africa did rather well in increasing its manufacturing exports in the 90s, the

proportion of primary exports still remains high, except in comparison with Brazil. Also, the proportion of high-tech products (5% of total manufacturing exports) is still low for a dynamic emerging economy, more comparable to agricultural economies like Poland and Turkey than to Malaysia (57 %), Mexico (22 %) or Brazil (18 %). During the 90s, foreign direct investment only rarely exceeded 5% of GDP in any of these emerging economies.

Rising incomes and a changing structure of domestic demand and international trade gradually changed the composition of GDP in the middle-income countries. In some of them, represented in table 2 by Mexico and Malaysia, manufacturing exports to Western markets expanded the share of the manufacturing sector in the economy. Those among the CEE countries that first completed their transition to a market economy, here represented by Poland and Slovakia, also experienced a rapid recovery of manufacturing production (although in Slovakia, services grew even faster). For most of the high and middle-income economies, as well as for a very large number of the poorest ones, the share of manufacturing followed a long term declining trend, while services – provided by the public as well as the private sectors – steadily expanded their share of GDP. South Africa and Brazil belong to this group of countries and did so already in the 80s.

Table 2: Annual production growth rates in selected economies, 1990-2001

Country	Annual growth of GDP	Annual growth agriculture	Annual growth manufacturing	Annual growth services
South Africa	2.2	1.2	1.6	2.8
Brazil	2.7	3.4	1.6	2.8
Mexico	3.0	1.6	4.0	3.0
Malaysia	6.2	0.3	8.8	6.4
Poland	4.3	1.1	8.3	4.4
Slovakia	2.3	2.5	4.3	7.7
Turkey	3.1	1.1	3.8	3.4

[Source: World Bank, WDR (2004)]

Box 1

The Growth of Mexican Manufacturing

The Mexican experience of manufacturing employment growth in the 80s and 90s is rather unique in Latin America, and it is certainly unique for a mineral-exporting country¹. During Mexico's long import substitution regime, labour-intensive industries had enjoyed higher protection than others, and the liberalisation of external trade beginning in the 80s therefore initially caused a rapid fall of employment and real wages in manufacturing. The maquiladora enterprises that emerged in the 80s along the Mexico-US border nevertheless contributed to raising the share of manufacturing in total employment from 12% to 19%. Although the North American TNCs that drove the rapid growth of manufacturing exports to the US under the free trade agreements in the 90s were mainly capital- and skills-intensive (Ghose, 2000) and did not build many linkages with the rest of the economy (Gallagher and Sarsky, 2004), the employment effect was still sizeable because of the massive foreign investment inflows. While output grew by 4% per year in the 90s, manufacturing employment maintained its share of a growing labour force, and real wages rose by 1% per year (ILO-KILM, 2003). It is hard to find other countries where this achievement could be replicated, however, since it was so heavily dependent on FDI flows from the US driven by the special trade agreements between the two countries.

In section 7 of this paper we shall examine to what extent different economies have managed to translate production increases into higher employment. This relationship, which is sometimes referred to as the *employment elasticity* of production growth, is affected by a number of factors, mainly related to the labour intensity of industries that are growing and shrinking. Economies whose development is based on a rapid growth of production in agriculture, labour-intensive industries and service industries generally show higher employment elasticity than those that mainly depend on mineral exploitation and capital-intensive manufacturing. To an important but lesser extent it also depends in the trade-off between the use of capital and labour at the micro level. This trade-off determines how big share of the production growth goes to increasing employment and how much to increasing productivity. How such factors as wage levels and investment incentives interact to determine these outcomes belongs to the most contested part of labour market analysis and requires a chapter of its own.

Social structures and processes also have a strong influence on employment outcomes. Middle-income countries like South Africa on average invest more than the poorer countries in developing human capacities and protecting their citizens from misfortune. The labour market benefits from the effects of these actions, which are undertaken by society as well as by private organisations and enterprises. First, these facilities provide human security and a better quality of life and work, and second, their delivery itself offers opportunities for employment. The table below shows a series of social indicators for our selection of middle-income countries. Table 1 shows that their Human Development Index ranking is generally at high or medium level, with South Africa lowest at a ranking of 111 among 175 countries.



This low ranking is due to the fall in life expectancy after 1995. In that year, South Africa had an HDI that was level with the Asian and Latin American countries in the reference group, only exceeded by the two CEE countries. The same applies even today to South Africa's achievements as regards adult literacy and gross education enrolment.

There are differences among middle-income countries with respect to the per cent of GDP which is devoted to public expenditure on health and education. Generally speaking, the richest countries devote the highest proportion of their resources to health and education – 6% to 7% to health and 4% to 6% to education – while the middle-income countries devote 3% to 5% and the poorest countries 1% to 3% to each one of these public services. South Africa is clearly in the higher range compared to other emerging economies. Even though the CEE countries have reduced their service levels since the early 90s, they are still ahead of other countries in the same income bracket. Sections 4 and 6 will deal with some specific aspects of education and health that are relevant for our labour market analysis.

Table 3: Social indicators of selected middle-income countries

Country	Life expectancy	Adult literacy	Gross education enrolment	Education exp. % of GDP 1990	Education exp. % of GDP 2000	Health exp. % of GDP 1990	Health exp. % of GDP 2001
South Africa	48.8	86.0	77	6.2	5.5	3.1	3.6
Brazil	68.0	86.4	92	..	4.7	3.0	3.2
Mexico	73.3	90.5	74	3.6	4.4	1.8	2.7
Malaysia	73.0	88.7	70	5.2	6.2	1.5	2.0
Poland	73.8	99.7	90	..	5.0	4.8	4.6
Turkey	70.4	86.5	68	2.2	3.5	2.2	..
Slovakia	73.3	100	89	5.1	4.2	-	5.2

[Source: UNDP, HDR (2004)]

2.1. Research priorities

In the economic debate about employment and development, International Financial Institutions (IFI) have strongly emphasised the rate of GDP growth as the most important contributor to employment growth. Experience from Asia, Africa and Latin America shows that the *pattern of growth* is at least as important as its annual rate. It also shows that government policy can influence the patterns of investment, production and employment growth, although it is not always easy to establish exactly how these relationships work. Such demand side analysis is not covered by the outline of the present Labour Market Analysis Project, but it is obvious that it is important for employment and living standards in a long term perspective. South African labour market analysts should examine the international experience in labour-absorbing growth and take an active part in the discussion on South Africa's changing industrial structure. A dynamic and responsive labour market is key to facilitating structural changes, and there is mutual benefit for both macro analysts and labour market specialists in exploring together how the labour market can better prepare, deploy and remunerate workers.

3. Labour market participation

Because of shifting definitions and survey approaches, labour market participation rates in South Africa have questionable reliability up to the end of the 90s. Part of the extraordinary rate of more than 4% per year increase of the labour force in the 90s may be the result of such weaknesses in the earlier data. Analysis is made particularly difficult by the fact that the way respondents report themselves to be inside or outside the labour force is actually influenced by the level of employment (Altman, 2004). The “strict” or official definition of being unemployed and hence belonging to the labour force requires that the person has actively been seeking employment. When unemployment is as high as in South Africa today, 20% to 30% of the labour force, many unemployed give up looking for work, which means that they are statistically outside the labour force. This phenomenon, which has become known as the “discouraged worker syndrome” is universal, particularly affecting female participation rates (Standing et al, 1996). In most countries, it is regarded as legitimate, even normal, for women to withdraw from the labour force and regard themselves as housewives, homemakers etc.

The closest parallel to the South African situation would be the transition economies in Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS). In almost all Central and Eastern Europe, the transition in the 90s brought a drastic fall in employment. Very few of those countries with the exception of Poland had recourse to a large self-employment sector, so unemployment rose. As shown in an ILO study undertaken by Sandrine Cazes and Alena Nesporova (2003), participation rates fell almost universally during the transition. Although overall employment levels fell rather little – in the CEE countries by a total of 4.5% and in the CIS countries by 3.5% – participation rates in Russia fell by 17 percentage points for men and 8 percentage points for women from 1990 to 1999. In Poland and Hungary, the drop was 7% for men and 5% for women and in Belarus 36% for men and 27% for women. The decline was even higher in Bulgaria, where unemployment reached the 20% level towards the end of the 90s. Participation rates for the age group 15-24 fell twice as deep as for those aged 25-49 years in most CEE countries, with many of the educated youngsters continuing their studies when they did not find any jobs. It is interesting to note that *the outflow to inactivity generally exceeded outflows to unemployment*. The authors refer to a lack of unemployment compensation and a certain social stigma of unemployment in the CIS countries as an explanation, but this does not quite explain why so many workers chose to withdraw from the labour market rather than reporting themselves as unemployed.

Table 4 compares the participation rates of the same selection of countries as in Section 2. South Africa is an outlier in this group as regards participation rates for men, but not for women. (But the female rate is still lower than what is common in other African countries). The drop in participation rates for Poland from 1980 was rather small, but in the case of Slovakia this drop is six percentage points for men as well as for women. The two predominantly Muslim countries, Malaysia and Turkey, have low female rates, but so does Mexico.



Table 4: Labour force participation rates and employment to population ratios 2001 in selected countries

Country	Participation rates aged 15-64			Employment to population ratio		
	Men	Women	Total	Men	Women	Total
South Africa	63.1	49.8	56.1	46.4	33.1	39.4
Brazil	84.7	58.4	71.1	67.4	43.1	54.8
Mexico	85.2	40.4	61.5	80.5	37.5	57.6
Malaysia	83.3	46.7	65.5	80.8	45.3	63.5
Poland	71.5	59.9	65.7	53.0	39.7	46.1
Slovakia	77.4	63.8	70.5	55.2	43.1	48.9
Turkey	74.6	26.7	50.6	63.1	22.8	42.9

[Source: ILO KILM, 3rd edition]

Because of the weakness of participation rates as a measure of the part of the population that is available for work, it is often more useful to make international comparisons of those who are employed in relation to the population as a whole. Such data are found in the three columns to the right of the table, showing the employment to population ratios of the same countries. Again, female rates are in some countries affected by religious and cultural factors and in addition, are often underreported. South Africa's employment rate for females seems to have increased between 1994 and 2001 according to official series, but the mid-90s data is not reliable enough for a firm conclusion. The South African male rates are at the bottom of the list for any international comparison, with Malaysia and Mexico 35 percentage points above.

Participation rates in South Africa vary considerably between different parts of the country. They are particularly low in the former Homelands and twice as high in West Cape and Gauteng as in the Northern Province and East Cape. In the latter provinces, around 20% of the working age population is "inactive" but not statistically unemployed. An important reason why these rates remain so high has been the apartheid regulations of the movements of Africans through pass laws and restrictions on housing and urban amenities. Together with the other restrictions on self-employment and land ownership, this generated a huge backlog of unemployed people, who were statistically outside the labour force. When those restrictions were lifted, one could expect that migration for work would have started reducing these regional differences.

An interesting parallel could be drawn with the *hukuo* system in China, which was designed to keep the rural population from moving to the cities and was implemented through some of the same means as in South Africa. Migration for work started to grow in China in the early 80s with liberalisation of the economy and rapid growth of job opportunities in the cities. But the *hukuo* system had not yet been changed, and most of the migrants did not have a legal right to live in other places than their places of origin, and so an illegal 'floating population' emerged. At the 2000 census it had grown to 80-million people or 6% of the total population (Liang and Zhongdong, 2004). Three-quarters of that number were recent – they had migrated in the five years preceding the Census. Most rural migrants went to towns or cities, some to other rural areas. The floating population is much more driven by economic motives like search of work than the legal, permanent migrants. They also have less education than the permanent migrants. Women migrate to the same extent as men, but a lower percentage than male migrants quote economic motives for moving. 'Marriage' and 'Joining dependants' are more frequent answers among women. Enquiries among the migrants indicate that many women move to urban

areas primarily to gain independence, but ultimately this often meant to look for work. The female participation rate in China increased from 69.5% in 1980 to 80.4% in 1995, while that of men remained fairly stable around 90%.

On average, a Chinese migrant, by moving out of the rural area, nearly doubles the per capita income of his/her household in urban location (not counting any member who might have been left behind in rural areas). But their per capita income is still more than a third below that of the urban residents. Migration enables a person to bridge approximately one-half of the massive gap that exists between rural and urban income (Khan, 2004). The proportion of China's population living in urban areas doubled from 1975 to 2001 (see table 5). Projections predict that it will continue to grow rapidly after the abolition of the *hukou* system.

Dorrit Posel and Daniela Casale have tried to map changes in migration for work in South Africa after the ending of Influx Control with the help of data in the October Household Surveys (OHS). The authors had some problems because of a declining coverage of migrants in household surveys over time. During the period, there was little change in male migration, but female migration increased significantly (from 30 to 34% of the total). Unmarried women migrated for economic reasons. The authors suggest that a large number migrated for work and that their relationship to males through marriage or cohabitation was changing. The role of men as breadwinners has declined (women were less likely to migrate from households headed by employed men), and many women seem to have opted for independence from the dominance of males. Half of all migrants and 60% of females migrated to rural areas. Women most often made "small-step" migration, wanting to keep ties to home.

It is surprising that migration to urban areas has not gone faster in South Africa after the end of Influx Control. One reason why this process moved so much faster in China is of course the rapid growth of job opportunities, but this could not entirely explain the difference. Even when unemployment is very high, the chances to get a job are so much better in the towns than in the Homelands that at least some family members could be expected to make the effort. Maybe the separation of townships from cities has something to do with the slow pace of rural-urban migration, or maybe like in China, the official data underreport migration. Table 5 shows the degree of urbanisation in South Africa compared with a selection of middle-income countries and China.

Table 5: Rate of urbanisation in selected countries

Country	1975	2001	2015 (projected)
South Africa	48	58	67
Brazil	62	82	89
Mexico	63	75	78
Poland	55	63	67
Turkey	42	66	72
Malaysia	38	58	66
China	17	37	50

[Source: UNDP, HDR (2004) Table 5]



Most Latin American countries have already reached a high degree of urbanisation, and their projections predict that the growth will taper off at that level. Central European countries are less urbanised and will remain so. South Africa's rate of urbanisation was much slower than the other countries in the table between 1975 and 2001 but is expected to pick up in the next decade or so with urban areas increasing by 8.5 million people between 2001 and 2015. These people are more likely to join the category of jobseekers than those presently considered as inactive.

3.1. Research priorities

It is necessary to improve the data and deepen the analysis regarding migration, both regarding its directions and its driving forces. It is possible that like in China, large and unrecorded movements are taking place that will change the shape and responses of the labour market in South Africa. There are also large numbers of unregistered migrants from neighbouring countries that further confound the picture. All these movements are affecting both rural and urban societies and are also changing the family support networks that are critical in a country with an extraordinarily high rate of unemployment and an employment to population ratio of less than 40%.

4. Education and its economic returns

Education is relevant to the labour market in several ways. A higher level of education is generally considered as an entry ticket to better paid and intellectually more rewarding jobs. When the education level of the entire labour force of a country rises, the productive capacity of the economy will increase, hence creating more job opportunities. With education levels rising all over the world, foreign trade and investment presuppose ever higher education levels among workers of all categories, and countries with low general levels of education will have difficulties competing both domestically and in international markets. Last but not least, in many middle-income countries, the education sector is one of the biggest, if not the biggest employer of trained manpower. The focus in this section will be on the general level of education in South Africa and other middle-income economies, and on the economic returns to the individuals that are generated by higher levels of education.

4.1. Education levels

The last three decades have seen a very rapid expansion of general education in South Africa, with secondary education for Africans doubling every ten years. University graduation has grown more slowly and has only picked up speed from 1998 and onwards. A comparison with other middle-income countries is made in Table 6. In terms of primary and secondary enrolment as well as in gender balance, South Africa compares very well. Its tertiary enrolment levels are still low, however, around half those of South East Asian economies like Thailand, the Philippines and Malaysia. Most of the CEE and CIS countries have had high enrolment levels for a long time, and most of them managed to maintain them through the transition. The tertiary enrolment level of countries like Poland, Bulgaria and Russia are still significantly higher than other middle-income countries. The rate of secondary enrolment in Brazil is the result of a recent effort on a scale that poses a challenge to the quality of education. Its secondary enrolment rate rose from only 15% in 1990 to 71% in 2001, which indicates an extraordinary effort. Its tertiary enrolment level, on the other hand, remains in the low range.

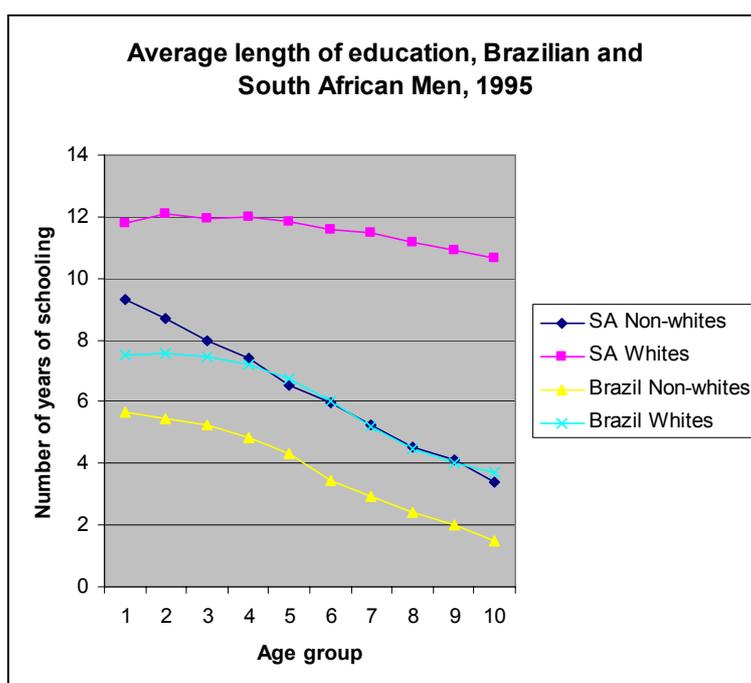
Table 6: Education enrolment in selected countries, 2001

Country	Combined primary and secondary enrolment, females	Combined primary and secondary enrolment, males	Net primary enrolment	Net secondary enrolment	Gross tertiary enrolment	% of tertiary students in science, maths & engineering
South Africa	78	78	89	57	15.0	18
Brazil	97	93	97	71	18.2	23
Mexico	74	74	103	60	21.5	31
Malaysia	74	71	98	70	26.6	n.a.
Poland	91	86	98	91	58.5	n.a.
Slovakia	74	72	89	75	32.1	43
Turkey	54	65	89*	41*	24.8	22

[Source: UNDP, HDR (2004) and UNESCO, EFA Global Monitoring Report (2005)]

David Lam (1999) has made a comparative study of education and earnings differentials among men in South Africa and Brazil based on 1995 household survey data from both countries.¹ The average length of education for men in the two countries is given in Figure 2 by five-year age groups (from 20-24 up to 65-69) and for two racial categories, non-whites and whites. The diagram shows that South Africa has made rapid progress in raising the education level of non-white men, as indicated by the very large difference in the average length of schooling for the youngest and the oldest group. The generational difference for white men, on the other hand, is minimal. Brazilian men –whites as well as non-whites- generally have lower average education than South African men. There is a generational difference indicating broadening distribution of education in Brazil, but the length of schooling has by no means risen as steeply as in South Africa. Lam also shows the differences in standard deviation among the groups. The differences in education level within age groups have been systematically reduced in South Africa, while in Brazil they peak in middle age and fall back in higher age groups. This indicates that South Africa has been more successful than Brazil in broadening its educational base over the last couple of decades.

Figure 2: Average length of education, Brazilian and SA men, 1995

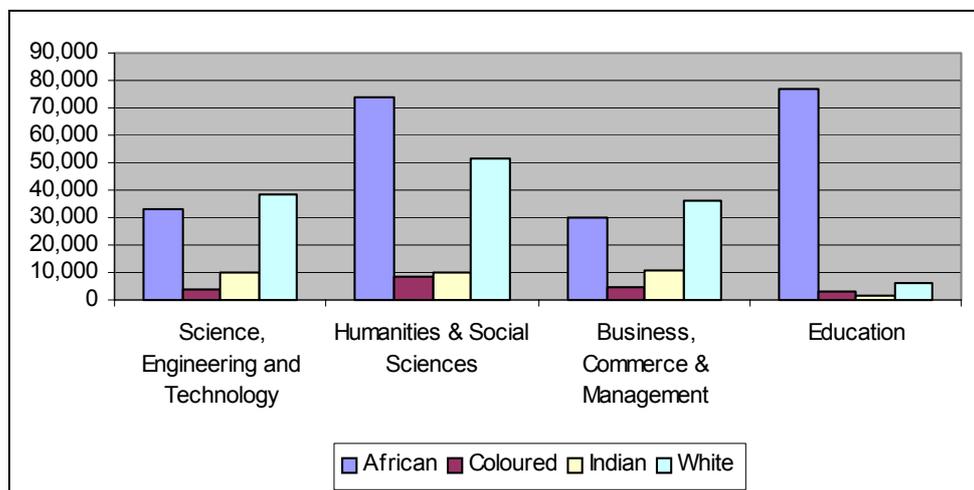


[Source: Lam (1999)]

Although the broad coverage of South Africa's education compares favourably with many other middle-income countries, there are some less reassuring signs as regards the orientation of study. International comparisons show that the proportion of students in science, maths and engineering as a percentage of all tertiary students is around one-third in industrialised countries and in the CEE countries as well as in Mexico, while it is 22% to 23% in Brazil and Turkey and 18% in South Africa. A high share of science and maths students is commonly regarded as an investment in future industrial competitiveness. What makes this question particularly thorny for South Africa is that black and white students at higher institutions of learning have strongly diverging bias in choosing their fields of study. Miriam Altman (January 2004) has

shown that about 70% of black students enrol in humanities and social sciences and in education, while the corresponding proportion of white students is 44%. The differences are illustrated by Figure 3.

Figure 3: Enrolments in universities, by race



[Source: Altman (January 2004)]

The same problem is reflected at lower levels of education by some numeracy test results which show SA far below not only middle income countries but even other African countries at the lowest income level. Helen Perry and Fabian Arends (2003) quote figures from a test performed under the UNESCO/Unicef Monitoring Learning Achievement in 1999, where South Africa scores 30 while 11 other African countries have a median value around 45 (Perry and Arends, 2003). South Africa's literacy score in the same test is below average in the same group but not at the bottom.

South Africa is one of the 38 countries taking part in the Third International Mathematics Study-Repeat (TIMMS-R) in 1998 and 1999. Its test scores were not only significantly lower than countries in the same income bracket, which could be expected six years after the end of apartheid, but they were also lower than those of countries with an income level that is significantly lower (Thailand, Philippines, Morocco). Wide differences in teaching standards are suggested by the dispersion of South African test scores. The standard error of the scores are so much higher than in all the other countries (standard error twice as high as comparable countries, three times higher if divided by mean score to calculate the relative error). Only the Philippines had a comparable dispersion.

Table 7: TIMMS Grade 8 mathematics and science achievement tests

Country	Mean test score	Standard error
South Africa	242.64	7.850
Turkey	432.95	4.268
Malaysia	492.95	4.409
Latvia	502.69	4.827
Philippines	345.23	7.502
Slovakia	535.01	3.290
Morocco	336.60	2.573

[Source: <http://nces.ed.gov/timss/results.asp>]

Hence, there are weaknesses in the pattern of South African success in raising and broadening education levels from the point of view of industrial competitiveness and economic growth. On the other hand, South Africa has a high research capacity manifested in HDR 2004 by a level of 992 scientists and engineers per million people, which is three times as much as the Latin American comparators and Turkey and more like the CIS and CEE countries than other middle-income economies. This may be an indication of achievements of a small elite, but even small elites are useful for technological innovation. South Africa's number of Internet users per 1 000 people is estimated at 65, also higher than most developing countries at the same income level (except Thailand) and quite similar to CIS and CEE.

4.2. Education and labour market access

Conventional wisdom has it that an entrant to the labour market has a higher chance of getting a good job, the higher her education. Her chances of remaining employed are also enhanced by longer education, preferably updated by repeated studies and courses. Support for this hypothesis is provided by a number of studies that estimate positive returns to education (see for instance Psacharopoulos, 1993). But most of those studies cover only those who are employed, and there is plenty of evidence of unemployed university graduates, particularly in developing countries that have maintained high rates of tertiary education for several decades.

One such country is Sri Lanka, from where at least one version of the famous concept of *skills mismatch* originates. It was minted by an ILO employment mission in 1971, suggesting that the documented high graduate unemployment in that country was the result of a market failure insofar as the education system produced graduates with skills that employers did not want, and with expectations for jobs that they could never get. As a result, neither were the graduates interested in existing vacancies, nor did the employers want them for those jobs. Egypt was another case where similar labour market conditions emerged, stimulated by persistent overproduction of graduates and a government guarantee to act as employer of last resort.

It is questionable whether these two examples are really cases of a mismatch between demand and supply for skills. In the Sri Lankan case, the distribution of unemployed persons by education level was bimodal, with one peak among the least educated and one among new graduates. There was evidence indicating that the former group was involuntarily unemployed, while a large number of the latter were holding out, queuing for government jobs. Many of the educated unemployed had better means than those without an education to survive while waiting (Rama, 2000). The same

phenomenon occurred in Egypt as a result of the employment guarantee scheme for graduates. When this scheme was abolished in 1990, the problem of over-supply eased, but the public sector still offered advantages that made it worthwhile queuing for jobs there. For instance, women were discriminated against in the private labour market and could more easily find a job with the government (Assaad, 1997). Neither of these two cases seems to show a mismatch of demand and supply for skills, but rather an application of games theory to the search for more profitable opportunities in the market. Recent tracer studies quoted by the World Bankⁱⁱ suggest that less than 5% of African graduates are currently unemployed and looking for work.

In countries where unemployment is extremely high, it is questionable whether graduate unemployment should be characterised as a skills mismatch. When the Soviet Union collapsed, Moldova suddenly had thousands of unemployed aeronautics engineers but no industry that could employ them. Many other CIS and CEE countries faced similar problems, which could at first sight be seen as a mismatch. The market responded very quickly by large numbers of skilled people – particularly women – withdrawing from the market, others taking resort to the informal sector or migrating to other regions (Nesporova, 1999). This example goes to showing that a mismatch cannot be sustained for very long in the face of hard economic realities. Graduate unemployment in those countries is not a sign of skills mismatch but of too low employment levels in the market as a whole.

South African studies (for instance Klasen and Woolard, 2000) show that unemployment levels are so high that families can hardly afford the waiting tactics suggested by the Sri Lankan and Egyptian examples. There may be quality problems in some of South Africa's tertiary institutions, but those are not large enough to explain the low employment outcomes.

Interviews with private enterprises show that manufacturing firms seem to prefer secondary school graduates “with relevant work experience” (Chandra and Ganou, 2001) to university graduates, but there is no hard evidence to suggest that this preference has been strong enough to constitute an obstacle to employment growth in that sector.

Lack of employment opportunities is a well-documented motivation for out-migration. A globalising labour market and the easing of restrictions on skilled labour immigration in the 90s in industrialised immigration countries provided a major pull factor, for South Africa as well as for many other countries. Andrew Myburgh (2002) has constructed an index which contains incentives that affect international migration of skilled South African labour, including the real wage differences between South Africa and industrialised immigration economies. High unemployment among skilled and professional workers in South Africa did not become an important incentive for migration until in the 90s. At that time, emigration increased steeply, particularly to Britain. Skilled emigration more than trebled in the later half of the 90s. The emigrating workers were mainly professionals, managers or skilled workers, a majority of whom were 25-35 years of age.

By international standards, however, even the higher level of skilled emigration of the later 90s does not represent a general threat to the South African supply of professional and skilled labour, except in certain professions (such as the medical one, see Section 6). Tracey Bailey (2003) has calculated that the out-migration of skilled workers in the period 1994-2000 amounted to a total of 17 549 and the

simultaneous in-migration to 6 675. This should be compared with a population of skilled and professional manpower amounting to around 1.6-million and growing by 60 000 every year.

International migration data are universally unreliable, as it is difficult not only to assess education levels but also to separate the movements of students, temporary workers and asylum seekers from those who move for permanent employment. Based on OECD data on migration to member countries, the World Bank (Adams, 2003) has calculated the following rates of migration of workers with tertiary education for major labour-exporting economies in the year 2000:

Table 8: Per cent of labour force with tertiary education from 13 major emigration countries resident in OECD countries in 2000

China	1.9	Tunisia	33.3
Indonesia	2.0	Egypt	0.5
Philippines	3.6	Bangladesh	1.5
Turkey	39.1	India	1.3
Brazil	5.3	Pakistan	3.3
Jamaica	95.8	Sri Lanka	16.5
Morocco	43.5		

[Source: Adams (2003)]

South Africa's loss to the globalised market for professionals does not seem large in comparison, but since it has grown quite fast recently, it needs to be watched. What is important in the present context, however, is that migration offers opportunities to skilled and educated workers that are not open to those who have less education and experience. It still seems certain that the highly skilled are better placed in the competition for jobs in South Africa than those without any education. We shall return to this question in the following section.

4.3. Economic returns to education

The increase in income that can be gained by an individual by adding one more year of schooling is often referred to as the economic returns to education. These returns can be calculated either from the point of view of the individual (private returns) or from society's point of view, deducting the costs of public subsidies (social returns). In this context, we shall discuss private rather than social returns, since our perspective is based on the individual's options and preferences in preparing his/her entry in the labour market.

The returns to education are to a large extent determined by the structure of demand for various types of manpower. Rising differentials between unskilled and highly skilled employees are characteristic of labour markets all over the world since the mid-80s, a tendency that is widely regarded as induced by globalisation of trade and changes in technology. The rise in earnings differentials with respect to education have had different strength in different economies, due to a long range of factors, such as the capacity of the education systems and the structure of labour demand in the national economy. Expanding education systems tend to dampen the rise of economic returns to education. The introduction of universal primary education in some middle-income countries, for instance, has brought the returns to one additional year at primary level close to zero, while the average level for African and

other poorer countries still remain around 20% (Psacharopoulos and Patrinos, 2002). A similar trend can be observed in industrialised countries where post-secondary education has expanded to a point where the returns from a year of tertiary education averages less than 10%.

Likewise, South Africa has moved from whatever affinity to the 'African' pattern that it may have had closer to those of the middle-income countries. A study by G.J. Trotter in 1984 of metropolitan Durban quoted by Psacharopoulos (1993) produced rate of return figures very close to the African patterns: Primary level 22.1, secondary 17.7 and tertiary 11.8%. More recent studies have produced very different results. Fryer and Vencatachellum (2003) studied the education and employment of women in 1989-90 in 331 households of the Machibisa township in KZN and found that primary education gave no returns at all in terms of wages and employment, while the lower secondary education was highly profitable. The upper secondary did not give any value added, which seems a bit strange, given that clerical jobs require a full secondary education. ⁱⁱⁱ

The below differentials between average monthly wages in South Africa with respect to education levels in 1995 were quoted by McCord and Borat in HSRC's Human Resources Development Review 2003 (p. 129).

Table 9: Median monthly wage by education level, 1995

Education level	Median wage (Rands)	Per cent of 'no education'
No education	501	100
Grades 1-7	631	125
Grades 8-11	1 248	249
Matric	2 420	483
Tertiary	3 500	699

[Source: Stats SA (1996)]

These earnings differentials are very high by international standards. The table below gives comparable data from Latin American countries, some of which are regarded as providing very high returns to post-secondary level education.

Table 10: Earnings differentials in Latin America

No schooling group =100

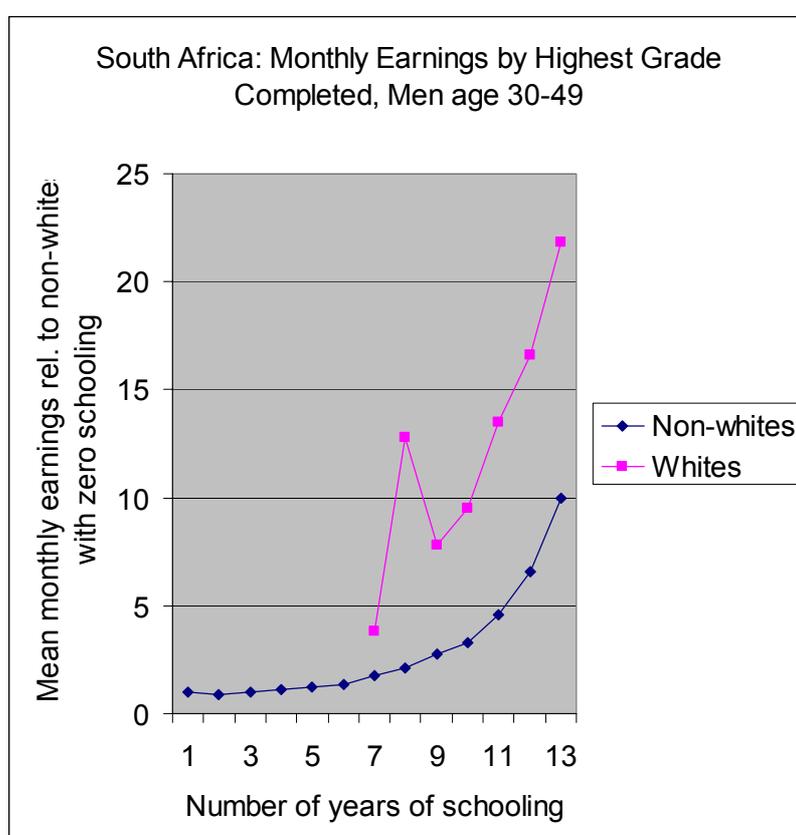
Level	Latin America	Mexico	Brazil	Argentina	Peru
Primary complete	50	100	100	35	40
Upper sec. complete	120	170	170	80	80
University complete	200	260	280	160	145

[Source: América Latina frente a la Desigualdad, Interamerican Development Bank (IDB) (1988-99)]

A study which allowed controlling for the very strong interaction by the racial factor in South Africa was made by David Lam (1999) on the OHS data for 1995. This is a large SSA survey based on interviews with 32,000 households, and contrary to most other studies of returns to education, it covers the whole labour force and not only those employed in large enterprises. It was made as part of a comparative study with Brazil, to which we shall return shortly. For non-white men, the earnings per year of

education did not rise significantly until after five years of schooling, from where the rise was very rapid: at nine years of schooling, the average income was double that of the 'no education' group and at university level it was 10 times the earnings of non-white men with no education (See Figure 4). The earnings differentials for white men rise less steeply, although comparisons are difficult due to the lack of observations at primary level. It is important to note that unemployment and zero earnings amounts to around 30% among non-white men with less than 12 years of education, a factor that significantly reduces their average earnings. Unemployment is one of the major factors of inequality, together with the racial factor.

Figure 4: South Africa: monthly earnings by highest grade completed, men aged 30-49

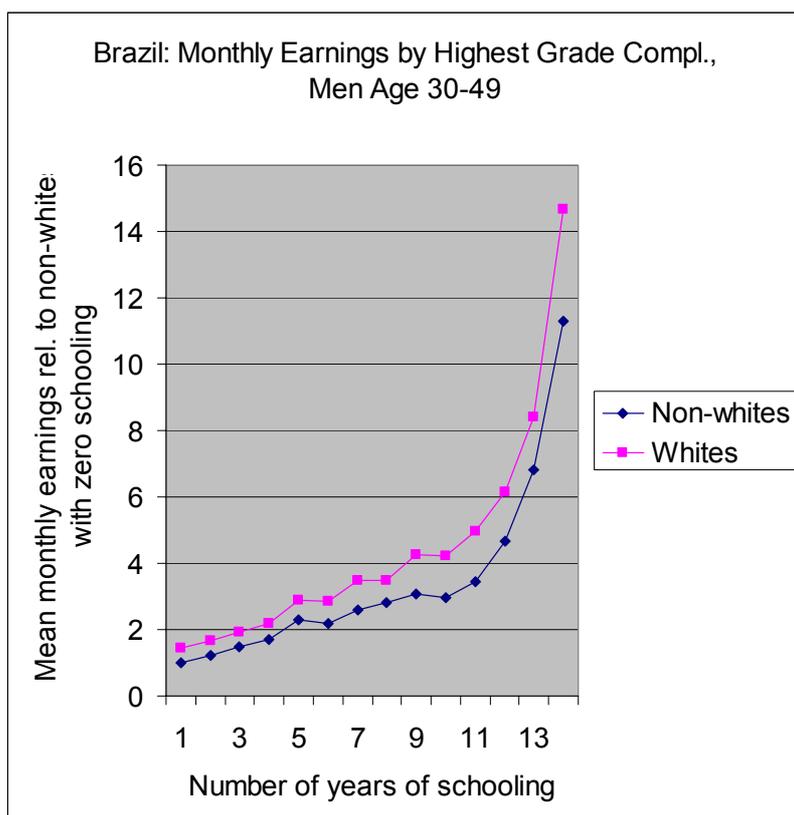


David Lam's study was designed to examine the role of earnings differentials in two countries with extreme income total differences, to find out what a wider distribution of education at all levels could do to reduce the overall dispersion. Like in the South African case, he distinguished between whites (57% in the comparison) and non-whites (43%). The Brazilian national household survey 1995 comprised 85 000 households, and the base for comparison with the South African data presented above was 40,505 men aged 30-49. Education was much less widely distributed in Brazil than in South Africa of 1995, the median number of school years for the two groups being 8.3 years for the South African men and four years for the Brazilians. The percentage with no schooling at all was much higher in Brazil than in South Africa, 23.4% of the non-whites and 8.3% of the whites.

The percentage of Brazilian men with zero earnings was much lower than in the South African group, 10.5% of non-whites and 8.7% of whites. Like in South Africa,

zero earnings are significantly less frequent at education levels above 12 years. The difference in earnings between university level and primary level would be 25% less in South Africa in the absence of a zero earnings group (i.e. at full employment) and 9% less in Brazil. Figure 5 shows a diagram comparable to the one for South Africa.

Figure 5: Brazil monthly earnings by highest grade compl., men aged 30-49



An interesting difference between the two countries is that an additional year of education gives high economic returns in Brazil even at the primary level, while the returns in South Africa are low. In Brazil, the returns rise progressively with the number of years and change to a steeper gradient from 10 years upwards. The gradient in that phase is quite similar for all groups, white and non-white, Brazil and South Africa. The racial earnings differential, however, is relatively smaller at the university level than at secondary level in both countries, although on average it is much bigger in South Africa.

Box 2**Racial wage discrimination**

Racial wage discrimination, that is, using different standards of remuneration for persons with different ethnicity but with the same “productive characteristics” (such as education, occupation, age or productivity), has been studied in many countries, in particular the US. The most common method is decomposition of each one of the “productive characteristics”, leaving an unexplained residual that is assumed to be caused by ethnic discrimination. It is important to remember that access to the “productive characteristics” may be subject to discrimination, so the racial residual does not tell the whole story.

In David Lam’s data set, the differences have been ‘decomposed’ by controlling for sex, education and racial factors. The white male average wage for the lowest education level where whites are represented – 8-10 years – is 3.7 times the non-white wage at the same level. This differential falls with rising education levels to 2.2 times in the group with university education. In contrast, the differential in the Brazilian material is highest as 45% for the group with no education at all but is fairly constant around 30% for all other levels up to university.

In South Africa, a decomposition study was made based on OHS data by Paul Allanson and Jonathan Atkins (2001), who controlled the racial average wage differences 1993-99 for age, education, occupation, economic sector, trade union membership and geographic residence. The unscrambled wage data had indicated that the differences between African and European wages were narrowing, but this could be a result of rising levels of education. The Allanson-Atkins study showed a compression of the unexplained residual in the difference between African and European wages from 1993 to 1995 and then some reversal towards the end of the period. Differentials arising from discrimination were smaller than the ones one can derive from Lam’s study but seemed to be very stubborn.

The World Bank has studied ethnic discrimination in Latin America (Patrinos, 1994) and found that the ethnic factor had relatively small effect on wage differences in most countries but that it explained around half of the differences in Guatemala, Mexico, Peru and Brazil. The biggest differences were found in Brazil.

Very few systematic studies of ethnic discrimination comparable to the South African findings have been made in other developing countries.

A conclusion that can be drawn from these comparisons is that the more even distribution of education in South Africa is reflected in lower returns to primary and secondary education than in Brazil. One might expect that the accelerated growth of university education for non-whites in South Africa since 1995 may in due course lower the returns to higher education as well. International evidence points in a different direction, however, for the simple reason that earnings levels are sensitive not only to supply but to demand. Studies of the changes in returns to education during the 90s in both Brazil (Blom, Holm-Nielsen and Verner, 2000) and Mexico (Lopez-Acevedo, 2001) show that in spite of expanding university populations, economic returns to tertiary education have been rising. This is generally ascribed to changes in labour demand, with service sectors growing relative to manufacturing

and a growing emphasis on formal education among employers. Some authors talk about a tendency towards “skill-biased technological change”, which entails using skilled workers for tasks that were previously performed by workers with much lower formal education and training. It is doubtful, however, whether exaggerated demands for education can be sustained for very long in the face of economic realities. A more likely reason is that the knowledge requirements of the work process are universally rising, which will maintain the returns to tertiary education in middle-income economies even as the number of graduates is expanding.

4.4. Research priorities

There is a strong case for research into the factors that guide (a) the students’ choice of stream and (b) the employers’ strategy for hiring skills. There are probably both institutional factors and traditional thinking involved, and there are great risks of individuals investing in education that has low economic returns. It is important to give both students and employers the best information possible about current labour market prospects in various fields, even though these prospects can change quite fast (and be influenced by the forecasts themselves). A new Labour Market Dynamics study along the lines of Standing-Sender-Weeks (1996) would be useful as a base for such studies, as well as for many others covered by the LMA project.

There are many indications that the returns to education of women are very different from those of men (see for instance Fryer and Vencatachellum, *op. cit.*) and that they are changing over time. It is interesting to pursue the same type of studies as that of David Lam for both sexes, and in the present labour market situation. It is also important to get a better handle on the occupational structure, which interacts with education, gender and race in a way that may obscure the forces at work. The possibility of refining the occupational classification of an OHS sub-sample may help throwing light on these.



5. Employment in the informal economy

South Africa's labour market differs from those of most comparable countries in the small part of the labour force engaged in the informal economy^{iv}. Altman and Woolard (April 2004, p. 33) reckons the informal sector presently amounts to 1.5-million or 13% of total employment or 45% of total non-formal employment (excluding subsistence farming which is about one third of that size and around one million workers engaged by private households). The numbers roughly doubled from 1995 to 2002, but a large part of this increase is assumed to be due to increasing coverage by SSA.

This percentage is low in comparison with those of other countries in Africa or at development levels comparable to South Africa's. The data below have been drawn from ILO's data base. It must be emphasised that these estimates are no better than the South African ones – in most cases they are pure guesstimates. (For instance, the figure quoted for South Africa in the same source is 31% of total employment, which would include household workers and subsistence farmers).

Table 11: Percent of total number of employed working in the informal sector in selected countries, latest available year

Country	Year	Total	Men	Women
Ethiopia	1999	74.2	56.4	85.7
Tanzania	1991	22.0	28.0	15.0
Kenya	1999	36.4	43.9	29.5
Zimbabwe	1987	8.8		
Brazil	1997	34.6	28.3	43.4
Mexico	1999	31.9	32.7	30.7
Turkey	2000	9.9	10.6	6.2
Poland	1998	7.5	9.5	5.0
Russian Fed.	2001	12.6	12.9	12.3
India	2000	55.7	55.4	57.0
Pakistan	1997	64.6		
Thailand	2000	71.0	71.0	71.1
Indonesia	1999	62.7	59.3	68.2

Note: Estimates for Kenya, Thailand and Indonesia are based on micro-enterprise definitions.

There is a statistical tendency for the share of informal employment to fall with rising national income per capita. Nurul Amin (2002) presents a regression graph showing how the percentage falls from between 60% and 70% in low-income South Asian countries through between 30% and 50% in the middle-income the South East Asian countries, to below 25% for the high-income Taiwan, Japan and Singapore. If this relationship explains the size of the informal economy, it is but a symptom of poverty that will disappear with economic growth and rising living standards. But the relationship does not seem to be so strong in Latin America, where even high-income countries have large informal employment. This suggests that there are other, structural factors at work in determining the size of the informal labour market.

Some authors have suggested that growth of the informal economy is at least partly driven by concentration tendencies in the economy as a whole. When economic growth leads to concentration of investment in capital-intensive enterprises, this leaves a growing number of workers without a chance of getting a job in the formal sector. It also inflates the costs of urban real estate and thereby also of producing

consumer goods and services for workers (Sassen, 1997). This produces both push factors (redundant labour) and pull factors (markets for goods and services) that promote the growth of an informal economy. With an oversimplification one can say that the informal sector contains an element of non-viable survivalist enterprises that grow with rising unemployment, and another element of dynamic micro-enterprises that grow with the economy at large. Informal enterprises have both backward and forward linkages to the formal economy, using and transforming some of its products and selling directly to formal enterprises as subcontractors, or to those who draw income from working in the formal economy. Location of informal enterprise is very important: in places where conditions are conducive to the growth of small and micro enterprises, clusters or villages of small entrepreneurs have created dynamic networks and developed new products that have benefited the formal economy and have even been exported.

But these examples of dynamism cannot hide the fact that a large part of informal employment and self-employment, and in most cases a majority, consists of people who have joined this market simply to survive. The sector grows when there are layoffs in the formal sector, whether by loss-making private firms or by a down-sizing public sector. When the influx of surplus labour is too large, competition for those niches will drive incomes down towards subsistence level. There are cases like Manila in the crisis year of 1986 when the number of people engaged in a certain activity suddenly doubled, while the total income generated remained practically the same. A growing number of people will be occupied in marginal pursuits, which reduces average productivity and incomes in the sector.

Over the last decades, the urban informal sector has seen a particularly large influx of female labour. Women have not chosen this type of work because it responds to their needs, even though there are some types of work that offer more flexibility of working hours and of location, like industrial home work. They enter the informal sector because they are forced to by economic need. During the 80s, female participation in the informal sector was pushed to record heights by the hardships imposed by the debt crisis. The Economic Commission for Latin America talked about a “feminisation of the informal sector” (ECLA, 1993). On the Indian subcontinent, the proportion of women in the formal sector is low, apart from certain occupations like teachers, nurses and secretaries. The overwhelming majority is found in the unorganised sector (Muqtada and Basu, 1997).

In this way, the informal economy functions like a “macro-economic buffer” for the labour market. When the economy grows fast enough to absorb the new entrants to the labour force, a number of those who pursue survival strategies in the informal economy cross over to the formal economy, or they keep one leg in either one of them by working in both. This effect is reflected particularly in the Asian economies whose growth has been more labour-absorbing than that of most other continents. According to Amin (2002), the labour market share of the informal sector in Bangkok and Jakarta fell during the boom of the late 80s and early 90s but rose again back to the 1980 levels during the Asian crisis in 1997-99.

Similar effects have been observed in Latin America during acute crises, but it is evident that employment generation in the formal sector in most Latin American countries is so weak that the informal sector is more like a sump than a buffer. According to ILO estimates, while in the 1970s the small and micro-enterprise sector provided less than half of all new jobs in Latin America, this proportion had risen to

90% in the 1990s. A similar development occurred in the CIS and some Eastern European countries after the collapse of the USSR. In countries like Georgia, the only jobs that have been created after the dramatic collapse of USSR have been informal (Musiolek, 2002).

Berry (2001) suggests that the South African informal economy has much in common with the Latin American countries. Its growth has been driven by an historical capital-intensive but rather slow economic growth path of the corporate sector and by recent downsizing of public sector employment. The fact that employment in this sector is still much smaller than in comparable economies in Latin America or Africa can be explained by the history of apartheid regulations, which were lifted less than 10 years ago (a comparison with Zimbabwe in the 80s is appropriate). In addition, as shown by Altman and Woolard (*op. cit.*), labour market statistics have only recently begun to capture its dimensions. Studies of informal employment by Devey, Skinner and Valodia (Durban, 2003) using labour force data show an occupational structure and education levels of entrepreneurs and workers in the informal economy which are very similar to those of Latin American studies (see for instance Galli and Kucera, 2003). A study of panel data over the period 1993-98 in KwaZulu-Natal by Cichello, Fields and Leibbrandt (DPRU, 2003) gives a fairly strong indication that the earnings dynamics of the informal economy in that area was not just survival strategy but that some new opportunities must have opened. An evaluation of ILO micro-enterprise projects in South Africa (ILO-DRA, 2001) gives the same indication: only a minority of respondents state that they have been forced by necessity to become entrepreneurs.

While South African data show a strong similarity with the Latin American experience, there are still questions as to how fast the informal economy will grow in this country. The removal of apartheid era regulations was not sufficient to bring about a sea change in micro enterprise development. ILO's DRA evaluation indicated that weak demand and sharp competition were more important obstacles than the remnants of this heritage. There is also a question of how fast South Africa will approach the Latin American level of urbanisation, which has played an important role in driving both size and diversity. The current pattern of settlements in South Africa with the unemployed living in townships at a certain distance from the big cities may also weaken the linkage between formal and informal markets.

Another important dimension of the informal economy is its ability to give adequate returns to both human and physical capital invested by workers and entrepreneurs. Large earnings differentials between formal and informal economies would also be an indicator of labour market segmentation. The Latin American studies reviewed by ILO (Galli and Kucera, *op. cit.*) show a common pattern of lower average pay levels (at around two-thirds of the formal sector level) in the informal sector than in formal employment, but there are important structural and cyclical differences. Returns to education are not so much lower in the informal sector, and mobility of educated manpower between the sectors is quite common. The difference is even lower in the case of returns to experience. These observations do not apply to female workers, however, whose occupational choices are more limited and less well-paid and who are evidently facing a segmented labour market. Self-employed men are generally better off than wage workers in the informal sector, who are mostly better paid than women. There are cases of skilled men saving money as employees in the formal sector for eventual investment in a small informal sector enterprise. Recent studies made in Mexico, El Salvador and Guatemala show considerable mobility both between sectors and in terms of levels of earnings. Since the turnover is high in the informal sector and wages much lower for new entrants than for experienced

operators, the authors make a strong case for studying life cycles rather than cross section comparisons for a single point in time. Individual earnings progressions can be sizeable in some occupations.

South African studies of these aspects are still few and mostly limited to specific locations, but the tendencies compare well with those in Latin America. Devey, Skinner and Valodia (op. cit.) testify to the wide range of occupations and skills in the South African informal economy. The range of skills and of earnings is wide, except for women whose choices are more limited. But, as reported by Fryer and Vencatachellum (2003), even in a township like Machibisa there are a few skilled occupations like traditional doctors (*sangoma*) which fetch quite substantial earnings for women. Based on Ntsika reports, ILO (2002) estimates that wages in micro enterprises are around 57% of the average in manufacturing, 71% in transport and 18% in trade. The level in other services is also very low, reflecting a high proportion of female workers. Self-employed operators on average earn more than employed workers.

As suggested by the Central American studies, life cycle studies would throw more light on the labour market dynamics and earnings structure of the informal economy. Cichello, Fields and Leibbrandt (op. cit.) use a panel of Africans of working age from both formal and informal sector, a panel which remains unchanged for five years, 1993-98. Wages rose very fast, by 7% per year on average for those members who had employment (70% of the panel). Increases were higher for those who entered at the lowest wage levels, and highest for those who entered with zero wages and who had by 1998 managed to get themselves a job, even one in the informal sector. Wages of the informal sector panel members rose faster than those in the formal sector, raising them from 31% of the formal sector average in 1993 to 44% in 1998. On the whole, jobs and earnings in the informal sector grew very fast, which may have been the result of exceptional developments in the years when the apartheid legislation was scrapped. Even with this caveat, the study shows the potential of panel studies of labour mobility between sectors and occupations.

5.1. Research priorities

It is important to further study the ability of informal enterprise to generate sustainable livelihoods. Markets may be constrained by municipal restrictions or by regulations of government procurement. Subcontracting arrangements to larger enterprises have been developed in Asia and could be explored as a way of helping small-scale firms grow big. Adaptive research on improving productivity and earnings in specific trades of the sector, such as manufacturing, repair, construction and transport, could give ideas of which services the government could provide informal sector operators to make them more effective.



6. Erosion of human capital due to HIV/AIDS

The global HIV/AIDS epidemic has been subject to extensive research, nationally as well as internationally, but the perspective has generally been medical rather than demographic and economic. Only in Southern Africa has the economic impact through the intermediary of the labour market become large enough to attract interest from researchers, mostly funded by ILO, UNDP and the World Bank. Since labour market data in this area are generally weak, the findings are sometimes contradictory. Only South Africa and Botswana seem to have sufficiently good data from which one can draw policy conclusions.

A question which is crucial to countries that are investing heavily in education, training and institutional development is that the AIDS epidemic threatens to undermine those efforts and in some cases even to eradicate the progress they have made in the past decades. HIV/AIDS-related deaths and absenteeism not only reduce the labour force as a whole but they also wipe out skills and knowledge that have been built for generations. Institutions and enterprises, both private and public, are weakened and productivity reduced.

Since HIV infections usually peak at age 25-35 for women and 30-40 for men and deaths related to AIDS about 8-10 years later, the demographic effects will appear as a reduction of those cohorts of the labour force which are generally most productive, economically as well as biologically. The population pyramid will assume the more sinister shape of a chimney (Lisk, 2002). The average age of the working population will decrease, as middle age workers become incapacitated. As the disease often affects both parents in a family, the number of orphans will increase drastically. Current projections for orphans in some Southern African countries range between 20% and 30% of all children, more than 80% due to AIDS-related deaths (Cohen, 2002). This undermines the chances of those children to get a proper education, and it will impose a heavy burden on societies, local as well as national.

From studies that have been made in Southern African countries it appears that infection rates vary considerably between different groups of workers, depending on such factors as age, gender, race, occupation, education level and geographic location. The strength and direction of these influences are not always clear, since both data and methods leave a lot to be desired, but it is clear that there are significant differences and that it is important for researchers to find a stronger base for making policy recommendations.

First, there is some confusion regarding differences in infection rates with respect to the level of skills. Some studies (mentioned by Cohen, *op. cit.*) indicate that there is a positive correlation between social class (approximated by income) and infection rates, supposedly because the skilled groups are urban and mobile. Most studies, however, conclude that 'unskilled' workers are most likely to be infected. A conclusion that often follows this observation is that unskilled labour is in ample supply, and that the losses are easy to make up for.

This latter argument is challenged by several authors (for example, Cohen, *op.cit.*, Vass 2003) who maintain that even low-paid workers are repositories of both social and economic knowledge in their roles of workers and members of families. The younger and less experienced workers that will take over when they are forced to leave the work place will not be able to restore this knowledge base, since there will be no one left from the older generation to guide them.

What seems to be clear from the existing studies is that infection rates vary with both occupational and industry characteristics. For instance, Vass quotes studies from South Africa which show that transport and mining industries have a higher prevalence than average. Both Cohen and Vass suggest that the military in most Southern African countries have very high infection rates, although there are no official data. In public services, attention has mostly focussed on education and health workers, but an attempt at studying the prevalence in the public sector as a whole in Malawi (Malawi Institute of Management, 2002) indicates that the Ministry of Agriculture in that country is particularly vulnerable.

The World Bank (2000) has estimated the changes in the number of teachers, pupils and orphans for four countries in the decade 2000-2010.

Table 12: Projected changes affecting the education sector in four African countries, 2000-2010 (%)

	Zimbabwe	Zambia	Kenya	Uganda
Reduction in school age population 2000-2010	24	20	14	12
Annual loss of teachers due to HIV/AIDS	2.1	1.7	1.4	0.5
Increase in orphans, aged 0-14 years	25	19	17	5

[Source: World Bank (2000)]

Some estimates of teacher attrition due to HIV/AIDS in Zambia quoted by Cohen would correspond to half of all teachers trained in one year. But there are other estimates of attrition based on micro studies of several schools that attrition is high for a number of other reasons than illness and death, particularly low pay. Vass estimates that 30 000 new teachers must be trained and recruited in South Africa every year in order to maintain the current staff strength.

But it may not be necessary to maintain the current staff strength, since the reduction in school-age population will also reduce the demand for teachers. Again, there are different opinions among researchers as to how big the latter reduction will be, given that the epidemic creates a number of systemic problems which require more management and highly trained educators. The reduced cohorts of school-age students, plus the problems of financing the schooling of a growing number of orphans, will in any case reduce demand more than the projected fall in supply of teachers due to the epidemic.

Regarding the health sector, the most reliable studies in Southern Africa have been made in Botswana and South Africa. Personnel data in other Southern African countries seem to be too scant for any substantive comparison. A very detailed study of HIV/AIDS in the health sector was made by the Government of Botswana and UNDP in 2000. The rate of infection in Botswana is already so high that a quarter of the total population may have died by 2010. The study estimates that 17% to 32% of health staff was infected in 1999, and that this will rise in 2005 to 28% to 41%. Big cost increases are reported even for non-health expenditure and for rising absenteeism.

In South Africa, there are strong indications that student nurses are more vulnerable to the epidemic than other categories of health workers. Vass quotes studies that show projection of prevalence rising to 40% for student nurses in 2010, while the rate for other professional categories is estimated at 25% at the same point in time. Even if there is an occupational differential, 25% is enough to cause serious problems of attrition, particularly since some of those senior categories are already in short supply. Even Malawi and Zambia report high rates of infection among student nurses. Unlike in the education sector, the epidemic will dramatically increase the demand for the services of the health sector, and these projections are indeed very ominous.

The picture is also more complex in South Africa than in other countries because of a strong interaction between race, gender and occupation. Africans show much higher prevalence than whites, women higher than men and certain occupations dominated by Africans and women have very high infection rates (Vass, *op. cit.*). This is likely in the long run to change the structure of the labour force in several dimensions, particularly by reducing the average age of the labour force. Since South Africa has already a relatively young labour force, this change may be less cataclysmic than in the case of countries like Russia and China which face an equally ravaging epidemic but have an aging population. Russia's population has already fallen because of other health crises, but it runs a risk of falling precipitously unless deliberate measures are taken (Specter, 2004).

6.1. Research priorities

More research is required for developing a policy framework for exposed sectors and occupations. It is particularly important to review the planning and personnel management systems in the public service, and for vulnerable ministries, to elaborate recommendations for reform of key provisions relating to recruitment, training, establishments, health care, pensions and other entitlements. Some private corporations in South Africa have elaborated such policies, but the public sector has not so far produced credible models for meeting the challenge of a large-scale future erosion of human capital. The health sector is obviously a high priority for strategic forward planning.

7. The wages-employment trade-off

The most common measure for describing the labour absorption of economic growth is the concept of *employment elasticity*, which is calculated as the ratio of employment growth to output growth. While this concept is useful for descriptive purposes, it is difficult to use in analysis. The elasticity measure conceals more than it reveals, since its implicit production function is unknown. When either numerator or denominator is negative, the value of the ratio will be difficult to interpret.

A more useful approach for analysing the growth-employment-wages relationship has been developed by Dipak Mazumdar in the form of a decomposition exercise, in which the total production growth in manufacturing is broken down in four factors:

- Employment changes
- Real wage changes
- Changes in the wages/value added ratio
- Changes in the domestic real exchange rate (DRER)

Factors (3) and (4) are necessary to make the components add up. When factor 3 is negative, it means that a certain share of the output increase is not available for distribution in the form of wage increases. Factor (4), the DRER, is the change in the ratio of producer to consumer prices. If the rate of consumer inflation is higher than that of producer prices, this is a leakage that will reduce the scope for real wage increases. Mazumdar's method of accounting for the way the cake of growing production has been divided between capital and labour is more sophisticated than the usual one of splitting total output growth between capital and labour, since it also takes into account the price changes that affect the real value of the shares that each party has taken.

The growth paths of different countries and regions of the world have differed widely with regard to the relative size of these components. By using a UNIDO dataset, Mazumdar (2003) has calculated the breakdown of manufacturing growth rates for four different regions, East and south East Asia, OECD member countries, Latin America and the Caribbean, and Eastern and Southern Africa (eight countries, not including South Africa). A summary of the results is given in table 13.



Table 13: Decomposition of real wage growth rates in manufacturing, four regions

Period/region	Real wage growth	Output effect	Employment effect	Wage share effect	Price effect
1971-80					
East Asia	5.32	11.47	5.77	1.07	-0.41
OECD	1.72	3.27	-0.23	0.99	-1.78
Latin America	-2.13	1.83	-0.64	0.97	-4.60
Africa (E&S)	-3.44	2.34	4.45	0.85	-1.33
1981-92					
East Asia	5.17	12.04	4.36	1.09	-2.53
OECD	1.35	3.03	-0.31	0.80	-1.99
Latin America	-3.13	1.77	-0.78	0.97	-5.68
Africa (E&S)	-4.36	3.66	3.59	0.87	-4.43

[Source: Mazumdar (2003)]

The patterns of growth and distribution over the different components show a number of striking differences, some of which are relevant to the present enquiry. It is important, however, to point out at the outset that the decomposition does not tell us anything about the *causes* of these changes and differences. Those are subject to influences from a large number of factors, in particular from changes in technology, investment climate, trade flows, manpower demand and supply, government policies, industrial relations and institutional behaviour. The usefulness of the decomposition as an analytical tool depends on the quality of data that explain the changes in those factors, which are often closely interrelated. For instance, as Adrian Wood (1994) has shown, competition from low-wage producers in developing countries did not only lead to contraction in labour-intensive industries in the West but also to technological change. Both these factors led to increased productivity and created room for wage raises but not necessarily for increased employment. Hence, the drop in labour absorption in OECD countries from the 70s onwards was caused by a complex chain of influences rather than by one single factor (wages being the usual suspect).

The price effect column in table 13 indicates, that inflation in Latin America and in Africa for long periods was of a type that allowed consumer prices to run ahead of producer prices, and hence to wipe out the effects of output growth. The leakage due to price effects was much lower in the other regions. Looking at how the scope available for increasing employment and pay was divided *ex post* between real wage increases, employment growth and a changing share of wages in the economy, the decomposition shows that the East Asian economies split the proceeds of output growth equally between employment and wage increases, which also led to an increased wage share. Since the scope created by a modest output growth in Latin America had been more than wiped out by price changes, the reduced resource base was shared in a way that reduced real wages more than employment, insofar as real wages fell more than employment.

In Eastern and Southern Africa, an extraordinary combination of structural and policy factors contributed to producing some of the highest employment elasticities on record (4.72 in the 70s and 0.86 in the 80s). The African economies managed to achieve employment growth to the tune of 4.5% per year in the 70s and 3.6% in the 80s, at the same time as the real resources were stagnant or shrinking. This was made possible by maintaining a persistent fall in real wages of 3% to 4% per year. As a consequence, at the end of the two decades, the African manufacturing industries

were both overstaffed and underpaid. For many of them, severe financial restrictions and increased global competition led to drastic reductions in employment and production in the 90s, by some authors characterised as “the de-industrialisation of Africa” (Pieper, 2000).

Mazumdar also decomposed the growth rates of China, South East Asia and South Asia, and found that the 80s marked a change of the distribution pattern in China from wages to employment, and in South Asia from employment to wages. Whatever the reasons for these changes, they had deep consequences for international competitiveness, giving China an advantage in its efforts to conquer new export markets. Mazumdar did not include the transition economies in CEE and CIS, but evidence from those countries indicate that Russia and CIS followed the “African” pattern of maintaining employment levels while real wages fell precipitously, while on the other hand most CEE countries drastically reduced both employment and real wages to regain competitiveness (Nesporova, 1999). At the end of the 90s, many of the CEE countries had increased their competitiveness enough to challenge the Western European economies.

In DPRU Working Paper 02/63 Dipak Mazumdar and Dirk van Seventer have applied the decomposition approach to South African data. The results are summarised in Table 14.

Table 14: Decomposition of real wage growth in SA manufacturing

Period	Real wage growth	Output effect	Employment effect	Wage share effect	Price effect
1970s	2.6	4.4	2.4	-0.3	0.5
1980s	-0.4	1.0	0.3	-1.5	-1.1
1990-95	1.0	1.0	-1.2	-0.9	-1.1
1995-2000	3.9	0.6	-3.0	0.9	0.2
1990-2000	1.8	1.4	-1.5	-1.4	-1.1

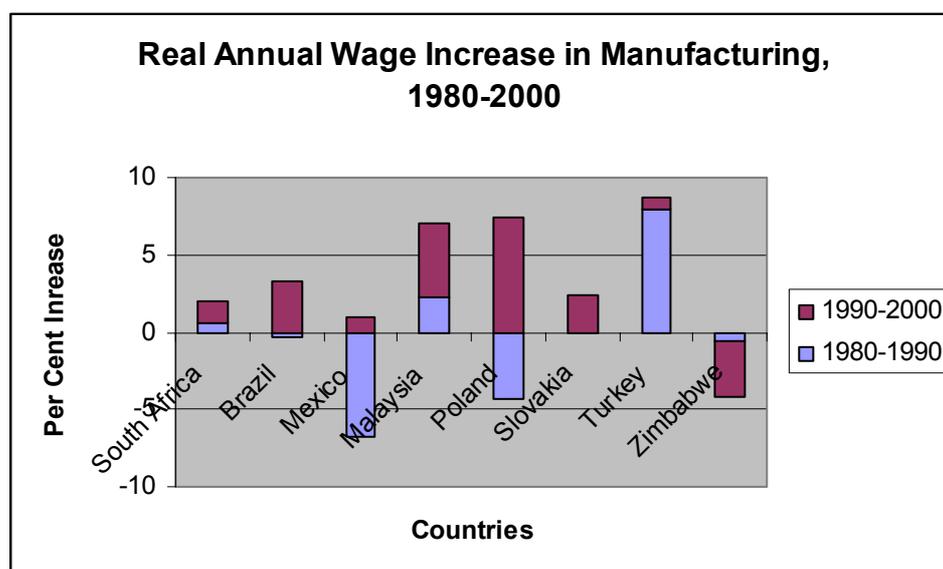
[Source: TIPS South Africa Standardised Industry Database and authors' own calculations]

The table shows that real output growth was about equally shared between wage increases and employment increases in the 70s. Stagnating growth in the 80s gave a small increase in employment through a corresponding fall in real wages. These figures indicate that the easing of restrictions on trade unions in the 70s and 80s did not lead to wage increases that were harmful to employment growth, since they did not claim a greater share of the growing wealth than the share of wages in total production costs. In the second half of the 90s, however, there was a dramatic shift, which entailed accelerating growth of real wages, with a corresponding fall in employment. Some of this shift can be explained by capital deepening, driven by a harder international competition, particularly in manufacturing. To what extent the higher pay increases of the later half of the 90s further dampened employment growth is a question that is more difficult to answer. And since this deviation from the pattern of earlier periods took place in the last five years of a thirty year observation period, it is not possible to judge whether it is a temporary deviation or a systematic shift.

A decomposition of sectoral growth rates showed that the non-tradable sector (utilities, construction and services) had maintained a more even balance in distributing the output gains between employment and wage increases through the

70s and 80s, while manufacturing was beginning to tilt towards increasing wages rather than employment. In the mining sector, rising gold prices occasionally spilled over into high wage increases. But in the 90s, the difference between tradable and non-tradable sectors had all but disappeared, and during the second half of the decade, wages were rising rapidly while employment fell in both the tradable and the non-tradable sectors. This has naturally raised questions as to whether the new political regime will support wage policies that will change the way the production cake is shared between capital and labour.

Figure 6: Real wage increases in manufacturing in the 80s and 90s, selected economies



[Source: ILO-KILM (2003)]

7.1. High-wage and low-wage strategies

The South African pattern of output-employment-wages development in the second half of the 90s is clearly different from those of other middle-income economies in that period. As mentioned above, it is different enough to raise questions whether this is a structural feature that will be sustained by government policy and the parties in the labour market, or if it is a temporary phenomenon, caused by expectations for a 'democracy dividend' after the change of government. The latter type of reactions occurred in other African countries at the time of independence, for instance in Tanzania and Zimbabwe, with big rises in minimum wages and falling employment as an immediate short term consequence. These consequences were mostly temporary and were soon overtaken by changes in prices and exchange rates.

Nicoli Natrass (2000) suggests that the paradigm shift is the result of a deliberate adoption of a government strategy which he characterises as High Productivity Now (HPN), based on the assumption that high wages will lead to high productivity by making low-productive, low-wage jobs uncompetitive. This type of wage policy was pursued rather successfully by the Scandinavian trade union movements in the 50s and 60s during a period of high growth and very low unemployment but had to be abandoned when the economic fundamentals changed in the mid-70s. The same

approach was adopted in Singapore in 1979, with the express intention to move the country from labour-intensive to high-tech lines of production. However, an economic slump occurred in export markets at the same time as the policy change was undertaken, which initially cast doubt over its usefulness. Singapore managed to salvage both its high-wage policy and its transition by a combination of very strong structural reforms acting on both demand and supply sides.

Box 3

Singapore's Central Provident Fund

The Central Provident Fund in Singapore was started by the British colonial government in the 50s along lines that were common in other colonies in Africa and Asia. It was based on compulsory contributions from both employees and employers and was meant to absolve the colonial government from any responsibility for supporting inhabitants incapacitated by old age or disability. After independence in 1965, however, the new PAP government raised the compulsory contributions to very high levels, peaking at a total of 50% with workers and employers sharing the costs equally. This arrangement raised the national savings rate of the city state to very high levels, facilitating investments that led to rapid industrial restructuring. Workers were originally allowed to withdraw their savings only on retirement, but in the 70s access became more flexible, including for housing and education purposes. The government's high-wage policy of the 1980s, aiming to eliminate low-wage labour-intensive production, was first compounded by high costs for the employers' contributions to the Fund. When a regional economic downturn made this process move so fast that unemployment levels rose, the government eased the transition by reducing the employers' rates of contribution and opening the Fund for the workers' use in re-education and training. The rates are currently 10% for employers and 20% for employees, and the Central Provident Fund is still an important vehicle both for financing industrial restructuring and for providing the workers with income security.

Sources: http://www.cpf.gov.sg/cpf_info/home.asp; <http://www.nandine.com/cpfja.htm>

Natras maintains that while the HPN may have worked for a while in economies with labour shortages, in a labour surplus economy like SA it will inevitably lead to increased unemployment and economic inequities. While there are 'soft' varieties of the HPN which try to alleviate target specific productivity problems, the South African government's approach has been hardened by pressure from the trade unions to use wage increases as an instrument of general pressure for rationalisation. Natras discusses the options that may have been open to SA in choosing between strategies and finds that the labour-intensive export alternative pursued by the Asian economies is no longer an option, since South Asian low-cost producers have stepped into the niches abandoned when the tiger economies moved up the value-added scale. Thus, the question is: what is SA going to do to provide jobs for all its people?

So far there is very little evidence in South Africa's economic performance of a permanent paradigm shift in the division of proceeds between capital and labour.



Woolard and Woolard (2004) have examined NHS data for formal sector earnings in different occupational categories and find that the narrowing of skills and racial differences that were characteristic of the 70s and 80s has not been continued during the period 1995-2003, and that the real wages of unskilled workers have actually declined since 1999. The pay raises of the mid-90s would thus not seem to herald a new era in South African wages policy. In fact, the more recent South African experience of widening pay differentials conforms to a pattern observed in both industrialised and emerging economies in the 90s, with stagnant or falling real wage levels for the lowest paid categories of workers. Like in other emerging economies, a hardening pressure from international competition will likely dampen any efforts to break out of that pattern.

7.2. Research priorities

South Africa is in dire need of more data and research to throw light on policies that influence the generation of productive employment. This does not only concern the role of wages that was the focus of this section, but the whole range of factors that influence the patterns of economic growth and the degree of labour absorption. For the advancement of such knowledge to influence policy-making, it is important that the parties of industry take part in the analysis. Any structural reforms that the Government wants to undertake will have greater changes of success if it is supported by the industrial partners. Even if no explicit agreement is possible, a common analytical platform will reduce the scope for conflict.

Almost all attention in this discussion in South Africa and elsewhere has been focused on manufacturing. This is understandable in view of the strategic role of this sector in technological innovation, exports and linkages to all other sectors. Manufacturing will remain an important sector for economic policy, even if it no longer has a lead role in employment creation. But it also necessary to examine the potential for productive employment generation in services and utilities. UNDP's Human Development Report for South Africa (2004b) suggests that South Africa has under-invested in the expansion of quality services and the maintenance of social service infrastructure. UNDP also suggests that the government should devote more attention to potential exports of services, such as tourism. International comparisons of public service capacity are notoriously difficult to make because of incompatible data, and it should be a priority for research to assess to what extent and in which lines of activity the public sector needs to expand to provide the necessary social and economic infrastructure. These studies should also take into account the research requirements mentioned in Section 6 on HIV/AIDS.

8. Employment protection and competitiveness

There is an old and never-ending debate about the effects on employment of institutional mechanisms to protect jobs and incomes of workers. Trade unions argue that legislation and collective agreements regulating advance notice, dismissals, temporary employment, severance pay, redeployment, retraining and redundancy benefits will raise productivity by providing a stable and well-motivated labour force. In some cases, union officials have even argued that legislation and other protecting those who are employed will actually lead to lower unemployment. Employers on the other hand argue that all these rules and benefits impose costs that will make industry less competitive internationally and may hence reduce employment. South Africa is no exception in this regard, with World Bank economists filling in on the side of the employers (Fallon, 1992; Lewis, 2002 and Black & Rankin, 1998).

There is a valid theoretical base for suspecting that regulations protecting the rights of those already employed could impinge on the opportunities of those who are unemployed or have not yet entered the labour force. The Lindbeck-Snower (2001) theory of how those who are already employed ('insiders') manage to block the entry of newcomers to the labour market or workers laid off in other establishments ('outsiders') is easy to verify in establishments with strong protective institutions, whether they are legislative or the results of collective bargaining. If the insiders press their advantage, they will exact a monopoly rent on the employer, and indirectly on the outsiders who will be deprived of job opportunities.

The impact of employment protection regulation depends entirely on how it is designed and managed. India and Brazil for instance have very detailed and stringent regulations concerning dismissals and restructuring, but they are observed in the breach in large parts of the economy. The impact of such practices is highly distorting, giving an advantage to those who do not follow the law. Public sector agencies and large enterprises have difficulties evading the regulations, while smaller private firms more easily find loopholes. In many developing countries there is also a tendency for the authorities to look the other way when the law is breached by industries that are exposed to fierce competition from abroad. In such industries, there are no monopoly rents to share among insiders on either employer or employee sides, and it is difficult to maintain job protection systems^v. We shall return to this trend further down in the context of globalisation.

A study has been made by OECD comparing its 19 members with regard to the strictness of employment protection legislation (OECD, 1999). An index was constructed based on a number of factors, such as advance notice, severance pay, definition of unfair dismissal, rules for collective dismissal, temporary and fixed-term work regulation. Countries with a high stringency of legislation were mostly found in southern and continental Europe, while among the least stringent cases were the US, Australia, UK, Japan and the Scandinavian countries.

The OECD study found that the strength of employment protection regulation had no significant effect on the overall level of unemployment, but it had very noticeable effects on the structure of employment and unemployment, insofar as stricter regulation led to a higher proportion of adult men with long tenure among the employed and to an increasing proportion of women and youth and cases of long-term duration among the unemployed. It probably also led to lower participation

rates, although this tended to be counterbalanced by an increase the proportion of self-employed among the economically active population. On the whole, protective legislation seemed to have an impact on who was to be unemployed rather than on the overall level of unemployment.

Less stringent regulation of employment security does not necessarily mean leaving the workers to the unfettered play of the market forces. ILO has studied how a balance is struck between the workers' needs of stability and the employers' needs of flexibility in some countries with relatively flexible regulation of employment protection, such as Denmark and the Netherlands. Auer and Cazes (2003) found that a combination of flexibility and security termed "flexicurity" could be found in those countries, based on certain general principles that satisfied the requirements of the social partners. The first principle was to reach a consensus about the macroeconomic policy that formed the base for employment generation. In the Netherlands and Ireland, this consensus developed into an institutionalised partnership to ensure that employment objectives remained at the forefront of public policy. The second principle was that labour market changes were managed by the local partners with the full support of public institutions that provided income security and support for mobility and retraining. In recent years, these functions have expanded the negotiating role of unions and employers at local level.

The policy mix that ILO calls "flexicurity" would not be possible without strong institutions that provide income security (e.g. unemployment insurance, mobility incentives) and assistance in finding and acquiring employable skills. The advantage with the *social insurance* approach to redundancy and restructuring is that it spreads the burden among many enterprises and over time, while the ad hoc approach used in most developing economies places the burden on those workers and enterprises that happen to be affected by the crisis, at a time when they are least capable of coping. An interesting departure from the latter was the public fund that was established by Singapore in the 70s to finance re-education and restructuring, at a time when Singapore was still an emerging economy. As a result of a very high rate of forced collective savings in this fund during the 70s, Singapore could successfully manage the transition crisis that hit its economy in the early 80s, as mentioned above. The transition in Eastern Europe and CIS countries had some help from the remnants of their social security systems, but in many of those countries the public finances quickly deteriorated to a point where large numbers of workers were thrown out into unemployment without any public support (Cazes and Nesporova, 2003).

Increasing globalisation of trade and financial transactions has raised questions regarding the effects of labour market institutions in general and trade unions in particular on international competitiveness. Governments in hard-pressed developing countries often see these institutions as a burden to the national economy and a drawback in competition with countries that suppress the labour movement. To test these types of hypotheses, the ILO studied trade union rights and trade performance in 135 countries. Kucera and Sarna (2004) used a trade gravity model to find out if the degree of Freedom of Association and Collective Bargaining (FACB) rights had any effects on the countries' ability to compete in export markets. Their findings indicate that stronger FACB and democratic rights are generally associated with higher total manufacturing exports. The exceptional export performance of China and other East Asian economies with weak trade union rights of course raises questions whether this conclusion also applies to labour-intensive exports. The answer seems to be that this case is indeed an exception – other countries have tried to promote exports by suppressing freedom of association and collective bargaining and have failed to reach that goal. It is possible that other social and cultural factors

than those included in the study might explain these differences, but for the world as a whole this study does not find any relationship – positive or negative – between trade union rights and labour-intensive manufacturing exports.

A comprehensive OECD study, which was occasioned by the export successes of the East Asian “tiger” economies in Western markets and presented to a meeting of labour and trade ministers in 1994, came to a similar conclusion (OECD, 1996). This study made a thorough examination of labour market regulation and its changes in both developed and developing countries, with analytical spotlights on the interrelationships of labour repression/protection and international competitiveness. In brief, no direct relationship was found between repressive labour policies and success in export markets or in attracting foreign investment. Countries with free bargaining and protective labour legislation have on the whole managed to expand their exports as well as those that suppress unions and fail to protect workers from bad working conditions. From the point of view of employment, however, it is important to note that both OECD members and emerging industrial countries in Asia and Latin America have managed to stay competitive by changing their product mix and technology by resorting to measures that reduce the number of unskilled workers.

While evidence thus supports the conclusion that strong labour market institutions in themselves do not constrain industrial competitiveness or the growth of exports, a distinction must be made between strong FACB institutions and trade union organisations on one hand and antagonistic industrial relations on the other.. Studies by the World Bank (Horton, Kanbur and Mazumdar, 1994) suggest that in cases where bad and disruptive industrial relations militate against employment creation, this may have been the result of deeper social and political divisions that influence employment *both* by making industrial relations more hostile and by worsening the investment climate^{vi}. In countries where there is a fair degree of consensus about the rules of the wage bargaining game, the above evidence shows that strong industrial relations institutions do not influence employment creation one way or the other.

Nevertheless, the international trends indicate that industrial relations systems all over the world are under increasing pressure and that more often than not, employment protection is at the centre of controversy. Trade union density figures have been falling for some time in most industrialised countries, as a result both of a reduced labour market presence of traditionally well-organised sectors like manufacturing and of a growing prevalence of individual rather than collective bargaining. Bargaining is increasingly carried out at level of the firm rather than at central or industrial level, a tendency which does not necessarily weaken the unions but inevitably widens the differences between negotiated outcomes. The pressure from international competition on individual firms is now leading to local bargaining which in some cases takes back some of the benefits that workers have won in negotiations at national or industry levels and even undercuts levels determined by law.

A study of negotiations for job protection in industrialised countries undertaken by ILO’s Labour Law and Labour Administration Department (Osaki, 1999) shows that although industrial relations systems differ widely between countries in their general philosophy as well as in the way they are managed by different actors, the universal pressure to maintain competitiveness is forcing them all to give more flexibility to the enterprise level. The pressure is not confined to export industries or import-

competing manufacturing firms but it also affects the tertiary sector, public utilities as well as private services. The changes have been most dramatic in the cases of UK and Australia, where the influence of the trade union movements has been drastically reduced. In France, where government has traditionally played a strong role in industrial relations, direct interventions to rescue jobs or to influence conditions like working hours have been frequent but this has not halted the decline of the union movement. In Ireland, and the Netherlands on the other hand, national consensus on employment policy has been sought by the social partners and is being applied with some success in local level bargaining.

In the US, very few collective agreements provide job guarantees or job security. A notable exception was the agreements of the United Autoworkers of America (UAW) with General Motors in 1996 and with the Big Three Automakers in 1999, which granted a certain degree of security and a moratorium on plant closures. Bargaining in the US has instead focused on reform of work practices to achieve high performance, as a means of making the enterprise more competitive. In Germany, the centralized bargaining pattern of the past was dramatically dissolved in the 90s through a series of enterprise-level “employment and competitiveness pacts” that effectively reduced the benefits achieved at national level in the interest of maintaining jobs. The participation of unions in Germany and elsewhere in Europe in lowering employment conditions under the pressure of competition has sometimes been called ‘concession bargaining’, the employer’s concession being a reduction of anticipated job losses. This problem has become acute with the access of Eastern European countries to EU. Firms in high-wage EU member countries are now holding both local governments and trade unions to ransom with the threat of moving production to low-wage Eastern European countries.

Even in Japan, with its tradition of life-long employment and low levels of unemployment, the harder climate of globalization and the erosion of the tradition of life-long employment, local unions have agreed to lower the level of employment benefits to maintain competitiveness.

In some cases, union movements have tried to win back some influence over job security by forming industry-level or national forums together with employers and governments to discuss employment policy or good conduct in industrial restructuring. An example is the Sectoral Chamber of the Automobile Industry in Brazil, which was created in the early 90s to deal with the problems of the industry in Sao Paulo. A similar example is the ‘pact for employment’ signed by the Italian unions, employers and government in 1996 that offered a forum where the parties could discuss problems of restructuring. But none of this can hide the fact that union movements all over the world are currently being challenged by a growing pressure on firms to remain competitive, and that legislation and collective agreements designed to protect employment are frequently being eroded. The systems that seem to have the greatest survival chances are those built on a combination of macro policy consensus at national level and strong negotiating machinery at the enterprise level.

South Africa has an elaborate institutional framework for protecting employment and labour standards which is partly built on modern concepts, partly on an old and rather dubious heritage of discretionary ministerial intervention. The different elements are not always coherent and give the industrial parties very demanding roles, both at macro and enterprise levels (Standing et al, 1996 Chapter 5). Although it has been criticised by employers for being rigid, its regulations are by no means unique and would not seem to be excessively complex or rigid compared to the legislative

systems of for instance India or Brazil. But to find out whether the system is an obstacle to employment generation, it is necessary to study how it works in practice and to weigh its regulations in comparison with other factors that attract or discourage investment in South Africa. An enquiry among a sample of 325 large enterprises in Johannesburg undertaken in 1999 for the World Bank by Chandra and Nganou (2001) showed a fairly consistent pattern among the enterprises to regard crime, theft, corruption and monetary policy (exchange rates and interest rates) as the most important factors that constrain increasing employment. Labour regulations were regarded as an important obstacle (in fourth place) only in manufacturing, but many enterprises also saw advantages with recent regulations.

Even though the regulations are not exceptionally rigid or complex, however, there are serious signs that the way they are managed poses big administrative problems to employers and delays and uncertainty to the workers. Paul Benjamin (2005) quotes a number of sources which complain of delays and hassle and estimates the number of dismissal cases submitted to the CCMA for arbitration as 100,000 per year, a clear indication of management problems. A system which clogs up in this way has difficulties ensuring that the potential for job creation is fully utilised. The international experience quoted above demonstrates that even a strong industrial relations system like the German must be flexibly managed if job opportunities are not to be lost. It shows that industrial relations and job protection systems must constantly be updated to withstand the global challenges of competition, technological change and emerging new modes of employment like different forms of outsourcing and subcontracting. The current South African system has its strengths in industries where both partners are strong and have established common modes of operation, but it is weak in many important sectors. Union density is between half and two-thirds in large mining and manufacturing enterprises but less than a quarter in non-government services. This means that the industrial relations machinery is weak in those industries where employment is growing fastest, such as private services and small enterprises in general.

The biggest weakness of the current system, however, may be that the threat of unemployment looms so large over the workers' side in any negotiation, that the outcome will more often favour protection rather than expansion. This bias has been reduced with the improvement of the unemployment insurance system that was undertaken in 2001, but the system does not yet provide a safety net that offers the unemployed the means to return to the labour markets through skills improvement and mobility incentives. It is necessary to build a social insurance system that offers workers a reasonable degree of *both* income security and occupational mobility (see Box 3 for the Singapore example). With such a safety net in place, it would be easier to streamline the entire system of labour regulation to make it more coherent and effective in protecting the interests of the social partners against the vagaries of rapid industrial restructuring.

8.1. Research priorities

It is useful to study the international experience in employment protection, not only with respect to the legal instruments but in particular to how they are managed by the State and the industrial parties. Recent developments in industrialised countries would be more relevant and provide a better guide for South African discussions than those in less developed countries. As to current practices in South Africa, the

labour dynamics study mentioned in Section 6 could help throw light on how the system is managed at the enterprise level.

Research should also be undertaken into alternative solutions to the problems of employment and income security. Social insurance systems are feasible even in a labour market with persistently high unemployment levels like the South African one, but the system will have to be designed to meet specific national requirements. It is important to give the social partners a role in designing and managing the system, which could further alleviate some of the present controversies in collective bargaining.

9. Concluding remarks

This review of different aspects of the labour market suggests that there are many lessons to be learned from international comparisons. South Africa's problems of economic structure and growth are similar to those of other middle-income countries, particularly in Latin America, where the formal economy fails to provide enough jobs for a growing labour force. Many of the factors that influence the growth of productive employment and wages are the same in South Africa as in Brazil or Mexico. South Africa has so far not grown an informal economy large enough to absorb a significant share of those excluded from the formal economy. In this regard, there are more similarities with the labour markets of the countries of East and Central European (CEE) and the way the informal economy is beginning to emerge in some of them. As regards the HIV/AIDS pandemic, some neighbouring African countries have a longer experience of its impact, although their data bases are mostly weaker than that of South Africa.

When it comes to inter-racial wage differences, however, South Africa remains in a category of its own. No other countries have racial wage differentials of a comparable magnitude, and the discrimination is so ingrained in social and economic structures that it is difficult to find examples of useful models for radically eliminating it. One reasonably successful model of positive ethnic discrimination is the New Economic Policy (NEP) of Malaysia, which over a quarter century had significant effects on the relative position of the majority Malay population through long term structural interventions on both supply side (education, urbanisation) and demand side (farm subsidies, government recruitment, corporate ownership). Since the low-income segments of the Malay population were concentrated in small-scale farming, agricultural subsidies were particularly effective in lifting their income levels relative to other population groups. But from a South African point of view the most useful material for comparative study of long-term inter-racial change is probably the United States, not only because the structural impact of policy measures are so well documented.

In spite of the tensions caused by widely different levels of pay, industrial relations in South Africa compare reasonably well in an international comparison. Trade unions are stronger than in many other emerging economies and have on the whole managed the transition in the interest of their members, apparently without hampering the overall growth of employment. Employment growth has been slow mainly because of a slow growth of demand and because of technology changes driven by international competition.

A more serious potential threat than pay differentials, however, is posed by the differences in living standards between those who have jobs and those who don't. To avoid serious political recoil from the unemployed, government must find ways of making economic growth absorb more workers in productive employment. This may call for structural changes that will not only create new jobs but will make some existing jobs redundant. To avoid placing the brunt of the burden of adjustment on vulnerable groups, it is necessary to develop a social insurance system that *both* protects the incomes of workers and facilitates occupational and geographic mobility.

It is tempting to suggest that some of the most successful employment-generating strategies of other countries could be applied in South Africa. Particularly the South

East Asian growth strategies based on labour-intensive exports attracted interest among economists in the early 90s as a possible solution to unemployment problems in other parts of the world. Even Mexico's achievements in this field could seem attractive, particularly since the two countries have many parallels in economic and social structure. With the benefit of hindsight, however, it is doubtful if the labour-intensive manufacturing approach was ever a realistic option for South Africa, not least since that window of opportunity in the world markets had more or less closed by the time South Africa got its first democratic government. Competing for Western markets with Chinese manufacturing industries is not easy today for those countries that were late to jump on the band wagon of labour-intensive exports.

Relying on domestic demand, some Asian and Latin American countries have found investing in agricultural infrastructure and small-scale industry an effective option for maximising the creation of productive employment in relation to the money invested. While these options should not be ruled out in South Africa, the scope may be constrained by demand to an extent that limits their effectiveness for making a significant dent in unemployment. UNDP has suggested a more rapid development of the service sector, as a way to stimulate broad-based economic and social development. There is an export potential in private services like tourism and outsourcing, and there are still unmet domestic needs for social services. The service sector should play an important role in a long term strategy for growth and employment generation, but its ability to pull the other sectors along is still limited.

There is no 'silver bullet' that will remove such a vast and complex problem as mass unemployment in South Africa. A strategy for rapid and sustainable employment generation must contain strong and inter-linked measures on both the demand and supply sides of the market, plus systematic efforts to improve the market mechanisms for making demand and supply meet. The socio-economic development strategies of the past decade have tried to cover these aspects, and success has been noted particularly in improving the quality of labour supply. But demand growth is not yet strong enough in critical sectors and occupations to increase the rate of employment growth and labour market participation. It is time to review the experience of the past decade in order to work out stronger and more comprehensive strategies.

Our studies suggest the following priorities for improving data and deepening labour market research for developing such strategies:

- It is necessary to improve the data base and analysis regarding migration, both regarding its directions and its driving forces. Such studies are important not only for demographic purposes but for physical and economic planning as well as for monitoring the social support systems in different communities.
- Students, employers and Government need to have a better knowledge base for their choices as regards which skills can be acquired in different educational streams and which skills are important for human as well as economic development.
- A new Labour Market Dynamics study along the lines of the ILO study of 1996 would be useful both to employers and policy makers. The study should not only examine the interaction of demand and supply at establishment level but also take into account the role of labour market institutions, like industrial relations and the regulatory system.

- Adaptive research on improving productivity and earnings in specific trades of the informal economy, such as manufacturing, repair, construction and transport, could give ideas of which services the government could provide informal sector operators to make them more effective.
- Longitudinal or life-cycle studies of work and incomes for a panel of workers in the informal economy would tell more about its potential for sustainable livelihoods than one-shot cross-sectional data.
- A framework for human resources policies must be developed for those sectors and occupations which are particularly vulnerable to HIV/AIDS. It is particularly important to review the planning and personnel management systems in the public service. For vulnerable ministries, the Health Ministry in particular, recommendations should be elaborated for reform of key provisions relating to recruitment, training, establishments, health care, pensions and other entitlements.
- Occupational and educational wage differentials for gender and racial groupings should be examined with the use of more detailed occupational classifications than the one-digit ISCO level. The most accurate occupational data could be drawn from establishment surveys, but it is also possible to use the OHS surveys.
- Government will have to elaborate a policy for economic growth that can significantly reduce unemployment. For such a framework to be successful, the analytical work should be undertaken in collaboration with stakeholders, in particular the industrial parties. Joint research into the forces that generate or impede employment creation would also contribute to improving industrial relations.
- To an increasing extent, employment and income security should be built on a nation-wide social insurance system rather than on the ability of individual enterprises and workers to bear the burden of restructuring. Studies should be undertaken to design a system incorporating unemployment insurance, retraining and mobility entitlements, which can gradually be expanded to become a modern safety net for South Africa's labour force.



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Endnotes

- i Lam's analysis of earnings differentials will be discussed further on in this section.
- ii <http://www.worldbank.org/afr/teia/briefs.htm>
- iii Occupational factors may have interfered with the regression. It is also important to note that the labour market of this township has a limited range of occupations, which makes it difficult to get adequate data for studying the tertiary level.
- iv In line with established ILO practice we define the informal economy as comprising informal employment (without secure contracts, worker benefits or social protection) of two kinds. The first is informal employment in informal enterprises (small unregistered or unincorporated enterprises) including employers, employees, own account operators and unpaid family workers in informal enterprises. The second is informal employment outside informal enterprises (for formal enterprises, for households or with no fixed employer), including: domestic workers, casual or day labourers, temporary or part-time workers, industrial outworkers (including home based workers) and unregistered or undeclared workers.
- v Even before the onslaught of globalization, it was more difficult for unions to capture any 'monopoly rents' in industries that were exposed to hard competition on the domestic market, like construction, saw mills, textile firms and farms. As shown for instance in Kenya by House and Rempel (1976), such rents were easier to collect for both workers and employers in protected industries like public utilities, banks and government services.
- vi In South Africa, this hypothesis is supported for instance by Abdi and Edwards (2002), whose studies suggest that the number of days lost in strikes in South Africa is *negatively* correlated with wage increases for the unskilled, suggesting that strikes were a reaction to deteriorating conditions rather than an exogenous leading factor.