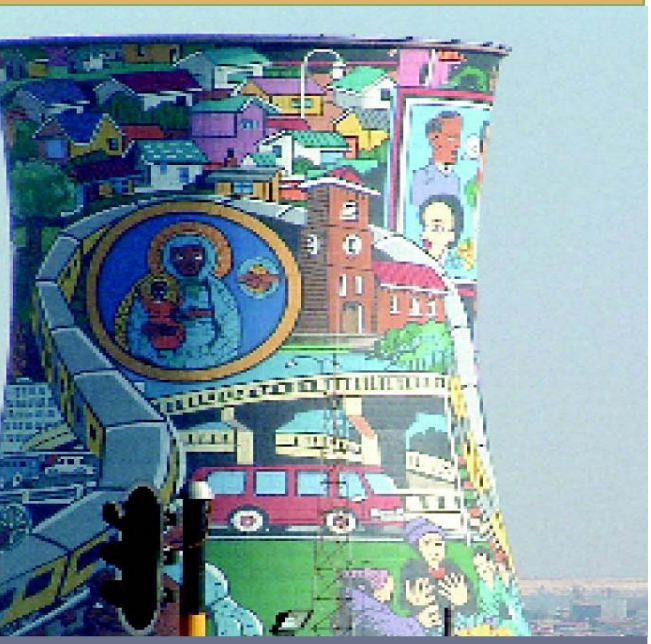



Review of Labour Markets in South Africa



Wage Trends and Dynamics in South Africa

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WAGE TRENDS AND DYNAMICS IN SOUTH AFRICA

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1. Introduction

Wage formation is a highly sensitive affair. It lies at the heart of a power play between workers and employers, who are always jockeying for position. Wages play an important role in the broader economy from both efficiency and equity perspectives. As part of a broader labour market review, this paper considers the state of knowledge on wage determination in South Africa (SA). It asks the following questions:

Is wage setting appropriate for SA's development needs? Are wages determined in alignment with employment and growth needs to achieve full employment? Do they underpin incomes (for labour replacement)? Are they responsive to industrial competitiveness requirements?

Are wages set within a competitive framework? What constrains competition in the labour market? How important is racial and gender discrimination? What impact does high skill wage increases have on economic growth? What impact would competition have?

What is the role of institutions such as unions, bargaining councils and minimum wages on efficiency and equity?

Figure 1 outlines factors that can impact on wage determination. This starts from 'supply-side factors' such as access to education, networks, transport or workers general health. The demand for labour, and therefore wage levels, can be affected by industrial structure, general growth conditions and the behaviour of firms in their human resources practices. These supply and demand conditions are mediated by market institutions providing bargaining, regulation, networks, and information.

Some flexibility to market conditions is often sought. However, flexibility is a term that is often misused. Most commonly, it refers to contract flexibility – or the ability to hire and fire. This should enable firms to adjust to changing market conditions. But flexibility or rigidity could also refer to entrenched non-competing labour market segments. Patterns of wage determination may be segmented by occupation, industry, geographical area, gender or race. These can be important sources of inflexibility and have serious cost and efficiency implications.

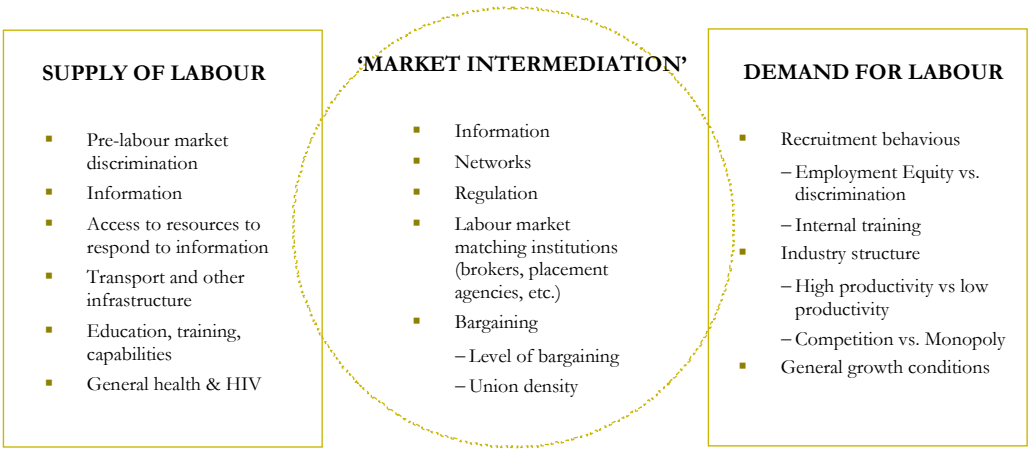
Makgetla (2004) begins to identify broad segments of the SA labour market that emerged from the Apartheid system, modified to include:

- The highly skilled top end of the formal sector, predominantly white male professionals and managers;
- Less skilled black workers at the lower end of the formal sector;
- Public sector workers – health, education and security;
- Segments defined by colonial labour relations, consisting of mining, domestic and agricultural workers and unskilled workers in the public sector;
- Informal and agricultural workers in the former homelands; and
- Unpaid production and reproductive workers consisting mostly of women and children.

These segments would need further refinement so as to begin to attach some weight to the extent to which movement has now been enabled between them or to identify where labour mobility could be enhanced.

This paper is structured as follows: section 2 reviews general wage trends and the distribution of wages, while section 3 considers explanations for wage trends attributed to economic structure. Section 4 reviews the impact of unions and minimum wages on overall wages and equity, while section 5 looks at the evidence of racial and gender discrimination. Section 6 investigates the effect of workers' spatial mobility on local labour markets and therefore on wage levels, while section 7 provides some concluding remarks.

Figure 1: Factors impacting on wage determination



2. Overview of wage trends

2.1. General wage trends

Wage trends differed dramatically over the 1970s, 1980s and 1990s, as would be expected over a period of structural change, greatly varying rates of economic growth and political change.

The distribution of value-added between wages and employment growth will greatly impact on efficiency and equity outcomes. In the 1970s, there was rapid annual growth in real wages in mining (10.8%), manufacturing (2.5%) and agriculture (2.6%). This exceptional growth in wages trailed behind that in real value added in agriculture and manufacturing. In services, real wages were relatively stagnant (0.2% per annum), despite rapid growth in value-added by about 3% per annum (Mazumdar and Van Seventer, 2002). (see Table 1). Mazumdar and Van Seventer (2002:17) find that the "tradable sector divided the increase in output almost equally between real wage growth and employment increase". Mining in particular benefited from output price increases, enabling higher wages in a context of stagnant output and slow employment growth. In contrast, expansions of output in the services sector contributed mainly to employment growth and not to wage increases.

The experience was very different in the 1980s. As seen in Table 1, real wage growth in the 1980s was generally very low, and mostly trailed growth in value added.

Table 1: Real growth in wages and value added, 1970-2000 (%)

	Avg annual growth in real wages			Avg annual growth in real value added		
	1970s	**1980s**	**1990s**	**1970s**	**1980s**	**1990s**
'Traded'	4.8	0.1	2.3	2.7	1.0	0.9
Mining	10.8	0.6	4.8	-0.6	-0.6	-0.4
Manufacturing	2.6	-0.4	1.8	4.5	1.1	1.5
Light	2.0	-0.7	2.4	5.3	1.6	0.4
Heavy	3.7	0.8	2.1	4.0	1.6	2.1
Tech mfg	1.8	-1.3	1.1	4.5	0.1	1.6
'Non-traded'	0.2	0.5	4.2	3.1	1.5	3.6

[Source: Prepared from Mazumdar and Van Seventer (2002)]

Notes: 'Traded' includes agriculture, mining and manufacturing. 'Non-traded' includes all services. This data is sourced from the TIPS Easydata, which in turn is sourced from Quantec Research.

According to Mazumdar and Van Seventer 2002), the 1990s were marked by a re-emergence of wage growth, generally outstripping that in value added. The divergence was much more marked for mining and light industry, than it was for services sectors. This was the case in both traded and non-traded sectors, although is still more marked for the former. This means the fruits of any output growth would have favoured wages over employment. The context is one of fairly slow growth in value added over the 1990s, so rapid employment creation would not be expected. Real wage growth would need explanation in this context.

Mazumdar and Van Seventer (2002) put forward possible explanations for such wage growth:

- Increasing capital intensity;
- Rising skill intensity;
- Efficiency wage effects where Government programmes to promote training have been effective. Labour legislation that raises the cost of dismissals may incentivise employers to pay more to retain better workers, and gain from efficiency considerations;[4] and
- Trade union strength, contract inflexibility and government regulation.

Mazumdar and Van Seventer's (2002) findings for the 1990s may be the case for mining, manufacturing and agriculture, but not for the economy as a whole. Those sectors did shed large numbers of low skill workers and there is evidence of rising skill intensity, especially in traded activities. However, it does not appear to be the case in services sectors, which dominate the economy. Moreover, Mazumdar and Van Seventer (2002) source their 1990s employment data mostly from the Statistics SA Survey of Employment and Earnings (SEE). These statistics generally show falling employment through the 1990s in most sectors, as compared to Statistics SA's October Household Survey (OHS) and Labour Force Survey (LFS), which show rising employment in a number of sectors, since 1997 at least. A part of the problem relates to the weak inclusion of services employment in the SEE data. The SEE data also tends to represent higher average wages than the LFS, perhaps as it does not include non-VAT firms with turnover of less than R 200 000. So their findings may overestimate wage growth and employment stagnation (see Altman *et al*, 2005). Moreover, Altman (2004) shows that there has been little change in the overall cross-economy distribution of skills if the OHS and LFS are used. This may explain the divergence of these findings from those presented below in section 2.2, which primarily reports on studies making use of household data.

2.2. Distribution of wages

It is well known that the SA economy is characterised by extreme unemployment amongst low skill workers, and a shortage of skilled workers and professionals. In such a context, one would expect to find a widening gap in earnings between high and low skill workers. This would involve falling real wages amongst low skill workers and rising earning for higher skill labour. If this were not found, some explanation would need to be identified.

Research based on data to the mid-1990s often shows the opposite trend: rising wages for low skill African workers and relatively stagnant wages for higher skill workers (see Lewis, 2001; Fallon, 1992 and Hofmeyer, 1990). This is shown in Table 2, Table 3 and Table 4. A comparison by race was, at that time, used as a proxy for skill. Wage increases for low skill black workers were generally understood to be a correction, after years of exploitation. Some authors, such as Fallon (1992), expressed concern that these increases, however humane, would have a negative impact on competitiveness and employment.

Considerable effort has been applied in the SA labour market literature to explain these phenomena, generally focusing on wage premia associated with rising unionisation. It has alternatively been explained as the result of growing capital

intensity and job losses amongst low wage workers. Overall there are some surprising trends over the period 1970 to 1990. Pay equity, improved considerably from the 1970s. The gap in wages paid to workers of different races pegged at the same grade narrowed dramatically (Table 4). However, the racial gap in average earnings did not change very much, probably explained by a continued crowding of African workers in low paying jobs (Table 3).

Despite wage increases for low skill workers, absolute earnings are still quite low relative to living costs. Valodia (2005) shows that 28.5% of workers earned less than R 1 000 per month in 2004, while 64.7% earned less than R 2 500 per month. Great inequality persists. McGrath (1990) found that wage differentials by race continued to be significant, even after standardising for relevant earnings-related characteristics. These are consistent with studies by Fallon, Hofmeyer (1990) and Moll (1998). Table 11 shows that skilled African male workers earned half of their white counterparts in 2002.

Table 2: Real growth of wages of whites and Africans by sector, 1945-1990 (% growth per annum)

Sector	Race	1945-60	1960-72	1972-75	1975-80	1980-85	1985-90
Manufacturing	Whites	3.05	3.35	0.92	1.16	0.08	-0.80
	Africans	0.44	2.57	7.57	3.62	1.59	1.21
Construction	Whites	1.89	4.18	-1.63	1.42	-0.56	-2.68
	Africans	0.07	3.38	6.07	-0.38	2.16	-2.67
Mining*	Whites	2.35	2.48	4.44	-1.59	0.36	
	Africans	0.31	1.32	29.59	5.44	3.12	
Formal sector	Whites			0.83	-0.79	1.79	
	Africans			10.47	3.29	2.88	
Non-primary sectors	Whites				-0.74	1.22	-0.28
	Africans				2.85	2.28	3.12

[Source: Woolard & Woolard (2005), quoted from Hofmeyr (1999)]

** The 1980-1985 period is replaced by 1980-1984 for mining as no racially disaggregated data are available after 1984.*

Table 3: African wages relative to white wages (expressed as a % of white wages), by sector, 1960-1990

Year	Mining*	Manufacturing	Construction
1960	6%	19%	18%
1970	5%	17%	15%
1980	17%	23%	19%
1985	19%	25%	21%
1990	n.a	29%	22%

[Source: Woolard & Woolard (2005), adapted from Fallon (1992)]

** The Chamber of Mines has not collected statistics by race since 1984.*

Table 4: Relative wage levels by race for similar gender and job grade (% of white levels)

Year	White	Coloured	Indian	African
1976	100%	62.2%	67.0%	57.1%
1985	100%	78.8%	87.3%	78.2%
1989	100%	79.9%	89.4%	84.7%

[Source: Woolard & Woolard (2005), quoted from McGrath (1990)]

Cichello, Fields & Leibbrandt (2003) compares 1993 and 1998 KIDS panel data in KwaZulu Natal. Using panel data, they compare how workers fared over this period, based on their starting point in 1993 – whether they were in the formal sector, informal sector or unemployed. Then they compare findings from the same data if used cross-sectionally only. This is a useful comparison, as most researchers use the national household data cross-sectionally, rather than longitudinally. The panel data tells us what happened to specific groups of individuals, while the cross-sectional data helps us to understand what happened 'on average'.

They come to different results when using the data as a panel or cross-sectionally, as shown in Figure 2 and Figure 3. Analysing the KIDS data cross-sectionally shows rising wages for formal sector workers, albeit for a smaller number of workers: they find that the formal sector fell from 36% of the local labour force to 33%, while the 'informal sector' expanded from 19% to 24%. Table 5 presents their findings on the change in earnings by quartile and by work status. The table shows how formal sector workers fared best, with the fastest growth in wages especially amongst those that started in the higher income quartiles. Informal sector workers also experienced increases in earnings.

Figure 2: Change in earnings 1993-1999 (treating data cross-sectionally)

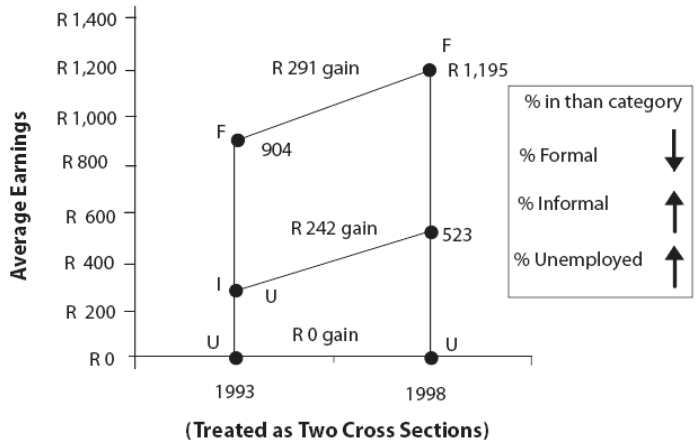
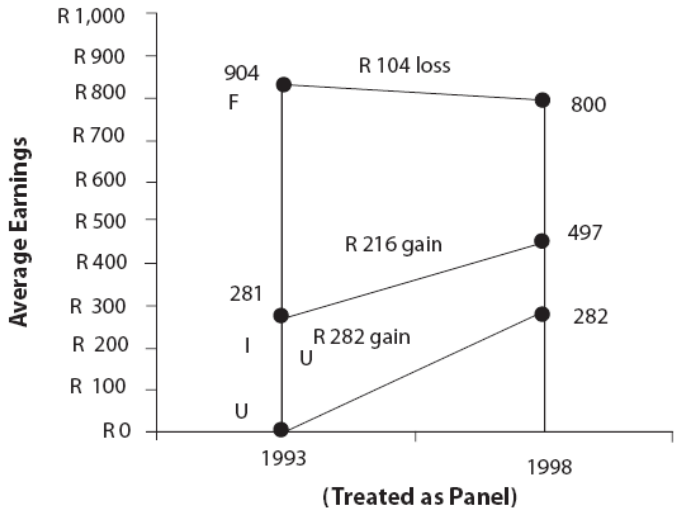


Figure 3: Change in earnings 1993-1999 (treating data as a panel)



[Source: Cichello, et al (2002)]

Notes: This compares findings using panel vs. cross-sectional analysis of KIDS data in KwaZulu-Natal. It compares earnings for people that started out in 1993 in the formal sector, informal sector or unemployed, with what they were earning in 1999.

Table 5: Sector earnings comparisons, 1993 & 1998

	1993		1998		1993 to 1998	
	Earnings	**s.e**	**Earnings**	**s.e**	**Change in ave earnings**	**% increase**
Formal sector						
Average	904.2	86.9	1,194.9	127.8	290.7	32%
25th percentile	415.4	43.2	460.4	49.2	45.0	11%
50th percentile	741.7	34.3	969.3	48.7	227.6	31%
75th percentile	1,218.7	69.7	1,658.3	101.4	439.6	36%
Informal sector						
Average	281.0	61.6	523.0	64.2	242.0	86%
25th percentile	57.0	8.8	113.5	16.0	56.5	99%
50th percentile	165.0	24.5	290.8	27.5	125.8	76%
75th percentile	300.0	33.2	567.4	48.0	267.4	89%

[Source: Cichello et al (2002)]

Note: This uses KIDS data cross-sectionally.

Table 6: Work status transition matrix

	Formal sector in 1998	**Informal sector in 1998**	**Not employed in 1998**	**Total (Column percent)**
Formal sector in 1993	191 58%	59 18%	77 24%	327 36%
Informal sector in 1993	30 17%	72 42%	70 41%	172 19%
Not employed in 1993	81 19%	85 21%	249 60%	415 45%
Total	365 33%	237 24%	418 43%	915 100%

[Source: Cichello et al (2002)]

Notes: This table shows the # and % in 1998 work status conditional on 1993 work status.

When using the panel data, they found that workers who started in the formal sector in 1993 experienced a fall in earnings by -2.6%. Workers who were initially in the informal sector experienced a rise in earnings by 13.2%. It is worth keeping in mind that formal sector workers earned an average R 904 monthly, while informal workers earned R 281 per month. The shift in earning was in part influenced by movement between employment states, whether formal, informal or unemployed, as seen in Table 6. Indeed, Cichello *et al (*2002) found that the initial employment status and the transition between employment statuses had a far greater impact on earnings changes than did other demographic characteristics such as gender, education, or geographic location. Of course, initial status is impacted greatly by demographic characteristics.

Table 7 shows how earnings changed depending on the direction of movement between employment statuses over this period. Although formal sector workers experienced declines in earnings, it is clear that working in the formal sector was the

most beneficial work status. Those that made the transition from informal to formal work experienced dramatic improvements in their earnings.

Hence, the cross-sectional data tells us that formal sector workers were better off in 1998 than they would have been in 1993. However, the panel data tells us that people working in the formal sector in 1993 were generally worse off by 1998. The panel data therefore tells us more about vulnerability, volatility and labour market risk.

The dramatically different results obtained applying panel versus cross sectional analysis has some important implications for research and analysis. It firstly points to the need to strengthen the availability of longitudinal household and labour data. It secondly draws one to see the importance of expanding the base of analytical research that draws these comparisons and makes deeper use of the available data.

Table 7: Mean earnings change by 1993 and 1998 work status (standard error)

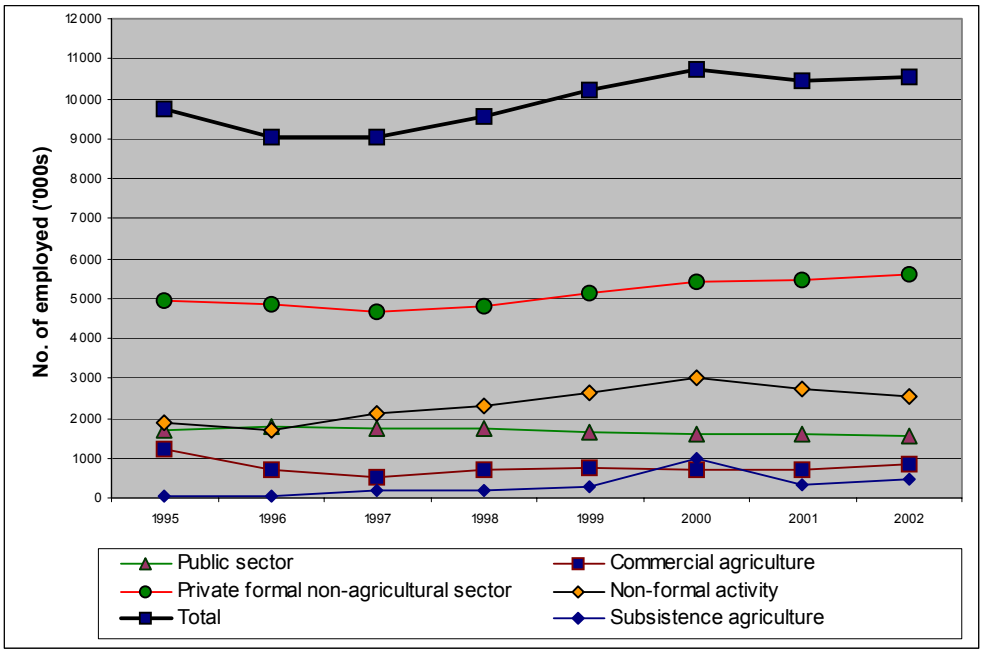
	Formal sector in 1998	Informal sector in 1998	Not employed in 1998
Formal sector in 1998	R 207 (83)	-R 145 (96)	-R 818 (111)
Informal sector in 1993	R 839 (169)	R 343 (182)	-R 182 (29)
Not employed in 1993	R 1 278 (137)	R 255 (29)	R 0 (-)

[Source: Cichello et al (2002)]

There are a number of interpretations, not all of which are reflected by Cichello *et al* (2003). They do account for the possibility that expanding opportunities due to loosening regulations and economic growth may have stimulated greater possibilities for informal businesses. On the other hand, as their definition of informal work includes peripheral workers in the formal sector, rising earnings might be attributed to the expansion of non-traditional forms of work and contracting out. The fall in income from formal to informal is not always as great as one would imagine. They interpret this to possibly indicate that some workers do gain useful experience in the formal sector that they apply to informal businesses. Alternatively, it might indicate that wages fell for workers that shift from large employer to casualised subcontractor.

The period of analysis matters a great deal to an understanding of wage trends. In particular, there were dramatic job losses in resource based industries in the 1980s, and apparent skill intensification in agriculture and mining, as most job losses were in lower skill categories. These jobs losses continued until the mid-1990s, as shown in Figure 4 (Altman 2004).

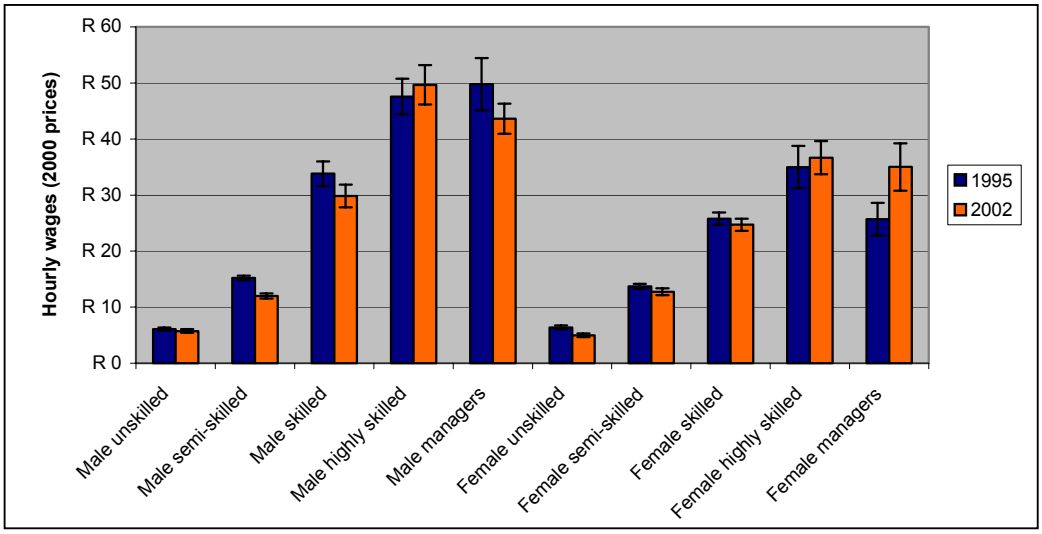
Figure 4: Employment in formal and non-formal sectors



[Source: calculated from electronic data made available by Stats SA, from the OHS (1994-1999) and the LFS (Sept. 2000-2003)]

Notes: These figures exclude subsistence agriculture unless specifically indicated. These figures are adjusted, as explained in Altman and Woolard (2005).

Figure 5: Wage trends by skill level in the formal sector (2000 prices)



[Source: Altman & Woolard (2005), calculated from Stats SA, OHS & LFS]

Note: The error bars are for 95% confidence intervals.

There is evidence that wage increases for low skill workers in the formal sector turned in the mid-1990s. Drawing from cross-sectional KIDS data, Cichello *et al* (2003) show

that the top 25% of formal wage earners experienced an average increase of 36% between 1993 and 1998, compared to 11% for the bottom 25% (see Table 5).

Woolard and Woolard (2005) analyse real wage trends as available from the OHS and LFS between 1995 and 2003, by five skill categories[ii]. The main findings include:

- The narrowing wage gap found in the (1980s) reversed from at least the mid-1990s. Instead, relative wages widened. Figure 5 shows that this was particularly due to:
  - falling real wages of low skill African workers;
  - stagnant semi-skilled, skilled and high skilled (female) workers; and
  - rising earnings amongst high skill male workers and managers (with tertiary qualifications).
- A substantial wage gap between small and large firms, of between 10% and 40% depending on skill level. The fall in wages of African low-skill workers was mainly found in small private sector firms, probably the result of the growing services economy and contracting out.
- In some categories, women made progress relative to men. For example, semi-skilled female workers wages rose relative to their male counterparts, possibly explained by growing feminisation at this level, especially in the services economy.
- The racial wage gap narrowed amongst managers, which might be explained by the drive toward employment equity.
- The wage gap between white and black workers widened in some cases for high skilled, skilled, and semi-skilled workers. Table 8 presents a summary of findings, comparing African workers' wages to white male workers with the same skill level. Of course, there are few white workers at the lower skill level. It is worth noting that the wage gap between African, Coloured and Asian workers is still very wide. For example, Coloured semi-skilled male workers earned 40% more than their African counterparts in 2003 (Woolard & Woolard 2005). Highly skilled African female workers earned 15% less than their Coloured counterparts. This could be explained by a number of factors such as occupational crowding of black workers into lower paying sectors and occupations
- Despite having contracted, the public sector has played a particular role in underpinning equity in the labour market, as a matter of explicit Government policy. The main result is that low-skill workers earn relatively more in the public sector, the race gap in pay is narrower, and that African graduates and professionals tend to earn more than they do in the private sector (Woolard 2002).

Table 8: African workers' wages as % of white male workers at same skill level, 1995 & 2003

	African males		African females	
	1995	**2003**	**1995**	**2003**
Managers (with tertiary qualifications	59	75	73	96
Managers (without tertiary qualifications)	37	48	51	88
Highly skilled	59	63	82	88
Skilled	58	57	82	84
Low skilled	38	35	51	36
Unskilled	57	29		

[Source: Adapted from Woolard & Woolard (2005)]

The wage/employment trade off is a critical component in understanding SA's development path. A number of factors stymie our ability to effectively assess these relationships. First and foremost is the difficulty in drawing remuneration and employment time series in the 1990s.

3. Economic structure

3.1. Private demand

Labour demand can have an important impact on wages. This is derived from two main inter-related phenomena:

- The sector distribution of the economy, particularly in relation to the skill intensity and labour intensity in growth industries. For example, higher productivity industries (more capital intensive) will generally pay higher wages for the same labour. A cleaner will earn more in the automotive sector than in the clothing industry.
- Competitive conditions in those industries. Wages will be influenced by whether dominant industries are inward or outward oriented. Inward oriented industries may pay higher wages than the same industry that is outward oriented, as global competition can bid wages down. In the longer run, trade could have the effect of raising average wages as a result of productivity and demand growth. Changing regulatory frameworks, such as those that increase market contestability or reduce mark-ups could boost demand, potentially having the impact of rising wages if the availability of labour is constrained. Intensified competition could encourage firms to change work organisation and technology – also shifting the type and quantity of labour demand. Through this process there may be labour displacement, or replacement by workers willing to take lower pay.

The employment debate is sometimes polarised between the need to promote exports versus a more domestic orientation. Scepticism in respect of potential job creation through exports particularly arises due to their growing capital intensity, at least in respect of manufacturing. Exports are an important contributor to employment in SA. Van Seventer (2005) shows that 36% of total formal employment is generated by foreign demand, through direct and indirect impacts. The remaining employment is derived from Government demand (19%) and the domestic circulation of goods and services (45%).

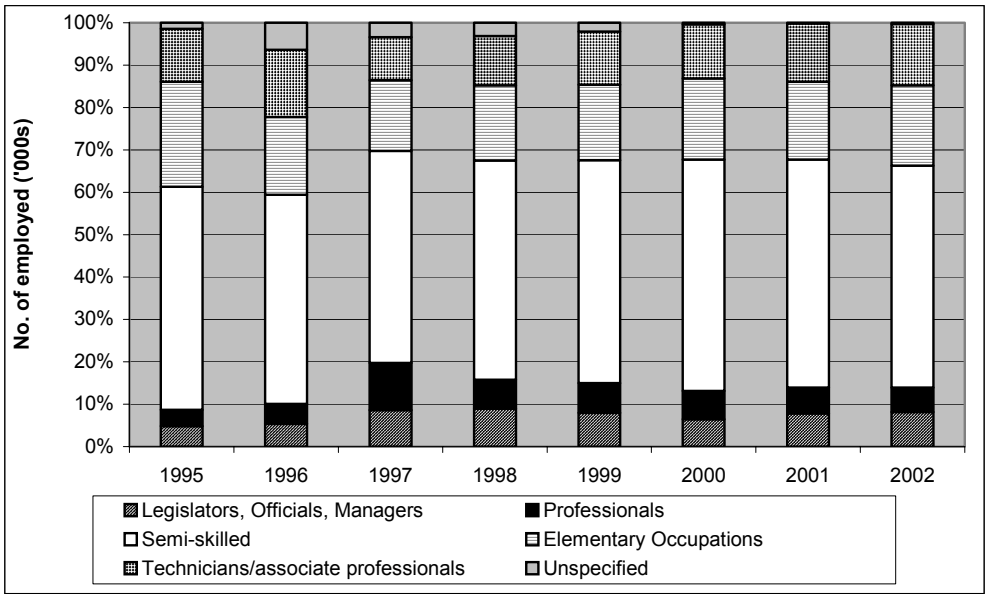
Employment in the traditional resource-based industries, namely mining and agriculture has been shrinking since the 1980s. There has not been sufficient uptake in other sectors, whether formal or non-formal. This has resulted in an observed skills and capital intensification in the SA economy. The main growth sectors have been ones that are energy and capital using (Altman, 2001 and 2001a; Bhorat & Hodge, 1999; Bhorat & Cassim, 2004; Edwards, 2001 and Whiteford & Van Seventer, 2000). Integration into the global economy has been blamed for job losses. This is sometimes attributed to rising imports. Edwards (2001) and Wakeford (2004) show that the main source of job losses in manufacturing are due to technology and productivity improvements. Slow structural shifts have also been explained by underlying economic bias due to minerals economy characteristics[iii].

There is little doubt that there has been capital intensification in mining, agriculture and manufacturing over the 1980s and 1990s. However, as shown in Figure 6, the *aggregate* picture shows a fairly stable proportion of low skill to high skill workers

(Altman, 2004). This can be explained by the inclusion of services when looking at the economy as a whole.

The largest and fastest growing segments of the SA economy are now found in the services sector – from finance and business to community services (Altman, 2004 and 2004a).

Figure 6: Formal employment by skill level ('000s)



[Source: Altman (2004), calculated from Stats SA, OHS (1995-1999) and Sept. LFS (2000-2002)]

3.2. The public sector

The public sector accounts for about 18% of formal employment in SA. Despite having contracted over the 1990s, the public sector has played a particular role in underpinning equity in the labour market. These have been the result of explicit policy decisions made as a result of the Presidential Labour Market Commission in 1996. The intention was that the state should catalyse and encourage the "progress of employment equity by its own performance" (Presidential Commission 1996). The main effects of public sector wage policy have included:

- The public sector has played an important role in raising low skill wages.
- The wage gap between high and low skill occupations is wider in the private sector. Low skill wages are relatively higher in the public sector (than the private sector) and high skill wages are relatively lower (Woolard, 2002).
- Racial disparities in wages for workers at the same skill level are very low in the public sector, and certainly much less than in the private sector where professional earnings vary considerably by race.
- Higher skill occupations in the private sector are still dominated by white workers, as compared to the public sector which has been an important employer of black professionals. For example, the proportion of senior black

managers in the public service rose from 37% to 55% between 1995 and 2001. Over this period there has been a growth in overall employment at managerial levels, absorbing both white and black workers. The growth has simply favoured black entrants, but not to the exclusion of white workers (Thompson & Woolard, 2002). The public service has played an important role as first employer for black graduates; indeed, Moleke (2005) found that 70% of new black graduates obtained their first job in the public sector. However, this growth in employment flattened in 2001 and further analysis would be required to see whether growth resumed in subsequent years.

- Woolard (2002) shows that although high skill wages are generally lower in the public sector than in the private sector, African professionals were nevertheless paid more in this sector than in the private sector. She found that "the average African public servant" was earning 32% more than "his equally experienced, equally qualified counterpart in the private sector" (Woolard, 2002: 13). Women in the public sector earned 21% more than their counterparts in the private sector. African women in the public sector earned 36% more (Woolard, 2002).

The extent to which public sector wage policy impacts on private sectors is not known. The more important impact may be to improve access and equity for black graduates to professional jobs, since public service is the first port of call for abut 70% of black graduates (Moleke, 2005). Therefore, growth in public sector employment in higher skill grades will be an important part of cross-economy employment equity.

Some questions:

- What role does the public sector play in offering wage leadership?
- Government committed itself to learnerships in the public service and has been an important first port of call for African graduates. How fast is public sector employment, especially for Higher Education and Training (HET) graduates, expected to grow and will it continue to have this impact?

4. Institutional interventions

One of the critical goals of a labour regime is to achieve an appropriate balance between flexibility and security. The institutional arrangements can make a significant contribution to achieving this balance in wage setting. In a separate article in this edition, Paul Benjamin considers approaches to labour regulation, what it is meant to do, and its influence on bargaining power. There are a number of possible institutional interventions, such as trade union organisation, minimum wages, or basic conditions that protect employment contracts.

4.1. Unions

Unions can have a number of impacts on wages, potentially increasing or decreasing inequality. The empirical question is to determine which predominates. Unions create a divide in the labour market between the insiders (employed/core workers) and the outsiders (unemployed/non-unionised peripheral workers), with their interest largely vested in the insiders. However, they can also offer leadership in basic conditions, such as that related to the strength of contracts that have an impact on a wider group of workers.

Unions affect wages in a number of ways:

- Wage dispersion within unionised firms tend to be reduced, particularly narrowing the wage gap between blue and white collar workers in general.
- Unions may increase inequality by increasing wages of unionised workers versus that of non-unionised workers. This can also happen if there is contracting out and regulation avoidance.
- Wage dispersion between firms in a given product market may be reduced, particularly amongst low skilled workers.
- Unionised firms may offer 'wage leadership' to non-unionised firms.

Although Table 1 shows that overall wage growth was relatively stagnant in the 1980s, a number of authors find that the trade union movement was successful in substantially raising wages in select industries, particularly in mining and manufacturing (Fallon & Pereira de Silva, 1994 and Fallon & Lucas, 1998). The public sector unions became more prominent in the late 1990s, and in combination with public sector policy, certainly had an impact as already described. Government extended its minimum wages determinations to new sectors, namely domestic and agricultural work. Empirical evidence shows that unionised segments of workers and those covered by industrial councils are reported to earn higher incomes compared to their non-unionised counterparts, particularly amongst African workers (Schultz & Mwabu, 1997; Rospabé, 2001 and Moll, 1993). According to Schultz and Mwabu (1998), union members earned around 60% more than their non-union counterparts. When controlling for industry and occupation, Butcher and Rouse (2001), using the 1995 OHS, found a much lower premium of about 20% for African workers and 10% for white workers. This is an important distinction, as unions predominate in certain sectors, such as mining, the public sector and specific sections of manufacturing (as shown in Table 9). Workers covered by bargaining councils were also found to earn a premium.

Table 9: Unionisation

Main industry	# unionised ('000s)	Total # in workforce	% of workforce unionised
Agriculture, hunting, forestry and fishing	60	884	6.8%
Mining and quarrying	378	494	76.5%
Manufacturing	481	1 425	33.8%
Electricity, gas and water supply	42	80	52.5%
Construction	53	410	12.9%
Wholesale and retail trade	246	1 281	19.2%
Transport, storage and communication	154	462	33.3%
Financial intermediation, insurance, real estate & business services	198	884	22.4%
Community, social and personal services	1 114	1 888	59.0%
Private households with employed persons	12	1 040	1.2%
Total	2 750	8 899	30.9%

[Source: Altman (2004), calculated from Stats SA, LFS Sept. 2002]

Table excludes employers, self-employed and those working without pay.

The extension of industrial council agreements to non-parties was also found to have an impact on wages, albeit not as much as might be anticipated. Butcher & Rouse (2001) reported a wage premium of 6% to 10% for African non-union workers covered by industrial councils. The reasoning is that, above and beyond industrial council agreements, some unions continue on to negotiate further increases at a plant level. As a result, the wage premium extended to the non-union workers covered by the industrial council was lower than that of unionised workers also covered by the industrial councils.

The key concern with institutional interventions is generally in relation to their impact on raising lower skill wages to the point that a disincentive to employment has been created. However, wages for unskilled, low- and mid-skill workers stagnated or fell from at least 1997 forward (Woolard & Woolard, 2005). Unions might not cause large cross-economy effects for a number of reasons. First, their coverage is not wide enough within the private sector. At the time of Butcher & Rouse's study, only 10% to 16% of workers were covered by Industrial Council agreements. Secondly, the majority of firms applying for exemptions from bargaining council agreements are granted. [iv] This was as true in the mid-1990s (ILO, 1996) as it is today. In 2004, the Department of Labour reports that small, medium and micro enterprises (SMMEs) accounted for 59% of the 7 373 exemption applications received: 77% of all applications were approved. Thirdly, by 2003, only 40% of bargaining council members worked in the private sector. Benjamin (2005) argues that the extension of bargaining council agreements could only potentially apply to about 300 000 workers, primarily in the metal and motor sectors.

It is worth noting that the wage premia may have the effect of reducing the apartheid legacy wage gap. Azam & Rospabé (2005) use the 1999 OHS to show that the gap between white and black workers is less amongst unionised than non-unionised workers. They conclude that this has the effect of reducing 'statistical discrimination'. This refers to the view that employers pay less because they have lower expectations of black workers.

Only a small proportion of low earning formal workers are actually unionised (Valodia *et al*, 2005). In 2004, there were 7.38-million people earning less than R 2 500 per month, of which about 5.36-million could be counted amongst the formally employed or in domestic service. Of these, about 20% were unionised. A much smaller proportion of workers (6%) earning less than R 1 000 per month were unionised. The proportions unionised fell dramatically between 2000 and 2004.

4.2. Minimum wage determinations

There were already existing sector determinations for the contract cleaning, wholesale and retail, private security and clothing sectors (Benjamin, 2005). Further, quite controversial, determinations were set for domestic workers and agricultural workers in 2002. Little is known empirically about the impact of these determinations, the latter two in particular. In the main, theoretical work has been done to guess at the possible impact.

A significant majority of the SA population in the labour market earn very low wages (Valodia, 2005). Being employed does not necessarily draw an individual or household out of poverty. For example, domestic workers and farm workers account for about 17% of employment in the economy. Their estimated wages lie below the poverty line for individuals and for households as well. The median wage for domestic workers was calculated at R 333.50 per month, while that of farm workers was just over R400 per month in 1999 (Bhorat & Leibbrandt, 1999).

The potential impact of minimum wages relies heavily on the extent to which the wage determination is actually significantly higher than what is already being paid, and the expected wage elasticity. In a case where the minimum is higher than the current wage, a significant wage/employment trade off could actually result in overall income losses.

Hertz (2002) estimated that an elasticity of -0.6 would be the point at which the losses (job losses) would outweigh the gains (wage increases). If the elasticity is 0 (that is, no job losses arise as a result of minimum wages implemented for domestic workers), then the 'ultra-poverty' rate of domestic workers households falls by 18% and the 'poverty rate' falls by 3%. [v]

Bhorat (2002) did a similar simulation for agricultural and domestic workers to review the impact of different wage increases, ranging from 5% to 100%. He uses the short run (-.156) and long run (-.71) wage elasticities put forward by Fallon & Lucas (1998). These are well above Hertz's threshold.

This is a theoretical exercise, as the elasticity is unknown. There are discrepancies in respect of long-run economy-wide elasticities. [vi] However, the central point put forward by Bhorat and Hertz is that, while the workers concerned may benefit individually, the increases in minimum wages is unlikely to make a big dent on poverty rates.

Breitenbach and Peta (2001) provide a local case study involving interviews with employers and employees in 128 residential units, thereby offering some empirical evidence of the possible impact of domestic worker minimum wages. They found that the demand for domestic work was relatively inelastic: in other words, an increase in wages of domestic workers would have a small impact on the demand of their

services. Instead, they found that wage increases might instead lead to a decrease in the number of hours worked and the nature of working conditions. In particular, it would result in a move from live in domestic workers to hourly or daily based work.

As noted, the available studies are 'guesstimates' of what the impact might be. There does not appear to be empirical evidence available to show what the actual impact has been.

Therefore, all things being equal, rising wages due to trade union organisation or minimum determinations would not explain rising low skill unemployment at the aggregate level, from at least the mid-1990s. Hence broad generalisations may not be productive, and more sector and sub-sector based work would be required. Moreover, follow up work to Butcher & Rouse (2001) using subsequent household surveys would be of great benefit.

5. Discrimination

5.1. Race and gender

The apartheid legacy still dominates wage differentials in SA. The apartheid system entrenched strong biases in education, training, space, job access and networks that have been difficult to shake. Distinguishing between pre-labour market discrimination and labour market discrimination is absolutely essential.

5.1.1. Pre-labour market discrimination by race

'**Pre-labour market discrimination**' is an important contributor to persistent race and gender differentials. Apartheid has still left a legacy, despite efforts to integrate the historically racially-segregated education systems.

There are a number of dimensions to pre-labour market discrimination and these are discussed in the companion papers by Moleke on education and training, and by Du Toit on school to work transitions. These include unequal access to:

- Schooling length and quality;
- Access to tertiary education that is desired by employers;
- Networks, career information, information about education quality and bursaries/loans; and
- Good learning conditions (young people work under substantial social stress and poor learning conditions).

The first dimension to educational difference is reflected in the differences in years of schooling attained. Africans and women have on average lower levels of education compared to other groups. The participation of Africans in education has increased but it is still not universal.

The second dimension related to the quality of education, particularly the differences in quality of education in schools which are dominantly African versus those which are predominantly white and/or integrated

For example, Peter Moll (1998) finds that cognitive skills are an important determinant of wage levels for those emerging from the African schooling system. In particular, computational skills are found to be more important than comprehension skills in influencing wages. The African primary schooling system was an extremely poor generator of computational skill, raising the computational test score by only 13%. Van der Berg (2004) shows poor maths & sciences results of graduates from historically black schools (also see Moll, 2000; Rospabé 2001; Keswell, 2004; Case & Yogo, 1999 and Van der Berg, 2002). Van der Berg (2002) found that the low test scores of Africans explain the some of the differences in the earnings gap.

The other indicator of quality is reflected in the number of secondary school leavers who pass with endorsement and with mathematics and science (Van der Berg, 2002). The poor quality of secondary school performance directly impacts on progression into higher education and the labour market. The implications of these are reflected in a study of university graduates experiences of graduates. The study reveals the

continued segregation of women and Africans in areas of study with poor labour market outcomes in terms of types of jobs landed (Moleke, 2005). This underpins a common belief that productivity and returns to education would be improved through the reallocation of resources in favour of mathematical learning.

The impact of pre-labour market discrimination on labour market outcomes and incomes needs far more investigation, in a context where the institutional context continues to create inappropriate barriers to potentially capable young people. Promoting equity is one concern, but it does not stop there. This poses an important challenge to SA's growth and employment agenda which is unlikely to be met unless there is fuller participation according to capability rather than race. The long-term options involve improved school integration and improved career services. However, shorter term options also require investigation.

5.1.2. Racial differences within the labour market

Discrimination 'in the labour market' differs from that caused by 'pre-labour market' discrimination. Persistent differences in labour market success by race do not necessarily imply the presence of labour market discrimination. Discrimination arises where it can be shown that there are persistent and statistically significant differences in labour market outcomes for people of different race groups that have similar characteristics, particularly in educational attainment and years of work experience. Otherwise, differential labour market outcomes are more likely caused by 'pre-labour market" conditions.

Cross-sectional analysis of the OHS and LFS data definitely show that there are labour market segments, with persistent and wide earnings inequalities between race groups. Some of this evidence is presented in Table 8 to Table 11. Despite the changes occurring in the labour market, Erichsen and Wakeford (2001) and Rospabé (2001) reported that wage differentials were increasing. Woolard and Woolard (2005) also reported an increase or no change in the wage gap between Africans and whites between 1995 and 2003 amongst most skill categories, although the situation was far worse the lower the skill level (see Table 8). There was a considerable narrowing of earnings gaps for managers, particularly in relation to African women. The earnings of white urban male formal sector workers were more than three times that of their African counterpart in 2002 (see Table 11).

There is also a problem of crowding into certain sectors and occupations. Bhorat (2000) shows how 42% of skilled Africans work in low earnings occupations such as teachers, teaching associates and nursing or midwifery, while 36% of skilled Whites work in higher earning occupations such as managers, finance, and physical & engineering sciences.

These gaps are partly explained by occupational crowding of Africans into certain occupations, thereby bidding their wages down. The professional and higher skill workers have less competition and are able to bid their wages up. Even as black workers obtain higher qualifications and move up the job ladder, it could take time for their earnings to catch up with those that have had more years of work experience. Employment equity and equity charters could fast-track that process, where firms find they are bidding up the price of younger black labour market entrants.

Simple cross-sectional analysis can tell us whether the racial earnings gap is narrowing generally and more specifically by occupation. But finding a persistent gap does not necessarily imply that labour market discrimination is the cause.

Discrimination is more accurately shown where income differentials are decomposed to isolate contributing factors. Relevant studies control for productivity related characteristics, such as education, or years of experience (see Moll, 1998; Knight & McGrath, 1987; Hinks, 1999; Hinks *et al*, 2000; McGrath, 1990; Hofmeyer, 1990; Rospabé 2001 and Van der Berg, 2002).

Studies by Moll (1998) and Treiman *et al* (1996) found that discrimination diminished as an explanation of income differentials between 1980 and the early 1990s. For example, Moll (1998) found that discrimination accounted for 44% of the wage differential in 1993, compared to 75% in 1980. Hinks *et al* (2000) found that wage discrimination accounted for 29% of the income differential between whites and Africans in 1994. They attribute this differential more to the overpayment of whites than to the underpayment of Africans. [vii]

Hinks (1999) takes this further, considering changes in discrimination between 1980 and 1997. He finds that more than 60% of the wage advantage experience by whites is due to 'white overpayment'. He further argues that a typical white worker would have earned 67% less if they had been paid on a competitive basis in 1980, and 28% less in 1994. In contrast, African workers would have earned 25.6% and 14.9% more respectively. This gives a sense of how discrimination may be hindering growth.

Table 10: Female earnings as % of male earnings, formal sector (2002)

Unskilled	87.0
Semi-skilled	106.4
Skilled	82.8
Highly skilled	73.8
Managers	80.3

[Source: Altman (2004), calculated from electronic data made available by Stats SA, Sept. LFS 2002]

Note: Calculated as mean hourly earnings

Table 11: Mean monthly incomes

	2002		1999		2002	
	Rand		As % of formal urban African male earnings		As % of formal urban African male earnings	
	Men	Women	Men	Women	Men	Women
White workers						
Formal (urban)	9 328	6 150	341%	217%	318%	210%
African workers						
Formal (urban)	2 931	3 092	100%	94%	100%	105%
Informal (urban)	1 055	655	46%	38%	36%	22%
Informal (non-urban)	723	436	32%	24%	25%	15%
Domestic (urban)	524	544	41%	24%	18%	19%
Domestic (non-urban)	410	399	16%	18%	14%	14%
Agricultural (formal)	698	497	46%	27%	24%	17%
Agricultural (informal)	480	424	18%	14%	16%	14%

[Source: Altman (2004), based on Sept. 2002 LFS

Discrimination is evident in hiring, promotion and training policies (Rospabé, 2001). Azam and Rospabé (2005) attribute this to "statistical discrimination", whereby employers have uncertainties regarding the productivity of African workers. These uncertainties perpetuate discrimination. There does not appear to be substantial empirical information in this regard, and more monitoring and evaluation would certainly help guide public and private action.

5.1.3. Gender differences within the labour market

The apartheid system also contributed to gender segmentation. This might be attributed partly to the fact that a greater proportion of women were left in the rural areas, with less access to quality education and employment opportunities. Women also tend to be more represented in relatively low skill and lower productivity sectors that generally pay less. Women are mostly concentrated in the retail and wholesale trade sector, community and personal services and private household sectors. Within these sectors women are employed in a fairly narrow set of low-wage, low skill female dominated occupations like clerical, sales, service work in waitresses, beauty, or cleaning services. Almost one-quarter of African women continue to work in 'elementary' occupations like office cleaning and domestic work. Within the skilled occupations, women are concentrated in professional occupations such as nursing, and teaching and as para-professionals in health, such as dental assistants or radiographers (Altman, 1993; Woolard & Woolard, 2005; Moleke, 2005a and Casale, 2002). All other groups are better spread across a range of craft and professional occupations. African women in skilled level occupations are better represented in the public sector (Moleke, 2005a and Casale, 2004).

This crowding of women into a small number of occupations and sectors can result in low earnings for similar educational attainment. Casale (2004) show this very clearly, where women earn less in almost all categories of skill attainment and occupation. Bhorat and Leibbrandt (1999) in their analysis of labour market outcomes of Africans reported earnings differences between African men and women who were in the same

occupations and had similar productivity characteristics. Casale (2002) and Woolard & Woolard (2005) also found wage gaps for all race groups between men and women that could not be attributed to differences in productivity traits.

There are specific occupations that may be affected by 'under-valuation', as they are similar to 'unpaid labour'. Women are often seen as the care givers at home, and this work is unmonetised. In these occupations, there is no money payment, and it is therefore seen as 'free' and delivered almost seamlessly. The jobs women have can be very similar and therefore undervalued in the market (see Altman, 1993; Mackintosh, 1993 and Elson, 1993).

White women tend to have a relatively better representation in the skilled occupations and in the private sector. Between 1995 and 2001, the average real earnings of white women with a degree rose by 17%, compared to only a 10% increase for African women with degrees. In fact, the earnings of white women with a matric or more improved over this period. African women's earnings, for those with education varying between Matric and diploma, fell in real terms by between 13% and 30% between 1995 and 2001 (Casale, 2004).

Between 1995 and 2001, there appears to have been some improvement in women's contribution to high skill professions. This was true for both white and African women. On the other hand, women were still not well represented in occupations denoted as "legislators, senior officials and managers". Professional women tended to earn a fraction of their white male counterparts. African women on the other hand seem to have made better strides in the public sector, where their representation in management increased significantly (Moleke, 2005a). [viii]

Gender roles and the interruptions of work by women also accounts for the differences in earnings between men and women. The work interruptions due to child rearing partly explain the differences in wages between men and women (Budlender, *et al.* 2001 and Warren, 2004). Family and child-rearing responsibilities often mean that women are likely to lose out on human capital accumulation and work experience. Notions of the 'traditional roles' of women in society can also influence young women's choices of types of occupations to pursue. In the SA context, Warren (2004) found that the number of children and presence of younger children in the household (children below 18 years) had a negative impact on women's earnings. Human capital theory backed by international evidence also shows that these factors influence the firms' hiring decisions. This is particularly so in types of occupations which requires heavy investment in on-the-job training. Firms might be less likely to hire women into these types of occupations for fear that they may quit and thus not recoup its investment. Once hired, women's jobs are protected by provisions in the Basic Conditions of Employment Act (No. 75 of 1997) which offers maternity leave and does not allow employers to permanently replace or demote workers for having taken this leave. Whether this dissuades employers from hiring women and whether they actually do abide by these rules are not known and would be the subject of empirical investigation.

6. Spatial mobility

Surprisingly little is known about the link between wages and migration. The spatial mobility of workers can have a profound effect on local labour markets and therefore wage levels. Where mobility is difficult, wage setting will differ regionally.

A study by van der Berg *et al.* (2002) uses 1996 Census data and 1995 OHS data to track movement of workers from the Eastern Cape. Posel and Casale (2002) compare the (SA Labour and Development Research Unit, or SALDRU) data and the OHS for 1995, 1996 and 1997 to trace labour migration. Historically in SA, it was primarily African men who migrated long distances to work, maintaining homes in the rural areas. Both studies show how women, particularly low and semi-skilled, are increasingly migrating to urban and peri-urban areas. This is explained by a number of factors. First, women seem to be delaying marriage, which enables them to move more freely. A Development Policy Research Unit (DPRU) study (2005) on migration to Gauteng confirms this. Yet, even families were increasingly moving together to make permanent homes in more urbanized areas. These studies show that lower skill African women have a higher probability of finding work in urban areas than do their male counterparts, possibly explained by the growth in service sectors.

African workers with tertiary education were more likely to stay in rural areas, perhaps due to special access to public sector employment. While it might be expected that these workers would move to urban areas, Van der Berg *et al.* (2002) found that they do not have special advantages in urban areas, and perhaps are signalled to that effect.

Kingdon and Knight (2005) review the responsiveness of wages to local unemployment using the SALDRU data. They find the responsiveness to be very low. They show that a 10% increase in unemployment leads to a 0.7% decrease in wages. They segment by those workers living in urban areas, rural areas that did fall within the former homelands and rural areas that did fall within the former homelands. They make this differentiation since the rate of unemployment differs so dramatically in each of these regional types, with homeland areas being worse off. They find that the responsiveness is particularly low in the former homeland areas. This is explained by the prevalence of long-term unemployed, who do not exert downward pressure on wages, as they do not really compete for available jobs. In rural areas that did not fall within the former homelands, unemployment is much lower: there they find that wages are three times more responsive to unemployment than in urban areas.

These studies make use of data from the early 1990s, about 10 years after the abolition of controls on spatial movement and right at the point of the political transition. More recent analysis would be essential to assess how mobility has changed in the first decade of democratic governance.

7. Conclusion

The first question posed related to whether wage trends are consistent with SA's growth and employment objectives. Real wage growth trailed behind that in value added in the 1970s and 1980s. Growth in output in the 1970s contributed equally to employment and wage growth.

The general picture of wage trends in the 1990s is a little uncertain. The view depends on the data source used. Where data is sourced from the SEE, the output growth is seen to have favoured wages over employment. Research done before the mid-1990s has also found lower skill wages rising faster than high skill wages, contrary to expectations in a context of a labour surplus.

However, research using the OHS/LFS would show that earnings for lower and mid-skill workers have been stagnant or falling from at least the mid-1990s and that higher skill wages rose substantially. The OHS/LFS is more inclusive, and therefore may be a better data source. Authors using panel household data have also found falling incomes amongst lower wage workers in both formal and informal sectors, with benefits generally accruing to the higher level workers and managers. Therefore, a break in the trend seems to have occurred in the 1990s. This would indicate a fair amount of 'flexibility' in the market. This is further underpinned by the finding of a wage differential of between 10% and 40% between small and large firms, depending on skill level.

Wage trends in the 1990s have generally been explained as the result of capital intensification in traded sectors, the expansion of services sectors, contracting out, slow structural transformation, rising unemployment and overpay of high skill white workers due to discrimination.

The public sector has played an important role, although it is unclear how this might impact on wage setting in the wider economy. It accounts for about 18% of formal employment. The public sector has had an explicit equity policy that has resulted in higher low-skill wages, and low racial wage disparities. It is the first port of call for the vast majority of African graduates. African professionals earn substantially more in the public sector than in the private sector. The slow pace of public sector hiring may impact on the returns to education for African graduates in a context of limited progress in promoting equity in the private sector.

Institutional interventions, such as trade unions and minimum wages, are generally blamed for causing wage rigidities and lack of competitiveness. Unions generated a wage premium of about 20% for Africans and 10% for whites in 1995. Non-unionised African workers that fell under industrial council agreements experienced a premium of only 6% to 10%. It does not appear that these arrangements have important cross-economy effects as too few workers actually fall within them. Moreover, the majority of applications to the Department of Labour for exemptions are approved. The main impact would appear to be on a small set of industries, namely the public sector, mining, and some manufacturing sectors. It is possible that unions have mostly had the effect of reducing statistical discrimination.

There is very little empirical evidence on the impact of minimum wage determinations on employment, or even on compliance. The theoretical studies show that minimum wages would have little impact on poverty levels amongst the most vulnerable

households. The only empirical study found, asserts that households would pay higher wages for domestic workers.

Race and gender wage discrimination is not that easy to identify. First and foremost, one must distinguish between pre-labour market discrimination and labour market discrimination. There are many institutional factors that constrain full participation by black labour market entrants such as lower quality education, poor access to desirable tertiary education, weak networks and information, and high levels of social stress. Some of these factors have been linked to lower earnings.

Labour market discrimination is found where people who have similar characteristics experience different labour market outcomes. The wage gap remains very wide, with Whites earning multiples of black workers. Moreover, some studies show rising racial wage gaps, which are clearly linked to wage divergence (Africans in the lower skill jobs with falling pay and Whites in the higher skill jobs with rising pay). On the other hand, Hinks and Moll show a narrowing wage gap. Hinks finds that 29% of the income differential between Whites and Africans was explained by discrimination in 1994. More than 60% of this differential is explained by 'overpayment of whites' if markets had been competitive.

Gender discrimination is another important problem, although the type of studies reviewing race do not appear available. Generally, SA women are crowded into few low paying occupations and sectors, across the skills spectrum. In almost all cases, women earn less than their male counterparts.

This points to the extent to which discrimination is not just an equity issue but also one that is having a potentially dramatic dampening effect on SA's growth, employment and competitiveness.

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Endnotes

[i] Some evidence for this might be found in Bhorat & Lundall (2002) who found that medium-sized firms tended to invest in training at higher rates than expected (and higher than in firms with more than 200 employees). This is explained by high "search difficulty rates" drawn from the World Bank's large firm survey conducted for the City of Johannesburg.

[ii] There is so much noise in the data, with very wide confidence intervals for higher skill categories, that it is actually difficult to discern a trend. Here we focus on comparing 1995 – 2002. The paper presents all years.

[iii] Such arguments were initially put forward by Fine and Rustomjee (1996) in their analysis of the 'minerals-energy complex'. Later Altman (2001, 2001a) argued that SA has continued having difficulty shifting off its historical minerals economy orientation, despite some progress in raising value added in trade, reducing interest rates and inflation over the 1990s. SA displays many characteristics that are common to minerals exporting economies. These countries have a tendency of leap-frogging from the resource base to capital intensive industry, missing the period of development involving labour absorption in low cost exportables. They do this because they earn capital from high value minerals exports. Moreover, these same high value minerals exports have the effect of overvaluing the currency and therefore render low cost value added exports less competitive. In contrast, low income, non-resource rich countries rely on their low cost labour to promote development. This is one reason why minerals economies are often more unequal, as there is greater economic exclusion (Auty, 1993 and 1994, and Ostensson *et al.*, 2000). They also tend to grow more slowly. This development path becomes entrenched and there are few countries that have managed to shift from it fundamentally. Successful minerals economies often diversify domestic oriented production over many years. Substantial policy initiatives are required to shift economic incentives towards labour absorbing exportable sectors.

[iv] A collective bargaining agreement may not be extended to non-parties unless the Minister is satisfied that they fall within the Bargaining Council's registered scope. At the same time, provision must be made in the collective agreement for an independent body to hear and decide any appeal brought against the issuing of an exemption.

[v] Ultra-poverty refers to households that have an income that is half the poverty rate identified by the Institute for Planning Research at UPE. The Poverty rate was set at R 207 to R267 per adult equivalent per month in 1993 Rand.

[vi] There is some discrepancy in relation to the extent to which employment is affected by wage increases. Nattrass (2004:90) reports on employment elasticities of between -0.66 to -0.85, while Fields *et al* (1999) found average employment elasticities of between -0.53 and -0.35 in the early 1990s. These latter elasticities are very low.

[vii] Moll's estimates are higher as he uses monthly income; Hinks *et al* use hourly wage rates.

[viii] By 2001, there were 90 000 African female 'professionals' as compared to 103 000 White male professionals. This would appear to represent a closing in of African women on their White male counterparts. However as a % of cohort, this represents only 6% of African women, as opposed to 12.3% of White men. The picture for senior officials and managers is starker: only 1.2% of African women fall in the category, as compared to 19.7% of White men (Casale 2004). It is surprising that this category would not see greater gains for women, as many managerial positions are filled by people without tertiary qualifications.