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The Provincial Decision-making Enabling Project

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A profile of Mpumalanga: Demographics, poverty, inequality and unemployment

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PROVIDE PROJECT

The Provincial Decision-making Enabling Project

Overview

The Provincial Decision-Making Enabling (PROVIDE) Project aims to facilitate policy design by supplying policymakers with provincial and national level quantitative policy information. The project entails the development of a series of databases (in the format of Social Accounting Matrices) for use in Computable General Equilibrium models.

The National and Provincial Departments of Agriculture are the stakeholders and funders of the PROVIDE Project. The research team is located at Elsenburg in the Western Cape.

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For the original project proposal and a more detailed description of the project, please visit www.elsenburg.com/provide

A profile of Mpumalanga: Demographics, poverty, inequality and unemployment [1]

Abstract

This paper forms part of a series of papers that present profiles of South Africa's provinces, with a specific focus on key demographic statistics, poverty and inequality estimates, and estimates of unemployment. In this volume comparative statistics are presented for agricultural and non-agricultural households, as well as households from different racial groups, locations (metropolitan, urban and rural areas) and district municipalities of Mpumalanga. Most of the data presented are drawn from the Income and Expenditure Survey of 2000 and the Labour Force Survey of September 2000, while some comparative populations statistics are extracted from the National Census of 2001 (Statistics South Africa). The papers should be regarded as general guidelines to (agricultural) policymakers as to the current socio-economic situation in Mpumalanga, particularly with regards to poverty, inequality and unemployment.

[1] The main author of this paper is Kalie Pauw.

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1. Introduction

According to the National Census of 2001 Mpumalanga is home to 7.0% of South Africa's population. Measured by its total current income, Mpumalanga has the third lowest total income of the provinces in South Africa. In *per capita* income terms, however, the province ranks fourth lowest (SSA, 2003).[2] As is the case with most of the other provinces in South Africa, Mpumalanga is marred by high poverty rates, inequalities in the distribution of income between various population subgroups, and unemployment. Poverty and unemployment in South Africa are often rural phenomena, and given that many of the rural inhabitants are linked to agricultural activities, the various Departments of Agriculture in South Africa have an important role to play in addressing the needs in rural areas. In this paper an overview of the demographics, poverty, inequality and unemployment in Mpumalanga is presented. A strong focus on agriculture and agricultural households is maintained throughout.

There are various sources of demographic data available in South Africa. In addition to the National Census of 2001 (SSA, 2003), Statistics South Africa conducts a variety of regular surveys. Most suited to this type of study and fairly recent is the Income and Expenditure Survey of 2000 (IES 2000) (SSA, 2002a), which is a source of detailed income and expenditure statistics of households and household members. The twice-yearly Labour Force Survey (LFS) is an important source of employment and labour income data. In this paper we use the LFS September 2000 (LFS 2000:2) (SSA, 2002b) as this survey can be merged with the IES 2000. Although there are some concerns about the reliability of the IES and LFS datasets, whether merged or used separately, as well as the comparability of these with other datasets, one should attempt to work with it as it remains the most recent comprehensive source of household income, employment and expenditure information in South Africa. For a detailed description of the data, as well as data problems and data adjustments made to the version of the dataset used in this paper, refer to PROVIDE (2005a).

This paper is organised as follows. Section 2 presents a brief overview of the spatial distribution of households within the province, while also presenting some estimates of the number of people or households involved in agricultural activities. Section 3 focuses on poverty, inequality and unemployment in the province, while section 4 draws some general conclusions.

[2] These population figures and income estimates are based on the Census 2001. Statistics South Africa warns that the question simply asked about individual income without probing about informal income, income from profits, income in kind etc. As a result they believe this figure may be a misrepresentation of the true income. Comparative figures from the IES 2000 ranks Mpumalanga second lowest in terms of total provincial income and third lowest in terms of *per capita* income.

2. Demographics

2.1. Spatial distribution of households

In 2000 Mpumalanga was home to 648,410 households and a total of 3.00 million people (IES/LFS 2000). These estimates are slightly lower than the Census 2001 estimates of 733,131 households (3.12 million people, see Table 1). The discrepancy is partly explained by the population growth experienced between 2000 and 2001, but also points to the outdated IES/LFS 2000 sampling weights.[3] Compared to the Census 2001 data African people were slightly under-represented, while the other population groups over-represented in the IES/LFS 2000.

Table 1: Racial composition of Mpumalanga

	IES/LFS 2000	*Population share*	*Census 2001*	*Population share*
African	2,735,325	91.3%	2,886,345	92.4%
Coloured	27,514	0.9%	22,161	0.7%
Asian/Indian	26,127	0.9%	11,243	0.4%
White	207,144	6.9%	203,245	6.5%
Total	*2,996,109*	*100.0%*	*3,122,994*	*100.0%*

Sources: IES/LFS 2000 and Census 2001.

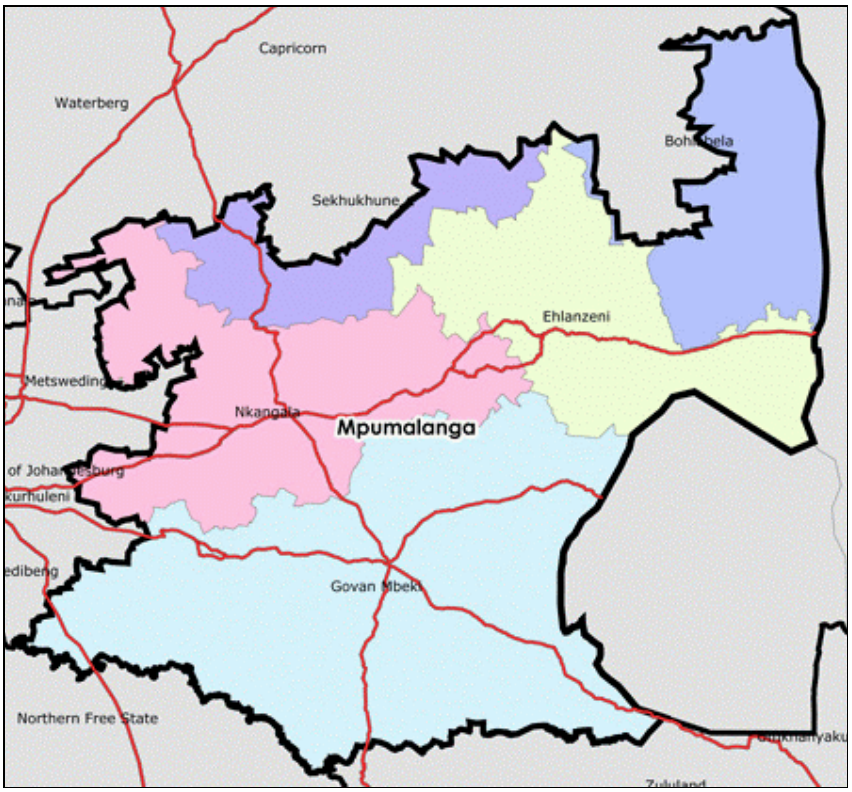
Mpumalanga is divided into five district municipalities (see Figure 1), Govan Mbeki, Nkangala, Ehlazeni, Bohlabela, and Sekhukhune. These district municipalities were recently demarcated as directed by the Local Government Municipal Structures Act (1998). Bohlabela and Sekukhune are so-called 'transfrontier' district municipalities as they stretch across the provincial border with Limpopo. None of the municipal districts or cities in Mpumalanga has metropolitan status; hence all urban areas are either classified as small cities or towns.[4] Several of the former homelands fall within Mpumalanga's boundaries. This includes Bophuthatswana (part of Nkangala), KwaNdebele (parts of Nkangala and Sekhukhune) and KaNgwane (parts of Ehlazeni and Bohlabela).[5]

[3] The IES 2000 sampling weights were based on 1996 population estimates.

[4] Officially the Demarcation Board declared Pretoria (Tshwane), Johannesburg, East Rand (Ekurhuleni), Durban (eThekwini), Cape Town and Port Elizabeth (Nelson Mandela) as metropolitan areas. However, in our definition of metropolitan areas we include the Vaal (Emfuleni), East London, Pietermaritzburg and Bloemfontein (which includes Botshabelo).

[5] See PROVIDE (2005b) for a more detailed discussion of geographical distinctions between households based on former homelands areas, metropolitan areas, and nodal areas for rural development programmes, all of which can be linked to municipal districts.

Figure 1: District municipalities in Mpumalanga



Source: Demarcation Board (www.demarcation.org.za).

Table 2 shows the number of people in each district municipality by racial group. The largest in teems of population size is Nkangala with 37.7% of the population. This district stretches along the main transport arterial (N4). It is followed by Govan Mbeki (21.1%), the largest of the districts in terms of area size, and Ehlazeni (20.9%), which stretches along the remainder of the N4 up to the border with Mozambique. The two transfrontier districts are somewhat smaller, with 13.4% of the population living in Bohlabela and 6.9% in Sekhukhune. About 91.3% of the population are classified as African. White people make up 6.9% of the population, while Coloured and Asian people make up 0.9% each.

Table 2: Population by district municipality and racial group

	African	*Coloured*	*Asian*	*White*	*Total*	*Percentages*
Govan Mbeki	540,221	5,229	7,795	78,483	631,727	21.1%
Nkangala	1,003,420	6,228	18,332	100,400	1,128,379	37.7%
Ehlazeni	597,985	2,428		24,959	625,372	20.9%
Bohlabela (tf)	388,391	13,629		398	402,418	13.4%
Sekhukhune (tf)	205,308			2,904	208,212	6.9%
Total	*2,735,325*	*27,514*	*26,127*	*207,144*	*2,996,108*	
Percentages	*91.3%*	*0.9%*	*0.9%*	*6.9%*		*100.0%*

Source: IES/LFS 2000

Table 3 shows the number of people in urban and rural areas. Although most Coloured, Asian and White people live in urban areas, the majority of Africans live in rural areas. Since the province has a very large African population the overall urban-rural split is 40.4% versus 59.6%. The proportion is almost the opposite of the national average 63-37 urban-rural split.

Table 3: Population by urban/rural areas and racial group

	African	*Coloured*	*Asian*	*White*	*Total*	*Percentages*
Secondary/small towns	985,774	23,120	26,127	175,908	1,210,928	40.4%
Rural areas	1,749,552	4,394		31,235	1,785,180	59.6%
Total	*2,735,325*	*27,514*	*26,127*	*207,144*	*2,996,109*	

Source: IES/LFS 2000

2.2. Agricultural households

The IES 2000 is one of the only sources of information on home production for home consumption (HPHC) in South Africa, and reports specifically on the productive activities of small, non-commercial subsistence farmers. Respondents were asked to provide estimates of production levels (livestock and produce), as well as the value of goods consumed and sold (see PROVIDE, 2005a for a discussion). This is potentially an important information source to measure the contribution of informal agricultural activities to poor households' income. On the formal side, employment data, which is available in the IES/LFS 2000, can be used to link households to agriculture. Workers reported both the industry in which they were employed as well as their occupation code.

Statistics South Africa has no formal definition of agricultural households, and hence two definitions are used here, namely a broad definition and a strict definition. Both definitions use a combination of HPHC data and agricultural employment data. Under the broad definition any household that earns income from either formal employment in the agricultural industry or as a skilled agricultural worker, or from sales or consumption of home produce or livestock, is defined as an agricultural household.[6] Under the strict definition a household has to earn at least 50% of its household-level income from formal and/or informal agricultural activities. A further way to 'qualify' as an agricultural household is when the value of consumption of own produce and livestock is at least 50% of total annual food expenditure.

Approximately 163,093 households (25.2%) in Mpumalanga are involved in HPHC, significantly more than the national average of 19.3%. This figure includes 157,158 African households, 252 Coloured households and 5,683 White households. In contrast to this about 82,853 households (12.8%) earn some share of their income from wages of household

[6] Note that consumption of own produce or livestock in economic terms can be regarded as an 'income' in the sense that the household 'buys' the goods from itself. If the household did not consume the goods it could have been sold in the market. This treatment of home-consumed production captures the notion of opportunity cost in economics.

members working in agricultural-related industries. The majority of these (81,548) of these households are African, while 1,305 are White households. Income differences between these households suggest that the White households are typically the owners or managers of farms, with incomes averaging R107,417. African households typically supply farm labour, with an average household income of R14,727. When combining households in own production and agricultural employment, a total of 215,619 households (33.3%) in Mpumalanga can broadly be defined as agricultural households. Note that some of these households 'qualify' as agricultural households on both own production and employment accounts, which is why the figures do not add up. Under the strict definition 93,897 households (14.5%) are defined as agricultural households (see Table 4).

Table 4: Agricultural households by race (broad and strict definitions)

	Broad definition		*Strict definition*		
	Agricultural households (column percentages)	*Non-agricultural households (column percentages)*	*Agricultural households (column percentages)*	*Non-agricultural households (column percentages)*	*Total (column percentages)*
African	209,393	388,018	91,924	505,487	597,411
	(97.1%)	*(89.7%)*	*(97.9%)*	*(91.2%)*	*(92.1%)*
Coloured	252	5,144		5,396	5,396
	(0.1%)	*(1.2%)*	*(0.0%)*	*(1.0%)*	*(0.8%)*
Asian		4,356		4,356	4,356
	(0.0%)	*(1.0%)*	*(0.0%)*	*(0.8%)*	*(0.7%)*
White	5,973	35,274	1,973	39,274	41,248
	(2.8%)	*(8.2%)*	*(2.1%)*	*(7.1%)*	*(6.4%)*
Total	215,619	432,792	93,897	554,513	648,410
	(100.0%)	*(100.0%)*	*(100.0%)*	*(100.0%)*	*(100.0%)*
Row percentages	33.3%	66.7%	14.5%	85.5%	100.0%

Source: IES/LFS 2000

The average household size of agricultural households in Mpumalanga ranges from 3.9 (strict) to 4.7 (broad), compared to the provincial average of 4.1 members. This means that the provincial share of people living in broadly defined agricultural households will be larger than the share of households broadly defined as agricultural, and *vice versa* for strictly defined agricultural households. Table 5 shows that between 418,272 and 1.14 million people live in agricultural households, representing 14.0% and 37.9% of the provincial population respectively. About 122,420 people in Mpumalanga are classified as agricultural workers, loosely defined here as skilled agriculture workers and/or people working in the agricultural industry, either in an informal or formal capacity, and reporting a positive wage or salary for the year 2000. This figure represents 15.7% of Mpumalanga's workforce.

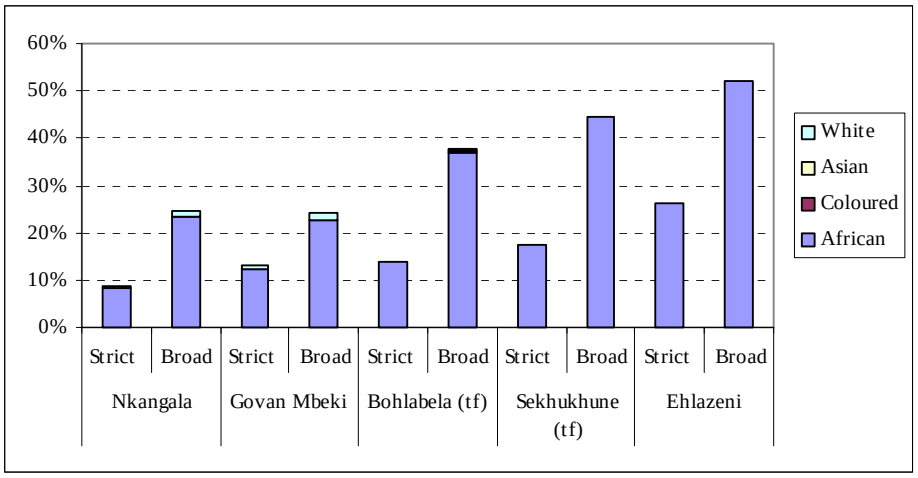
Table 5: Agricultural population by race (broad and strict definitions)

	Population living in agricultural households (broad)	*Percentages*	*Population living in agricultural households (strict)*	*Percentages*	*Population defined as agricultural workers*	*Percentages*
African	1,095,479	*(96.4%)*	403,075	*(96.4%)*	117,891	*(96.3%)*
Coloured	5,515	*(0.5%)*	221	*(0.1%)*	-	*(0.0%)*
Asian	-	*(0.0%)*	-	*(0.0%)*	-	*(0.0%)*
White	35,791	*(3.1%)*	14,976	*(3.6%)*	4,529	*(3.7%)*
Total	*1,136,785*	*(100.0%)*	*418,272*	*(100.0%)*	*122,420*	*(100.0%)*

Source: IES/LFS 2000.

Figure 2 shows, for each region, the proportion of households that are strictly or broadly defined as agricultural households. In this figure municipal districts are ranked from lowest to highest strict agricultural household share. The figure also provides a racial breakdown of agricultural households. By far the majority of agricultural households are African (compare Table 4). Ehlazeni has the largest share of agricultural households (26.1% - 52.0%). What is interesting to note is the relatively large gap between the strict and expanded definitions, which suggests that for many broadly defined agricultural households agricultural activities do not represent an important source of income.

Figure 2: Agricultural household shares by region and race



Source: IES/LFS 2000

3. Poverty, inequality and unemployment

In 2003 Mpumalanga contributed approximately 7.0% to the National GDP, while 7.0% of the South African population live in this province (IES/LFS 2000).[7] This implies that the *per capita* GDP in Mpumalanga is about the same as the national average. According to the

[7] Other provinces: Western Cape (14.5%), Eastern Cape (8.1%), Northern Cape (2.4%), Free State (5.5%), KwaZulu-Natal (16.5%), North West (6.5%), Gauteng (33.0%), and Limpopo (6.5%).

IES/LFS 2000 estimate Mpumalanga *per capita* income, which is only an approximation of the *per capita* GDP, was R9,180 in 2000, slightly less than the national average of R12,411.

Table 6 shows the average household incomes (not *per capita*) by various subgroups in Mpumalanga. Although some of these averages are based on very few observations, which often lead to large standard errors, the table gives a general idea of how income is distributed between household groups in the province. The average household in Mpumalanga earned R36,097 in 2000 (not shown in the table). White agricultural households in general earn more than their non-agricultural counterparts, but the same is not true of African agricultural households. Note that in all the figures and tables that follow agricultural households are defined according to the strict definition. On average agricultural household reported an income of R18,598 compared to R39,060 for non-agricultural households. African agricultural households earned R15,238 in 2000 and are far worse off than their White counterparts, who reportedly earned R175,117. Note that these figures are household-level income figures that are potentially made up of income earned by multiple household members. As such it is not necessarily a reflection of wages of agricultural and non-agricultural workers.

Table 6: Average household incomes in Mpumalanga

	Agricultural households					Non-agricultural households				
	African	Coloured	Asian	White	Total	African	Coloured	Asian	White	Total
Govan Mbeki	13,996			191,366	23,905	33,907	106,099	127,485	131,305	44,670
Nkangala	15,460			156,248	21,794	29,804	21,794	118,981	136,447	40,750
Ehlazeni	16,196				16,196	28,353	33,131		213,315	40,622
Bohlabela (tf)	13,594				13,594	28,359	46,827		23,760	28,748
Sekhukhune (tf)	16,067				16,067	24,493			125,272	27,332
Provincial average	*15,238*			*175,117*	*18,598*	*29,880*	*50,773*	*122,375*	*146,363*	*39,060*
National average	*15,014*	*24,250*	*132,816*	*282,151*	*26,612*	*29,777*	*57,284*	*88,642*	*166,100*	*49,990*

3.1. Poverty and agriculture

Table 6 shows that Coloured and African agricultural households are generally worse off than their non-agricultural counterparts in terms of income levels. Agricultural households often reside in rural areas and are far removed from more lucrative employment opportunities in urban areas. As a result the National Department of Agriculture places strong emphasis on rural poverty reduction. Various strategies are proposed in the official policy documentation (see Department of Agriculture, 1998). Central to these strategies are (1) an improvement in rural infrastructure, with the aim of giving rural or resource-poor farmers better access to markets, transport, water and electricity, and (2) employment opportunities within agriculture for the poor. The latter can be interpreted either as the creation of employment opportunities within the commercial farming sector by encouraging commercial farmers to increase

employment levels or the creation of new business opportunities for small farmers through a process of land restitution.

Various absolute and relative poverty lines are used in South Africa. In recent years the 40th percentile cut-off point of adult equivalent per capita income has become quite a popular poverty line.[8] This was equal to R5,057 per annum in 2000 (IES/LFS 2000). This relates to a poverty headcount ratio (defined as the proportion of the population living below the poverty line) for South Africa of 49.8% (IES/LFS 2000).[9] The 20th percentile cut-off of adult equivalent income (R2,717 per annum) is sometimes used as the 'ultra-poverty line'. About 28.2% of the South African population lives below this poverty line.

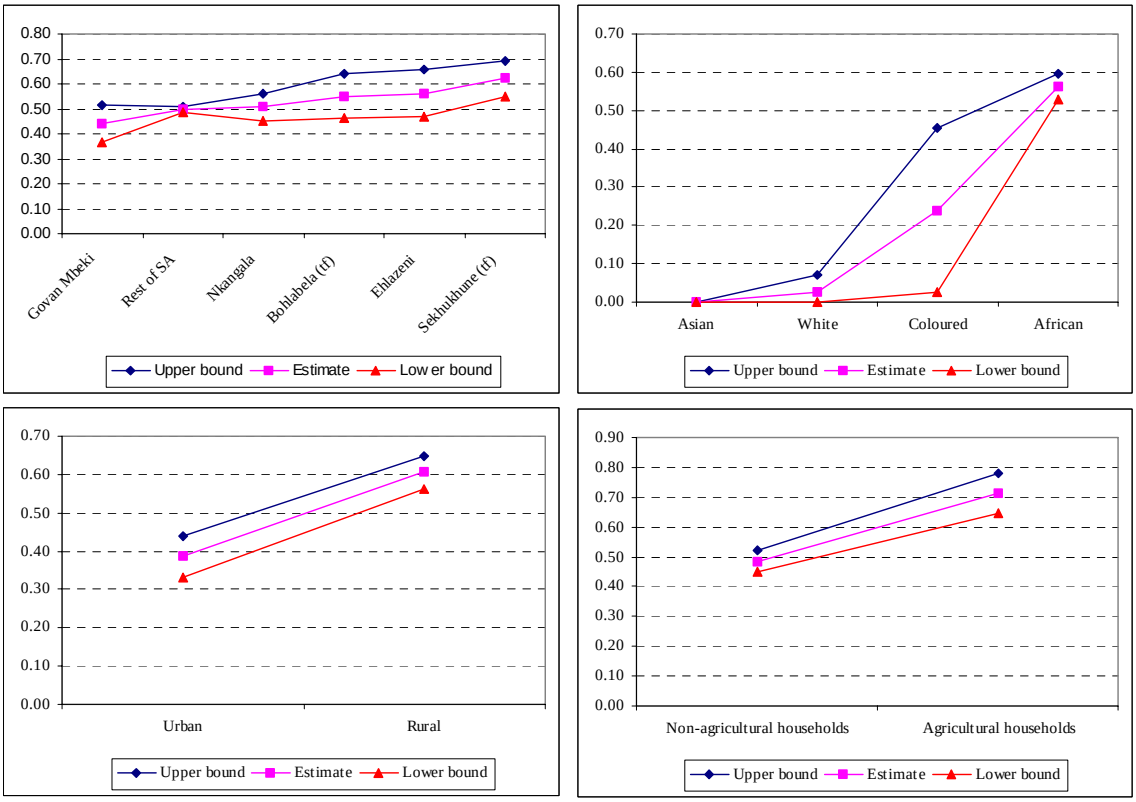
These same national poverty lines are used for the provincial analysis as this allows for comparisons of poverty across provinces. Mpumalanga poverty rate of 51.7% is marginally higher than the national average, while the ultra-poverty rate is 25.1%. Figure 3 compares poverty rates for various population subgroups (race, municipality, location and agricultural/non-agricultural households). The subgroups are ranked from lowest to highest poverty rates for easy comparison. The upper and lower bands on the graph represent the 95% confidence intervals.

With an estimated poverty rate of 43.9% Govan Mbeki is the only district with a lower incidence of poverty than the national average. The poverty rates of the rest of Mpumalanga's districts range from 50.6% for Nkangale to 62.1% for Sekhukhune. Poverty rates vary greatly between racial groups. There is virtually no poverty among White and Asian people. In sharp contrast about 24.0% of Coloured people are classified as poor. The confidence interval around this estimate is fairly wide due to the limited number of sample observations. An estimated 56.2% of Africans live in poverty. Poverty is also more pronounced in rural areas, where 60.6% of people live in poverty, compared to 38.6% in urban areas. Finally, a comparison of agricultural and non-agricultural households reveals that a larger proportion of agricultural people are poor (71.2% compared to 48.6%). Some interesting comparisons between poverty and unemployment rates are drawn later in the paper (see section 3.3).

[8] The adult equivalent household size variable, *E*, is calculated as $E = (A + \alpha K)^{\theta}$, with *A* the number of adults per household and *K* the number of children under the age of 10. In this paper the parameters α and θ are set equal to 0.5 and 0.9 respectively (following May *et al.*, 1995 and others).

[9] The poverty headcount ratio is usually calculated using the Foster-Greer-Thorbecke class of decomposable poverty measures (see PROVIDE, 2003 for a discussion). Poverty measures were also calculated to determine the depth and severity of poverty, but we do not report on these in this paper.

Figure 3: Poverty rates by population subgroups

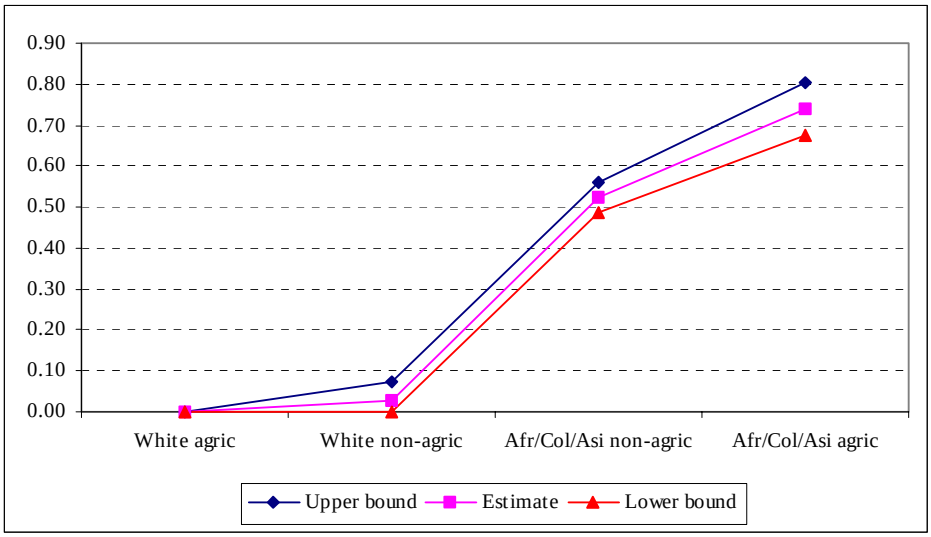


Source: IES/LFS 2000

Note: The poverty headcount ratios show the proportion of *people* living in poverty and not the proportion of *households*.

Section 3.2 explores the distribution of income in Mpumalanga. The inequality that exists in Mpumalanga, and particularly between racial groups within agriculture, is reflected in the poverty rates shown in Figure 4. Virtually none of the White agricultural and non-agricultural population is poor compared to 52.2% of the Coloured/African/Asian non-agricultural population. However, even more disadvantaged is the African agricultural population with a poverty rate of 73.8%.

Figure 4: Poverty rates by race and agricultural/non-agricultural population

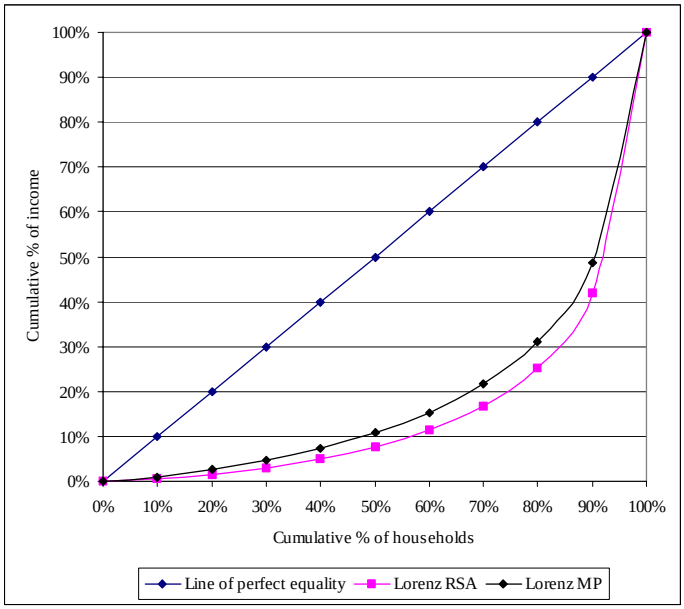


Source: IES/LFS 2000

3.2. Inequality in the distribution of income

Although income levels in Mpumalanga are fairly low, policymakers are also interested in how the income is distributed among the population. Various income distribution or inequality measures exist in the literature (see PROVIDE, 2003 for an overview). One approach to measuring inequality is using Lorenz curves. A Lorenz curve plots the cumulative share of households against the cumulative share of income that accrues to those households. In a society where income is perfectly distributed the Lorenz curve is a straight line. When the income distribution is unequal, the Lorenz curve will lie below the 'line of perfect equality'. Figure 5 shows that Mpumalanga Lorenz curve is always above the South African Lorenz curve, which suggests that income is distributed more equally in this province than in the rest of the country.

Figure 5: Lorenz curves for Mpumalanga and South Africa



Source: IES/LFS 2000

The Gini coefficient is perhaps the best known inequality measure and can be derived from the Lorenz curve (see PROVIDE, 2003). Mathematically the Gini coefficient varies between zero and one, although in reality values usually range between 0.20 and 0.30 for countries with a low degree of inequality and between 0.50 and 0.70 for countries with highly unequal income distributions. Table 7 shows the Gini coefficients for various groups of countries. Clearly South Africa's Gini coefficient, estimated at about 0.69 (IES/LFS 2000), is very high.

Table 7: Trends in income distribution – 1960 and 1980

Group of Countries	*Gini coefficient: 1960*	*Gini coefficient: 1980*
All non-communist developing countries	0.544	0.602
Low-income countries	0.407	0.450
Middle-income, non-oil-exporting countries	0.603	0.569
Oil-exporting countries	0.575	0.612
Gini coefficient: South Africa (1995)*	0.64	
Gini coefficient: South Africa (2000)*	0.70	

Source: Adelman (1986) cited in Todaro (1997).

Note (*): Author's calculations based on IES 1995 and IES/LFS 2000. Unfortunately not much can be read into the apparent increase in inequality since the data sources are not necessarily comparable.

As expected Mpumalanga's Gini coefficient of 0.63 (IES/LFS 2000) is lower than the national Gini coefficient. A useful decomposition technique can be used to identify the sources of inequality. From the IES/LFS 2000 a number of household income sources can be identified, namely income from labour (*inclab*), gross operating surplus (*incgos*), and transfers from households (*inctrans*), corporations (*inccorp*) and government (*incgov*). Total household

income (*totinc*) is thus defined as *totinc = inclab + incgos + inctrans + inccorp + incgov*. McDonald *et al*. (1999) show how the Gini coefficient can be decomposed into elements measuring the inequality in the distribution of these income components. Consider the following equation:

$$G = \sum_{k=1}^{K} \left\{ \left[\frac{\text{cov}(y_k, F(y))}{\text{cov}(y_k, F(y_k))} \right] \left[\frac{2\,\text{cov}(y_k, F(y_k))}{\mu_k} \right] \left[\frac{\mu_k}{\mu} \right] \right\} = \sum_{k=1}^{K} R_k G_k S_k$$

The index *k* represents the income sources. S_k is the share of the k^{th} income source in total income, G_k is the Gini coefficient measuring the inequality in the distribution of income component *k* and R_k is the Gini correlation of income from source *k* with total income (see Leibbrandt *et al.*, 2001). The larger the product of these three components, the greater the contribution of income source *k* to total inequality as measured by *G*. S_k and G_k are always positive and less than one, while R_k can fall anywhere in the range [-1,1] since it shows how income from source *k* is correlated with total income.

Table 8 decomposes the Gini coefficient of Mpumalanga. It also gives decompositions for subgroups by race and agricultural households. A clear pattern that emerges for all the subgroups is a very high correlation between the overall Gini and the Gini within income component *inclab*. Furthermore, *inclab* typically accounts for between 70% and 86% of total income of the various sub-groups evaluated here. Consequently, it is not surprising to note that most of the inequality is driven by inequalities in the distribution of labour income. As far as agricultural households are concerned the picture looks slightly different, with inequality in the distribution of *incgos* playing a relatively important role compared to the rest of the sub-groups evaluated. Income from gross operating surplus can be interpreted as returns to physical and human capital, and, in an agricultural context, the returns to land owned by the agricultural household.

These results suggest that inequalities within agricultural households are driven to a large extent by inequalities in the distribution of wages, but inequalities in the ownership of capital stock and land also play a part. It is also clear from previous tables in this discussion that the main source of inequality is inequality between White agricultural farm owners and landless African agricultural households that supply labour services. Land reform programmes may therefore be very successful at improving incomes of poor agricultural households.[10]

[10] The difference between *inclab* and *incgos* in an agricultural context is problematic. Simkins (2003) notes large changes in the levels of *incgos* and *inclab* between IES 1995 and IES 2000 (*incgos* fell significantly, while *inclab* increased), an indication that *incgos* is possibly underreported due to confusion that may exist among respondents as to whether income earned from self-employment in agriculture should be reported as income from labour or income from GOS.

Table 8: Gini decomposition by race and agriculture in Mpumalanga

	All households							
	Rk	*Gk*	*Sk*	*RkGkSk*				
inclab	0.96	0.74	0.77	0.54				
incgos	0.67	0.94	0.05	0.03				
inctrans	0.26	0.78	0.07	0.01				
inccorp	0.73	0.97	0.04	0.03				
incgov	0.30	0.75	0.08	0.02				
				0.63				
	African/Coloured/Asian households				White households			
	Rk	*Gk*	*Sk*	*RkGkSk*	*Rk*	*Gk*	*Sk*	*RkGkSk*
inclab	0.94	0.72	0.73	0.49	0.95	0.42	0.86	0.34
incgos	0.65	0.93	0.06	0.03	0.73	0.96	0.03	0.02
inctrans	0.29	0.78	0.09	0.02	0.04	0.85	0.01	0.00
inccorp	0.69	0.97	0.03	0.02	0.46	0.93	0.05	0.02
incgov	0.24	0.72	0.10	0.02	-0.07	0.84	0.04	-0.00
				0.58				0.39
	Agricultural households				Non-agricultural households			
	Rk	*Gk*	*Sk*	*RkGkSk*	*Rk*	*Gk*	*Sk*	*RkGkSk*
inclab	0.93	0.71	0.70	0.46	0.96	0.73	0.77	0.55
incgos	0.86	0.96	0.08	0.07	0.63	0.94	0.05	0.03
inctrans	0.42	0.77	0.09	0.03	0.23	0.79	0.06	0.01
inccorp	0.71	0.99	0.01	0.01	0.71	0.97	0.04	0.03
incgov	0.39	0.73	0.11	0.03	0.28	0.75	0.08	0.02
				0.60				0.63

Source: Author's calculations, IES/LFS 2000

The Gini coefficients suggest that inequality among agricultural households (0.60, with a confidence interval of [0.57, 0.63]) is probably lower than inequality among non-agricultural households (0.63, with a confidence interval of [0.62, 0.64]). However, since the confidence intervals overlap this statement could be challenged. An alternative measure of inequality, the Theil index, is very different from other inequality measures. It is derived from the notion of entropy in information theory (see PROVIDE, 2003). The Theil inequality measure for agricultural households is 0.83 [0.73, 0.92] compared to 0.76 [0.73, 0.80] for non-agricultural households, which contradicts the previous result, although, as before, the confidence intervals overlap.

These findings raise some interesting questions. Cleary income inequality among agricultural households is a concern, but indications are that income is as skewed among non-agricultural households. Land restitution has been placed at the top of the government's agenda to correct inequalities in South Africa. Although similar economic empowerment processes are in place in non-agricultural sectors, the process of agricultural land restitution has been highly politicised. The question is will more equality among agricultural households necessarily impact on the overall inequality in Mpumalanga? This question can be answered by decomposing the Theil inequality measure into a measure of inequality within a population

subgroup and a measure of inequality between population subgroups. The Theil inequality measure (*T*) for Mpumalanga population as a whole is 0.81. This figure can be decomposed as follows (see Leibbrandt *et al.*, 2001):

$$T = T_B + \sum_{i=1}^{n} q_i T_i$$

The component T_B is the between-group contribution and is calculated in the same way as *T* but assumes that all incomes within a group are equal. T_i is the Theil inequality measure within the i^{th} group, while q_i is the weight attached to each within-group inequality measure. The weight can either be the proportion of income accruing to the i^{th} group or the proportion of the population falling within that group. Table 9 shows the results of a Theil decomposition using income and population weights with agricultural- and non-agricultural households as subgroups.[11] The between-group component contributes only 0.02 (2.2%) to overall inequality. Inequality among agricultural households contributes 0.06 (7.9%) or 0.12 (14.6%) to overall inequality, while non-agricultural households contribute 0.70 (89.9%) or 0.66 (83.2%) to overall inequality in Mpumalanga, depending on the weights used. These results suggest that a correction of inequalities within agriculture will do little to reduce inequality in the province as a whole.

Table 9: Theil decomposition – agricultural and non-agricultural households

Income weights	q_i	T_i	$\sum_{i=1}^{n} q_i T_i$	T_B	$T = T_B + \sum_{i=1}^{n} q_i T_i$
Agricultural households	0.07	0.83	0.06		
Non-agricultural households	0.93	0.76	0.70		
Sum			*0.77*	*0.02*	*0.78*
Population weights					
Agricultural households	0.14	0.83	0.12		
Non-agricultural households	0.86	0.76	0.66		
Sum			*0.77*	*0.02*	*0.79*

Source: Author's calculations, IES/LFS 2000

Note: The different decomposition techniques do not necessarily lead to the same overall Theil index.

3.3. Employment levels and unemployment

There are approximately 780,516 workers in Mpumalanga (IES/LFS 2000).[12] Statistics South Africa distinguishes between eleven main occupation groups in their surveys. These include

[11] The income weight for agricultural households is the total income to agricultural households expressed as a share of total income of all households in the province. The population weight for agricultural households is expressed as the share of the population living in agricultural households (see Table 2 and Table 5).

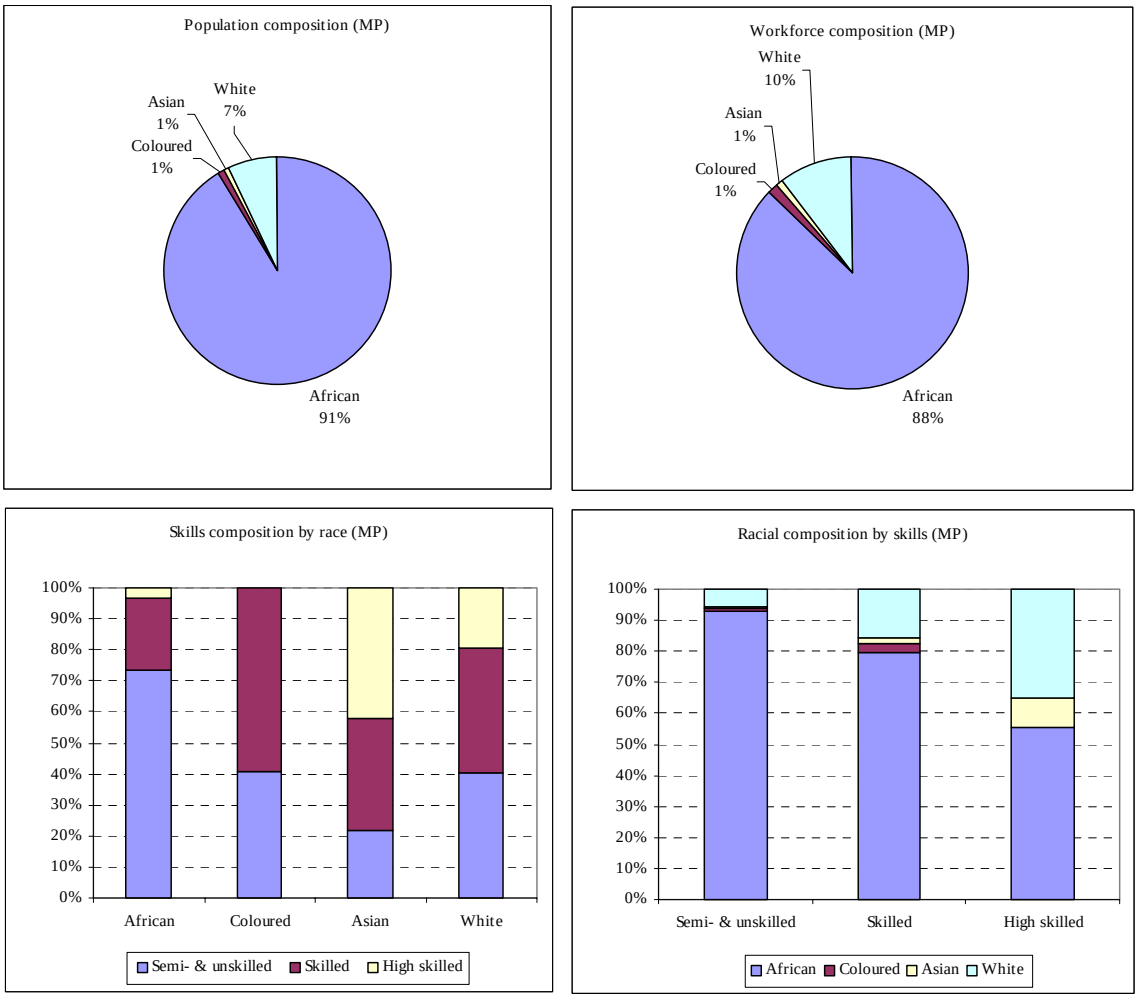
[12] 'Workers' are defined here as those people that report a positive wage for 2000. People who were unemployed at the time of the survey but who have earned some income during the previous year will therefore be captured here as workers. In the unemployment figures reported later the *current* status of workers is reported, irrespective of income earned. Employment figures reported here are therefore higher than the official employment figures.

(1) legislators, senior officials and managers; (2) professionals; (3) technical and associate professionals; (4) clerks; (5) service workers and shop and market sales workers; (6) skilled agricultural and fishery workers; (7) craft and related trades workers; (8) plant and machine operators and assemblers; (9) elementary occupations; (10) domestic workers; and (11) not adequately or elsewhere defined, unspecified.

For simplification purposes the occupation groups are aggregated into various skill groups, namely high skilled (1 – 2), skilled (3 – 5), and semi- and unskilled (6 – 10).[13] Figure 6 explores the racial composition of the workforce by race and skill and compares these figures with the provincial racial composition. The overall racial distribution of the workforce is fairly similar to the racial composition of the province, although African workers are slightly underrepresented. The picture becomes clearer when disaggregating further by skill. African workers are typically found in the lower-skilled occupation groups, while White workers are more concentrated around the skilled and high-skilled occupations. The limited number of Asian and Coloured workers in Mpumalanga make sit difficult to draw conclusions about their skills distribution. Clearly much still needs to be done in Mpumalanga to bring the racial composition of the workforce more in line with the provincial-level population composition at all skills levels.

[13] Unspecified workers (code 11) are not included in a specific skill category since the highly dispersed average wage data suggests that these factors may in reality be distributed across the range of skill categories.

Figure 6: Racial representation in the workforce of Mpumalanga



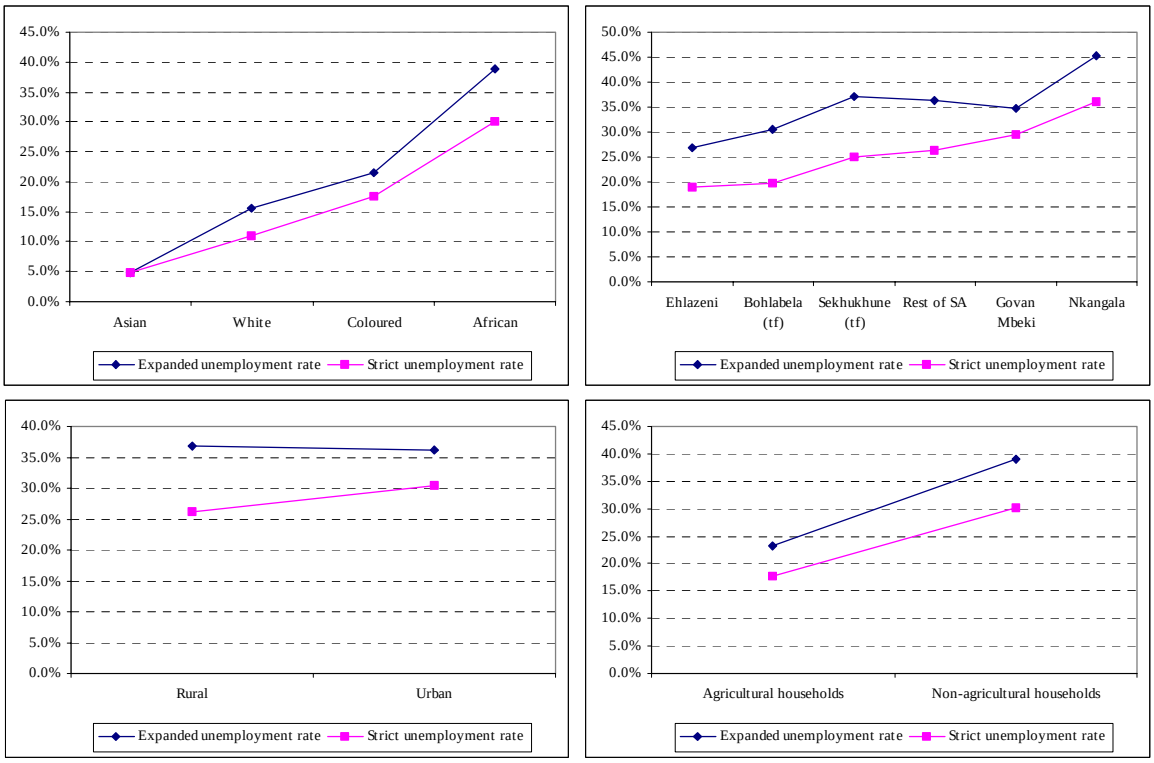
Source: IES/LFS 2000

Statistics South Africa uses the following definition of unemployment as its strict (official) definition. The unemployed are those people within the economically active population who: (a) did not work during the seven days prior to the interview, (b) want to work and are available to start work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview. The expanded unemployment rate excludes criterion (c). Mpumalanga has a population of about 3.00 million people of which approximately 778,262 people are employed (see footnote 12). Under the strict (expanded) definition about 1.91 million (1.77 million) people are not economically active, which implies that 304,430 (448,344) people are unemployed. This translates to an unemployment rate of 28.1% (36.6%), which is marginally higher than the national rate of 26.4% (36.3%) for 2000.[14]

[14] The official (expanded) LFS March and September 2003 (SSA, 2004) unemployment figures are 31.2% and 28.2% for South Africa respectively.

In Figure 7 the unemployment rates (official and expanded) are compared for different population subgroups. Only 4.8% of Asian people are reported as being unemployed. The unemployment rate rises slightly for White people (11.0% and 15.5%), and then rises rapidly for Coloured (17.6% and 21.6%) and African (30.0% and 38.8%) people. The gap between the strict and expanded rates for Africans is also relatively large, which is indicative of the large numbers of discouraged jobseekers among Africans. A comparison of the municipal areas shows that the difference in unemployment rates between various regions is not large. Only Govan Mbeki (29.4% and 34.7%) and Nkangala (36.0% and 45.2%) have unemployment rates above the national average. This is very interesting, especially given that these same two regions rank lowest in terms of poverty rates. Also interesting is that the strict rural unemployment rate appears to be lower than the urban unemployment rate, but the expanded rate is higher in rural areas. This implies that the gap between the strict and expanded rates in rural areas is much more pronounced, which is indicative of long-term unemployment and the large numbers of rural people that have given up searching for jobs. Finally, unemployment is also lower among agricultural households than non-agricultural households, mainly because family members would rather participate in the household's farming activities than do nothing.

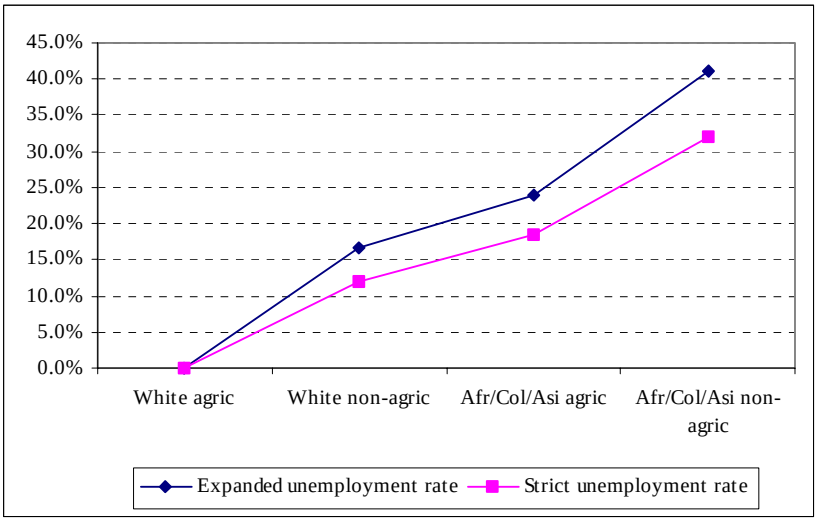
Figure 7: Unemployment rates by population subgroups



Source: IES/LFS 2000

A comparison of unemployment rates by race (Asian/Coloured/African and White) and agricultural/non-agricultural households shows that unemployment levels in agriculture are driven mainly by unemployment among African workers. The unemployment rate for Coloured/African agricultural workers is also lower than the unemployment rate for Asian/Coloured/African non-agricultural workers. In fact, most of the unemployment in Mpumalanga appears to be driven by unemployment among African/Coloured/Asian non-agricultural workers. An interesting comparison can be made between Figure 8 and Figure 4. The latter shows that poverty is highest among Coloured/African agricultural households, yet unemployment is lower. One possible explanation for this is inaccurate accounting by agricultural households of the value of goods and services (such as food, clothing and housing) received in kind from employers, which leads to an overestimation of poverty rates. However, this does not take away the fact that agricultural wages are often very low compared to non-agricultural wages. This may explain higher employment levels among agricultural households, but often these people can be classified as the 'working poor'.

Figure 8: Unemployment rates by race and agricultural/non-agricultural population



Source: IES/LFS 2000

4. Conclusions

Mpumalanga is a relatively small province and shares its eastern border with Swaziland and Mozambique. The majority of its inhabitants reside in rural areas, and as such many households partake in agricultural activities. Broadly speaking 37.9% of people live in what can be defined as agricultural households. However, under the strict definition only 14.0% of people live in agricultural households. Most of these agricultural households are in the Ehlazeni district.

The people of Mpumalanga are relatively disadvantaged in terms of their *per capita* incomes, with African, rural and agricultural households being worse off. However, the income distribution is not as skewed as in the rest of South Africa. The analysis here revealed that income inequality among agricultural households is not necessarily different from inequality among non-agricultural households. Wages drive most of the inequality, while inequality in the distribution of land contributes to agricultural inequality as well. However, a correction of agricultural inequalities will do little to improve overall inequality in the province.

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