Background Paper Series

PROVIDE PROJECT

The Provincial Decision-making Enabling Project

Background Paper 2005:1(2)

A profile of the Eastern Cape province: Demographics, poverty, inequality and unemployment

Elsenburg
August 2005

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 the Eastern Cape province: 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 the Eastern Cape. 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 the Eastern Cape, 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 Census of 2001 the Eastern Cape province is home to about 14.4% of South Africa's population. Measured by its total current income, the Eastern Cape is the fourth richest province in South Africa after Gauteng. However, in *per capita* income terms, the province only ranks eighth, with only the Limpopo province being worse off (SSA, 2003a).[2] Large parts of the Eastern Cape are made up of former homelands Transkei and Ciskei. Current high poverty and unemployment rates in this province may be linked directly to the historical economic neglect of these areas. 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 the Eastern Cape 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, 2003a), 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/LFS 2000 also ranks the Eastern Cape fourth in terms of total provincial income, and eighth as measured by *per capita* income.

2. Demographics

2.1. Spatial distribution of households

In 2000 the Eastern Cape was home to 1.44 million households and a total population of 6.82 million people (IES/LFS 2000). These estimates are slightly different from than the Census 2001 estimates of 1.51 million households (6.44 million people, see Table 1). The discrepancies can be explained by possible changes in population size and composition between 2000 and 2001, but also points at the outdated IES/LFS 2000 sampling weights.[3] Compared to the Census 2001 data Coloured, Asian and African people were over-represented while Whites were under-represented in the Eastern Cape in the IES/LFS 2000.

Table 1: Racial composition of the Eastern Cape

	IES/LFS 2000	*Population share*	*Census 2001*	*Population share*
African	5,993,798	87.9%	5,635,080	87.5%
Coloured	522,608	7.7%	478,805	7.4%
Asian/Indian	25,415	0.4%	18,372	0.3%
White	273,672	4.0%	304,504	4.7%
Total	6,815,493	100.0%	6,436,761	100.0%

Sources: IES/LFS 2000 and Census 2001.

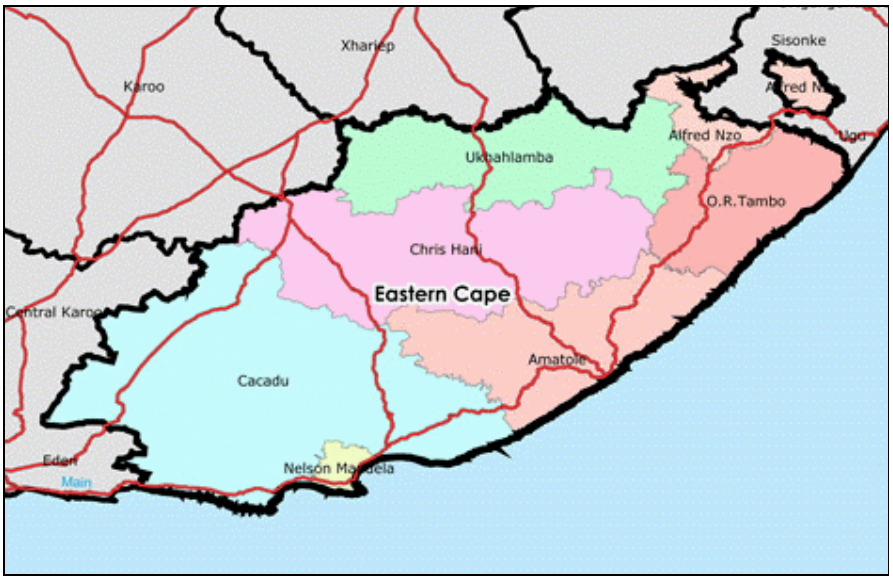
The Eastern Cape is divided into seven district municipalities (see Figure 1). The Nelson Mandela municipal district (greater Port Elizabeth) and East London are classified as metropolitan areas.[4] The remaining district municipalities are Cacadu, Chris Hani, Ukhahlamba, Alfred Nzo, OR Tambo and Amatole. Both East London and King Williams Town, the capital of the Eastern Cape, fall under the Amatole district. These district municipalities were recently demarcated as directed by the Local Government Municipal Structures Act (1998).[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 the Eastern Cape



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

Table 2 shows the number of people in each district municipality by racial group. By far the largest in terms of population size are OR Tambo and Amatole, which are collectively home to 58.5% of the population. Despite its metropolitan status the Nelson Mandela metropolitan district is only the fourth largest district. Although Cacadu covers about a third of the Eastern Cape's land area it only houses 5.4% of the population. The vast majority of the population is classified as African (87.9%). Most of the Coloured population live in the Nelson Mandela metropolitan area and the surrounding Cacadu district. Coloured, Asian and White households are generally sparsely distributed between the municipal districts to the North East of Cacadu and Nelson Mandela. Most of these areas form part of the former homelands areas (Transkei and Ciskei) and are still mainly populated by Africans.

Table 2: Population by district municipality and racial group

	African	*Coloured*	*Asian*	*White*	*Total*	*Percentages*
Cacadu	164,531	169,682		37,190	371,403	5.4%
Chris Hani	786,805	59,660	1,619	39,618	887,703	13.0%
Ukhahlamba	294,395	3,932		15,935	314,262	4.6%
Alfred Nzo	335,265	606			335,872	4.9%
OR Tambo	2,154,167	6,168		243	2,160,578	31.7%
Amatole	1,739,966	50,203	4,888	28,378	1,823,436	26.8%
Nelson Mandela	518,668	232,355	18,907	152,309	922,239	13.5%
Total	5,993,797	522,606	25,414	273,673	6,815,493	
Percentages	87.9%	7.7%	0.4%	4.0%		100.0%

Source: IES/LFS 2000

Table 3 shows the number of people in urban and rural areas. Urban areas are divided into metropolitan areas (Port Elizabeth and East London) and secondary cities or small towns.

Almost two thirds of the population (65.1%) live in rural areas, a reversal of the national average 63-37 urban-rural split. In contrast to the 72.2% of Africans living in rural areas, relatively few Coloured, Asian and White people live in rural areas (approximately 13.5%).

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

	African	*Coloured*	*Asian*	*White*	*Total*	*Percentages*
Metropolitan areas	740,727	267,053	23,796	178,309	1,209,884	17.8%
Secondary/small towns	923,738	170,660	1,619	69,376	1,165,393	17.1%
Rural areas	4,329,333	84,895		25,988	4,440,216	65.1%
Total	5,993,798	522,608	25,415	273,672	6,815,493	

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). It 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.

More than one third of households (539,473 or 37.5%) in the Eastern Cape are involved in HPHC, well above the national average of 19.3%. This includes 526,298 African households, 6,037 Coloured households and 7,138 White households. In sharp contrast to this only 127,910 households (8.9%) 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 households (104,847) are African, while 17,135 are Coloured and 5,929 are White households. Income differences between these households suggest that the White households are typically the owners or managers of farms, with incomes averaging R76,658. African and Coloured households typically supply farm labour, with average household incomes of R11,763 and R13,257, respectively. When combining households in own production and agricultural employment, a total of 617,133 households (42.8%) in the Eastern Cape 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 249,295 households (17.3%) 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	584,261	663,241	225,772	1,021,731	1,247,503
	(94.7%)	*(80.6%)*	*(90.6%)*	*(85.8%)*	*(86.6%)*
Coloured	22,161	75,928	15,789	82,300	98,089
	(3.6%)	*(9.2%)*	*(6.3%)*	*(6.9%)*	*(6.8%)*
Asian		7,230		7,230	7,230
	(0.0%)	*(0.9%)*	*(0.0%)*	*(0.6%)*	*(0.5%)*
White	10,711	76,881	7,734	79,858	87,592
	(1.7%)	*(9.3%)*	*(3.1%)*	*(6.7%)*	*(6.1%)*
Total	617,133	823,281	249,295	1,191,119	1,440,414
	(100.0%)	*(100.0%)*	*(100.0%)*	*(100.0%)*	*(100.0%)*
Row percentages	42.8%	57.2%	17.3%	82.7%	100.0%

Source: IES/LFS 2000

The average household size of agricultural households in the Eastern Cape ranges from 4.8 (strict) to 5.2 (broad), which is significantly higher than the provincial average of 4.3 members. This means that the provincial share of people living in agricultural households is actually larger than the share of households defined as agricultural. Table 5 shows that between 1,314,030 and 3,493,050 people live in agricultural households, representing 19.3% and 51.3% of the provincial population respectively. About 1,19 million people in the Eastern Cape are classified as agricultural workers, loosely defined here as skilled agriculture workers and/or 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 18.3% of the Eastern Cape's workforce.

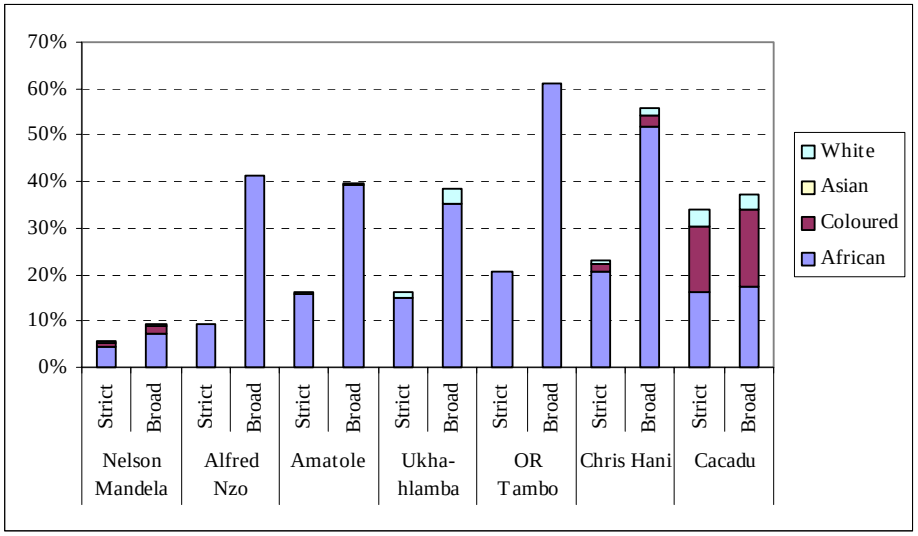
Table 5: Agricultural population by race (broad and strict definitions)

	Population living in agricultural households (broad)	*Percentages*	*Population living in agricultural households (strict)*	*Percentages*	*Population defined as agricultural workers*	*Percentages*
African	3,343,159	*(95.7%)*	1,210,028	*(92.1%)*	225,392	*(86.1%)*
Coloured	110,917	*(3.2%)*	76,860	*(5.8%)*	28,058	*(10.7%)*
Asian	-	*(0.0%)*	-	*(0.0%)*	-	*(0.0%)*
White	38,974	*(1.1%)*	27,143	*(2.1%)*	8,421	*(3.2%)*
Total	3,493,050	*(100.0%)*	1,314,030	*(100.0%)*	261,870	*(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 (compare Table 4). Most of the Coloured agricultural households live in Cacadu, making up almost half of the agricultural households in this region. Many of the White owned farms are also located in this region. Between 33.9% and 37.4% of households in Cacadu are agricultural households. The majority of agricultural households in the other Eastern Cape regions are African. The large differences between the shares of households defined as agricultural households under the strict and broad definitions suggest that many African households are involved in agriculture (mainly via their involvement in HPHC), but these agricultural activities do not represent an important source of income to these households. In some cases there are two, three or even four times as many agricultural households under the broad definition as under the strict definition.

Figure 2: Agricultural household shares by region and race



Source: IES/LFS 2000

3. Poverty, inequality and unemployment

In 2003 the Eastern Cape contributed approximately 8.1% to the National GDP, while 14.4% of the South African population live in this province (SSA, 2003a, 2003b).[7] This implies that the *per capita* GDP in the Eastern Cape is lower than the national average. According to the IES/LFS 2000 estimate the Eastern Cape *per capita* income was R6,774 in 2000, only about half the national average of R12,411. High levels of poverty and inequality persist as they do in the rest of the country.

Table 6 shows the average household incomes (not *per capita*) by various subgroups in the Eastern Cape. 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 the Eastern Cape earned R29,699 in 2000 (not shown in the table). Agricultural households in general earn less than their non-agricultural counterparts. Note that in all the figures and tables that follow agricultural households are defined according to the strict definition. The average agricultural household reported an income of R17,729 compared to R32,204 for non-agricultural households. Coloured and African agricultural households earn similar income levels (R13,690 and R12,749 respectively), compared to a substantially higher income for White agricultural households (R145,806). 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 the Eastern Cape

	Agricultural households					Non-agricultural households				
	African	Coloured	Asian	White	Total	African	Coloured	Asian	White	Total
Cacadu	12,674	11,304		96,735	21,077	22,795	22,892		78,836	33,199
Chris Hani	16,376	15,414		182,022	23,682	18,425	37,576	204,506	140,530	26,431
Ukhahlamba	12,466			285,066	36,428	19,818	17,117		115,993	23,857
Alfred Nzo	16,296				16,296	13,139				13,139
OR Tambo	11,465				11,465	19,313	67,667		139,000	19,531
Amatole	15,258			116,580	16,186	24,058	53,558	270,114	242,017	31,695
Nelson Mandela	13,173	18,542		86,892	20,399	25,495	47,790	110,432	159,661	64,066
Provincial average	13,690	12,749		145,806	17,729	21,070	41,197	148,376	154,883	32,204
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 agricultural households are generally worse off than non-agricultural households in terms of income levels. Agricultural households often reside in rural areas and

[7] Other provinces' contribution to GDP: Western Cape (14.5%), Northern Cape (2.4%), Free State (5.5%), KwaZulu-Natal (16.5%), North West (6.5%), Gauteng (33.0%), Mpumalanga (7.0%) and Limpopo (6.5%).

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. The Eastern Cape poverty rate of 68.7% is the highest in the country and well above the national average, while the ultra-poverty rate is 45.5%. 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.

The Nelson Mandela metropolitan area has the lowest poverty rate (38.5%) and is also the only region that measures below the national poverty rate. It is followed by Cacadu (57.9%), Amatole (67.7%), Chris Hani (68.8%), Ukhahlamba (71.0%), OR Tambo (81.5%) and Alfred Nzo (84.0%). Three of these regions, namely Amatole, Chris Hani and OR Tambo have been identified during President Thabo Mbeki's State of the Nation address in 2001 as 'nodal areas' that would be targeted for rural development programs across South Africa. Although the ranking of district municipalities here suggest that there are other regions that are poorer

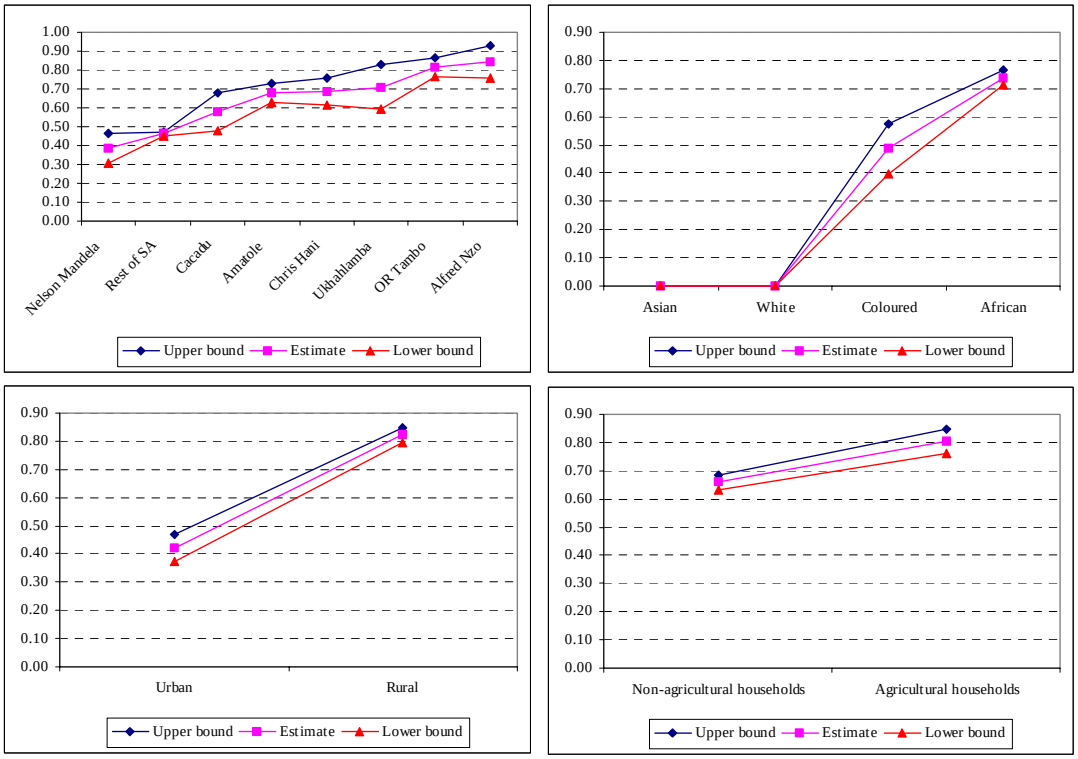
[8] The adult equivalent household size variable, *E*, is calculated as $E = (A + \alpha K)^{\theta}$, with *A* the number of adults per household and *K* the number of children under the age of 10. In this paper the parameters α and θ are set equal to 0.5 and 0.9 respectively (following May *et al.*,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

than these three regions, the figures here only report on one dimension of poverty, namely income poverty.

Poverty rates vary greatly between racial groups. There is virtually no poverty among White and Asian people. In sharp contrast the poverty rates for Coloured and African people are 48.7% and 73.8% respectively. Poverty is also clearly a rural phenomenon, with the rural poverty rate estimated at 82.2% compared to 42.1% in urban areas. The poverty rate is also much higher among agricultural households (80.3%) than non-agricultural households (65.9%). Some comparisons between poverty and unemployment rates are drawn later in the paper (see section 3.3)

Figure 3: Poverty rates by population subgroups



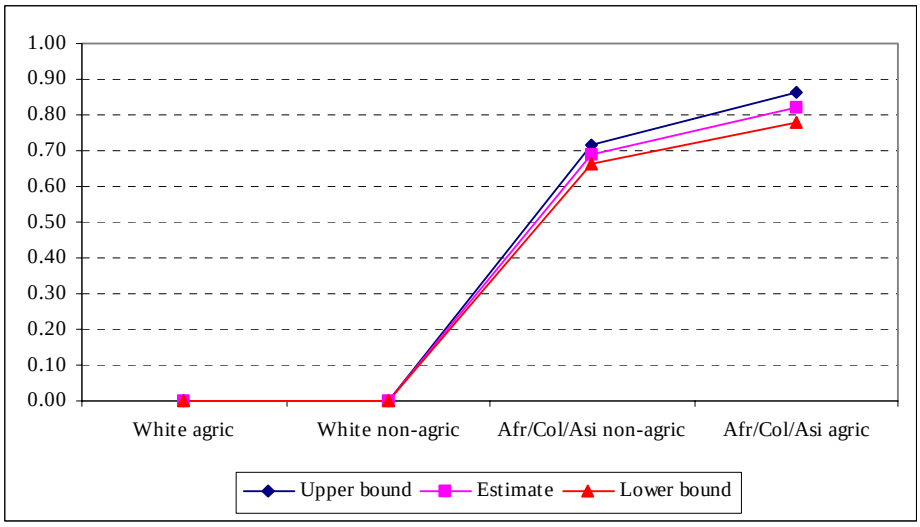
Source: IES/LFS 2000

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 the Eastern Cape. The inequality that exists in the Eastern Cape, and particularly between racial groups within agriculture, is reflected in the poverty rates shown in Figure 4. Virtually none of the White agricultural population are poor compared to 82.0% of the Coloured/African agricultural population. This rate is considerably higher than the poverty rate for the Asian/Coloured/African non-agricultural population (69.0%), which in turn is much higher than the poverty rate of the

White agricultural population. Virtually none of the White non-agricultural population is defined as poor.

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

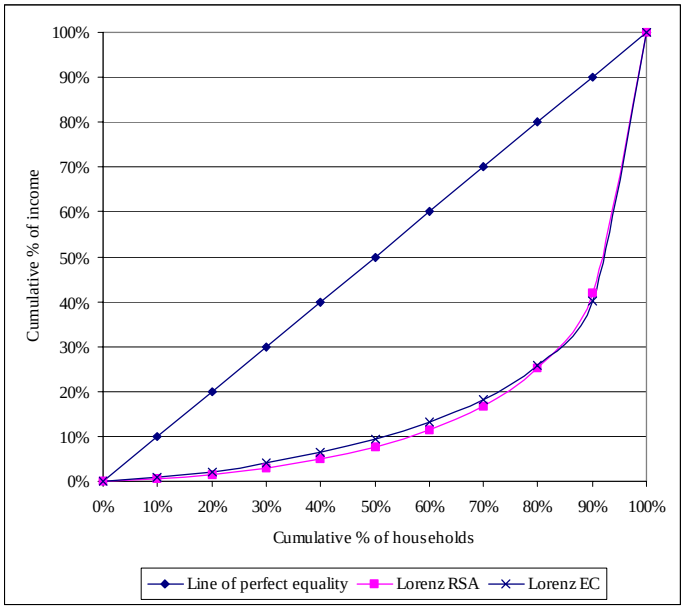


Source: IES/LFS 2000

3.2. Inequality in the distribution of income

Previously it was shown that the Eastern Cape is one of the poorest regions in South Africa. But how is the income 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 the Eastern Cape Lorenz curve virtually runs along the same 'path' as the South African Lorenz curve. Initially it is marginally above the South African Lorenz curve, but then crosses it at the 90th percentile. In order to assess whether income is more or less unequal in this province inequality estimates have to be calculated, as this cannot be judged purely from looking at this graph.

Figure 5: Lorenz curves for the Eastern Cape 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.

The Eastern Cape's Gini coefficient is 0.69 (IES/LFS 2000), which is marginally lower than the national Gini coefficient, and still high according to international standards. 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:

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

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 the Eastern Cape. 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 about 61% to 78% of total income. Consequently, it is not surprising to note that most of the inequality is driven by inequalities in the distribution of labour income. Also interesting to note is that *incgos* contributes a lot more to overall inequality among agricultural households than non-agricultural households. 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 primarily by inequalities in the distribution of wages. Addressing the inequality problem should focus on redistributing wage income to low-income agricultural workers. However, the Gini for *incgos* is also very high, which suggests that inequalities in the ownership of capital stock and land also drives agricultural household income inequality. Given that many of the agricultural households in the Eastern Cape are primarily involved in own production (as opposed to being formally employed in the agricultural sector) land reform programmes may be very successful at improving incomes of poor agricultural households. Income from GOS is, however, difficult to interpret due to issues of ownership of land in former homelands.[10]

[10] It is also not clear whether respondents reported *incgos* and *inclab* correctly. 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

Table 8: Gini decomposition by race and agriculture in the Eastern Cape

	All households							
	Rk	*Gk*	*Sk*	*RkGkSk*				
inclab	0.96	0.77	0.77	0.57				
incgos	0.83	0.98	0.06	0.05				
inctrans	0.24	0.86	0.04	0.01				
inccorp	0.86	0.98	0.06	0.05				
incgov	0.28	0.80	0.06	0.01				
				0.70				
	African/Coloured/Asian households				White households			
	Rk	*Gk*	*Sk*	*RkGkSk*	*Rk*	*Gk*	*Sk*	*RkGkSk*
inclab	0.95	0.73	0.77	0.54	0.89	0.52	0.77	0.36
incgos	0.70	0.96	0.05	0.03	0.84	0.97	0.08	0.07
inctrans	0.20	0.84	0.06	0.01	0.23	0.95	0.02	0.00
inccorp	0.75	0.98	0.03	0.02	0.54	0.91	0.10	0.05
incgov	0.21	0.77	0.09	0.01	0.13	0.92	0.03	0.00
				0.62				0.43
	Agricultural households				Non-agricultural households			
	Rk	*Gk*	*Sk*	*RkGkSk*	*Rk*	*Gk*	*Sk*	*RkGkSk*
inclab	0.94	0.77	0.61	0.44	0.96	0.76	0.78	0.58
incgos	0.96	0.99	0.21	0.20	0.78	0.97	0.05	0.04
inctrans	0.21	0.79	0.05	0.01	0.24	0.87	0.04	0.01
inccorp	0.89	0.99	0.04	0.04	0.85	0.98	0.07	0.05
incgov	0.41	0.77	0.09	0.03	0.26	0.81	0.06	0.01
				0.71				0.69

Source: Author's calculations, IES/LFS 2000

The Gini coefficients suggest that inequality among agricultural households (0.71, with a confidence interval of [0.69, 0.73]) is slightly higher than inequality among non-agricultural households (0.69, with a confidence interval of [0.68, 0.69]). An alternative measure of inequality, the Theil index, also gives this result. 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 1.67 [1.56, 1.78] compared to 1.03 [0.99, 1.08] for non-agricultural households, further evidence that inequality among agricultural households in the Eastern Cape is higher than among non-agricultural households.

These findings raise some interesting questions. 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 the Eastern Cape? This question can be answered by decomposing the Theil inequality measure into a

exist among respondents as to whether income earned from self-employment in agriculture should be reported as income from labour or income from GOS.

measure of inequality within a population subgroup and a measure of inequality between population subgroups. The Theil inequality measure (T) for the Eastern Cape 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 (1.6%) to overall inequality.

Although both subgroups have relatively high inequality levels, inequality among agricultural households only contributes 0.10 (9.3%) or 0.20 (17.7%) to overall inequality, depending on the weights used. Non-agricultural households contribute 0.96 (89.1%) or 0.90 (80.8%) to overall inequality in the Eastern Cape. These results suggest that a reduction of inequalities within agriculture will only have a limited impact on overall inequality in the province as most of the inequality is driven by inequalities among non-agricultural households. However, since such a large proportion of the population in the Eastern Cape is involved in agriculture (broadly speaking) an improvement in agricultural wages and agricultural returns to low income households may be an effective policy to reduce poverty in the province.

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	0.06	1.67	0.10		
Non-agricultural households	0.94	1.03	0.96		
Sum			1.06	0.02	1.08
Population weights					
Agricultural households	0.12	1.67	0.20		
Non-agricultural households	0.88	1.03	0.90		
Sum			1.10	0.02	1.12

Source: Author's calculations, IES/LFS 2000

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

[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).

3.3. Employment levels and unemployment

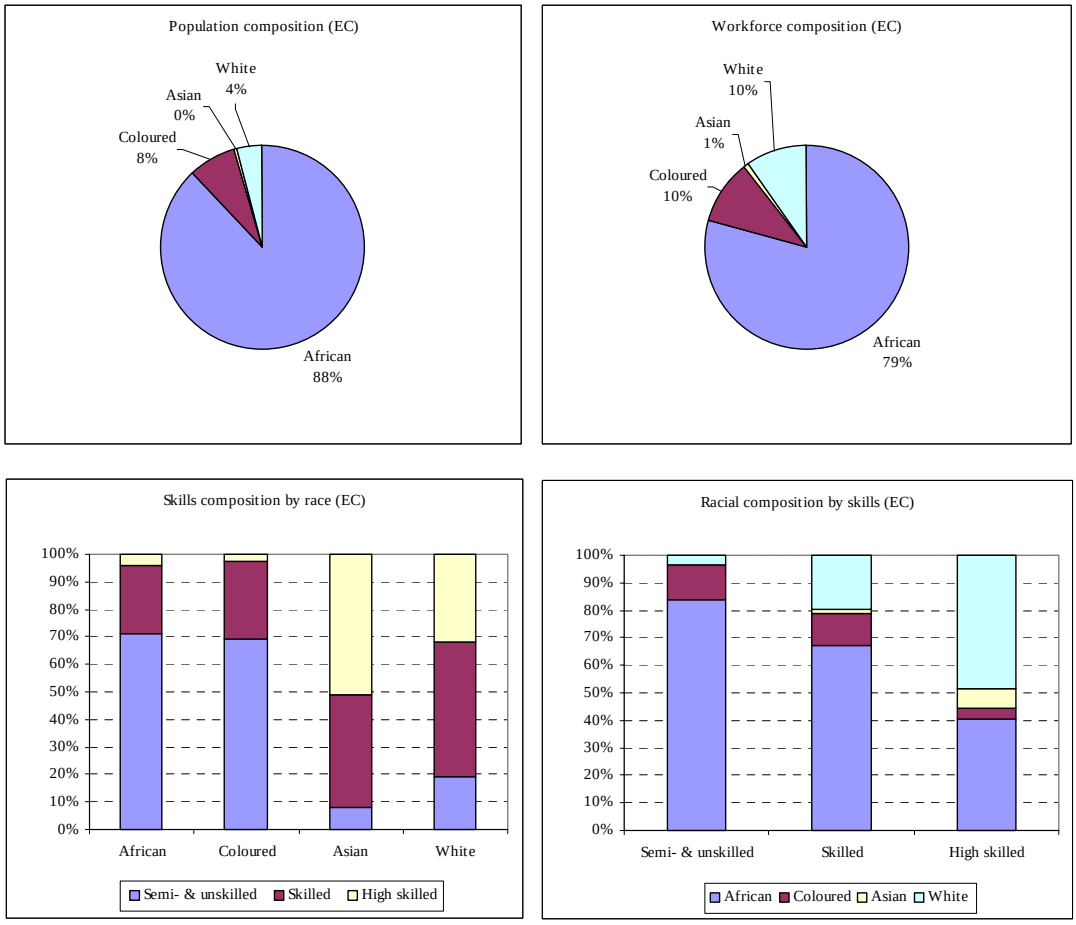
There are approximately 1.43 million workers in the Eastern Cape (IES/LFS 2000).[12] Statistics South Africa distinguishes between eleven main occupation groups in their surveys. These include (1) legislators, senior officials and managers; (2) professionals; (3) technical and associate professionals; (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. However, this is certainly not true for each skill group. African and Coloured workers are typically found in the lower-skilled occupation groups, while White workers are more concentrated around the higher-skilled occupations. Since there are very few Asian workers in the Eastern Cape no conclusions can be drawn about their skills distribution. Clearly much still needs to be done in the Eastern Cape to bring the racial composition of the workforce more in line with the provincial-level population composition at all skills levels.

[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.

[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 the Eastern Cape



Source: IES/LFS 2000

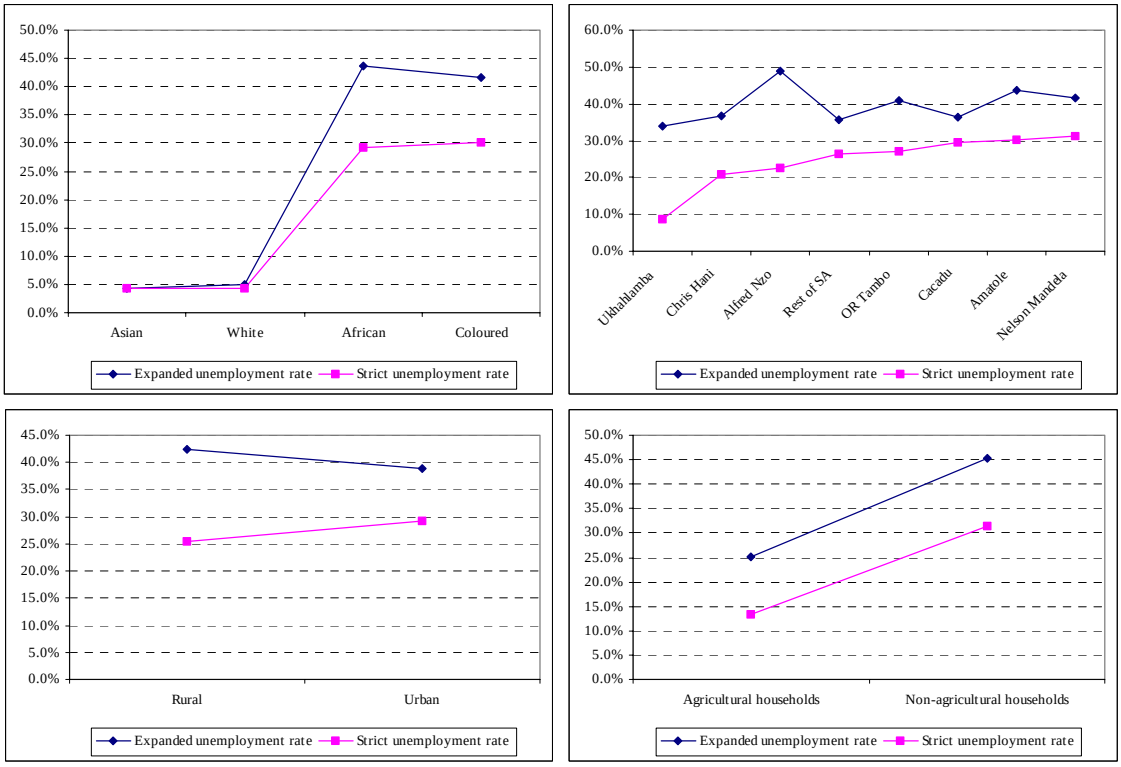
Statistics South Africa uses the following definition of unemployment as its strict (official) definition. The unemployed are those people within the economically active population who: (a) did not work during the seven days prior to the interview, (b) want to work and are available to start work within 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). The Eastern Cape has a population of about 6.82 million people of which approximately 1.43 million people are employed (see footnote 12). Under the strict (expanded) definition about 2.20 (2.07) million people are not economically active, which implies that 322,011 (448,351) people are unemployed. This translates to an unemployment rate of 18.0% (23.4%), which is significantly lower 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. Unemployment rates are very low among White and Asian people (below 5%), while there is also not much difference between the strict and expanded rates. The unemployment rates rise rapidly for African and Coloured people, averaging 29.2% and 30.0% respectively (strict definition). A large gap between the strict and expanded definitions, such as the one for African households, is usually indicative of a large proportion of unemployed that have given up searching for jobs.

A comparison of the municipal areas shows that Ukhahlamba, Chris Hani and Alfred Nzo have strict unemployment rates measuring below the national average. However, the expanded unemployment rates for these three municipalities are (on average) higher than the national expanded unemployment rate. Unemployment rates are highest in the Amatole and Nelson Mandela municipalities. Both these municipalities are more urbanised and probably attract many job seekers from rural areas. The fact that strict unemployment is higher in urban areas than rural areas (29.3% versus 25.6%) further suggests that more of the urban unemployed are actively seeking jobs. In contrast the expanded unemployment rate is higher in rural areas (42.5% versus 39.0%) where more people have given up hope of finding a job. Finally, unemployment is lower among agricultural households than non-agricultural households, probably because many farming enterprises are family-run, hence household members participate actively in farming rather than not working at all.

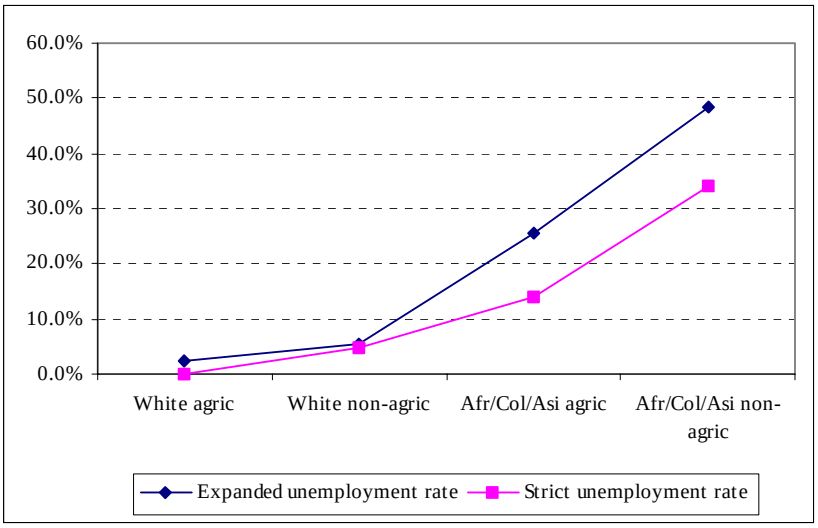
Figure 7: Unemployment rates by population subgroups



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 Coloured/African workers. Nevertheless, the unemployment rate for Coloured/African agricultural workers is lower than the unemployment rate for Asian/Coloured/African 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

The Eastern Cape is fairly unique in South Africa in that a very large proportion of households are involved in farming activities. Using the broad definition of agricultural households it was shown that over 50% of the population reside in agricultural households. However, few of the agricultural household members are formally employed in agriculture, which contributes to the fact that agricultural activities do not represent an important income source to many of these households. Most of these households are involved in own production but complement their income from other sources of income.

The Eastern Cape province is one of the most impoverished provinces in South Africa, with most of the municipal districts experiencing higher poverty rates than the national average. The high incidence of poverty may be linked to the economic neglect of the former homelands Transkei and Ciskei that are located within the Eastern Cape's boundaries. Poverty is especially high among African agricultural households living in rural areas. Small wonder that various municipal districts in the province are being targeted for rural development programmes of the national government.

The high poverty in rural areas and the resulting urbanisation are probably reasons for the high unemployment rates (strict definition) found in urban areas of the Eastern Cape. However, long-term unemployment (expanded definition) remains higher in rural areas. Agricultural households report lower unemployment rates, but this relates to the fact that household members would rather join in the agricultural activities of the household than do nothing. This suppresses wages in the informal agricultural sector.

As far as inequality is concerned income in the Eastern Cape is highly skewed, with a Gini coefficient of 0.70. The Gini coefficient for Black (African, Asian and Coloured) households is 0.62 compared to 0.43 for White households. This suggests that between-racial group inequality is an important source of inequality. Also interesting is that inequality is higher among agricultural households, which can be related mainly to inequalities in the distribution labour income, although the distribution of GOS also contributes substantially to inequality among agricultural households.

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