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SURVIVING UNEMPLOYMENT WITHOUT STATE SUPPORT: UNEMPLOYMENT AND HOUSEHOLD FORMATION IN SOUTH AFRICA

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Abstract

High unemployment in many OECD countries is often attributed, at least in part, to the generosity and long duration of unemployment compensation. It is therefore instructive to examine a country where high unemployment exists despite the near complete absence of an unemployment insurance system. In South Africa unemployment stood at 23% in 1997 and the unemployed have no unemployment insurance nor informal sector activities to fall back on. This paper examines how the unemployed are able to get access to resources without support from unemployment compensation. Analysing a household survey from 1995, we find that the household formation response of the unemployed is the critical way in which they assure access to resources. In particular, unemployment delays the setting up of an individual household of young people, in some cases by decades. It also leads to the dissolution of existing households and a return of constituent members to parents and other relatives and friends. Access to state transfers (in particular, non- contributory old age pensions) increases the likelihood of attracting unemployed persons to a household. Some unemployed do not benefit from this safety net, and the presence of unemployed members pulls many households supporting them into poverty. We also show that the household formation responses draw some unemployed away from employment opportunities and thus lowers their employment prospects. The paper discusses the implications of these findings for debates about unemployment and social policy in South Africa and in OECD countries.

Keywords: unemployment, household formation, South Africa, incentive effects.

JEL Classification: J23, J12, J61, O15.

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1. Introduction

Rigid labour markets and generous and long-lasting unemployment benefits are often claimed to be important factors causing high unemployment rates in continental Europe (e.g. OECD, 1994; Nickell, 1997; Blanchard and Wolfers, 1999). To take another approach to examining these claims, this paper studies the experience of a country with high unemployment rates despite a virtually complete absence of an unemployment compensation system. This country is South Africa which is currently experiencing one of the highest reported unemployment rates in the world. Using a 'narrow' definition of unemployment (including only those who are willing to work and actively searching), South Africa has an unemployment rate of 24% in 1999; using a 'broad' definition (including those who are willing to work but are not searching), the unemployment rate stands at about 38% (see Table 1).[1] These rates are at the very high end of developing countries overall and worse than unemployment rates in all OECD countries (World Bank, 1995: 28-29; OECD, 1997). Moreover, high unemployment coexists with comparatively low levels of labour force participation (around 55% of the working age population) with the result that less than 40% of the working age population are actually working. As documented in great detail by Klasen and Woolard (1999), these high rates of open unemployment are not due to high levels of informal sector or agricultural activities or to other issues of undercounting employment or overstating unemployment.[2]

While urban unemployment rates are already very high, the even higher *rural* unemployment rates (particularly in the former 'homelands') are striking as unemployment rates in rural areas of developing countries tend to be much lower than in urban areas (Todaro, 1997; World Bank, 1995).[3] There is also a large racial differential in unemployment with Africans suffering from a 29% strict and 47% broad unemployment rate in 1997, compared to only 4.6% and 6.7% unemployment rates among whites in 1997 (see Figure 1).[4]

These high unemployment rates constitute a puzzle in two respects. First, how do the unemployed sustain themselves in a country where only some 3% of the unemployed are receiving

[1] There is some discussion as to what is the appropriate unemployment rate to use for analyses of the labour market. Kingdon (1999) argues that the 'broad' unemployment rate is the appropriate one, while others believe that the 'narrow' unemployment rate tracks the performance of the labour market more reliably. For a discussion, see SSA 1996, Klasen and Woolard (1999, 2000). Including involuntary part-time employed would add another 2% to the unemployment rate.

[2] While there have been some questions about the reliability of some of these figures (e.g. ILO, 1996; Schlemmer, 1996), the consistency between the unemployment rates measured in five consecutive household surveys and the general consistency with employment statistics, labour force participation data, various methodologies to capture the informal economy and to elicit information about the activities and means of support of the unemployed confirm these unusually high unemployment rates. See Klasen and Woolard (1999, 2000) for further details.

[3] Those rates exceed, for example, the most careful accounting of unemployment and underemployment in rural areas in India by a considerable margin (Bardhan, 1978, see also Fallon and Lucas, 1997).

[4] Throughout the paper, we use the currently used descriptions of population groups in South Africa. We refer to black South Africans as Africans, people of mixed-race origin as Coloureds, people of Indian and other Asian origin as

unemployment support at any one point in time?[5] Second, while it may be the case that urban unemployment rates are related to adverse macroeconomic shocks, the legacy of *apartheid*-era distortions, and growing labour market rigidities (e.g. Fallon and Lucas, 1997), how can it be that unemployment is so high in *rural* areas where there is no enforced labour regulation(Labour Market Commission, 1996), and where wages could (presumably) freely adjust to equilibrate labour demand and supply.

This paper investigates these questions and shows that the unemployed attach themselves to households with adequate means of private or public support to ensure access to basic means of survival. These location decisions often lead the unemployed to stay in, or move to, rural areas where the nature of economic support tends to be better which can thus partly account for the high rural unemployment rates. At the same time, they leave most of the unemployed and the households supporting them mired in deep poverty, with some unemployed facing destitution. In addition, these coping strategies appear to negatively influence search and employment prospects as the location of economic support is often far away from promising labour market opportunities.

Apart from the obvious relevance of the findings to South African unemployment and social policy (see Klasen and Woolard, 1998), the findings of the paper are of relevance also to debates about unemployment support and social policy in OECD countries (e.g. OECD, 1998; Murray, 1984; Ellwood and Bane, 1985, Moffitt, 1992; Atkinson and Micklright, 1991; Gregg and Wadsworth, 1996). As a natural experiment of a country with only negligible access to unemployment insurance, it sheds some light on the consequences of the lack of such a support system on incentives and employment prospects of the unemployed as well as their welfare and the welfare of those who support them. Moreover, these findings may also contribute to debates about Southern European patterns of unemployment, particularly among the young, where lack of public support for the unemployed young also appears to lead to marked changes in the household formation patterns of the unemployed (mainly a long delay in leaving the parental home and deferred marriage and child-bearing) and appears to contribute to locational rigidities in the labour market (Gallie and Paugham, 2000; Bentolila and Ichino, 2000).[6]

This paper is organised as follows: section 2 discusses the relevant literature on unemployment and household formation, while section 3 provides some background to South

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Indians, and people of European descent as whites.

[5] The Saldru survey finds that about 2.5% of households containing unemployed people are receiving unemployment support (it does not attribute this income to a specific person within the household). ILO (1996) suggests that about 600,000 (or about 12% of the unemployed) received some unemployment support over the course of the year 1992. The two figures can be reconciled, knowing that the maximum amount of time the UIF pays out is 26 weeks, and recognising that the actual pay-out time is often much shorter (for workers with short unemployment spells or those who do not qualify for the full 26 weeks due to an insufficient prior work history).

[6] See also a recent article in the *Economist* about the high propensity of Italian males to live with (or very close to) their

Africa and the data used. Section 4 examines descriptive statistics, section 5 specifies a multinominal logit model relating employment status to household formation, and section 6 investigates the consequences of these household formation decisions on incentives to search and on the welfare of households hosting unemployed members. Section 7 concludes with policy implications for South Africa and OECD countries about the incentive and welfare effects of various unemployment policies.

2. Unemployment and Household Formation: Literature and Framework

Before proceeding to the empirical analysis of the South African case, it may be useful to briefly consider the existing literature on unemployment and household formation and present a simple theoretical framework for the ensuing discussion.

Most empirical analyses of incentive effects associated with length and generosity of unemployment benefits focus on the unemployed individual (e.g. Atkinson and Micklright, 1992; Mortenson, 1977; Steiner, 1997). More recently, the impact of the household on unemployment has been brought in in two ways. First, household resources of other members of the household have been included in analyses of incentive effects. These studies found that the availability of other household resources may also raise reservation wages and thus prolong search and unemployment durations although the size of the effects is a matter of some debate (e.g. Atkinson and Micklright, 1991; Arulampulam and Stewart, 1995). Second, the distribution of unemployment across households has recently received some attention in a literature examining employment and unemployment polarisation and thus the welfare consequences of unemployment (e.g. Gregg and Wadsworth, 1996; OECD, 1998). While both literatures enrich the debates about unemployment, they tend to treat the household as exogenous, although several studies mention the possibility that household formation may be a result rather than a cause of labour market outcomes (OECD, 1998: 8; Bentolila and Ichino, 2000).

At the same time, there exists a theoretical and econometric literature that examines the determinants of household formation and transfers between households that can shed some light on the questions examined here. McElroy (1985) considers a Nash-bargaining model of family behaviour that jointly determines work, consumption, and household membership, in particular the decision whether a young male resides with the parents or on his own. In this model, the location decision of the youth (alone or with parents) as well as his labour supply decision are considered jointly and she finds that parents insure their sons against poor labour market opportunities. While drawing from insights of these models, we deviate from this framework as we take the employment

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mothers (Economist, 2000).

situation as exogenous and then consider the optimal residential decision as a result.

Rosenzweig and Wolpin (1993, 1994) study the resource allocation of parents in the US towards their children in the form of transfers and co-residence. They also consider the impact of own earnings of the children, public transfers and fertility decisions of their children on these resource allocations. They find that there is some limited trade-off between parental and government aid to children and that unemployment significantly increases the chance of staying with one's parents or receiving a transfer.[7] While using some insights from these models, we focus on the location decision of the individual rather than his/her parents. Moreover, we broaden the analysis to consider not only parents but other relatives or even non-relatives as potential receiving households, while we limit the analysis to residence decisions as inter-household transfers to support an unemployed relative play a negligible role on the South African context.[8]

Finally, there is a literature on household formation that is particularly focused on the price of housing. Börsch-Supan (1986) finds that housing prices significantly influence the formation of households. Ermish and Di Salvo (1997) find that own income increases household formation, parental income reduces it, and unemployment also serves to reduce household formation of young people in Britain.[9]

Using insights from this literature, we consider the following framework for the empirical analysis. We take the labour market situation as given and consider the residential decision of the individual. In particular, we want to consider the decision of forming one's own household versus attaching oneself to the household of parents, relatives, or friends. The individual is assumed to maximise a utility function subject to a budget constraint that considers the incomes available to that individual in the various possible household arrangements. If living on one's own, the arguments in the utility function only include wages, non-wage incomes, and prices, while other considerations are added when being attached to another household. They include a privacy cost to being attached to another household which presumably rises with age, education, and being married (see Rosenzweig and Wolpin, 1993, 1994), but include the additional benefit of getting access to a

[7]Another literature closely related to the topic investigated here deals with the household formation and dissolution decisions associated with welfare in the USA. In this well-known debate, Murray (1984) and others charged that AFDC was splitting up families by penalising two-parent families. Ellwood and Bane (1985) and Ellwood and Summers (1986) suggested instead that more generous welfare payments were having minimal effects on marriage, divorce or birth rates, but their main effect is to allow single mothers with children to form their own households instead of forcing them to live with their parents. They suggest that in a world without welfare many single-mothers would be forced to live with their parents, and many others would be extremely poor, while the incidence of single motherhood or illegitimacy would be less affected.

[8] Remittances do play a significant role in South Africa, but usually in the form of a working single individual remitting funds to his/her family, but not a family sending resources to support an unemployed individual (see May 1996, May et al. 1997).

[9] In contrast, Richards et al.(1987) find that higher income of the parental household increases the likelihood of the children living alone and the labour force data do not significantly influence the nature of transitions from household

share of the incomes of the household to which one is attached. In addition, one benefits from sharing in the economies of scale of being in a larger household. For example, we can simply assume that the share each person can get access to is proportional to the scale-adjusted household income per capita.[10] A further cost to being attached to another household may however be that one is thereby bound by the location of that household and may therefore face reduced labour market opportunities if the household is in a region where there is little demand for the labour the individual provides.

Thus the framework we are considering is the comparison between the indirect utility functions of living on one's own and being attached to another household:

$$V(\text{alone}) = f(w, p, I)$$
$$\qquad\qquad + \; - \; +$$

$$V(\text{attached}) = g(w, p, I, c_p(\text{age, education})\, \delta Pr(w), Y/n^{\theta})$$
$$\qquad\qquad + \; - \; + \quad - \quad - \quad - \quad +$$

where w is the wage rate (zero in the case of unemployment), p prices, I non-wage income, c_p refers to the privacy cost which is assumed to rise with age and education[11], $\delta Pr(w)$ refers to the discounted expected value of lost wages due to attaching oneself to a household where employment prospects are scarce, Y/n^{θ} is the scale-adjusted per capita income of the household one is attached to (which can include market and public incomes). Being employed and earning higher wages should increase the likelihood of living on one's own as it becomes relatively more attractive to avoid the privacy costs, while the benefits to being attached to another household are comparatively smaller.[12] Conversely, being unemployed should reduce the attractiveness of living alone as now the access to income from other household members looms larger in the calculation of relative benefits. Being older and married should also reduce the likelihood of being attached, while the higher the (scale adjusted) per capita income of the household one can go to should increase the likelihood of being attached. Finally, the costs of being attached to a household in a poor labour market should matter less for unemployed people who already face poor labour market opportunities as their forgone earnings are comparatively smaller.

This very simple framework should allow us to study how the unemployed in South Africa

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types in the US.

[10] We model this simply as the combined incomes of everyone else in the household divided by the scale-adjusted household size (the number of household members to the power 0.6; the results are, however, not sensitive to the choice of the exponent).

[11] This privacy cost could additionally be related to marital status. But since marital status is usually endogenous (many people combine leaving home with marriage), we do not include it as a separate exogenous variable. In sensitivity analyses, we have included it as a separate variable (see below).

[12] If we assume negative partial derivatives on the various influences. Moreover, realistically one would assume that a person earning a wage will get viewer resources from others in the household than before. We abstract from this here, but it may be one of the reasons why employed people typically set up their own household (see below).

cope with their fate which is examined in more detail in the next three sections.

3. Background and Data

In may be useful to briefly summarise some key features of the South African economy and labour market. South Africa is a middle income country whose economy depends to a considerable extent on mining and mineral activities, a sizeable manufacturing sector serving the domestic and regional markets (about 20% of total employment), a large service sector (including a large governmental sector), a comparatively small, capital-intensive, commercialised agricultural sector and a very low-productivity, small-scale subsistence agricultural sector in the former homelands (with all of agriculture producing about 5% of GDP and absorbing some 10% of employment). The *apartheid* system in place until the transition to black majority rule in the early 1990s had profound effects on the economy and the labour market including:[13]

-discriminatory access to employment in the formal labour market, with whites being favoured by better education systems, job reservations, and residential and workplace restrictions (pass laws);

-an increasing capital-intensity of production in all sectors of the economy, promoted by an increasing shortage of skilled labour, subsidies on capital, and attempts by the *apartheid* state to lessen the dependence of the 'white' economy on unskilled African labour;

-restrictions on the movement of Africans (through pass laws and restrictions on housing and urban amenities) forcing the majority of Africans into the homelands; this also contributed to the splitting up of households where working-age members would be allowed to live and work in the cities of white RSA and their dependants would be forced to reside in the homelands and be dependent on remittances;

-several legislative measures to eliminate the previously widespread practise of share-cropping, and 'squatting' of Africans on white-owned land[14];

-prohibitions and restrictions on formal and informal economic activities by Africans, especially for those residing in non-homeland RSA;

Partly as a result of the inefficiencies and distortions generated by some of the above policies, per capita growth declined dramatically from 5% in the 1960s to 2% in the 1980s and less than that in the 1990s. Employment growth fell to 0.7% in the 1980s and turned negative in the 1990s.[15]

[13] See Lundahl (1991), Fallon (1993), Fallon and Lucas (1997), and ILO (1996) for details.

[14] Squatting was an arrangement where Africans rented a portion of the land (or sometimes, the entire farm was rented out in this way) and paid a fixed rent for doing so. For a discussion see Wilson (1971).

[15] Some observers have also pointed to increasing capital intensity, rising union wage premia, and a number of external shocks (falling gold prices and financial sanctions) as further factors causing the slowdown in employment growth in the 1980s (e.g. Fallon and Lucas, 1997).

With the labour force growing at about 2.5% per year, low and recently negative employment growth ensured that unemployment increased very rapidly in the 1980s and, by the 1990s reached the levels observed in Table 1. Moreover, the apartheid legacy (esp. with regards to education and the labour market) is responsible for the fact that unemployment, employment, and earnings continue to differ greatly by race which is a more important predictor of employment prospects and wages than any other factor (including age, gender, education, experience, or location, see Klasen, 2000, and Fallon and Lucas, 1997). [16] The decline in job creation in the 1980s and 1990s also led to a steep age profile of unemployment, with unemployment rates among the young being 5-6 times higher than among older age groups (Klasen and Woolard, 1999, 2000). Apartheid policies are also largely responsible for the uneven population distribution of Africans, many of whom (including most of the elderly) are still crowded in the areas of the former homelands.

Finally, despite the lack of a system of unemployment support or other safety nets targeted at the unemployed, the one source of social security in South Africa comes in the form of fairly generous non-contributory means-tested old-age pensions (Case and Deaton, 1998, Ardington and Lund, 1995). Since many of the elderly live in rural areas, particularly in the former homelands, these pensions support many households in those areas, a subject examined in greater detail below.

The data used for the analysis are drawn from two cross-sectional households surveys. For 1993, the data are drawn from the SALDRU survey, which is similar to conventional Living Standards Measurement Surveys that are conducted with support of the World Bank in many developing countries. It covered 9000 households (in 360 clusters), and included detailed questions on incomes and expenditures, including modules on informal and subsistence activities.

For 1995, we rely on the October Household Survey covering 30 000 households (this time in 3000 clusters[17]) and focused on labour market and informal sector activities. It has the added advantage that it included an Income and Expenditure Survey covering 98% of the households covered by the OHS, thereby allowing a careful analysis of incomes and expenditures as well.[18]

4. Descriptive Statistics

[16] This predominance of race as a factor 10 years after the end of all statutory racial discrimination in the labour market (influx controls, job reservations, and colour bars were lifted in the 1980s), is mostly related to vastly different quality of education (Case and Deaton, 1996b), the continued impact of past discrimination in the labour market which still has a powerful influence on the shape of the existing labour force, some persisting discrimination in the labour market (likely to have persisted until the early 1990s at least), and the absence of any significant job creation which could have hastened a change in the racial composition of the labour force.

[17] The impact on standard errors in a clustered sample of this nature is taken account of in the econometric results. For details, see Deaton (1997).

[18] Despite small differences in sampling and questionnaire design, Klasen and Woolard (1998a) find that the two surveys are broadly compatible and yield results consistent with other sources of employment data, so that it they present a coherent and consistent picture on the state and determinants of employment and unemployment in South Africa.

In motivating the econometric analysis, this section provides some descriptive statistics on how the unemployed are able to get access to resources despite the near absence of unemployment insurance.[19] This can be done using a person-level and household-level analysis. The former investigates in what types of households unemployed individuals live; the latter asks what share of households contain various combinations of employed, unemployed, and inactive (out of the labour force) individuals.

The person-level analysis is shown in Table 2. It shows that about 60% of the unemployed live in households where someone is employed. Another 20% of the unemployed live in households that receive remittances from an absent household member, which is related to the migrant labour system created by *apartheid* era restrictions on movements. Thus about 80% of the unemployed are able to depend on labour income from a present (or absent) household member, and only 20% of all unemployed (or about 0.8 million) live in households with no connection to the labour market whatever. This is a very small share indeed, certainly when compared to countries such as the UK, Germany, or Ireland where more than 50% of the unemployed live in households where no one else is employed (OECD, 1998). Among rural Africans, the largest group among the unemployed, the relations are similar, although a greater share rely on remittances, and fewer on employment income in the household.

Table 3 examines the distribution of employed and unemployed within households. With high unemployment rates such as those prevailing in South Africa, we would expect a high proportion of households with no connection to the labour market. But this is not the case. Table 4 show that the vast majority of households (70%) contains no unemployed person. Given the racial differences in unemployment rates (Figure 1) and the near absence of interracial households, most white and Indian, and a large share of Coloured households are among this group of households with no unemployed. 20% of households contain one unemployed person; very few contain more than 3 unemployed. In 15% of households, no one is employed, but they do receive remittances. At the same time, 12.6% of households do not receive remittances and contain no one who is employed. Thus these households have no connection to the labour market. This is again much lower than in OECD countries. In OECD countries, the average unemployment rate stood at 7.6% in 1996; yet 18% of all households which included a working age person contained no one who is employed. In contrast to South Africa, a much higher jobless rate produces a much lower rate of jobless households.[20]

[19] See ILO (1996) and Fallon and Lucas (1997) for a similar, but somewhat more cursory analysis.

[20] The comparison understates the difference as the South African figure includes pensioners living alone where we would not expect a connection to the labour market (see Table 6), while the OECD figures do not. Including them in the OECD figures would, for example, raise the share of households containing no one in employment to about 29% in

The two analyses together imply that employment and unemployment are much more widely distributed across households than in OECD countries. This is particularly surprising given the fact that, due to racial differences in unemployment, white households (and, to a lesser extent, Indian households) are largely insulated from the burden of unemployment. This implies that among African households, the burden of unemployment is particularly widely dispersed, with many households containing one unemployed, and relatively few more than one. In the next section we will examine how this wide dispersion of unemployment is achieved through shifts in household composition. At this stage, it suffices to note that the vast majority of the unemployed and the vast majority of households containing unemployed persons have access to labour income and thus provide an important private safety net. At the same time, this private safety net does not cover everyone and leaves some 20% of the unemployed and some 12% of households without access to labour income.

What do the households without access to labour income live off? Some 25% of the 1.1 million households with no connection to the labour market[21]consist of predominantly white retired persons relying on private pensions or private incomes; it is the other 75% that are of concern and their sources of incomes are shown in Table 4, which only examines sources of incomes for African households with no labour market connection. About 60% of these households receive the (non-contributory means-tested old age) social pension, disability, or child maintenance grant (with the social pensions being by far the most important source);[22] another 7% receive a private pension or unemployment insurance. For those households that receive none of these sources, the incomes are extremely low (only R104 or $35 per adult equivalent, putting them in the poorest decile), and include minimal agricultural incomes, some minor wage or self-employment income (for employment of less than 5 hours a week), some private income, or no incomes at all.[23]

Thus the private safety net for the unemployed also includes state support in the form of old-age social pensions and other social grants paid out to household members other than the

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Germany.

[21] This is consistent with the figure of 835,000 unemployed living in households with no connection to the labour market (Table 3), as nearly 60% of the 1.1 million *households* with no connection to the labour market contain no one who is employed, but also no one who is unemployed, i.e. everyone is out of the labour force. These households consist mostly, and in nearly equal absolute numbers each, of white and African pensioners living alone (suggesting, of course, that a much larger percentage of white than African pensioners live alone).

[22] In addition, many households that contain employed members also receive state support in the form of social pensions and disability grants. All in all, 31% of the households containing at least one unemployed receive state support; equivalently, 34% of all unemployed live in households with state support.

[23] The minimal wage and self-employment income is included as people working fewer than 5 hours a week were not counted as employed. This last group of households did report expenditures but no incomes which is either due to underreporting of incomes in the survey or the fact that these households indeed earn no incomes currently and are drawing down on assets they may have or incurring debt. It is a small number and thus gives as some reassurance that the survey is tracking most income sources.

unemployed.[24] But even this indirect public safety net does not stretch far enough to include everyone and leaves a significant portion of households in utter destitution.

5. Unemployment and Household Formation: Evidence

Knowing that (virtually) all unemployed find themselves in households with some market and non-market resources of other households members begs the question how this is achieved. In this section we investigate to what extent this is a results of explicit household formation strategies of the unemployed.

In an exploratory analysis in Table 5, we have classified persons of working age according to their position in the household, which we measure via their relationship to the household head.[25] If we hypothesise that unemployed persons are likely to attach themselves to another household to seek support we would not expect many unemployed to be household heads or spouses of the head but instead to be living with their parents or other relatives (and thus their relation to the household head would be child, sister, cousin, nephew, or niece of the household head).

We grouped all possible relationships to the household head into five groups: they are either the household head or his/her spouse ('head/spouse' in Table 5), they are children less than 25 years old living with their parents ('kid<25'), children 25 or over living with their parents ('kid>25'), people living with siblings, living with other family (e.g. they are nephew, niece, cousin, parent, grandparents, uncle, aunt, or grandchildren of the household head) or non-family.

The results of the table are striking. 75% of the employed are either household heads or their spouses, suggesting that employment ensures that people can set up independent households. We compare this to the two types of unemployed, the strict and broad unemployed. To investigate the difference between those two types of unemployed, we treat the two categories throughout the subsequent analysis as exclusive categories, i.e. the broad unemployed only include those that are willing to work but have given up looking, and the narrow only those that want to work and are actively searching.

In contrast to employed people, for the strictly (broadly) unemployed, the household position is very different. Only 34% (30%) of them head households or are married to household heads, while a surprising 26% (26%) of them are children *aged 25 or over* still living with their parents.[26] Another 23% (26%) are children below 25 living with their parents, and 7% (7%) live with siblings,

[24] This is again in contrast to OECD countries. While also there some 60-90% of households with no one in employment rely on social transfers, most of these transfers consist of unemployment support to the unemployed household member (OECD 1998).
[25] In all the analysis of this section, we rely on the 1995 October Household Survey. We replicated the analysis with the 1993 SALDRU survey and found very similar results. For details, refer to Klasen and Woolard (1998).
[26] These figures are strikingly similar to the situation in today's Mediterranean countries. See Gallie and Paugham (2000).

aunts, or cousins, and another 10% (11%) live with other family.

Thus the unemployed appear to have a lower propensity to set up their own households; instead, they stay with their parents, or move in with close (or more distant) relatives. Similar to the findings of Ellwood and Bane (1985) and Rosenzweig and Wolpin (1993, 1994) which showed that less generous welfare payments led to a higher incidence of single mothers living with their parents, the absence of unemployment support in South Africa prevents the unemployed from forming their own households. This can then also explain the contrast between the distribution of unemployment among households in OECD countries and South Africa. Support to the unemployed in OECD countries allows households with no one in employment to persist and thus accounts for their high share; in South Africa, many of these households could not exist and the unemployed distribute themselves among household with access to private and public incomes.

To investigate this issue further and place it in the context of the theoretical framework discussed in section 2, we specify a multinomial logit model predicting the likelihood of each relationship to the household head. We distinguish between various destination states including being household head or spouse of the household head (reference category), being a child living with his/her parents, living with other family and living with non-family. In the last two categories, we also distinguish between whether this household is in rural or urban areas to capture the possibility that people may move between rural and urban areas as a result of unemployment.[27] Despite the fairly large number of categories, the regressions do not violate the independence of irrelevant alternatives condition, as determined by a series of Hausman tests.

We include narrow and broad unemployment (with employment being the excluded category) as covariates (again treating them as exclusive categories as described above). We restrict the sample to people in the labour force, thus excluding the inactives.[28] In line with the discussion in section 2, the regressions also control for age, education, race, and the scale-adjusted per capita income of the household one is located in.[29] The regressions are estimated separately for males and females. Table 6 shows the descriptive statistics for the variables used in the model. Using these regressions, we can then predict to what extent employment status affects the relationship to the household head and thus household formation.

[27] For example, a person may move back to an aunt or grandmother in a rural area after becoming unemployed in an urban area. We cannot split each category to a rural and urban component since in some cases, the decision to move in with a certain relative automatically prescribes whether this involves living in rural or urban areas. For example, for children deciding to stay with their parents (or move back to them) this does not allow them to separately choose whether to live in urban or rural areas (as this depends on the location of the parents). For most of the other household relations, such a separate choice is likely to be possible in most cases.

[28] The household relation of the inactives are very much dependent on the reason for their inactivity (e.g. whether it is due to formal education, domestic responsibilities, disability, or retirement).

[29] This is net of one's own income to give a sense of how many additional resources one may be able to draw upon.

This type of analysis only examines the end results of the link between employment and the relationship to household head and can say little about the process that created this outcome. It is possible that unemployment prevented people from setting up their own household in the first place and thus they live longer with their parents than employed persons. Alternatively, they may have moved back to their parents or relatives in response to unemployment.[30] We will investigate this issue further by examining information about migration in the survey and the results of a re-survey of part of the 1993 sample in 1998.

Table 7 show the results for the multinomial logit for males. The results confirm some of the findings of the model. In particular, age has the predicted effect of older people preferring to live on their own rather than be in another household. The influence of income is as expected; the higher the household income, the more attractive it is to be attached to such a household rather than setting up one's own. Education has a varying influence on household formation. While higher education reduces the chance of living with one's parents and with relatives or non-relatives in urban areas, it increases the chance of staying with relatives in rural areas, all compared to being household head or spouse. This provides an interesting contrast between those who attach themselves in rural and urban areas which will be explored in greater detail below.[31]

For the purposes of this analysis, it is particularly important to see that being unemployed significantly reduces the chance of being household head or spouse. Thus the results from the cross-tabulations in Table 5 carry over to the multivariate context. Unemployment either prevents the setting up of a household or leads the unemployed to attach themselves to other households in search of support. These results still hold even if we control for additional variables such as marital status or household size.[32]

This importance of the link between unemployment and household formation is shown in some simulations in Table 8. We compare the simulated effects of being employed, differentiating between African and whites, and being broadly and narrowly unemployed on household formation. *Ceteris paribus*, the switch from being employed to being unemployed reduces the chance of being household head or spouse by about 30 percentage points, which is considerably larger than all other effects in the regression, including the large racial differences in household structure. Instead, the

[30] There is also the (somewhat remote) possibility that unemployment simply leads to a renaming of the household head and thus the relationships to the household head. For example, if the person of the younger generation becomes unemployed, household headship may move up to the parents and they are now called child. Qualitative evidence from South Africa suggests, however, that this is not a likely possibility.

[31] There are also interesting racial differences in household formation patterns in Table 8 which shall not detain us here.

[32] Since marital status and household size are endogenous variables that are themselves influenced by employment status, it is not appropriate to treat them as exogenous regressors. The fact that their inclusion still generates significant results for the unemployment variables suggests that plenty of unemployed married people still live with their parents or with other results and that marriage and setting up a household are far from synonymous in South Africa. The regressions are available on request.

unemployed have a much higher propensity of living with one's parents, although living with other family also is considerably more likely now.

To what extent is this result driven by active migration in response to unemployment, or is it the failure of young unemployed people to leave the home of parents or relatives that is driving the results? The OHS contains information on recent migration (last 12 months) and birthplace migration, but unfortunately does not state reasons for the migration.[33] The migration information yields three distinct patterns of migration as shown in Table 9. The first, among those in employment, appear to have moved to set up their own household. The employed have a much higher propensity to move; about 50% have left their birth place and 91% have done so to set up a household. The second pattern is that among the broad and narrow unemployed, the propensity to migrate is much smaller. Only some 25% of each group has migrated. The vast majority who have not migrated remained in their parental household. Thus unemployment is a powerful force of regional immobility, similar to claims made about regional rigidity in Spanish and Italian labor markets (Bentolila and Ichino, 2000). Third, of those that have moved, most have also set up households though more than half of these were women who joined households rather than male heads of households. In addition, however, a significant minority of other unemployed who have moved have attached themselves to households of family and non-family, presumably in search of support, and some seem to have returned to parental households. Thus this information suggests that the predominant portion of the household formation response to unemployment occurs via staying with the parents, while a considerable minority react to unemployment by attaching themselves to the household of relatives and non-family, and some return to their parents.[34]

In the appendix, we expand the multinominal logit model to distinguish between those that have moved from the town of their birth in each category of the five categories used before (see appendix Tables 1, 2). Also here it is clear that the predominant response to unemployment is staying with one's parents while a significant minority move to join family and non-family, and some return to their parents.

The Africans included in the 1993 SALDRU survey from the most populous province, KwaZulu-Natal, containing some 20% of all Africans in that survey, were resurveyed in 1998. This allows us to see whether the employment status has had an impact on changes in household

[33] Note that birthplace migration is an imperfect proxy of migration in response to labour market events. First, if people stayed in the same town but changed household, this will not be captured. Second, migration could have taken place for other reasons. If children moved with their parents, we assume that this is not of relevance for our analysis as the children did not change household and thus we treat them as if they had not moved.

[34] While this is the most likely interpretation of the table, it is possible that some of the unemployed who live as children could have returned to the parental home (and not be regarded as having migrated since their current place of residence is their place of birth) and also some might have moved with other family or non-family. Given the close correlation with employment status, the interpretation advanced above seems more plausible for most cases.

formation.[35] Table 3 in the appendix shows the results. Those who were employed in both periods were much more likely to become head or remain head of household, while those who remained unemployed or had become unemployed predominantly remained with their parents. A small share returned to their parents in search of support and a much larger share of those that became unemployed remained or became attached to households headed by other family. This also support the finding that the largest household formation response to unemployment is to remain in the parental house while a significant minority adapt by attaching themselves to households of other family.

Another important finding emerges from Tables 7 and 8. When examining the difference between the narrow and broad unemployed and their household formation patterns, the narrow unemployed have a relatively higher propensity to attach themselves to household of relatives and non-family in urban areas (14.7% in urban areas, only 5.1% in rural areas), while among the broad unemployed the difference is much smaller (11.6% in urban areas versus 6.4% in rural areas). Combined with the finding that also the more educated are more likely to find themselves in households of relatives and non-family in urban areas, this suggests that the unemployed differ in their reaction to unemployment. One group with bleaker job prospects, poorer education, and better access to resources in rural areas (relatives in work, pensions, land, etc.), fewer connections in urban areas, deterred by the high costs of urban living, and possibly less motivation remains in rural areas or goes to rural areas to attach themselves to a household of parents and relatives. This group does not engage in search activities and thus ends up among the broad unemployed.[36]

The second group, with better job prospects, less access to resources in rural areas, better connections in urban areas, more education, and possibly more motivation, attaches themselves more often to a household of relatives or non-family in urban areas and then searches for employment. The correlation between attachment to households of relatives or even non-family in urban areas and narrow unemployment would, if it is indeed a result of a conscious household formation decision, suggest a keen desire among this group to be close to jobs and actively seek them; conversely, the correlation between broad unemployment and living with relatives in rural areas may be more motivated by a desire to seek economic support (at the possible expense of job prospects). This would be consistent with the theoretical framework outlined above. People who have a low probability of getting a job will value the certain access to resources (wherever that may be) more highly than the potential losses associated with being in an areas with low labour demand.

[35] With the 1998 resurvey, we have another data point on employment status and household formation, but no information on developments inbetween.

[36] Other factors that may contribute to this segmentation of the unemployed could be language, education, and existence of a household in urban areas to which they could move to.

Conversely, those who believe they can get a higher-paying job will value being in a labour market with higher labour demand and thus adjust their household formation decision accordingly.

The results on migration and household formation (shown in the appendix) are generally in support of the interpretation about the narrow and broad unemployed being drawn from two different groups. First, there is a general correlation between broad unemployment and having stayed in one's town of birth (78% of the broad unemployed have never moved, compared to 73% of the narrow unemployed). Moreover, there is a positive correlation between narrow unemployment, having moved to urban areas, and being attached to a household headed by other family. 7.5% of the narrow unemployed have moved to urban areas and attached themselves to a household of relatives or non-family, compared to only 1.8% who have moved to rural areas to attach themselves to such households. In contrast, only 4.2% of the broad unemployed have moved to urban areas to attach themselves to such households, compared with 2.2% who moved to rural areas. This is consistent with the view that the group with better labour market prospects are more likely to move to urban areas and search, while those with fewer prospects are relatively more likely to remain in, or go to rural areas to seek economic support and not search.

Tables 10 and 11 show the respective regressions and simulations for women. Here the impact of unemployment on household formation is somewhat more muted, presumably due to the fact that it is easier for an unemployed female to be spouse of a household head than for an unemployed male to be household head. But the same household formation effects are still present. Moreover, the difference between the narrow and broad unemployed also appears to be present among females.

Household formation responses of the unemployed thus strongly influence the household and locational pattern of unemployment. Unemployment in many cases precludes the maintenance of an independent household and thus leads the unemployed to seek support in other households. This happens in the form of staying in the parent's home or moving back to parents and relatives in response to unemployment. Employment, on the other hand, allows the creation of a new and independent household, often in a different location.

This can now partly explain the puzzle of rural unemployment.[37] An unemployed stays in, or moves to rural areas primarily for the economic support he or she can get there, rather than the (very limited) labour market opportunities. Potential economic support for the unemployed is particularly high in rural areas, esp. in the former homelands, as apartheid residential policies ensured that most families were forced to take up residence there and since the social pensions paid to the elderly, who live predominantly in those areas, now provide considerable public support for

[37] See also Klasen and Woolard (1998) for other reasons for high rural unemployment in South Africa.

remaining there. This draws many unemployed away from most employment opportunities and may thus provide a disincentive to search and find employment, an issue that is investigated in the next section. Moreover, it appears that those who choose to relocate or stay in rural ares are self-selected to the extent that they have lower employment prospects (and possibly motivation) to begin with. Reducing unemployment among this group will therefore be a particularly challenging task. Conversely, those who attach themselves to households of relatives in urban areas and are actively searching are likely to be among the first to find employment.

6. The Consequences of Household Formation Decisions of the Unemployed

The analysis so far has suggested that location decisions of the unemployed are heavily influenced by the availability of economic support and may therefore lead them away from places where it is profitable to search for employment. In this section we want to examine two consequences of this household formation behaviour. The first is to investigate the impact of this behaviour on the welfare of the unemployed and the welfare of households hosting them. As already mentioned in section 4, this private safety net that operates via household formation does not work for everyone. While most unemployed are able to get access to resources this way, the amount of resources varies greatly and some are facing utter destitution. Thus this private safety net generates considerable risks for those who have to rely on it.

In addition, those who are the providers of the safety net also have to shoulder a considerable burden for their willingness to support the unemployed. This is shown in Table 12 which shows a simple regression of annual household income per adult equivalent among Africans, using the 1995 Income and Expenditure Survey. Adding an unemployed member to a household reduces adult equivalent expenditures by over R1600 (over R500 for adding one more person based on household size, and nearly R1100 for that person being unemployed). This is brought out even more forcefully in Table 11 which shows a strong correlation between unemployment and household poverty. In 1995, some 65% of the broad and 59% of the narrow unemployed found themselves in households situated in the poorest two quintiles (defined by adult equivalent expenditures). 51% of the people in the poorest quintile live in households where no one is employed, and only 17% of the working age population in the lowest quintile actually has a job.

With rising joblessness in the 1990s, this burden of unemployment on households is increasing in South Africa. As unemployment is rising, so is the number of unemployed people relying on other household members for their resources. This is shown in Table 14 which shows that the share of households that contain one or more unemployed has rising from 30% to over 35% of all households between 1993 and 1997. While the total number of households has increased by

some 9%, the number of household having to support four or more unemployed has risen by about 50%.

Thus the private safety net ensures basic survival for most unemployed but this system drags the benefactors into poverty and rising joblessness increases the strain on this private safety net considerably. More and more people are involuntarily crowded into households and have to share the resources available.

Another consequence of the location decision of the unemployed is the potential impact on search behaviour. To further investigate whether the nature of economic support received by the household provides a disincentive on labour market participation and search, we examine participation and search decisions as well as employment prospects at the household level.[38] In particular, we estimate a model predicting participation in the labour force, search activities, and employment prospects based on income sources of the household and other labour market characteristics. The first regression could indicate to what extent households rely on the labour market for resources, the second gives an impression of the influences on search costs for the unemployed, and the third should shed some light on the ability to get employment offers and on the willingness to accept such offers.

Since we specify the model at the household level, we try to predict the share of adults in a household who report to be in the broad labour force (regression 1 in Table 13), the share of those in the broad labour force who are also in the narrow labour force (employed or searching, regression 2), and the share of those in the narrow labour force who are employed (regression 3), respectively. Since the causality between remittance income and labour market behaviour may run in both directions (i.e. household may receive remittance income *because* they have no one employed), we have used the existence of an absent members of a household as an instrument for remittance income and estimate the model using Two Stage Least Squares.[39]

Table 13 shows the results. Age, education, gender, and location have the expected signs and are all significant. Remittance income is negatively correlated with labour force participation, search activities, and employment prospects. Similarly, pension and non-wage private income in the household are also correlated with lower labour force participation, search activities, and employment prospects of the adult household members. This effect is the strongest in the second regression suggesting that these income sources have the strongest impact on reducing search activities. Since some 31% of all household containing unemployed people receive such state

[38] We examine this question at the household level under the presumption that labour force decision are taken at the household level, with individuals taking the decisions of others into account.

[39] As a benchmark, we ran Ordinary Least Squared regressions using the same variables (and without the instrument). The coefficients do not differ much from the OLS regressions. The instrument passes tests for relevance (it significantly

support, this finding should be of some concern to policy-makers.[40]

These findings could either mean that remittance, pension and non-wage private income raise the reservation wage. [41] Alternatively, they could mean that unemployed people attach themselves to households with pension or remittance income, which might reduce search activities and employment prospects if the household receiving pensions and remittances is in rural areas.[42] This could be due to high search costs there which reduce search activities or due to low employment prospects which would lower employment rates. Given the discussion above on the endogeneity of household formation, this latter interpretation is more likely and does indeed suggest a pattern of household formation that takes some unemployed people away from job prospects and into households with pensions and remittances in rural areas which then causes them do cease searching.[43]

We also examine the determinants of reservation wages of the unemployed to examine whether pension and private incomes constitute a direct disincentive to search by raising the reservation wage. Table 15 shows the results of the regressions for monthly reservation wages, based on the 1993 SALDRU survey.[44] We use the Heckman correction for this regression to address the sample selection bias of the reservation wage equation. We use the a worker-specific (by province, age, gender, and education group of the worker)[45] local unemployment rate and urban location as identifying variables for the selection equation. Although the regression coefficients do not differ greatly between the OLS and the Heckman regression, the Wald test indicates that

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influenced the remittance variable proxied for), and it passes the Overidentification Restriction Test.

[40] Similarly, some 35% of the unemployed live in households which receive state support.

[41] It should, however, be pointed out that pension income is likely to have fewer disincentive effects than other forms of support to the unemployed (such as direct unemployment benefits) as the pension income of an elderly member of the household will not be reduced when an adult member of the household finds employment.

[42] The negative coefficients on household incomes do not mean that these forms of income serve to increase unemployment. In fact, to the extent that pension, private, and remittance income reduces labour force participation, it contributes to *lowering* the unemployment rate as it reduces labour supply and relieves pressure on the labour market; the negative coefficient in regression 3 also says nothing about influence on the unemployment rate but only says something about who among the narrow labour force is likely to get employment. Only to the extent that other household income (such as pension income) reduces search activities and employment of adult members of households, it may contribute to increasing the unemployment rate by raising reservation wages and by increasing rigidities in the labour market. An alternative interpretation could be that those with other forms of income are searching less actively and thereby are less successful in securing employment.

[43] Table 10 also supports our earlier contention about the two groups of unemployed in the following two ways. First, the high and significant coefficient on education and on urban and metropolitan areas in regression (2) supports the finding that there are two groups of unemployed. Those with better job prospects (for which education may be a good proxy) are more likely to go to urban areas, attach themselves to relatives and search, while those with worse job prospects fall back to rural areas and do not search. Second, regression (3) shows that employment prospects are indeed worse for those with lower education, and for those who have other income sources, which may suggest that those who attach themselves to other households with pension or other income correctly perceive their lower employment prospects.

[44] Unfortunately, OHS 1995 did not ask this question.

[45] Each worker was assigned an unemployment rate which was the unemployment rate prevailing among the same age, education, gender, and province group to which the worker belongs

selectivity is indeed a problem so that it was right to address the potential selectivity issue.

While province, race, gender, age, and education have large and significant impact on the reservation wages (as one would expect), pension and remittance incomes do not appear to raise reservation wages. Only self-employment income and private income is associated with higher reservation wages. Thus we find little evidence of a direct disincentive effect of pension and remittance income on search activities and employment prospects through higher reservation wages.[46]

This provides further confirmation that the linkages between pension and remittance income and search and employment prospects operates via changes in household formation rather than directly via an increase in the reservation wage. The unemployed get stuck in rural households to get support from pensions and remittances and thereby reduce their search and employment prospects. The direct impact of household income on search and employment prospects, operating via an increase in the reservation wage, does not appear to be of significant magnitude (and may not exist at all).

6. Conclusion

We started out by posing the question about the factors that can explain the persistence of high unemployment in rural areas in a situation of flexible labour markets and no significant unemployment insurance.

We were able to show that the unemployed are dispersed widely among South African households ensuring that most of the unemployed have access to employment income or state transfers received by other household members. While this insures some resource access, this private safety net does not cover everyone. Moreover, it drags many of the households supporting unemployed people into poverty and involuntarily increases household sizes.

One interesting policy issue emerges immediately from this. If South Africa succeeded in substantially reducing unemployment, this would then lead to many of the previously unemployed seeking to set up independent households which, in turn, would drastically increase the demand for housing and associated municipal services. The current strain on the private safety system would make way for strain on the housing market and municipal services.

The mechanism allowing for the wide dispersion of the unemployed is through adjustments in the household boundaries. Unemployed people never get to be household heads or spouse (or cease to be household head) and stay in (or move to) households of parents of relatives. The

[40] We know of no other study that has examined the impact of pensions on reservation wages; given the importance of the issue, the policy debates on the effects of pensions may take note of this finding.

information on migration and a resurvey on part of the sample suggest that this response operates mainly via staying in the parental household, thus reducing labour market mobility considerably. Given that many of these households are in rural areas, and are being sustained by pensions and remittances, unemployed (esp. the less educated and employable ones) will go to (or remain in) rural areas to draw on these resources which thereby reduces their search activities and employment prospects. This prolongs their unemployment spells and leads to the emergence of rural unemployment which is not related to rural labour markets but simply to the location decisions of the unemployed. While the social pensions and other state support thus are able to support the unemployed (among other poor people, see Deaton and Case, 1997), they appear to contribute to lower labour market mobility and may, from that perspective, be inferior to direct support to the unemployed person, wherever they are.[47]

At the same time, we find no evidence of a direct disincentive effect of household income on reservation wages which supports our contention that the reduced search activity of households receiving pension and remittance income is a result of the location decision of the unemployed.

Several important policy conclusions emerge from these findings. First, unemployment can persist at very high levels even in the absence of unemployment support. Similar to the claim made by Ellwood and Bane that the absence of welfare would not solve the problem of single-parent households, we find that the absence of unemployment support will not solve the problem of unemployment.

Second, a private safety net can, in theory, partly replace public support for the unemployed. But this private safety net does not cover everyone and leaves some unemployed and their dependants in utter destitution. Moreover, it drags many households supporting the unemployed also into poverty. And finally, in the South African case, it heavily depends on the existence of state transfers to pensioners which indirectly supports the unemployed.

Third, reliance on a private safety net generates disincentive effects that can prolong unemployment. In particular, it forces the unemployed to base their location decisions on the availability of economic support rather than on the best location for employment search. In the South African case, where a lot of economic support (esp. the social pensions)[48] is based in rural areas, this leads to low labour market mobility, reduces search activities (since there are few prospects of employment) and thus prolongs unemployment. Similar arguments have been advanced for explaining high unemployment and low regional mobility among the young in Spain

[47] At the same time, there are other advantages to the social pensions as support for the unemployed, compared to unemployment insurance. In particular, they provide no direct disincentive effect. See also Case and Deaton (1997).
[48] As a legacy of apartheid-era restrictions on mobility, the policy to force inactives into the homelands, and the high costs of living in urban areas, most of the elderly reside in rural areas.

(Bentolila and Ichino, 2000).

Thus we are faced with a rather counterintuitive overall conclusion: the absence of unemployment support may not only lower welfare of the unemployed and their dependants, it may not do much to reduce unemployment duration, and may actually increase it. The debates about incentive effects of unemployment support in OECD countries may want to take note of this finding.

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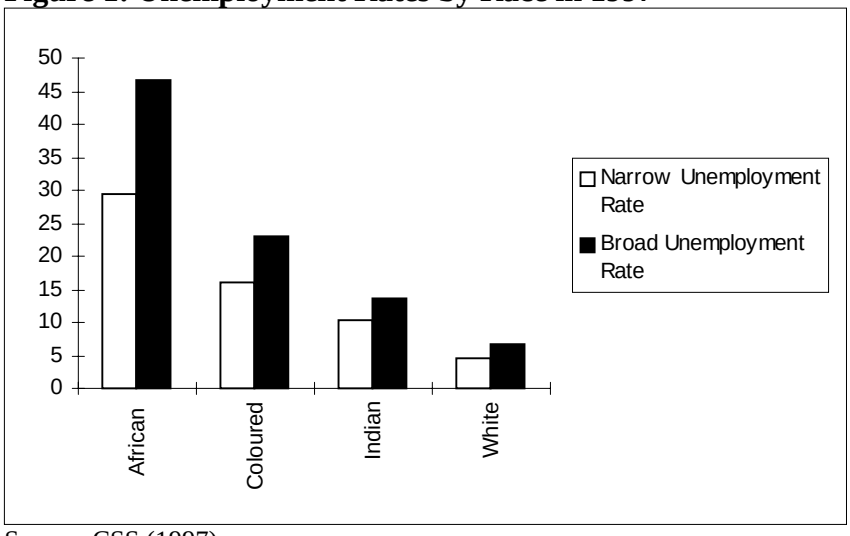
Table 1 Unemployment rates, by location

	Strict unemp. rate	Broad unemp. rate
1993		
Rural	13.1	38.7
Urban	12.4	23.3
All	12.7	29.4
1994		
Rural	28.9	42.3
Urban	13.5	28.8
All	19.5	34.1
1995		
Rural	26.1	36.6
Urban	11.8	24.0
All	16.9	28.5
1996		
Rural	25.7	47.1
Urban	19.5	31.1
All	21.0	35.6
1997		
Rural	26.9	49.5
Urban	21.5	32.6
All	22.9	37.6
1998		
Rural	30.0	48.4
Urban	21.8	32.6
All	24.3	37.5
1999		
Rural	27.9	47.7
Urban	22.2	33.0
All	24.0	38.2

Source: Saldru (1993), CSS (1994, 1995, 1998, 2000). Please note that the figures are not entirely comparable, for reasons explained in Klasen and Woolard (1999, 2000). But they present the correct orders of magnitude.

Figure 1: Unemployment Rates by Race in 1997



Source: CSS (1997)

Table 2: Labour Market Connections of Unemployed Individuals ('000)

	All Unemployed		Rural African Unemployed	
	Number	Share	Number	Share
No one employed, no remittances	835	20.2	655	21.4
No one employed, remittances	878	21.3	783	25.6
1 employed	1,557	37.7	1,063	34.7
2-3 employed	792	19.2	502	16.4
4+ employed	69	1.7	58	1.9
Total	4,130	100	3,061	100

Source: Saldru 1993.

Table 3: The Number of Employed and Unemployed among Adults in Households (%)

	Number of Unemployed				
Number of Employed	0	1	2-3	4+	Total
0, no remittances	7.1	3.2	2.1	0.3	12.6
0, remittances	8.3	4.3	2.1	0.1	14.8
1	31.6	2.6	2.9	0.4	43.8
2-3	22.0	3.4	1.6	0.3	27.3
4+	1.1	1.0	0.1	0.1	1.5
Total	70.0	19.9	8.9	1.2	100.0

Source: Saldru 1993.

Table 4: Income Sources of African Households with no Labour Market Connection

	Number ('000)	Share	Mean Amount (R.)
Social Grants	502	60.0%	429
Private Pension	24	2.9%	586
Unemployment Insurance	39	4.7%	551
Private Income	74	8.9%	300
Wage Income/Self-Emp.*	97	11.6%	526
Agriculture	284	34.0%	86
No Income	114	13.6%	0
Total w/o Wage or Remittances	836	135.6%	417

Note: Social grants consist primarily of social pensions, but also include disability and child maintenance grants. The wage or self-employment income included here only includes workers working less than 5 hours a week; those were counted as unemployed in the analysis above. The total share adds up to more than 100% as some households have access to more than one of the listed income sources. In 1993, a $ was worth about 3.5 Rands so that average *household* incomes from these sources was about $115 a month. Source: Saldru (1993).

Table 5: Living Arrangements of Adult Individuals in 1995 (Relationship to Household Head)

	Inactive	Employed	Strictly Unemployed	Broadly Unemployed	Total
Head/Spouse	33.0	74.9	34.0	30.4	50.0
Kid<25 living with Parents	43.7	7.7	22.9	25.7	25.8
Kid>25 living with Parents	6.7	10.2	25.7	25.7	11.2
Living with Sibling	3.8	2.3	6.8	7.0	3.7
Living with Other Family	12.4	3.1	9.8	10.5	8.3
Living with Non Family	0.5	1.8	0.7	0.8	1.1
Total	100	100	100	100	100

Source: CSS (1995). The most important categories among 'other family' are people living with uncles, aunts, and cousins. The fairly high proportion of inactive adults living with other family is largely due to school and university age children living other family for school location reasons.

Table 6: Descriptive Statistics Used in Regression

	Males		Females	
	Mean	S.D.	Mean	S.D.
African	0.64	0.48	0.68	0.47
Coloured	0.15	0.36	0.16	0.37
Indian	0.05	0.21	0.03	0.17
Pcnetinc	7.25	29.57	10.46	24.72
Narrow	0.11	0.32	0.17	0.38
Broad	0.11	0.32	0.20	0.40
Age	36.37	11.06	34.70	10.53
Education	6.64	3.86	6.71	3.79

Note: Pcnetinc refers to the scale-adjusted per capita income of other household members, in thousands of Rands per year.

Table 7: Multinomial Logit Model of Relationship to Household Head, Males (1995)

	Coefficient	Standard Error	T-Statistic		Coefficient	Standard Error	T-Statistic
Child living with Parents				Non-Family, Rural			
African	1.418	0.125	11.362	African	2.761	1.134	2.434
Coloured	1.503	0.132	11.352	Coloured	1.548	1.152	1.345
Indian	1.317	0.147	8.949	Indian	0.636	1.319	0.482
Pcntinc	0.023	0.005	4.204	Pcntinc	0.030	0.007	4.406
Narrow	2.373	0.087	27.348	Narrow	0.278	0.563	0.494
Broad	2.595	0.090	28.753	Broad	1.011	0.481	2.100
Age	-0.173	0.004	-41.110	Age	-0.127	0.023	-5.623
Education	0.013	0.009	1.341	Education	-0.213	0.055	-3.843
Constant	2.699	0.188	14.326	Constant	-2.562	1.345	-1.904
Other Family-Rural				Non-Family, Urban			
African	4.569	0.581	7.860	African	1.182	0.594	1.989
Coloured	3.507	0.627	5.596	Coloured	1.096	0.404	2.715
Indian	2.925	0.772	3.789	Indian	0.051	0.496	0.103
Pcntinc	0.026	0.007	3.748	Pcntinc	0.026	0.007	3.921
Narrow	2.174	0.146	14.940	Narrow	0.611	0.499	1.223
Broad	2.551	0.135	18.956	Broad	0.070	0.545	0.128
Age	-0.165	0.009	-19.288	Age	-0.057	0.018	-3.221
Education	-0.105	0.015	-6.830	Education	-0.021	0.027	-0.773
Constant	-1.997	0.625	-3.198	Constant	-2.724	0.821	-3.317
Other Family-Urban							
African	2.233	0.336	6.653				
Coloured	2.533	0.334	7.578				
Indian	2.130	0.339	6.290	N	22988		
Pcntinc	0.024	0.006	4.121	F (40, 2864)	88.78		
Narrow	2.532	0.119	21.199	Prob>F	0.00		
Broad	2.403	0.127	18.986				
Age	-0.123	0.006	-20.063				
Education	0.044	0.014	3.183				
Constant	-1.354	0.411	-3.294				

Note: The standard errors take account of the clustered nature of the sample. Hausman tests were performed to test for the IIA hypothesis and the results failed to reject the IIA hypothesis.

Table 8: Predictions of Household Status, Males.

	Employed All	Employed White	Employed African	Broad Unemp African	Narrow Unemp African
Head/Spouse	65.1%	80.3%	62.6%	32.0%	33.5%
Child	25.4%	17.3%	26.5%	50.0%	46.6%
Other Family-Rural	2.5%	0.1%	3.2%	6.1%	5.0%
Other Family-Urban	5.3%	1.5%	5.7%	11.0%	13.5%
NonFamily-Rural	0.3%	0.1%	0.4%	0.3%	0.1%
NonFamily-Urban	1.4%	0.8%	1.7%	0.6%	1.2%

Note: The table is based on predictions using the results from Table 7.

Table 9: Birthplace Migration by Employment Status

	Employed		Broad Unemployed		Narrow Unemployed	
	Stayed	Moved	Stayed	Moved	Stayed	Moved
Head/Spouse	58.2	91.4	24.6	67.4	20.0	62.7
Child	34.5	1.5	60.5	7.2	66.0	6.0
Other Family	6.2	4.6	14.4	24.3	13.5	29.8
Non-Family	1.0	2.5	0.6	1.2	0.5	1.5
Total	100	100	100	100	100	100
Observations	15700	15868	5268	1470	4673	1509

Note: Observations are weighted to mirror population distribution.

Table 9: Multinomial Logit Model of Relationship to Household Head, Females (1995)

	Coefficient	Standard Error	T-Statistic		Coefficient	Standard Error	T-Statistic
Child living with Parents				Non-Family, Rural			
African	1.479	0.108	13.693	African	2.486	0.812	3.063
Coloured	1.705	0.124	13.734	Coloured	1.817	0.847	2.144
Indian	1.289	0.157	8.189	Indian	-25.092	0.632	-39.696
Pcntinc	-0.002	0.002	-1.261	Pcntinc	0.006	0.002	3.729
Narrow	0.914	0.071	12.893	Narrow	-1.751	0.744	-2.355
Broad	0.852	0.067	12.710	Broad	-0.431	0.446	-0.966
Age	-0.141	0.004	-39.071	Age	-0.080	0.018	-4.495
Education	0.050	0.008	6.315	Education	-0.149	0.064	-2.333
Constant	1.824	0.173	10.572	Constant	-3.612	1.038	-3.479
Other Family-Rural				Non-Family, Urban			
African	5.763	1.008	5.717	African	0.332	0.372	0.891
Coloured	4.344	1.032	4.210	Coloured	0.975	0.358	2.723
Indian	2.502	1.246	2.009	Indian	-1.181	1.037	-1.139
Pcntinc	-0.007	0.008	-0.917	Pcntinc	0.006	0.001	5.465
Narrow	1.030	0.130	7.929	Narrow	-0.488	0.369	-1.323
Broad	1.253	0.116	10.784	Broad	-0.741	0.393	-1.886
Age	-0.120	0.007	-17.782	Age	-0.084	0.018	-4.755
Education	-0.060	0.015	-4.138	Education	0.007	0.039	0.187
Constant	-4.283	1.032	-4.150	Constant	-1.805	0.825	-2.187
Other Family-Urban							
African	1.858	0.224	8.307				
Coloured	2.369	0.237	9.992				
Indian	2.267	0.263	8.608	N	19527		
Pcntinc	0.002	0.000	1.520	F (40, 2772)	538.77		
Narrow	1.127	0.112	10.018	Prob>F	0.00		
Broad	0.815	0.108	7.547				
Age	-0.084	0.006	-15.143				
Education	0.069	0.012	5.535				
Constant	-2.110	0.303	-6.956				

Note: The standard errors take account of the clustered nature of the sample. Hausman tests were performed to test for the IIA hypothesis and the results failed to reject the IIA hypothesis for most categories.

Table 11: Predictions of Household Status, Females

	Employed All	Employed White	Employed African	Broad Unemp African	Narrow Unemp African
Head/Spouse	60.2%	57.9%	82.2%	46.1%	44.6%
Child	28.9%	30.2%	15.2%	37.6%	38.5%
Other Family-Rural	4.0%	5.0%	0.0%	8.2%	7.1%
Other Family-Urban	5.9%	5.8%	1.8%	7.6%	9.4%
NonFamily-Rural	0.3%	0.4%	0.1%	0.2%	0.1%
NonFamily-Urban	0.8%	0.7%	0.8%	0.3%	0.3%

Note: Simulations based on results from Table 10.

Table 12: Unemployment and Poverty among Africans (1995)

	Coefficient	Standard Error	T-Statistic
Education Spline			
No education	-786.6	112.3	-7.0
Primary	-145.9	86.8	-1.7
Some Secondary	547.3	103.2	5.3
Comp. Secondary	2022.7	279.0	7.2
Some Tertiary	2614.1	497.8	5.3
Houshold Size	-577.1	55.1	-10.5
Urban	3673.6	296.9	12.4
Number of Unemployed	-1080.4	99.9	-10.8
Constant	9398.1	310.9	30.2

Note: The dependent variable is annual adult equivalent income of Africans in 1995. The standard errors are adjusted to take into account the clustered nature of the sample. The education variables refer to the average education level of everyone in the household who is older than 16. It is included as a spline which means that the effect of tertiary education can be computed by adding the effects for none, primary, secondary, completed secondary, and tertiary.

Table 13: Unemployment, Participation, and Poverty (1995)

		Households Ranked by Consumption Quintiles				
	All quintiles	Quintile 1 (Poorest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (Richest)
Broad Unemployment Rate	29.3	58.9	41.6	30.0	14.7	5.5
Narrow Unemployment Rate	16.5	35.8	25.9	19.0	8.8	3.4
Participation rate	54.3	42.4	48.8	55.8	61.0	69.5
Share Working	38.4	17.4	28.5	39.1	52.1	65.6
Share of people living in households with no one working	25.6	50.5	30.9	17.4	11.1	8.1
Share of Broad Unemployed		37.4	27.2	21.2	10.5	3.8
Share of Narrow Unemployed		30.5	28.0	24.3	12.3	4.8

Source: Income and Expenditure Survey, CSS (1995). The average adult equivalent monthly expenditure in the poorest two quintiles stood at about $60 a month.

Table 14: Unemployed Persons and Household Structure, 1993 and 1997

		Number of unemployed					
		0	1	2	3	4+	Total
1993	Amount	5931252	1722953	573793	193476	98981	8520455
	Share	69.6	20.2	6.7	2.3	1.2	100
1997	Amount	5956836	2136267	776293	239112	148199	9256707
	Share	64.3	23.1	8.4	2.6	1.6	100
Increase	Percentage	0.4%	24.0%	35.3%	23.6%	49.7%	8.6%

Source: Saldru (1993) and CSS (1997).

Table 15: Predicting Labour Force Participation, Searching, and Employment (African and Coloureds)[49]

Dependent	(1) Share of Adults in Labour Force	(2) Share Narrow/ Broad LF*	(3) Share Employed / Narrow LF**
Remittance Amount	-0.0008 (-13.8)	-0.001 (-12.5)	-0.0006 (-6.9)
Coloured	0.028 (1.9)	0.115 (6.9)	0.008 (0.5)
Urban	0.071 (6.2)	0.048 (3.6)	-0.01 (-0.9)
Metropolitan	0.084 (6.8)	0.052 (3.8)	-0.064 (-5.5)
Age	0.034 (10.7)	-0.006 (-1.3)	0.0009 (0.2)
Age^2	-0.0004 (-9.4)	0.0001 (1.9)	-0.00004 (0.6)
Avg. Education	0.002 (1.6)	0.011 (6.0)	0.0083 (5.2)
Share Female	-0.173 (-13.8)	-0.049 (-2.7)	0.003 (0.2)
Pension Income	-0.00025 (-9.8)	-0.0005 (-14.8)	-0.0003 (-8.7)
Private Income	-0.0002 (-4.2)	-0.0001 (-1.6)	-0.0001 (-2.1)
Constant	0.93 (1.6)	0.86 (11.2)	0.81 (11.7)
R^2	0.15	0.04	0.03

* refers to the share of adults in a households in the broad labour force who are also in the narrow labour force (ie. working or searching). ** refers to the share of adults in a household in the narrow labour force who are employed. t-statistics in parentheses. Age refers to the average age of the adult members of the household.

Table 16: Determinants of Reservation Wages 1993

	OLS			Heckman			Select		
	Coefficient	Standard Error	T-Ratio	Coefficient	Standard Error	T-Ratio	Coefficient	Standard Error	T-Ratio
Remittances	-0.32	0.17	-1.87	-0.34	0.21	-1.58			
Wage Income	0.14	0.07	2.11	0.15	0.04	3.30			
Private Income	0.39	0.14	2.75	0.39	0.14	2.85			
State Income	-0.03	0.02	-1.91	-0.04	0.05	-0.76			
Ag. Income	-2.73	1.34	-2.03	-2.26	1.43	-1.58			
Self-Emp. Inc.	0.66	0.20	3.32	0.62	0.14	4.57			
old TBVC	-51.07	99.23	-0.52	-10.28	48.89	-0.21	-0.01	0.06	-0.26
old SGT	-87.04	63.13	-1.38	-81.53	37.10	-2.20	0.14	0.05	3.05
Coloured	-165.76	53.12	-3.12	-179.63	48.73	-3.69	0.07	0.05	1.39
Indian	31.57	89.02	0.36	36.32	85.92	0.42	-0.07	0.09	-0.78
White	104.72	136.30	0.77	153.84	83.66	1.84	-0.37	0.06	-5.92
Everwork	-48.60	33.87	-1.44	-47.71	30.61	-1.56			
Female	-209.26	30.47	-6.87	-205.69	28.86	-7.13	-0.08	0.03	-2.46
Age	23.20	7.96	2.92	23.33	9.13	2.56	0.02	0.01	2.27
Age Squared	-0.26	0.11	-2.43	-0.23	0.12	-1.84	0.00	0.00	-3.08
Kids	85.01	39.66	2.14	91.10	36.40	2.50	-0.21	0.03	-6.22
Married	34.90	41.02	0.85	56.93	35.35	1.61	0.08	0.04	2.08
Education	31.48	6.07	5.19	33.31	4.72	7.06	-0.02	0.00	-3.46
Unemployment Rate							0.95	0.11	8.50
Urban							0.43	0.04	10.24
Constant				546.27	171.48	3.19	-1.88	0.21	-8.97
/athrho				-0.30	0.10	-3.00	0.00	-0.50	-0.10
/lnsigma				6.33	0.03	212.68	0.00	6.28	6.39
Rho				-0.29	0.09	-0.46	-0.10		
Sigma				563.64	16.79	531.68	597.53		
Lambda				-165.32	55.86	-274.81	-55.83		
R-Sq.	0.14								
Likelihood Ratio Test (Pr rho=0)				0.0077					

Source: In the OLS regression, the standard errors are adjusted to take into account the clustered sampling of the survey.

[49] Indians and Whites were dropped since the focus is on the groups with high unemployment rates. Including them would not change the results.

Appendix

Table 1: Logit Prediction Relationship to Household Head and Migration Status, Males (1995)

	Coefficient	Standard Error	T-Statistic		Coefficient	Standard Error	T-Statistic
Headmove				OtherFamilyMove-Urban			
African	-0.921	0.090	-10.223	African	1.423	0.501	2.837
Coloured	-1.344	0.111	-12.145	Coloured	0.938	0.517	1.816
Indian	-0.997	0.175	-5.700	Indian	1.273	0.499	2.553
Pcntinc	0.002	0.003	0.667	Pcntinc	0.026	0.007	3.548
Narrow	-0.376	0.101	-3.707	Narrow	2.414	0.158	15.305
Broad	-0.632	0.113	-5.605	Broad	1.705	0.207	8.235
Age	0.007	0.002	2.844	Age	-0.109	0.009	-12.586
Education	0.045	0.008	5.661	Education	0.050	0.021	2.380
Constant	0.683	0.166	4.121	Constant	-0.911	0.627	-1.452
Kidstay				NonFamilyStay-Rural			
African	0.788	0.142	5.531	African	2.963	2.337	1.268
Coloured	0.680	0.150	4.541	Coloured	1.805	2.258	0.799
Indian	0.635	0.188	3.371	Indian	-26.857	1.831	-14.669
Pcntinc	0.025	0.007	3.629	Pcntinc	0.034	0.009	3.863
Narrow	2.186	0.095	22.974	Narrow	-0.017	0.779	-0.022
Broad	2.306	0.099	23.380	Broad	0.593	0.616	0.962
Age	-0.169	0.004	-39.271	Age	-0.128	0.028	-4.520
Education	0.038	0.010	3.714	Education	-0.204	0.087	-2.340
Constant	3.837	0.209	18.319	Constant	-2.562	2.488	-1.030
Kidmove				NonFamilyMove-Rural			
African	0.386	0.343	1.124	African	1.524	0.962	1.583
Coloured	0.064	0.405	0.159	Coloured	-0.420	1.266	-0.332
Indian	0.400	0.463	0.864	Indian	0.168	1.271	0.132
Pcntinc	0.023	0.007	3.321	Pcntinc	0.031	0.008	3.767
Narrow	2.023	0.250	8.086	Narrow	0.217	0.776	0.280
Broad	2.108	0.246	8.574	Broad	0.866	0.696	1.245
Age	-0.193	0.014	-13.540	Age	-0.119	0.031	-3.830
Education	0.028	0.027	1.028	Education	-0.169	0.050	-3.381
Constant	1.768	0.510	3.469	Constant	-1.870	1.409	-1.327
OtherFamilyStay-Rural				NonFamilyStay-Urban			
African	4.339	0.988	4.394	African	0.778	1.018	0.764
Coloured	2.807	1.023	2.744	Coloured	1.726	0.907	1.903
Indian	2.805	1.191	2.356	Indian	-0.232	1.013	-0.229
Pcntinc	0.004	0.010	0.409	Pcntinc	0.028	0.007	4.066
Narrow	2.127	0.168	12.674	Narrow	1.504	0.508	2.959
Broad	2.377	0.149	15.955	Broad	0.739	0.559	1.321
Age	-0.172	0.011	-16.391	Age	-0.112	0.028	-4.054
Education	-0.083	0.020	-4.095	Education	0.075	0.051	1.475
Constant	-1.294	1.033	-1.253	Constant	-2.159	1.519	-1.421
OtherFamilyMove-Rural				NonFamilyMove-Urban			
African	3.746	0.938	3.993	African	0.439	0.634	0.692
Coloured	2.864	1.036	2.765	Coloured	-0.874	0.513	-1.704
Indian	2.048	1.020	2.008	Indian	-0.784	0.593	-1.322
Pcntinc	0.031	0.008	3.827	Pcntinc	0.027	0.008	3.251
Narrow	1.793	0.245	7.305	Narrow	-0.279	0.745	-0.375
Broad	2.075	0.221	9.374	Broad	-0.641	0.668	-0.959
Age	-0.146	0.012	-11.854	Age	-0.037	0.015	-2.398
Education	-0.060	0.023	-2.676	Education	-0.016	0.032	-0.519
Constant	-2.159	0.971	-2.223	Constant	-2.056	0.796	-2.584
OtherFamilyStay-Urban							
African	1.717	0.408	4.208				
Coloured	2.142	0.405	5.281	N	22988		
Indian	1.578	0.432	3.655	F (88, 2912)	257.84		
Pcntinc	0.025	0.007	3.588	Prob>F	0		
Narrow	2.273	0.156	14.549				
Broad	2.359	0.153	15.428				
Age	-0.128	0.008	-16.829				
Education	0.083	0.016	5.076				
Constant	-0.756	0.489	-1.546				

Note:The Hausman test for the IIA assumptions was passed in the majority of cases.

Table 2: Predicting Household Structure, Males.

	Employed All	Employed Africans	Broad Unemp. Africans	Narrow Unemp. Africans
HeadStay	26.2%	26.7%	18.2%	17.1%
HeadMove	38.9%	35.9%	13.7%	16.4%
ChildStay	24.4%	25.6%	48.7%	45.2%
ChildMove	0.9%	1.0%	1.5%	1.4%
OtherFamStay-Rural	1.6%	2.0%	4.1%	3.4%
OtherFamMove-Rural	0.9%	1.2%	2.1%	1.7%
OtherFamStay-Urban	3.1%	3.1%	7.1%	6.7%
OtherFamMove-Urban	2.2%	2.6%	3.8%	7.0%
NonFamStay-Rural	0.2%	0.2%	0.1%	0.1%
NonFamMove-Rural	0.1%	0.1%	0.1%	0.1%
NonFamStay-Urban	0.4%	0.3%	0.2%	0.4%
NonFamMove-Urban	1.0%	1.3%	0.4%	0.5%

Note: Simulations are based on regression in Appendix Table 1. Results for females are available on request.

Table 3: Changes in Household Formation and Employment Status among Africans in KwaZulu-Natal, 1993 to 1998 (%)

	Remain Employed	Become Employed	Remain Unemployed	Become Unemployed	Remain Inactive	Become Incative
Remain Head/Spouse	11.1	10.2	1.7	10.2	26.7	30.8
Become Head/Spouse	50.1	15.3	5.2	9.9	9.8	17.8
Remain Child	26.7	44.8	62.6	46.6	29.7	26.4
Become Child	0.9	1.7	2.0	1.1	1.8	0.7
Remain with Other Family	7.5	17.2	16.5	22.3	19.2	14.4
Go to Other Family	3.4	10.6	12.1	9.3	12.1	9.3
Remain with Non-Family	0.3	0.2	0.0	0.8	0.7	0.7
Go to Non-Family	0.0	0.0	0.0	0.0	0.1	0.0
Cases	585	587	406	668	705	292