

#### UNIVERSITY OF CAPE TOWN

#### CENTRE FOR SOCIAL SCIENCE RESEARCH

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

Stephan Klasen **Ingrid Woolard** 

CSSR Working Paper No. 129



#### Published by the Centre for Social Science Research University of Cape Town 2005

Copies of this publication may be obtained from:

The Administrative Officer
Centre for Social Science Research
University of Cape Town
Private Bag
Rondebosch, 7701
Tel: (021) 650 4656

Fax: (021) 650 4656 Fax: (021) 650 4657 Email: kforbes@cssr.uct.ac.za

Price in Southern Africa (incl. VAT and postage): R 5.00

or it can be downloaded from our website http://www.cssr.uct.ac.za/index.html

ISBN 0-77011-063-1

© Centre for Social Science Research, UCT, 2005

#### CENTRE FOR SOCIAL SCIENCE RESEARCH

## Southern Africa Labour and Development Research Unit

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

Stephan Klasen Ingrid Woolard

CSSR Working Paper No. 129

October 2005

Ingrid Woolard is a SALDRU Research Associate and researcher in the Centre for Social Science Research at the University of Cape Town.

Stephan Klasen is a professor of economics at the University of Göttingen, Germany.

## Surviving Unemployment without State Support: Unemployment and Household Formation in South Africa

#### **Abstract**

While in many African countries, open unemployment is largely confined to urban areas and thus overall rates are quite low, in South Africa (and a few other Southern African countries), open unemployment rates hover around 30%, with rural unemployment rates being even higher than that. This occurs despite the near complete absence of an unemployment insurance system and little labour market regulation that applies to rural labour markets. This paper examines how unemployment can persist without support from unemployment compensation. Analysing household surveys from 1993, 1995, and 1998, we find that the household formation response of the unemployed is the critical way in which the unemployed assure access to resources. In particular, unemployment delays the setting up of an individual household by young persons, 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, noncontributory 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 response draw some of the unemployed away from employment opportunities, and thus lowers their employment prospects.

#### 1. Introduction

Rigid labour markets, high statutory (or union-negotiated) minimum wages and generous, long-lasting unemployment benefits are often claimed to be important factors causing high unemployment rates in Organisation for Economic Co-operation and Development (OECD) countries as well as developing countries (for example, World Bank, 1995; OECD, 1994; Nickell, 1997; Blanchard and Wolfers, 2000). As

far as African countries are concerned, these arguments usually focus on urban labour markets, where open unemployment is a serious problem in many countries (ILO, 2005).

In light of this literature, this paper examines the unemployment experience of South Africa, a country with 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 had an unemployment rate of 28% in 2004; using a 'broad' definition (which includes those who are willing to work but are not searching), the unemployment rate stood at about 41% (see Table 1). These rates are at the very high end of developing countries overall and, together with similarly high open unemployment rates in some neighbouring countries (for example, Botswana, Lesotho, Namibia, and Zambia), by far the highest measured open unemployment rates in Sub-Saharan Africa (World Bank, 1995; ILO, 2005).<sup>2</sup> Moreover, high unemployment coexists with comparatively low levels of labour force participation. Only 56% of the working age population are active labour market participants, in comparison with a participation rate of 75% for middle-income countries as a whole (World Bank, 2003). Consequently, only 40% of the working age population are actually working and this figure drops to 16% among the poor. As documented in detail by Klasen and Woolard (1999), these high rates of open unemployment are only to a very small extent due to underreporting of informal sector or agricultural activities or to other issues of undercounting employment or overstating unemployment.<sup>3</sup>

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

-

<sup>&</sup>lt;sup>1</sup> There is some discussion as to what is the appropriate unemployment rate to use for analyses of the labour market. Kingdon and Knight (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 Stats SA (1996), Klasen and Woolard (1999, 2000). Including involuntary part-time employed would add another 2% to the unemployment rate.

<sup>&</sup>lt;sup>2</sup> Reliable unemployment statistics for Sub Saharan African countries are sparse. The countries included in the ILO labour statistics database (13 countries, see ILO 2005) generally show open unemployment rates of between 1-10% in most countries in West, Central or East Africa. In Southern Africa, open unemployment rates are considerably higher, ranging from 12% in Zambia to about 33% in Namibia and 40% in Lesotho.

<sup>&</sup>lt;sup>3</sup> While there have been some questions about the reliability of some of these figures (for example, ILO, 1996; Schlemmer, 1996), these unusually high unemployment rates have been confirmed through 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. See Klasen and Woolard (1999, 2000) for further details.

than in urban areas (Todaro and Smith, 2003; World Bank, 1995).<sup>4</sup> As illustrated in Figure 1, unemployment differs greatly by race and age. Africans have much higher unemployment rates and the young of all races are disproportionately affected by unemployment. The broad unemployment rate for young Africans stood at over 60% in 2004, compared to about 3% for older whites.<sup>5</sup>

Table 1 Unemployment rates, by location

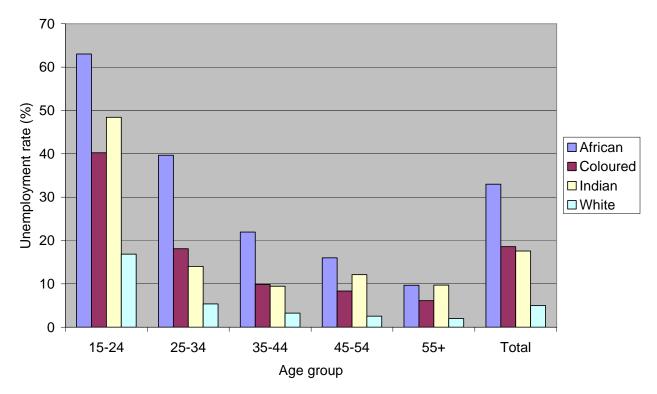
|       | Strict unemp. rate | Broad unemp. Rate |
|-------|--------------------|-------------------|
| 1993  |                    |                   |
| Rural | 13.1               | 38.7              |
| Urban | 12.4               | 23.3              |
| All   | 12.7               | 29.4              |
| 1995  |                    |                   |
| Rural | 26.1               | 36.6              |
| Urban | 11.8               | 24.0              |
| All   | 16.9               | 28.5              |
| 1997  |                    |                   |
| Rural | 26.9               | 49.5              |
| Urban | 21.5               | 32.6              |
| All   | 22.9               | 37.6              |
| 1999  |                    |                   |
| Rural | 27.9               | 47.7              |
| Urban | 22.2               | 33.0              |
| All   | 24.0               | 38.2              |
| 2001  |                    |                   |
| Rural | 32.7               | 51.4              |
| Urban | 28.2               | 35.9              |
| All   | 29.5               | 41.6              |
| 2003  |                    |                   |
| Rural | 31.7               | 49.6              |
| Urban | 30.5               | 37.3              |
| All   | 30.9               | 41.8              |
| 2004  |                    |                   |
| Rural | 28.5               | 50.3              |
| Urban | 27.5               | 36.1              |
| All   | 27.8               | 41.3              |

*Source*: Saldru (1993), Stats SA (1995, 1997, 1999, 2001, 2003, 2004). It should be noted that the figures are not entirely comparable over time, for reasons explained in Klasen and Woolard (1999, 2000) and Business Trust (2004), but they present the correct orders of magnitude.

<sup>&</sup>lt;sup>4</sup> 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).

<sup>&</sup>lt;sup>5</sup> 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 Indians, and people of European descent as Whites. There is also a noticeable gender differential with females suffering from higher unemployment rates among each age and race group.

Figure 1: Unemployment Rates by Race and Age in 2004



Source: Stats SA (2004).

These high unemployment rates constitute a puzzle and challenge for the above mentioned literature in two respects. First, how do the unemployed sustain themselves in a country where only about 3% of the unemployed are receiving unemployment support at any one point in time? Second, while it may be the case that urban unemployment rates are related to adverse macroeconomic shocks, the legacy of apartheid-era distortions, and high and possibly growing labour market rigidities (for example, Fallon and Lucas, 1997), how can it be that unemployment is so high in *rural* areas where there exists almost no enforced labour regulations (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 respond to their plight by attaching 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

<sup>&</sup>lt;sup>6</sup> The SALDRU (SALDRU, 1993) 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 owing to an insufficient prior work history).

economic support tends to be better which can thus partly account for the high rural unemployment rates. At the same time, these household formation decisions leave most of the unemployed and the households supporting them mired in deep poverty, with some unemployed persons 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.

These findings suggest that the existing private safety net provides some means of sustenance for the unemployed, but does so very unequally and inefficiently in the sense that it may be responsible for creating regional immobility of the unemployed. As we discuss below, this may therefore call for innovative solutions for the design of safety nets and other policies to improve the employment prospects of the unemployed (see also Klasen and Woolard, 1998). The findings of the paper are of relevance also to debates about unemployment support and social policy in OECD countries (for example, OECD, 1998; Murray, 1984; Atkinson, 1999; Agell, 1999; Ellwood and Bane, 1985, Moffitt, 1992; Atkinson and Mickleright, 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. Lastly, 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 (namely, a long delay in leaving the parental home, deferred marriage and child-bearing) and appears to contribute to locational rigidities in the labour market (Gallie and Paugam, 2000; Bentolila and Ichino,  $2000).^{7}$ 

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 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 discusses the incentive and welfare effects of various unemployment policies.

<sup>&</sup>lt;sup>7</sup> See also a related discussion about the adaptation of North American youth to changes in economic circumstances in Card and Lemieux (2000).

## 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.

While most of the macro empirical literature has focused on the role of labour market institutions and rigidities to explain unemployment (for example, Blanchard and Wolfers, 2000; World Bank, 1995; see Kingdon and Knight, 2004 for South Africa), most of the micro empirical literature on the causes of persistent unemployment has focused on incentives of the unemployed individual (for example, Atkinson and Micklewright, 1991; Mortenson, 1977; Steiner, 1997). More recently, the impact of the household on unemployment has been considered in two ways. household resources of other members of the household have been included in analyses of incentive effects (mainly in analyses focusing on OECD countries). 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 (for example, Atkinson and Micklewright, 1991; Arulampulam and Stewart, 1995). Secondly, the distribution of unemployment across households has recently received some attention in the literature examining employment and unemployment polarisation and thus the welfare consequences of unemployment (for example, 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; 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 his parents or on his own. In this model, the location decision of the youth (alone or with parents) as well as his labour supply decisions are considered jointly and she finds that parents insure their sons against poor labour market opportunities. drawing from insights of these models, we deviate from this framework as we take the employment 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.<sup>8</sup> 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 because inter-household transfers to support an unemployed relative play a negligible role on the South African context.<sup>9</sup>

Finally, there is a literature on household formation. 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.<sup>10</sup>

There is also some literature that relates to household formation in South Africa. In particular, Edmonds *et al.* (2001) find evidence that the presence of an old-age pensioner alters the household composition of the household housing that pensioner, with important gender differences. Secondly, Bertrand *et al.* (2003) find that the presence of an old-age pensioner is correlated with a reduction in labor supply of prime-age individuals in that household.<sup>11</sup> Both studies highlight important aspects that will be examined here, namely the endogeneity of household composition, and the incentive effects of public income sources on labor market behavior. But neither study focuses on linking these issues to explaining high unemployment, particularly in rural areas.

<sup>&</sup>lt;sup>8</sup>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 Aid to Families with Dependent Children (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.

<sup>&</sup>lt;sup>9</sup> 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).

<sup>&</sup>lt;sup>10</sup> 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 types in the US.

These findings have been questioned by Posel *et al.* (2004) who argue that once absent (that is, migrating) household members are considered in the analysis, the results change considerably.

Using insights from this literature, we consider the following framework for the empirical analysis. While at least in the medium term, both the labour market situation as well as the household formation decision is jointly determined, we focus most of our analysis on the situation, where we take the labour market situation as given and consider the residential decision of the individual.<sup>12</sup> In particular, we want to consider the decision of forming one's own household versus remaining in the household of parents, or attaching oneself to 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 the decision is to live on one's own, the arguments in the utility function include only wages, non-wage incomes, and prices, which are likely to depend on location, while other considerations are added when the individual is 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 share of the incomes of the household to which one is attached. In addition, one benefits from sharing 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.<sup>13</sup> further cost to being attached to another household may 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 \ (alone) = f \ (w, p, I) + - + V(attached) = g \ (w, p, I, c_p(age, education) \ \delta Pr(w), \ Y/n^{\theta}) + - + - - - - +
```

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

<sup>&</sup>lt;sup>12</sup> Given the large unemployment rates, particularly among the young who are facing the decision of staying or leaving a household, we believe that this is a reasonably approximation. See also Case and Deaton (1998). We will, however, consider the impact of household location of the unemployed on the decision to search or not.

<sup>&</sup>lt;sup>13</sup> 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). There is a question whether this variable is endogenous, so we will also consider specifications where we drop this variable (whose size and significance is not of substantive interest in this paper) to see whether it changes our results.

education<sup>14</sup>,  $\delta Pr(w)$  refers to the discounted expected value of lost wages due to attaching oneself to a household where employment prospects are scarce, Y/nº is the scale-adjusted per capita income of the other members 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 of being attached to another household are comparatively smaller.<sup>15</sup> Conversely, being unemployed should reduce the attractiveness of living alone because in this situation, 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 higher (scale adjusted) per capita incomes of the receiving household 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 cope with their fate which is examined in more detail in the next three sections.

#### 3. Background and Data

It 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 gross domestic product 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:<sup>16</sup>

<sup>&</sup>lt;sup>14</sup> 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).

<sup>&</sup>lt;sup>15</sup> Moreover, one would realistically assume that a person earning a wage will get fewer resources from others in the household than before (and might even have to transfer some of the earnings to others).

<sup>&</sup>lt;sup>16</sup> See Lundahl (1991), Fallon (1993), Fallon and Lucas (1997), Kingdon and Knight (2004), and

- discriminatory access to employment in the formal labour market with whites being favoured by better education systems, job reservation policies, 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<sup>17</sup>; and
- prohibitions and restrictions on formal and informal economic activities by Africans, especially for those residing in non-homeland South Africa.

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. <sup>18</sup>

With the labour force growing at about 2.5% per year, low 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 (especially 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, 2002, and Fallon and Lucas, 1997). <sup>19</sup> The decline in job creation in the 1980s and 1990s also

\_\_\_

ILO (1996) for details.

<sup>&</sup>lt;sup>17</sup> 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).

<sup>&</sup>lt;sup>18</sup> 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 (for example, Fallon and Lucas, 1997).

<sup>&</sup>lt;sup>19</sup> 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. See also Klasen (2002).

led the steep age profile of unemployment as shown in Figure 1 (Klasen and Woolard, 1999, 2000; Kingdon and Knight, 2004). 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 predominantly rural 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 household surveys and one re-survey of a share of the households in one of the 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 (OHS) covering 30 000 households (in 3000 clusters<sup>20</sup>) and focused on labour market and informal sector activities. It has the added advantage that it included an Income and Expenditure Survey which included 98% of the households covered by the OHS, thereby allowing a careful analysis of incomes and expenditures as well.<sup>21</sup>

In order to learn more about the dynamics of household formation and its interaction with labour market trends, we also examine the 1998 KwaZulu Income Dynamics Survey (KIDS) which re-surveyed all households included in the 1993 SALDRU survey in KwaZulu-Natal, South Africa's most populous province.<sup>22</sup>

<sup>&</sup>lt;sup>20</sup> The impact on standard errors in a clustered sample of this nature is taken into account in the econometric results. For details, see Deaton (1997).

<sup>&</sup>lt;sup>21</sup> Despite small differences in sampling and questionnaire design, Klasen and Woolard (1999) find that the two surveys are broadly compatible and yield results consistent with other sources of employment data, such that they present a coherent and consistent picture on the state and determinants of employment and unemployment in South Africa.

<sup>&</sup>lt;sup>22</sup> For details on this re-survey, refer to May *et al.* (2000).

#### 4. Descriptive Statistics

To motivate 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.<sup>23</sup> This can be done using a person-level and household-level analysis. The former investigates the types of households in which 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; 20% of the unemployed live in households which receive remittances from an absent household member. This is largely 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 whatsoever. This is a very small share indeed, certainly when compared to industrialised countries 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 relies on remittances, and fewer on employment income in the household.

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

|                                 | All Unen | nployed | 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 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 3 shows that the vast majority of households (70%) contain 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

<sup>&</sup>lt;sup>23</sup> See ILO (1996) and Fallon and Lucas (1997) for a similar, but somewhat more cursory analysis.

unemployed. Twenty % 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, 13% 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.<sup>24</sup>

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

| 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).

The two analyses together imply that employment and unemployment are widely distributed across households, certainly much more widely than in rich countries. In the South African context, this is particularly surprising given 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 person, and quite a 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 which thus provides 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<sup>25</sup>consist

<sup>&</sup>lt;sup>24</sup> 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. This 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 4), 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 Germany.

<sup>&</sup>lt;sup>25</sup> This is consistent with the figure of 835,000 unemployed living in households with no connection to the labour market (Table 2), as nearly 60% of the 1.1 million *households* with no connection to

predominantly of 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 (noncontributory means-tested old age) social pension, disability, or child maintenance grant (with the social pensions being by far the most important source);<sup>26</sup> 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 month 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.<sup>27</sup>

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

|                               | Number  | Share  | Mean Amount (R.) |
|-------------------------------|---------|--------|------------------|
|                               | ('000') |        |                  |
| 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              |

Source: Saldru (1993).

*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.

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

the labour market contain no one who is employed, but also no one who is unemployed, that is, 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).

<sup>26</sup> In addition, many households which 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.

<sup>27</sup> The minimal wage and self-employment income is included here as people working fewer than 5 hours a week were not counted as employed. The last group of households with no reported incomes did report expenditures 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 us some reassurance that the survey is tracking most income sources.

other than the unemployed.<sup>28</sup> 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 most unemployed find themselves in households with some market and non-market resources obtained by other household members begs the question how this is achieved. In this section, we investigate to what extent this is a result 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.<sup>29</sup> 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).

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

|                            | Inactive | Employed | Strictly   | Broadly    | Total |
|----------------------------|----------|----------|------------|------------|-------|
|                            |          |          | Unemployed | Unemployed |       |
| 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*: Stats SA (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.

2

<sup>&</sup>lt;sup>28</sup> This is again in contrast to OECD countries. While some 60-90% of households with working age members where no one is in employment rely on social transfers, most of these transfers consist of unemployment support to the unemployed household member (OECD 1998).

<sup>&</sup>lt;sup>29</sup> 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).

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 (for example, they are nephew, niece, cousin, parent, grandparents, uncle, aunt, or grandchildren of the household head) or non-family.

Before proceeding to interpret the results, it is important to examine whether the definition of a household head is an exogenous category within a given household or is itself dependent on employment and income status of its members. While we cannot examine this using these cross-sectional surveys, we can examine a two-wave panel from South Africa for 1993 and 1998, where the respondents in the 1993 SALDRU survey from the most populous province, KwaZulu-Natal, were reinterviewed in 1998 to see whether the household head changed within a given household configuration. If we restrict our analysis to households where the head in 1993 was resident and was still alive in 1998, 96% of household heads or spouses in 1993 were still head or spouse in 1998, and the very few who were 'demoted' from headship had an average age of 67. Thus the definition of headship seems very stable and we can treat it as a category that is exogenous to employment and earnings of individual members and thus can be seen to provide an accurate reflection of household formation patterns.<sup>30</sup>

The results of the table are striking. 75% of the employed are either household heads or the spouses of household heads, 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, that is, 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.<sup>31</sup> Another 23% (26%) are children below 25 living with their parents, and 7% (7%) live with siblings, aunts, or cousins, and another 10% (11%) live with other family.

<sup>&</sup>lt;sup>30</sup> For a discussion of the concept of 'household headship' in South African surveys, see Budlender (1997)

These figures are strikingly similar to the situation in today's Mediterranean countries. See Gallie and Paugam (2000).

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. This is 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. We also find here that lack of support prevents the unemployed from setting up their own households. This can then also explain the contrast between the distribution of unemployment among households in most rich countries and South Africa. Support for the unemployed in rich 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.<sup>32</sup>

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 which, as discussed above, we believe gives an accurate reflection of household formation patterns. 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.<sup>33</sup>

We restrict the sample to people in the labour force, thus excluding the inactives and use a dummy variable for the broadly unemployed to determine the effect of unemployment on household formation.<sup>34</sup> 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.<sup>35</sup> 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.

<sup>&</sup>lt;sup>32</sup> To the extent that the unemployed young are not covered by unemployment insurance in some OECD countries, particularly in Southern Europe but also to some extent in the US and Canada, this can explain the delayed household formation of the young in these countries. See Card and Lemieux (2000) on the US and Canada and Gallie and Paugam (2000) for Southern Europe.

Most of the regressions do not violate the independence of irrelevant alternatives condition, as determined by a series of Hausman tests. See notes below the tables.

<sup>&</sup>lt;sup>34</sup> The relationship to the household head of the inactives is very much dependent on the reason for their inactivity (for example, whether it is due to formal education, domestic responsibilities, disability, or retirement).

This is net of one's own income to give a sense of how many additional resources one may be able to draw upon. Since this variable is partly endogenous to the household formation process (in a one-person household that variable is by definition zero; but one-person households are quite rare in South Africa), we also specify specifications without this variable to see if it affects the other coefficients (which it does not to any significant extent).

This type of analysis examines only 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.<sup>36</sup> 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 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  |
| Penetine   | 7.25  | 29.57 | 10.44   | 24.63 |
| Unemployed | 0.22  | 0.42  | 0.37    | 0.48  |
| Age        | 36.40 | 11.06 | 34.71   | 10.53 |
| Education  | 6.71  | 3.86  | 6.77    | 3.79  |

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

Table 7 shows the results for the multinomial logit, separately for males and females. The results confirm some of the findings of the theoretical discussion. In particular, age has the predicted effect of older people preferring to live on their own rather than 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.<sup>37</sup> Education has a varying influence on household formation. While higher education reduces the chance of living with one's parents, it has no impact on living with other relatives or non-family, all compared to being household head or spouse.<sup>38</sup>

<sup>&</sup>lt;sup>36</sup> 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. Qualitative evidence from South Africa suggests, however, that this is not a likely possibility.

<sup>&</sup>lt;sup>37</sup> This finding should be treated with some caution as this variable, per capita net income of other household members, is partly endogenous to the household formation process (for example, if one moves out and lives alone, it will be zero). This has no impact on the employment status variables, our main focus of interest. If we drop the income variable, unemployment has an even (slightly) stronger impact of remaining in the parental household or staying with relatives. These results are available upon request.

<sup>&</sup>lt;sup>38</sup> There are also interesting racial differences in household formation patterns in Table 8 which we do not discuss here.

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

|  |                  | Males           |              |               |                  | Females          |              |
|--|------------------|-----------------|--------------|---------------|------------------|------------------|--------------|
|  | Coefficient      | Standard        | T-Statistic  |               | Coefficient      | Standard         | T-Statistic  |
|  |                  | Error           |              |               |                  | Error            |              |
|  | Child living     | with Parents    |              |               | Child living     | with Parents     |              |
| African  | 1.42             | 0.13            | 11.36        | African       | 1.47             | 0.11             | 13.54        |
| Coloured   | 1.51             | 0.13            | 11.36        | Coloured      | 1.71             | 0.12             | 13.77        |
| Indian   | 1.31             | 0.15            |              | Indian        | 1.29             | 0.16             | 8.24         |
| Pentine  | 0.023            | 0.005           | 4.20         | Pentine       | -0.003           | 0.002            | -1.37        |
| Unemployed   | 2.47             | 0.07            |              | Unemployed    | 0.88             | 0.06             | 15.70        |
| Age  | -0.17            | 0.004           | -41.35       | Age           | -0.14            | 0.004            | -39.08       |
| Education  | 0.013            | 0.009           | 1.48         | Education     | 0.052            | 0.008            | 6.55         |
| Constant   | 2.66             | 0.19            | 14.18        | Constant      | 1.81             | 1.17             | 10.48        |
| Other Fami   | ly (Siblings, Au | ints, Uncles, G | randparents) | Other Famil   | ly (Siblings, Au | ınts, Uncles, Gı | randparents) |
| African  | 2.52             | 0.32            | 7.91         | African       | 2.25             | 0.21             | 10.58        |
| Coloured   | 2.50             | 0.32            | 7.80         | Coloured      | 2.26             | 0.23             | 9.82         |
| Indian   | 2.18             | 0.33            | 6.66         | Indian        | 2.20             | 0.26             | 8.33         |
| Pentine  | 0.025            | 0.006           | 4.18         | Pentine       | 0.002            | 0.001            | 1.08         |
| Unemployed   | 2.43             | 0.08            | 28.72        | Unemployed    | 1.04             | 0.005            | 14.83        |
| Age  | -0.14            | 0.005           | -25.27       | Age           | -0.10            | 0.005            | -21.38       |
| Education  | -0.01            | 0.01            | -0.57        | Education     | 0.01             | 0.01             | 1.1          |
| Constant   | -0.43            | 0.37            | -1.15        | Constant      | -1.06            | 0.27             | -3.93        |
|  | Non-I            | Family          |              | Non-Family    |                  |                  |              |
| African  | 1.26             | 0.55            | 2.27         | African       | 0.59             | 0.34             | 1.71         |
| Coloured   | 1.04             | 0.40            | 2.59         | Coloured      | 0.90             | 0.34             | 2.65         |
| Indian   | 0.06             | 0.48            | 0.13         | Indian        | -1.26            | 1.03             | -1.22        |
| Pentine  | 0.026            | 0.007           | 4.01         | Pentine       | 0.006            | 0.001            | 5.34         |
| Unemployed   | 0.45             | 0.39            | 1.17         | Unemployed    | -0.68            | 0.25             | -6.16        |
| Age  | -0.07            | 0.02            | -3.84        | Age           | -0.08            | 0.01             | -2.73        |
| Education  | -0.05            | 0.02            | -2.12        | Education     | -0.05            | 0.03             | -1.39        |
| Constant   | -2.07            | 0.85            | -2.45        | Constant      | -1.26            | -1.26            | -1.26        |
| N  | 22985            |                 |              | N             | 19524            |                  |              |
| F (21, 2883)=  | 156.65 (Prob>    | F = 0.00)       |              | F(21, 2789) = | 124.02 (Prob>    | F=0.00)          |              |
| Note: The standard errors take account of the clustered nature of the sample. Hausman tests were performed to test for the |                  |                 |              |               |                  |                  |              |

*Note*: The standard errors take account of the clustered nature of the sample. Hausman tests were performed to test for the Independence of Irrelevant Alternatives-hypothesis and the results mostly failed to reject the IIA hypothesis. In the two cases where the hypothesis was rejected, inspection of the test results show nearly identical coefficients on our unemployment covariate in the full and the reduced model so that this rejection of the IIA hypothesis does not materially question the results of the analysis.

For the purposes of this analysis, it is particularly important to see that being (broadly) unemployed significantly reduces the chance of being a household head or spouse.<sup>39</sup> For males, the impact of this variable is very large and very precisely determined leading to very high significance levels, particularly with regard to remaining in the parental household or the household of relatives. 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

<sup>&</sup>lt;sup>39</sup> Considering only the narrowly unemployed, or both separately, leads to very similar results. See also discussion below.

and becomes even larger if we drop the possibly endogenous income variable.<sup>40</sup> For females, 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 the spouse of a household head than for an unemployed male to be household head, a finding that is also true elsewhere, see Gartner (2000). But the same household formation effects are still present.

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 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 unemployed have a much higher propensity of living with their parents, although living with other family is also considerably more likely for them. The simulated effects are, in line with findings from Table 7, smaller for women.

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. The birthplace migration information yields three distinct patterns of migration as shown in Table 9. Among those who are in employment, nearly half have moved as shown in the second to last row. Of those who have moved, over 90% of the employed became (or remained) household heads or spouse; very few employed moved in with their parents or other family. The second pattern is that among the unemployed, the propensity to move is much smaller. Only 20-25% of each group has moved. The vast majority who have not moved remained in their parental household or in a household of other relatives. Thus unemployment is a powerful force for persistence in the parental family. This persistence generates considerable regional immobility as the children remain tied to their parental location which, in the South African context, often involves a location in rural areas and/or the

<sup>&</sup>lt;sup>40</sup> 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 relatives, and that marriage and setting up a household are far from synonymous in South Africa. The regressions are available on request.

<sup>&</sup>lt;sup>41</sup> Note that birthplace migration is an imperfect proxy of migration in response to labour market events. Firstly, if people stayed in the same town but changed household, this will not be captured. Secondly, 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.

former homelands. Thirdly, of those few unemployed that have moved, most are household heads or spouses though more than half of these are women who formed households with a male partner rather than male heads of households. In addition, a significant minority of other unemployed who have moved have attached themselves to households of relatives and non-family, presumably in search of support, and some seem to have returned to parental households. Thus this information suggests that the predominant household formation response to unemployment involves staying with parents or other relatives, while a considerable minority react to unemployment by attaching themselves to the household of relatives and non-family, and some return to their parents.<sup>43</sup>

Table 8: Predictions of Household Status

|                    | Head/Spouse | Child | Other Family | Non-Family |
|--------------------|-------------|-------|--------------|------------|
| Male               |             |       |              |            |
| Employed           | 65.1%       | 25.3% | 7.9%         | 1.7%       |
| Employed African   | 62.6%       | 26.5% | 8.9%         | 2.0%       |
| Employed white     | 80.2%       | 17,1% | 1.8%         | 0.9%       |
| Unemployed         | 38.6%       | 45.4% | 14.9%        | 1.1%       |
| Unemployed African | 34.7%       | 46.8% | 17.2%        | 1.2%       |
| Unemployed white   | 59.2%       | 35.9% | 4.0%         | 0.8%       |
| Female             |             |       |              |            |
| Employed           | 60.2%       | 28.9% | 9.8%         | 1.1%       |
| Employed African   | 57.9%       | 30.2% | 10.8%        | 1.1%       |
| Employed white     | 81.7%       | 15.0% | 2.2%         | 1.0%       |
| Unemployed         | 51.1%       | 35.2% | 13.2%        | 0.5%       |
| Unemployed African | 48.2%       | 36.6% | 14.8%        | 0.5%       |
| Unemployed white   | 76.2%       | 20.0% | 3.3%         | 0.6%       |

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

In the appendix we expand the multinominal logit model for males to distinguish within each category (head/spouse, kid, other family, non-family) between those who have moved from the town of their birth and those who remained (see appendix Tables 1, 2). Those in employment are much more likely to be head of the households and much more likely to have moved than to have stayed. Employment thus is highly associated with headship and with moving. In contrast, the predominant response to unemployment is staying with one's parents or other

4

<sup>42</sup> Since this refers to birthplace migration, some of these moves might have taken place before the current spell of unemployment and might be related to previous spells of employment.

While this is the most likely interpretation of the table, it is also 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 much more plausible.

relatives, while a significant minority move to join family and non-family, and some return to their parents.

Table 9: Birthplace Migration by Employment Status

|              | Employed |       | Broad Un | employed | Narrow Unemployed |       |
|--------------|----------|-------|----------|----------|-------------------|-------|
|              | Stayed   | Moved | Stayed   | Moved    | Stayed            | Moved |
| Head/Spouse  | 58.2     | 91.4  | 24.6     | 67.4     | 20.0              | 62.7  |
|              | 38.7     | 61.3  | 56.7     | 43.3     | 49.7              | 50.3  |
| Child        | 34.5     | 1.5   | 60.5     | 7.2      | 66.0              | 6.0   |
|              | 95.8     | 4.2   | 96.8     | 3.2      | 97.1              | 2.9   |
| Other Family | 6.2      | 4.6   | 14.4     | 24.3     | 13.5              | 29.8  |
|              | 57.1     | 42.9  | 68.0     | 32.0     | 58.4              | 41.6  |
| Non-Family   | 1.0      | 2.5   | 0.6      | 1.2      | 0.5               | 1.5   |
|              | 28.4     | 71.6  | 64.2     | 35.8     | 50.8              | 49.2  |
| Total Column | 100.0    | 100.0 | 100.0    | 100.0    | 100.0             | 100.0 |
| Share Row    | 49.7     | 50.3  | 78.2     | 21.8     | 75.6              | 24.4  |
| Observations | 15700    | 15868 | 5268     | 1470     | 4673              | 1509  |

*Note*: Observations are weighted to mirror population distribution. The figures in italics refer to the share of people within each row and category (for example, employed) that stayed or moved.

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 in the two periods has had an impact on changes in household formation, thus enabling us to study the dynamics of household formation behaviour. Table 3 in the appendix shows the results. Those who were employed in both periods were much more likely to remain head of household or set up their own 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 supports 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.

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

<sup>&</sup>lt;sup>44</sup> With the 1998 resurvey, we have another data point on employment status and household formation, but only limited information on developments in-between.

<sup>&</sup>lt;sup>45</sup> To be sure this finding does not contradict the finding that household headship is a largely exogenous category as we have shown earlier. The people who have become head between 1993 and 1998 have done so because the household head from 1993 is no longer there ((s)he has died or moved away) or they have founded a new household.

unemployed to seek support in other households. This happens predominantly by staying in one's 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 partly explain the puzzle of high rural unemployment.<sup>46</sup> An unemployed person 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.<sup>47</sup> Potential economic support for the unemployed is particularly high in rural areas, especially 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 remaining there. This draws many unemployed away from most employment opportunities and may thus provide a disincentive to search and find employment. This issue is investigated in the next section.<sup>48</sup>

<sup>&</sup>lt;sup>46</sup> See also Klasen and Woolard (1998) for other reasons for high rural unemployment in South Africa. The arguments presented here may be further reinforced by cost differences between urban and rural areas. While the cost differences between urban and rural areas for people with established households in either location are remarkably small (largely due to subsidised housing costs and/or rent and service boycotts in urban areas as well as high transport costs in rural areas, see Klasen, 2002), it is quite costly to establish a new household in urban areas which further raises the barrier to accessing the urban labour market and contribute to rural unemployment.

<sup>&</sup>lt;sup>47</sup> In an earlier analysis, we distinguished in our multinomial logit analysis between rural and urban destinations, that is, whether a person chose to live with relatives in rural or urban areas, and also distinguished between narrow and broad unemployed. There we found that the there is a correlation between higher education, narrow unemployment, and household formation in urban areas (many with relatives and non-family), and conversely a correlation with lower education, broad unemployment and rural location. While several factors could account for this correlation, this might be particularly suggestive of the unemployed sorting themselves into two groups with those with better labour market prospects going to urban areas and actively searching while those with worse prospects remaining in rural areas and stopping to search.

One might still claim that given the presence of many unemployed in rural areas, flexible rural labour markets should ensure that wages adjust accordingly and they should then be employed there nevertheless. But several reasons might militate against this. Firstly, rural labour markets may be segmented in the sense that labour demand is very low in the areas where most unemployed reside, so that market clearing wages would be far too low for the unemployed to make their employment worthwhile. Similarly, access to productive assets is so limited as to reduce the potential for self-employment or farm activities. See Klasen and Woolard (1998) for a discussion.

## 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 face 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 10 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 reduction for adding one more person based on household size, and nearly R1100 reduction for that person being unemployed). If the household hosting the unemployed is in rural areas and headed by someone with poor education, having an average household size (5 people), two of whom are unemployed, this will, on average, place that household far below the poverty line, which stood at about R3000 annual income per person in 1995. As a result, there is a close correlation between hosting unemployed people and 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). Fifty-one % 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 have 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 11 which shows that the share of households that contain one or more unemployed has risen 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%. Further support for the importance of the importance of this comes from Woolard and Klasen (2005) who use the KIDS panel survey and the addition of unemployed members is one of the most important predictors of changes in poverty status between 1993 and 1998.

Thus the private safety net ensures basic survival for most unemployed but this system drags the households providing the support into poverty. In addition, 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.

Table 10: 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         |
| Household Size   | -577.1      | 55.1           | -10.5       |
| Urban            | 3673.6      | 296.9          | 12.4        |
| Number of        | -1080.4     | 99.9           | -10.8       |
| Unemployed       |             |                |             |
| 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 11: 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 Stats SA (1997).

pı

Another consequence of the location decision of the unemployed is the potential impact on search behaviour. Since labour market decisions are often influenced by other household members, we examine participation and search decisions as well as employment prospects at the household level.<sup>49</sup> 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

<sup>&</sup>lt;sup>49</sup> We also examined this using a person-level analysis trying to predict which broadly unemployed decide to search. The results suggest that poorly educated Africans in rural areas are least likely to search, confirming that being 'stuck' in rural areas significantly reduces employment prospects. The results are available on request.

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 12), 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 (that is, 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.<sup>50</sup>

Table 12: Labour Force Participation, Searching, and Employment of Households (African and Coloureds)<sup>51</sup>

|                   | (1)                | (2)                 | (3)              |
|-------------------|--------------------|---------------------|------------------|
| Dependent         | Share of Adults in | Share Narrow/ Broad | Share Employed / |
|                   | Labour Force       | LF*                 | 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             |

*Notes*: \* refers to the share of adults in a household in the broad labour force who are also in the narrow labour force (that is, 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.

influence on remittances).

25

As a benchmark, we ran Ordinary Least Squares 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 influences the remittance variable proxied for) and exogeneity (in the sense that it does not influence the dependent variable, except through its

<sup>&</sup>lt;sup>51</sup> Indians and Whites were dropped since the focus is on the groups with high unemployment rates. Including them would not change the results.

Table 12 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 support, this finding should be of some concern to policy-makers.<sup>52</sup>

These findings could either mean that remittance, pension and non-wage private income provide a direct disincentive by raising the reservation wage. <sup>53</sup> 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. <sup>54</sup> 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. <sup>55</sup>

<sup>&</sup>lt;sup>52</sup> Similarly, some 35% of the unemployed live in households which receive state support.

<sup>&</sup>lt;sup>53</sup> 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. Bertrand *et al.* (2003) do, however, suggest that there might be small disincentive effects associated with pension receipt, although this finding is controversial (see Posel *et al.* 2004).

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, may it 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.

Table 12 also supports our earlier contention about the two groups of unemployed in the following two ways. Firstly, 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. Secondly, regression (3) shows that employment prospects are indeed worse for those with lower education, and for those who have other income sources

Table 13: Determinants of Reservation Wages 1993

|                                  | OLS         |                   |         | Heckman     |                   |         | Select      |                   |         |
|----------------------------------|-------------|-------------------|---------|-------------|-------------------|---------|-------------|-------------------|---------|
|                                  | Coefficient | Standard<br>Error | T-Ratio | Coefficient | Standard<br>Error | T-Ratio | Coefficient | Standard<br>Error | T-Ratio |
| Remittances                      | -0.32       | 0.17              | -1.87   | -0.34       | 0.21              | -1.58   |             | Error             |         |
| 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   |
| N                                | 13159       |                   |         |             |                   |         |             |                   |         |
| Rho                              |             |                   |         | -0.29       | 0.09              |         |             |                   |         |
| Sigma                            |             |                   |         | 563.64      | 16.79             |         |             |                   |         |
| Lambda                           |             |                   |         | -165.32     | 55.86             |         |             |                   |         |
| 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.

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 13 shows the results of the regressions for monthly reservation wages, based on the 1993 SALDRU survey.<sup>56</sup> We use the Heckman correction for this regression to address the sample selection bias of the reservation wage equation. We use a worker-specific (by province, age, gender, and education group of the worker)<sup>57</sup> 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 Likelihood Ratio test indicates that selectivity is indeed a problem so that it was right to address the potential selectivity issue.

which may suggest that those who attach themselves to other households with pension or other income correctly perceive their lower employment prospects.

<sup>&</sup>lt;sup>56</sup> Unfortunately, OHS 1995 did not ask this question.

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

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.<sup>58</sup>

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 in order 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).

#### 7. Conclusion

We started out by posing a 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, with negative consequences for the welfare of receiving households.

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.

<sup>&</sup>lt;sup>58</sup> 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.

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 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 persons (most likely the less educated and less employable ones) will remain in (or move to) 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 social pensions and other state support thus are able to support the unemployed (among other poor people, see Deaton and Case, 1998), 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.<sup>59</sup>

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. Firstly, unemployment can persist at very high levels even in the absence of unemployment support. Secondly, 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 into poverty. In the South African case, it heavily depends on the existence of state transfers to pensioners which indirectly supports the unemployed.

Thirdly, reliance on a private safety net can generate 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 (especially the social pensions)<sup>60</sup> is based in rural areas, this leads to low labour market mobility, reduces search activities (since there are few prospects of

-

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).

<sup>&</sup>lt;sup>60</sup> As a legacy of apartheid-era restrictions on mobility, the policy to force the economically inactive into the homelands, and the high costs of living in urban areas, most of the elderly reside in rural areas.

employment) and thus prolongs unemployment.<sup>61</sup> In order to remedy the situation, financial support for search and relocation to unemployed youth might be one way to help overcome this particular immobility. Alternatively, facilitating the move of pension recipients to urban areas (through for example, provision of urban amenities for such population groups) might also ensure that those that depend on it would also be able to move closer to promising labour market opportunities.

Thus we are faced with a rather counterintuitive overall conclusion: the absence of unemployment support may not only lower the welfare of many of the unemployed and those they depend on, it may also not do much to reduce unemployment duration, and the regional immobility it engenders might actually increase it. The debates about incentive effects of unemployment support in other developing or industrialised countries may want to take note of this finding.

<sup>&</sup>lt;sup>61</sup> Similar arguments have been advanced for explaining high unemployment and low regional mobility among the young in Spain (Bentolila and Ichino, 2000).

#### **Appendix**

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

|                 | Coefficient | Standard<br>Error | T-Statistic |                 | Coefficient | Standard<br>Error | T-Statistic |  |
|-----------------|-------------|-------------------|-------------|-----------------|-------------|-------------------|-------------|--|
| Headmove        |             |                   |             | OtherFamilyMove |             |                   |             |  |
| African         | -0.92       | 0.09              | -10.22      | African         | 1.69        | 0.48              | 3.51        |  |
| Coloured        | -1.34       | 0.11              | -12.13      | Coloured        | 1.13        | 0.50              | 2.29        |  |
| Indian          | -0.99       | 0.18              | -5.67       | Indian          | 1.34        | 0.48              | 2.80        |  |
| Pentine         | 0.002       | 0.003             | 0.67        | Pentine         | 0.027       | 0.008             | 3.63        |  |
| Unemployed      | -0.50       | 0.08              | -6.33       | Unemployed      | 2.08        | .12               | 17.26       |  |
| Age             | 0.007       | 0.002             |             | Age             | -0.119      | 0.007             | -16.26      |  |
| Education       | 0.05        | 0.008             | 5.70        | Education       | 0.019       | 0.017             | 1.12        |  |
| Constant        | 0.69        | 0.165             | 4.15        | Constant        | -0.27       | 0.56              | -0.47       |  |
|                 | Kid         | stay              |             | NonFamilyStay   |             |                   |             |  |
| African         | 0.79        | 0.14              |             | African         | 1.04        |                   | 1.09        |  |
| Coloured        | 0.68        | 0.15              | 4.57        | Coloured        | 1.56        | 0.88              | 1.77        |  |
| Indian          | 0.63        | 0.19              |             | Indian          | -0.26       |                   | -0.26       |  |
| Pentine         | 0.025       | 0.007             | 3.63        | Pentine         | 0.029       | 0.007             | 4.00        |  |
| Unemployed      | 2.24        | 0.08              | 29.45       | Unemployed      | 0.96        | 0.37              | 2.57        |  |
| Age             | -0.17       | 0.004             | -39.43      |                 | -0.12       | 0.02              | -5.45       |  |
| Education       | 0.04        | 0.01              |             | Education       | -0.01       | 0.05              | -0.26       |  |
| Constant        | 3.81        | 0.21              | 18.25       | Constant        | -1.12       |                   | -0.85       |  |
|                 |             | nove              |             | NonFamilyMove   |             |                   |             |  |
| African         | 0.39        | 0.34              | 1.13        | African         | 0.47        | 0.60              | 0.77        |  |
| Coloured        | 0.07        | 0.40              | 0.18        | Coloured        | -0.89       | 0.50              | -1.80       |  |
| Indian          | 0.41        | 0.46              | 0.88        | Indian          | -0.76       | 0.57              | -1.33       |  |
| Pentine         | 0.023       | 0.007             | 3.32        | Pentine         | 0.027       | 0.008             | 3.33        |  |
| Unemployed      | 2.06        | 0.19              |             | Unemployed      | -0.29       | 0.50              | -0.57       |  |
| Age             | -0.19       | 0.014             | -13.52      |                 | -0.04       | 0.016             | -2.78       |  |
| Education       | 0.029       |                   |             | Education       | -0.031      | 0.028             |             |  |
| Constant        | 1.73        | 0.51              | 3.41        | Constant        | -1.64       | 0.81              | -2.02       |  |
| OtherFamilyStay |             |                   |             |                 |             |                   |             |  |
| African         | 2.02        | 0.38              | 5.26        |                 |             |                   |             |  |
| Coloured        | 1.99        | 0.39              | 5.12        |                 | 22985       |                   |             |  |
| Indian          | 1.61        | 0.41              |             | F (49, 2855)    | 73.76       |                   |             |  |
| Pentine         | 0.024       |                   |             | Prob>F          | 0.00        |                   |             |  |
| Unemployed      | 2.27        | 0.10              | 22.17       |                 |             |                   |             |  |
| Age             | -0.14       |                   | -21.72      |                 |             |                   |             |  |
| Education       | 0.017       | 0.014             | 1.27        |                 |             |                   |             |  |
| Constant        | 0.38        | 0.45              | 0.86        |                 |             |                   |             |  |

*Note*: The Hausman test for the independence of irrelevant alternatives assumption was passed in the all cases.

Table 2: Predicting Household Structure, Males.

|              | Employed All | Employed Africans | Unemployed |
|--------------|--------------|-------------------|------------|
|              |              |                   | Africans   |
| HeadStay     | 26.2%        | 26.7%             | 18.7%      |
| HeadMove     | 38.9%        | 35.9%             | 16.0%      |
| ChildStay    | 24.4%        | 25.6%             | 45.5%      |
| ChildMove    | 0.9%         | 1.0%              | 1.4%       |
| OtherFamStay | 4.7%         | 5.1%              | 10.0%      |
| OtherFamMove | 3.1%         | 3.7%              | 7.2%       |
| NonFamStay   | 0.5%         | 0.5%              | 0.5%       |
| NonFamMove   | 0.1%         | 0.1%              | 0.1%       |

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   | Become   | Remain     | Become     | Remain   | Become   |
|--------------------------|----------|----------|------------|------------|----------|----------|
|                          | Employed | Employed | Unemployed | Unemployed | Inactive | Inactive |
| 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     |
| Stay with Parents        | 26.7     | 44.8     | 62.6       | 46.6       | 29.7     | 26.4     |
| Move to Parents          | 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      |

Source: own analysis based on SALDRU and KIDS household surveys.

#### Reference

- Agell, Jonas. 1999. On the Benefits from Rigid Labour Markets: Norms, Market Failure, and Social Insurance. *Economic Journal* 109: F143-F164.
- Ardington, Elizabeth and Frances Lund. 1995. Pensions and Development: Social Security as Complementary to Programmes of Reconstruction and Development. *Development Southern Africa*, 12(4).
- Arulampalam, Wiji, and Mark Stewart. 1995. The Determinants of Individual Unemployment Durations in an Era of High Unemployment. *Economic Journal* 105: 321-332.
- Atkinson, Anthony B. and John Micklewright. 1991. Unemployment Compensation and Labor Market Transitions: A Critical Review. *Journal of Economic Literature* 29: 1679-1727.
- Atkinson, Anthony B. 1999. The Economic Consequences of Rolling Back the Welfare State. Cambridge: MIT Press.
- Bardhan, Pranab. 1979. Wages and Unemployment in a Poor Agrarian Economy: A Theoretical and Empirical Analysis. *Journal of Political Economy* 87(31): 479-500.
- ----. 1978. On Measuring Rural Unemployment. *Journal of Development Studies* 342-352.
- Becker, Gary. 1981. Treatise on the Family. Chicago: University of Chicago Press.
- Bentolila, Samuel and Andrea Ichino. 2000. Unemployment and Consumption: Are job losses less Painful near the Mediterrranean? Florence: EUI, mimeographed.
- Bertrand, M., Mullainathan, S. and Miller, D. (2003) Public Policy and Extended Families: Evidence from Pensions in South Africa. *The World Bank Economic Review* 17 (1): 27 50.
- Blanchard, Olivier and James Wolfers. 2000. The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence. *Economic Journal* 110: C1-33.
- Börsch-Supan, Axel. 1986. Household Formation, Housing Prices, and Public Policy Impacts. *Journal of Public Economics* 30: 145-164.

- Card, David and Thomas Lemieux. 2000. Adapting to Circumstances: The Evolution of Work, School, and Living Arrangements among North American Youth. In Blanchflower, D. and R. Freeman (eds.) *Youth Employment and Joblessness in Advanced Countries*. Chicago: University of Chicago Press.
- Case, Anne and Angus Deaton. 1998. Large Cash Transfers to the Elderly in South Africa. *Economic Journal* 108: 1330-1363.
- -----. 1996. School Quality and Educational Outcome in South Africa. Princeton University, mimeographed.
- Deaton, Angus. 1997. *The Analysis of Household Surveys*. Baltimore: Johns Hopkins Press.
- Edmonds, Eric, Kristin Mammen, and Douglas Miller. 2001. Rearranging the Family? Household Composition Responses to Large Pension Receipts. Mimeographed, Darthmouth: Department of Economics.
- Ellwood, David and Lawrence Summers. 1986. Poverty in America: Is Welfare the Answer or the Problem? in Danziger, Sheldon and Daniel Weinberg (eds.) *Poverty, What Works and What Doesn't.* Cambridge: Harvard University Press.
- -----. and Mary Jo Bane. 1985. The Impact of AFDC on Family Structure and Living Arrangements, in Ron Ehrenberg (ed.) *Research in Labour Economics*, Vol. 7. Greenwhich: JAI Press.
- Ermisch, John and Pamela di Salvo. 1997. The Economic Determinants of Young People's Household Formation. *Economica* 64:627-644.
- Fallon, Peter. 1992. *An Analysis of Employment and Wage Behavior in South Africa*. Washington DC: The World Bank.
- ----, and Bob Lucas. 1997. South African Labour Markets: Adjustment and Inequality. Washington, DC: The World Bank.
- Gartner, Hermann. 2000. Das Auszugsverhalten junger Menschen aus dem Elternhaus. *SFB Working Paper* No. 215. University of Munich, Mimeographed.
- Gallie, Duncan and Serge Paugam. 2000. Welfare Regimes and the Experience of Unemployment in Europe. Oxford: Oxford University Press
- Gregg, Paul and Jonathan Wadsworth. 1996. It takes two: Employment Polarization

- in the OECD. Centre for Economic Performance Discussion Paper No. 304.
- International Labour Organization. 1996. Restructuring the Labour Market: The South African Challenge. Geneva: ILO.
- International Labour Organization. 2005. Laboursta Database. Geneva: ILO.
- Kingdon, Geeta and John Knight. 1999. The Appropriate Unemployment Rate for South Africa. Oxford: Centre for the Study of African Economies. Mimeographed.
- ----. 2004. Unemployment in South Africa: Causes, Problems, and Policies. Mimeographed, Oxford: Centre for the Study of African Economies.
- Klasen, Stephan. 2002. Social, economic, and environmental limits to the newly enfranchised in South Africa? *Economic Development and Cultural Change* 50:607-642.
- ----. 2000. Measuring Poverty and Deprivation in South Africa. *Review of Income and Wealth.* 46:33-58.
- ----, and Ingrid Woolard. 1998. Unemployment, household formation, poverty and nutrition in South Africa. Munich: University of Munich. Mimeographed.
- ----, and Ingrid Woolard. 1999. 'Levels, Trends and Consistency of Measured Employment and Unemployment in South Africa.' *Development Southern Africa* 16: 3-35.
- ----. 2000. Unemployment and Employment in South Africa, 1995-1997. Pretoria: Department of Finance. Mimeographed.
- ---- . 1998. *Unemployment, Household Formation, Poverty and Nutrition in South Africa*. Paper Presented at Workshop on Unemployment at University of Pretoria, April 24, 1998. Mimeographed, University of Munich.
- Labour Market Commission. 1996. Report of the Labour Market Commission. Pretoria: Department of Labour.
- Lippmann, Stephen and John McCall. 1976. The Economics of Job Search: A Survey. *Economic Inquiry* 14: 155-89.
- Lundahl, Mats. 1991. Apartheid in Theory and Practise. Boulder: Westview Press.
- May, Julian. 1996. Experiences and Perception of Poverty in South Africa. Durban:

DRA.

- ----, et al. 1997. The South Africa Poverty and Inequality Report. Durban: DRA.
- May, J., Carter, M., Haddad, L. and J. Malluccio 2000, Kwa-Zulu Natal Income Dynamics Study (KIDS) 1993-1998: A longitudinal household data set for Southern African policy analysis, *Development Southern Africa* 17(4), 567-581.
- McElroy, Marjorie. 1985. The Joint Determination of Household Membership and Market Work: The case of Young Men. *Journal of Labor Economics* 3: 293-316.
- Moffitt, R. 1992. Incentive effects of the US Welfare System. *Journal of Economic Literature*, 30(1): 1-61.
- Mortenson, Dale. 1977. Unemployment and Job Search Decisions. *Industrial and Labour Relations Review* 30: 505-517.
- Murray, Charles P. 1984. Losing Ground. New York: Basic Books.
- Nickell, Stephen. 1997. Unemployment and Labor Market Rigidities: Europe versus North America. *Journal of Economic Perspectives* 11: 55-74.
- OECD. 1998. Employment Outlook June 1998. Paris: OECD.
- ---. 1994. The OECD Jobs Study. Paris: OECD.
- Posel, D., J. A. Fairburn, and F. Lund. 2004 Labour Migration and Households: A Reconsideration of the Effects of the Social Pension on Labour Supply in South Africa. Mimeographed, University of Natal.
- Ramphele, Mamphele, and Francis Wilson. 1989. *Uprooting Poverty: The South African Challenge*. New York: Norton.
- Richards, Toni, *et al.* 1987. Changing Living Arrangements: A Hazard Model of Transitions among Household Types. *Demography* 24: 74-97.
- Rosenzweig, Mark and Kenneth Wolpin. 1993. Intergenerational Support and the Life-Cycle Incomes of Young Men and their Parents. *Journal of Labor Economics* 11: 84-112.
- ----. 1994. Parental and Public Transfers to Young Women and their Children. *American Economic Review* 84: 1195-1212.

- Saldru. 1993. The South African Living Standards and Development Survey. Cape Town: Saldru.
- Schlemmer, Lawrence. 1996. New Evidence on Unemployment. *Fast Facts*, September 1996. South African Institute for Race Relations, pp. 2-8.
- Statistics South Africa (Stats SA). 1994, 1995, 1997, 1999. October Household Survey. Pretoria: Stats SA.
- Statistics South Africa (Stats SA). 2000, 2001, 2002, 2003, 2004. *Labour Force Survey*. Pretoria: Stats SA.
- Steiner, Viktor. 1997. Extended Benefit-Entitlement Periods and the Duration of Unemployment in West Germany. *ZEW Discussion Paper* No. 97-14.
- Todaro, Michael and Stephen Smith. 2003. *Economic Development*. Edinburgh: Pearson Education Limited.
- Wilson, Francis. 1971. Farming, 1866-1966. in Wilson, M. and L. Thompson (eds) *The Oxford History of South Africa*. Oxford: Oxford University Press.
- Woolard, I. and S. Klasen. 2005. Determinants of Income Mobility and Household Poverty Dynamics in South Africa. *Journal of Development Studies* (forthcoming).
- World Bank. 1995. World Development Report. New York: Oxford University Press.
- ----. 2003. World Development Indicators. Washington DC: World Bank.

### The Centre for Social Science Research Working Paper Series

#### **RECENT TITLES**

du Toit, A. 2005. Chronic and Structural Poverty in South Africa: challenges for action and research? CSSR Working Paper no. 121.

Archer, S. 2005. The basic homework on basic income grants. CSSR Working Paper no. 122

Magruder, J. Nattrass, N. 2005. Attrition in the Khayelitsha Panel Study (2000-2004). CSSR Working Paper no. 123.

Seekings, J. with Jooste, T. Langer, M. Maughan Brown, B. 2005. *Inequality and Diversity in Cape Town: An Introduction and User's Guide to the 2005 Cape Area Study*. CSSR Working Paper no. 124.

Seekings, J. 2005. The Mutability of Distributive Justice Attitudes in South Africa. CSSR Working Paper no. 125.

Seekings, J. 2005. The Colour of Desert: Race, Class and Distributive Justice in Post-Apartheid South Africa. CSSR Working Paper no. 126.

Meintjes, H. Bray, R. 2005. 'But where are our moral heroes?': An analysis of South African press reporting on children affected by HIV/AIDS. CSSR Working Paper no. 127. (A Joint Working Paper of the Children's Institute and the Centre for Social Science Research).

Mattes, R. and Shin, D. 2005. The democratic impact of cultural values in Africa and Asia: The cases of South Korea and South Africa. CSSR Working Paper no. 128.

#### The Centre for Social Science Research

The CSSR is an umbrella organisation comprising five units:

The **AIDS** and **Society Research Unit** (ASRU) supports innovative research into the social dimensions of AIDS in South Africa. Special emphasis is placed on exploring the interface between qualitative and quantitative research. By forging creative links between academic research and outreach activities, we hope to improve our understanding of the relationship between AIDS and society and to make a difference to those living with AIDS. Focus areas include: AIDS-stigma, sexual relationships in the age of AIDS, the social and economic factors influencing disclosure (of HIV-status to others), the interface between traditional medicine and biomedicine, and the impact of providing antiretroviral treatment on individuals and households.

The **Data First Resource Unit** ('Data First') provides training and resources for research. Its main functions are: 1) to provide access to digital data resources and specialised published material; 2) to facilitate the collection, exchange and use of data sets on a collaborative basis; 3) to provide basic and advanced training in data analysis; 4) the ongoing development of a web site to disseminate data and research output.

The **Democracy in Africa Research Unit** (DARU) supports students and scholars who conduct systematic research in the following three areas: 1) public opinion and political culture in Africa and its role in democratisation and consolidation; 2) elections and voting in Africa; and 3) the impact of the HIV/AIDS pandemic on democratisation in Southern Africa. DARU has developed close working relationships with projects such as the Afrobarometer (a cross national survey of public opinion in fifteen African countries), the Comparative National Elections Project, and the Health Economics and AIDS Research Unit at the University of Natal.

The **Social Surveys Unit** (SSU) promotes critical analysis of the methodology, ethics and results of South African social science research. Our core activities include the overlapping Cape Area Study and Cape Area Panel Study. The Cape Area Study comprises a series of surveys of social, economic and political aspects of life in Cape Town. The Cape Area Panel Study is an ongoing study of 4800 young adults in Cape Town as they move from school into the worlds of work, unemployment, adulthood and parenthood.

The **Southern Africa Labour and Development Research Unit** (SALDRU) was established in 1975 as part of the School of Economics and joined the CSSR in 2002. In line with its historical contribution, SALDRU's researchers continue to conduct research detailing changing patterns of well-being in South Africa and assessing the impact of government policy on the poor. Current research work falls into the following research themes: post-apartheid poverty; employment and migration dynamics; family support structures in an era of rapid social change; the financial strategies of the poor; public works and public infrastructure programmes; common property resources and the poor.