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Strategies of the unemployed in South Africa: Does moving allow the unemployed to get ahead?

by

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Strategies of the unemployed in South Africa: Does moving allow the unemployed to get ahead?

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Abstract

This paper examines the survival strategies of the unemployed using the balanced panel of the first three waves of the National Income Dynamics Study. We find that in response to unemployment and almost no unemployment insurance, unemployed individuals look to parents, relatives and friends for economic support. They are more likely to attach themselves to household that have some income through an employed member or in receive of state support. In many cases the unemployed delay setting up their own households while others move back into family households when faced with persistent unemployment. We use a probit model to show that the unemployed who move are more likely to be employed in a successive wave. The effect of moving on employment status remains significant and positive when we take into account household and individual characteristics. Moving allows the unemployed to get ahead.

SECTION 1: Introduction

It is easy to understand why unemployment has been of particular interest in South Africa as it has one of the highest unemployment rates in the world. Statistics South Africa reports an unemployment rate of 24.9% in 2012 with minor increases in 2013 and 2014 (Stats SA, 2014). This figure is higher than some of South Africa's neighbouring countries. For example, the unemployment rate was 17% in Botswana and 16.7% in Namibia in the same year (World Bank, 2012)

In 2012 unemployment rates were 25% and 38%, in urban and rural areas respectively as reported in Table 1 below. We also note that unemployment rates continue to differ considerably by race some 20 years after Apartheid ended in South Africa. Africans have the highest unemployment rates across the panel (32% in 2012) followed by Coloureds (26% in 2012), Indians (15% in 2012) and lastly Whites (9%in 2012).

Table 1: ***Unemployment Rates by Location and Race***

Unemployment rate (%)	2008	2010	2012
Rural	36	39	38
Urban	28	22	25
African	34	31	32
Coloured	26	23	26
Indian	15	15	15
White	15	5	9
All	30	27	29

Note: Own estimates using full samples of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using post-stratification weights.

Little to no direct support for the unemployed exists in the form of unemployment insurance (Leibbrandt, M. et al., 2010). Only 0.1% of the sampled unemployed in 2012 reported receiving payments from the Unemployment Insurance Fund (UIF) in the preceding month. The fund provides insurance only to those who previously contributed to it while working. Unemployed youth are unlikely to be able to make use of this fund as they would not have had a chance to contribute to it. The high unemployment rates in rural and urban areas coupled with little insurance begs the question about the coping strategies the unemployed seek in order to survive.

Alongside this, there has been little scholarly attention with regard to household composition and moving in Africa. However, increasingly, more work is surfacing around the topic in South Africa with attention being paid to the effect of the social security system and labour migration on household

composition (Budlender & Lund, 2011; Posel, Fairburn & Lund, 2006) and to a lesser extent the effect of employment on household formation (Keller, 2004).

Household composition is endogenous to a variety of welfare issues and little is understood about the determinants of this composition. During apartheid the movement of Africans, Coloured and Indians were restricted through an elaborate system of pass laws enacted by the Group Areas Act (Act No. 41. of 1950). The government allowed for African individuals to migrate to urban areas to work, but they were not allowed to have their families move with them (Thompson, 1990).

Movement within and out of South Africa continues post-apartheid and may be temporary, where the migrant leaves behind a family and returns to their household from time to time, or permanent from one district to another. Moving is often associated with finding employment (Pekkala and Tervo, 2002). Understanding migration within South Africa and the household formation decision may improve our understanding of how the unemployed gain access to resources in order to survive.

Previous studies point out that the unemployed attach themselves to households where some economic support exists (Klasen & Woolard, 2009; Keller 2004). In many cases the unemployed have to move to rural areas, where they have family and communities to support them. However, doing this takes them away from job opportunities that may arise in urban areas. Furthermore, supporting the unemployed becomes a bigger burden for resource constrained rural households, and may drag them deeper into poverty.

By investigating the movement of the unemployed, we will bring to light some of the most important choices made by the unemployed in order to access resources and survive. This paper will investigate two main strategies of the unemployed: to stay in households that provide them with support, or to move to other households in search of employment or support. In section 2, we present relevant local and international literature on unemployment, household formation and moving to inform our model at the end of the section. In section, 3 we discuss the data and its suitability for this analysis. In section 4, we estimate the effect of moving on the unemployed, and finally in section 5 we make concluding remarks.

In order to survive with no insurance and low employment prospects, the unemployed look to immediate and extended family for support. It seems that those who are able to access resources do move and we show that they benefit from such a move. Those that cannot access such resources, remain where they are as it is the best that they can do given their constraints.

SECTION 2: Literature and Model

We examine the existing international and South African literature on the location decision of the unemployed. Using the previous literature to guide us, we develop an informed research approach to understand this issue in South Africa.

2.1 International Literature

The international literature on the survival of the unemployed is concentrated in developed countries. It focusses predominantly on the determinants of household formation for young people entering the labour market (Card & Lemieux, 1997; Ermisch & Di Salvo, 1997).

McElroy (1985) examines a model of household membership, employment and consumption. She proposes a Nash bargaining model for family behaviour that suggests that the decision whether to live with parents or to move out is decided jointly with the employment decision. For example, a youth will choose his/her consumption and leisure bundle and the associated household membership to maximise his utility (McElroy, 1985). She finds that families in the United Kingdom are likely to provide their young adult sons with informal 'unemployment insurance' when faced with poor labour market opportunities.

Rosenzweig and Wolpin (1994) examine the effect of support to young adults through transfers or co-residence in the USA. They suggest that young adults may choose to delay moving out of their family home in response to unemployment. This choice of co-residency can be viewed as an intergenerational transfer from parents to their children. The authors consider co-residency to be a less expensive way for families to support their unemployed children. In comparison to providing them with transfers, co-residency comes at a cost to one's privacy (Rosenzweig & Wolpin, 1994).

Card and Lemieux (1997) find that, in the Canadian context, poor labour market conditions are a cause of higher percentages of youth remaining with their families in comparison to the USA. They make use of panel data over a 25 year period and examine the effect of labour market forces on household composition, school attendance and workforce participation.

Pekkala and Tervo (2002) use data from the Finnish longitudinal population census to investigate whether moving helps the unemployed. The authors argue that those with more favourable employment prospects are more likely to migrate which would cause a selection bias. To deal with this issue the authors use housing prices and household ownership as the instruments for migration. They show that the instruments are uncorrelated with employability and use the instrumental variable approach to deal with the problem of selection bias. They find that moving does not have a significant effect on employment status for a sample of working-age Finnish in 1996.

Ermisch and Di Salvo (1997) suggest that in response to unemployment, youth in the UK will delay leaving their family homes and may even return. They examine the effect of the price of housing, parental income, potential future income and individual characteristics on the household formation decision of a cohort of British youth. The authors use a dynamic two-stage model. In the first stage they model the utility of parents providing transfers to their children, among other variables, conditional on their budget constraints. In the second stage the authors model the choice of the youth to remain with their parents. The higher the exogenous housing price will result in a reduction in the likelihood that the child leaves the parental home. The authors predict that a higher income increases the probability of the child leaving home while a higher parental income reduces it. This implies that they are more likely to follow a strategy with the best economic support.

Wiemers (2014) suggests that one way in which individuals and families can cope with job loss is by "doubling up" (sharing living arrangements) with family and friends. She uses panel data from the USA and finds that individuals who become unemployed are three times more likely to move in with other people. She also find that doubling up is most common among those with less than a high school diploma and those with at least some college using a linear probability model.

Keller (2004) finds a similar result in the South African context, higher parental income reduces the likelihood of moving out.

2.2 South African Literature

There are dangers in mechanically applying the international literature to the South African context. Unemployment in South Africa is concentrated amongst the youth and in rural areas with limited labour market opportunities and access to information. We also note that the household formation decisions are likely to be influenced by cultural and ethnic norms of South Africa (Neves & Du Toit, 2008).

The South African literature on the unemployed, household composition and moving has been dominated by discussions on the South African non-contributory old-age pension and the effect on labour supply (Ardington, Case & Hosegood, 2009; Edmonds, Mammen & Miller, 2001; Madhavan et al., 2012; Posel, Fairburn & Lund, 2006).

Edmonds, Mammen and Miller (2001) use a regression discontinuity design to measure the household response, including the unemployed, when a member becomes eligible for an old-age pension at the age of 60. The authors use census data and find that the presence of a pensioner has an effect on household composition. In response to a woman receiving a pension income, the household will include fewer prime aged women who migrate in search of work. In response to a man receiving the pension, the household will lose its prime aged men to labour migration. This implies

that an increase household income provides the opportunity for the working-age members who wish to seek employment to leave the home.

Pensioners living in multigenerational households share their pension income with their families (Møller & Sotshongaye, 1996; Sagner & Mtati, 1999). This sharing of income increases the resources available to support the unemployed.

Ardington, Case and Hosegood (2009) examine the effect of the presence of a pensioner in the household on employment and moving using panel data from a poor rural district in KwaZulu-Natal. They find that a household that receives an old-age pension has higher employment rates for prime-aged household members, as well as increased labour migration among the prime-aged members. This evidence suggests that an exogenous increase in household income from the old-age pension provides much needed support to the unemployed and even allows them to migrate in search of employment.

Using a combination of panel and cross-sectional data, Klasen and Woolard (2009) study the household formation choices of the unemployed with the use of a multinomial logit model. The authors look at the effect of unemployment on the unemployed person's relationship to the household head. Under the hypothesis that the unemployed are likely to attach themselves to a household for economic support, the authors suggest that the unemployed are less likely to be the head of a household. They find that the unemployed are more likely to live with their parents, family or non-family to seek support relative to being the household head or spouse of the household head. The authors examine panel data to show that those who remain unemployed or become unemployed between 1993 and 1998 remained in their parental home and delayed setting up their own households. This is similar to findings in the international literature.

Keller (2004) models the effect of employment status on household head status using a cross section of male Africans in rural South Africa. She uses a probit model with selection to capture the simultaneous determination of employment and household head status. The results from the model are similar to that of Klasen and Woolard (2009); that is, the unemployed are less likely to move out and set up households while the employed are more likely to be household heads.

The South African literature has thus far used national cross-sectional data (Keller, 2004) or region-specific panel data (Klasen & Woolard, 2009), pointing to the need for national panel data to examine the strategies of the unemployed. Panel data is often preferred as it allows one to overcome the problem of potential unobserved heterogeneity. In the context of employment, personal characteristics such as innate ability do not change over time. There is value to be gained from following people as they move and respond to changes in employment status.

2.3 Model – The location decision of the unemployed

The international literature models the choice of the unemployed between moving and staying with parents. In the South African context, this idea has been extended to include other options such as staying with extended family, or non-family, taking into account the cultural norms (Neves & Du Toit, 2008). The findings from the South African literature endorse this approach (Keller, 2004; Klasen & Woolard, 2009).

This extension also affects the kind of income variable used in our model. In the international literature, parental income is often used as a factor to determine the location decision of the youth. In South Africa, in the context of extended families, the income of other household members is shared with everyone in the household (Møller & Sotshongaye, 1996; Sagner & Mtati, 1999). Furthermore, the South African literature tells us that many parents may have temporarily migrated for work. We thus use household income instead of parental income in our model.

We consider a similar framework to that of Klasen & Woolard (2009). We treat employment as exogenous, while acknowledging that in the medium to long term the labour market situation and location decision may be a joint one. We assume the individual maximises his or her utility according to the budget constraint determined by the different household arrangements and their locations. Variables in the utility function of moving out include the individual's wage income, non-wage income and the prices of consumption goods.

When attaching to a household the unemployed benefit from a share of the income of the other household members. We account for this by including per capita household income, however it may be endogenous so we consider the model with and without this variable (Klasen & Woolard, 2009).

The cost of attaching to a household includes the cost to one's privacy and the discounted future value of wages constrained by the location of the household. That is, if the household is in a rural area the unemployed are removed from possible employment opportunities (Klasen & Woolard, 2009:9).

$$v(moving\ unattached) = f(w, I, p, G) \qquad (1)$$

$$v(staying\ attached) = \left(w, I, p, c_p, \delta\ \Pr(w), \frac{Y_h}{n_h}\right) \qquad (2)$$

Equation 1 represents the indirect utility of living alone; w represents the wage rate, I is the non-wage income and p refers to price. Equation 2 describes the indirect utility of sharing a household with others; c_p refers to the privacy cost, $\delta\ \Pr(w)$ is the lost wages or discounted future value of wage from being attached to a household with limited employment prospects and finally, $\frac{Y_h}{n_h}$ represents the income per capita in the household calculated as the household income divided by the household size.

Within this framework it is the employed who earn a wage enabling them to move out and live alone. Living with others becomes less likely as the benefit of the shared income becomes lower, and the cost of privacy increases with age. Being older, married and employed will place greater value on privacy and reduce the likelihood of living with parents or others. A further cost of being attached to another household is the location of that household. If the choice of where to live brings the unemployed closer to improved labour market conditions, this situation makes someone who moves more likely to be employed.

In this framework, it is more appealing for someone with no wages to attach themselves to a household in order to share in the income of other members. The higher the household's per capita income the more attractive it will be for an unemployed person but the discounted future earnings may be low depending on the location of the household and the surrounding labour market conditions.

With the use of this framework we examine the strategy of the unemployed to remain in income bearing households or move in search of support. We then show that moving has proved beneficial for the unemployed.

SECTION 3: Data and Descriptive situation

3.1 Data & Sample characteristics

The National Income Dynamics Study (NIDS) (Southern Africa Labour and Development Research Unit [SALDRU], 2013c) tracks a nationally representative sample of South Africans over time. It is the change in location that is unique to NIDS and particularly important for this study. Each wave of the fieldwork tracks those who move around South Africa and interviews them at their current residence. The dataset contains variables related to whether people had moved or stayed within the same location as well as the distance they had moved (Villiers et al., 2013).

The NIDS panel currently consists of three waves of survey data conducted in 2008, 2010 and 2012. A total of 28,247 individuals were interviewed in the first wave, 28,641 individuals in the subsequent wave; and 32,633 individuals in the third wave in 2012.

Our central interest lies in changes over time in location of the wave 1 unemployed individuals. For this reason we exclude the wave 1 non-resident household members who do not continue as members of the sample. We further exclude individuals who left the sample in waves 2 and 3. Taking into account these exclusions, there are 18,818 individuals that are continuing sample members making up the balanced panel.

Table 2: ***Characteristics of sample members***

Wave 1 Unemployed		
	Full Sample (%)	Balanced Panel (%)
Race		
African	84.9	88.3
Coloured	8.1	7.0
Indian	1.4	1.6
White	5.6	3.1
Gender		
Men	37.1	34.5
Women	62.9	65.5
Location		
Urban	36.1	38.6
Rural	63.9	61.4
Age categories		
15-18	5.2	4.7
19-23	23.3	22.0
24-28	21.1	20.8
29-34	19.0	19.1
35-44	19.5	20.2
45-59	11.9	13.2
Education		
No Schooling	5.6	5.8
Primary School	17.7	16.9
Some Secondary	47.8	48.3
Secondary School	28.2	28.6
Post-Secondary	0.7	0.5
Number of observations	3252	2,196
Weighted observations	6,002,427	4,884,978

Note: Own estimates using full samples of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations in the full sample weighted using post-stratification weights and observation in the balanced panel sample weighted with calibrated panel weights.

We examine and compare the unemployed from all those sampled in wave 1 and the unemployed from the balanced panel in Table 2 above.

According to Table 2 the balanced panel is broadly similar with some small differences when compared to the full sample in the characteristics shown. We wish to track the movement of those in the sample thus the panel sample of unemployed is better suited as our analytical sample. This will allow us to track an individual's response to changes in employment status in successive waves.

Table 2 above makes use of the panel weights in the balanced panel and all subsequent analysis will do the same. The panel weights are based on the calibrated weights of the sampled individuals and account for attrition bias in basic demographic variables. As can be seen from the table, when using the panel weight, our balanced panel seems to retain reasonable representativity.

3.2 Employment status

Cichello, Leibbrandt and Woolard (2012) note that the unemployment rates in wave 2 of the data are lower than expected perhaps due to some of the unemployed being categorised as not economically active, when in fact they were unemployed. To address this issue we look at the wave 1 unemployed and their decisions to stay or move in waves 2 and 3. In our empirical work we rely on the broad definition of unemployment; those who report being unemployed and searching as well as those desiring to work but not looking for a job.

When examining a change in employment status we include adults of a working age. We choose a lower age limit of 15 as some teenagers are not in school but are working to support their families and an upper age limit of 59 as those older are eligible for the state old-age pension.

3.3 Remittances, Pensions and Grants

We begin our examination of the unemployed by looking at the households in which they live in each of the three years of the NIDS panel. Below we show that the economic support available to the unemployed goes beyond income from an employed household member. Some households derive their income from remittances or the social assistance system. Earlier, we describe these as private and public safety nets respectively. Households with an income are attractive to the unemployed as they can provide economic support. However, many of these households are located in rural areas[1], away from labour market opportunities, making it harder to find employment.

Using the balanced panel, Table 3 reports the type of households with economic support and the households which the unemployed seek support from. The top half of the table reports the share of all households containing various combinations of employed and incoming-receiving individuals. This sets the scene for the bottom half of the table which describes the types of households in which unemployed respondents live.

[1] See Table A1 in the appendix.

Table 3: ***Household support and the unemployed***

Household-level analysis						
	All (%)			African (%)		
	2008	2010	2012	2008	2010	2012
1+ employed	60.2	58.5	59.5	58.2	56.2	58.7
No employed, remittances	7.8	4.5	6.8	8.6	5.2	7.6
No employed, no remittances, grants	19.3	21.6	20.0	20.9	24.0	21.4
No employed, no remittances, no grants	12.8	15.4	13.7	12.4	14.6	12.3
Individual-level analysis						
	All unemployed (%)			African unemployed (%)		
	2008	2010	2012	2008	2010	2012
1+ employed	45.8	38.5	41.2	42.8	36.3	38.8
No employed, remittances	7.9	6.6	7.8	8.2	7.1	8.4
No employed, no remittances, grants	33.8	31.9	33.9	35.8	32.7	34.8
No employed, no remittances, no grants	12.5	23.0	17.0	13.3	23.9	18.1

Note: Own estimates using working-age sample of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights

We categorise all households into a set of discrete household types to depict a national breakdown of household types by income support. The top half of the table disregards where the unemployed reside. The categorisation shows the various household types from which the unemployed could seek support.

The first household type we examine is one where at least one or more persons in the household receives an income. This household type may include, but not limited to, a pensioner receiving a pension income, an employed member working elsewhere and sending an income to the household or simple a household member who is employed.

The second category of household we examine is one where there are no employed members of the household but someone, not residing in the household, working elsewhere and remitting income to the household. Post-apartheid South Africa still has a large migrant labour system (Grieger et. al., 2013) adding to the private safety net of an employed household member as we discuss previously.

The third category looks at household with no employed individual and is not in receipt of a wage income but derives the household income through state support, including but not limited to, the old-age pension.

The final, and most vulnerable category of households is those with no employed members, receive no remittance income and do not receive any state support.

The table reveals that almost a third of households are disconnected from the labour market with no employed household members present or absent. More than 13% of households in 2012 fall into

the category of households that report having no income. These households may be less attractive to the unemployed as they are unable to provide economic support.

Many of the households that do receive remittances or social assistance that could provide some economic support to the unemployed, are located in rural areas.[2] While these types of households could provide economic support to the unemployed the location of these households takes them away from the labour market opportunities they would otherwise be exposed to in urban areas.

The bottom half of Table 3 describes the location of the unemployed categorised under the same household types described above. In 2008, 45.8% of the unemployed resided in households with at least one employed person. This figure decreases to 38.5%% in 2010 and then increases to 41.2% in 2012. The figures for the African-only sample are slightly lower. As expected this is the most popular choice for an unemployed individual requiring economic support.

Almost 8% of the unemployed live in households with no employed member and that received remittances in 2008, with figures dropping to 6.6% in 2010 and increasing again to 7.8% in 2012.

However, the second largest proportion of the unemployed resides in households with no employed member and no remittance income but at least one member received state support. In 2008, 33.8% of the unemployed lived in a household where no other member was employed, no member in the household received a remittance but someone in the household was in receipt of a grant income. In 2010 the proportion decreases to 31.9% and again increases to 33.9% in 2012. This shows the reach of the social assistance system in South Africa as Keller (2004) suggests and also the pressure on grant holders to share their income.

The remainder of the unemployed reside in households that do not receive state support and with no connection to the labour market and no remittance income. This group makes up 12.5% of the sample in 2008, 23% of the sample in 2010 and 17% of the sample in 2012. These figures are comparable to those reported in Klasen and Woolard (2009) for 2004. It is of concern that so many unemployed are not protected through private or public safety nets. This group of unprotected unemployed has almost no access to resources in order to find employment or move. Since this is the least attractive household type for unemployed, due to its lack of available economic support, we had expected these numbers to be lower.

We have established that when the unemployed are attached to households they are most often in a household that receives a grant or wage income. However, there are some unemployed who find themselves in households with no access to an income. Very few unemployed were found to be living alone.

[2] See Table A1 in the appendix.

3.4 Do the unemployed move?

Between wave 1 and 3 we observe that 2,097 individuals from the balanced panel had moved. Moving is defined as residing in a different building in a successive wave. Verified using (non-public access) GPS data, household members in the survey are classified as having moved if they changed residences between waves. In very few cases all the members of the household move, most cases were individual moves leaving other household members behind. Individuals may move within the same area but join a different household. Moves may take place between rural to urban areas, but also occur within rural and urban areas. Household members in the survey are coded as stayers if they have not changed residences between waves. We examine how this movement affects the unemployed.

Table 4: ***Wave 1 Unemployed movement in waves 2 and 3***

Wave 1 Unemployed	**Wave 2 (%)**	**Wave 3 (%)**
Migration in later waves		
Mover	11.7	14.5
Stayer	88.3	85.5
Employment Status in later waves		
NEA	39.6	27.3
Unemployed	28.8	32.8
Employed	31.6	40.0

Note: Own estimates using working-age sample of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights

A simple examination of the movement of the unemployed indicates that 11.7% had moved by wave 2 and 14.5% of the wave 1 unemployed had moved by wave 3.

At the same time we see that some have gained employment in subsequent waves. We do not know the degree to which finding employment is driven by the move of the unemployed to survive or the support of living with parents or family.

In trying to understand how moving affects employment status, we compare the household composition of movers and stayers of wave 1 (both the unemployed and all those in our wave 1 balanced panel sample) in Table 5 below. In the top part of the table we see that from our sample of unemployed working-age individuals, 14.3% had moved between waves 1 and 3. On the top right of the table we see that the unemployed have a slightly higher propensity to move in comparison to the rest of the balanced panel of which only 12.8% had moved.

Table 5: ***Movement between waves 1 and 3***

	Wave 1			
	Unemployed (%)		All (%)	
	Mover	Stayer	Mover	Stayer
Wave 3 - All	14.3	85.7	12.8	87.2
HH Head/Spouse	83.0	57.9	74.3	60.5
Living with parents	8.4	23.5	10.0	23.7
Living with family	8.0	18.5	15.5	15.7
Living with non-family	0.6	0.1	0.2	0.1
Column Total	100.0	100.0	100.0	100.0
Wave 3 - Unemployed	12.2	87.8	11.3	88.7
HH Head/Spouse	87.2	51.6	74.4	44.9
Living with parents	7.4	28.8	12.4	35.3
Living with family	5.4	19.5	13.0	19.7
Living with non-family	0.0	0.2	0.2	0.1
Column Total	100.0	100.0	100.0	100.0

Note: Own estimates using working-age sample of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights

More than 16% of the unemployed have moved to join the households of their parents (8.4%) or family (8%). A sizeable share of the unemployed stayers (42.1%) remained living with parents, family and others. Both the unemployed stayers and movers are presumably living with parents or family due to the comfort provided by the financial support of the household.

Those who are still unemployed in wave 3 have a higher propensity to stay with their support structures as can be seen in the bottom section of Table 5. In comparison to the balanced panel a smaller percentage of those who are still unemployed move.

The results from Tables 5 confirm that the unemployed will remain where they have the best access to economic resources. This means that in the face of low employment prospects and no unemployment insurance the unemployed make use of private and public safety nets. The information about moving goes further and tells us that the main survival strategies for the unemployed are to remain in a household of their parents or family and to a lesser degree move into a household with parents or family. We now explore whether the strategies of moving enable the unemployed to get ahead.

In Table 6 we describe the gains of moving and staying for the unemployed on their household real log per-capita income. The first row displays all the working-aged respondents in the balanced sample and the second row includes only the working-aged unemployed from the balanced panel. On the whole, movers gain more than stayers in terms of the change in the real log per capita household income between waves 1 and 3. When isolating the unemployed we see that the movers are making greater gains than the stayers in terms of household per capita income between waves.

Table 6: ***Changes in real log per capita household income of the unemployed between waves***

	Wave 1 - Wave 3		
Population	Movers	Stayers	Both
All	0.5641	0.1956	0.2433
	(0.0659)	(0.0226)	(0.0234)
Unemployed	0.6321	0.3545	0.3948
	(0.1260)	(0.0413)	(0.0446)

Note: Own estimates using working-age sample of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights Standard errors reported in parentheses.

The evidence from Table 5 and 6 suggests that moving allows the unemployed to get ahead. However, employment could be dependent on many other variables. We will now take into account all the other factors we think may be affecting employment to see if moving persists as a factor for getting ahead.

SECTION 4: Econometric results

4.2 Moving as a strategy out of unemployment

As discussed in section 2.3, we assume in our model that an individual maximises his or her utility such that their decisions are based on future costs and benefits. We are interested in whether employment in wave 3 was due to moving. Employment status is thus determined as:

$$E_i = \beta' X_i + u_i \qquad (3)$$

In equation 3, X_i is the vector that contains moving status, individual and household demographics. We are interested in the coefficient of moving status, that is, the effect of moving on employment status.

In looking at the effect of moving on the sample of wave 1 unemployed, our expectation is that those who have more skills and education are likely to move in search of employment opportunities.

We consider a binary probit regression model predicting the possibility of employment associated with moving. We use the binary employment status variable in wave 3 as our dependent variable, where 1 reflects being employed and 0 reflects being unemployed or not economically active. Table 7 reports the marginal effects of the probit regression. The marginal effect provides an estimate of the change in the probability of gaining employment associated with moving between waves 1 and 3. Controls include age, education levels, gender and location in the base year.

Columns 2 and 3 include controls for household income characteristics. Column 4 combines both individual and household income characteristics. Column 5 includes log per capita household income and lastly, column 6 we control for a move in wave 2.

Table 7: ***Effect of moving on employment status for the Wave 1 unemployed***

	(1) Moving only	(2) Moving with Household grant income control	(3) Moving with Household income controls	(4) Moving with HH income and Individual controls	(5) Moving with Per capita HH income and Individual controls	(6) Moving with a control for an early mover
Mover	0.147***	0.145***	0.145***	0.133***	0.136***	0.130***
	(0.0398)	(0.0393)	(0.0394)	(0.0382)	(0.0382)	(0.0391)
Early mover						0.0770
						(0.0549)
HH receives grant income in Wave 1 (=1)	-	-0.105***	-0.105***	-0.0790**	-	-
		(0.0364)	(0.0364)	(0.0381)		
HH receives wage income in Wave 1 (=1)	-	-	0.00183	-0.00175	-	-
			(0.0400)	(0.0434)		
Log Per capita Household Income in Wave 1					-0.0184	-0.0212
					(0.0201)	(0.0201)
Female (=1)	-	-	-	-0.138***	-0.147***	-0.150***
Male (omitted)				(0.0310)	(0.0306)	(0.0306)
Urban (=1) in Wave 1	-	-	-	0.0695**	0.0907***	0.0866***
Rural (omitted)				(0.0315)	(0.0327)	(0.0326)
Education: No Schooling (Omitted) in Wave 1						
Primary School	-	-	-	-0.144**	-0.132**	-0.135**
				(0.0618)	(0.0626)	(0.0629)
Some Secondary School	-	-	-	-0.107*	-0.0893	-0.0927

	(1) Moving only	(2) Moving with Household grant income control	(3) Moving with Household income controls	(4) Moving with HH income and Individual controls	(5) Moving with Per capita HH income and Individual controls	(6) Moving with a control for an early mover
				(0.0606)	(0.0613)	(0.0610)
Secondary completed	-	-	-	-0.00369	0.0289	0.0279
				(0.0678)	(0.0668)	(0.0667)
Post-Secondary	-	-	-	0.274*	0.311***	0.291*
				(0.147)	(0.147)	(0.154)
Age Categories: 15-18 (Omitted) in Wave 1						
19-23	-	-	-	0.0925*	0.0878	0.0891
				(0.0560)	(0.0551)	(0.0553)
24-28	-	-	-	0.140*	0.141**	0.138*
				(0.0742)	(0.0710)	(0.0713)
29-35	-	-	-	0.192***	0.191***	0.190***
				(0.0684)	(0.0667)	(0.0670)
35-44	-	-	-	0.172***	0.163***	0.163***
				(0.0633)	(0.0588)	(0.0587)
45-59	-	-	-	0.102	0.104	0.107
				(0.0678)	(0.0668)	(0.0664)
Observations	2,084	2,084	2,084	2,082	2,076	2,076

Note: Own estimates using working-age sample of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights Standard errors reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Individuals residing in households in receipt of social grant income have a lower probability of being employed in wave 3. This may suggest that grant receiving households are providing support while individuals are unemployed but this support may not be sufficient to enable to them to find work. This also supports the idea discussed earlier that the unemployed live in households that provide support but that these households are often located in rural areas.

While some unemployed are located in households that receive labour market income through an employed household member or remittances, household wage income has no effect on gaining employment. In both columns 2 and 3, moving has a positive significant effect on finding employment in wave 3.

In column 4 we include both the household and individual characteristics. Age, as expected, is a significant determinant of employment, individuals between 19 and 44 years old are more likely to gain employment than those in the 15-18 category. Primary and secondary education has a negative impact on gaining employment if unemployed in wave 1. Those having more than high school education are more likely to gain employment.

It also appears that unemployed women are less likely to gain employment than unemployed men. One possible reason for this may be that it is easier for men to find a job but at the same time it may also suggest that men and women move for different reasons. Below in Table 8 separate regressions are shown for men and women. We see that location is significant for women but not for men. Age is a significant determinant of employment for women and only significant for men between 29 and 35 years.

As expected, being unemployed in an urban area, has a positive impact on gaining employment in wave 3. Urban areas in South Africa have lower unemployment rates than rural areas as we described earlier in Table 1. In Table 8 we show separate regressions for the unemployed who are located in urban and rural areas in Wave 1.

Even after accounting for household and individual demographics the coefficient of moving remains positive and significant. The effect is only slightly diminished.

In column 5 we remove the remittance and the grant income variable. We include the log per capita household income variable instead. The effect of moving remains positive and significant but the impact of the household real log per capita income at baseline is insignificant. As a final check we control for a movement in wave 2 that might affect employment in wave 3. The results are reported in column 6. While moving in wave 3 is only slightly diminished by adding the wave 2 mover dummy variable, the coefficient on wave 2 mover is not significant and thus has no impact on finding employment in wave 3.[3]

[3] We also check for differences in race but find no evidence that race has an effect on our results.

Table 8: ***Effect of moving on employment status for the Wave 1 unemployed***

	Female	Male	Urban W1	Rural W1
All Movers	0.0998**	0.219***	0.141***	0.140***
	(0.0469)	(0.0737)	(0.0449)	(0.0410)
Log Per capita Household Income	-0.0335	0.0162	-0.0111	-0.0287
	(0.0242)	(0.0276)	(0.0250)	(0.0321)
Female (=1)	-	-	-0.123***	-0.176***
Male (omitted)			(0.0442)	(0.0344)
Urban (=1)	0.121***	0.0387	-	-
Rural (omitted)	(0.0392)	(0.0407)		
Education: No Schooling (Omitted)				
Primary School	-0.0155	-0.265**	-0.220*	-0.0778
	(0.0822)	(0.114)	(0.117)	(0.0811)
Some Secondary School	-0.0110	-0.149	-0.173	-0.0320
	(0.0775)	(0.0967)	(0.111)	(0.0688)
Secondary completed	0.161*	-0.133	-0.0203	0.0315
	(0.0838)	(0.102)	(0.107)	(0.0859)
Post-Secondary	0.391**	0	0	0.160
	(0.174)	(0)	(0)	(0.228)
Age Categories: 15-18 (Omitted)				
19-23	0.140**	0.0579	0.180**	-0.0853
	(0.0646)	(0.0826)	(0.0771)	(0.0954)
24-28	0.218***	0.0426	0.286***	-0.104
	(0.0620)	(0.0888)	(0.0727)	(0.112)
29-35	0.222***	0.215**	0.278***	0.0172
	(0.0748)	(0.0961)	(0.0830)	(0.0841)
35-44	0.220***	0.112	0.261***	-0.0164
	(0.0715)	(0.0932)	(0.0700)	(0.114)
45-59	0.225***	-0.0188	0.197***	-0.0638
	(0.0803)	(0.105)	(0.0656)	(0.137)
Observations	1408	666	985	1,089

Note: Own estimates using working-age sample of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights Standard errors reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

We report in Table A1 in the appendix a fixed effects model on the effect of moving on employment status. This model absorbs all determinants of employment that are constant within the individual over time. This includes (but is not limited to) unobserved ability, motivation, cognitive ability and even quality of schooling that may not be reflected in controls such as years of schooling (Ardington et al., 2009; Klasen and Woolard, 2009). The literature often talks about the difficulty in taking these many varying unobservable into account when looking at those who get a job as well as those who migrates. It is really useful to see that when we difference out these fixed effects the core result holds.

SECTION 5: Conclusion

This paper begins by investigating two main strategies of the unemployed: to stay in households that provide them with support, or to move to other households in search of employment and/or support. We show, in Table 3, the dispersion of the unemployed; most of whom have access to financial support through labour income or receipt of a state grant by a household member. However, a large proportion of the households receiving remittances or state support are located in rural areas. This moves the unemployed away from the labour market and will reduce their employment prospects and intensity of job search (Klasen & Woolard, 2009).

Between 12% and 18% of the unemployed in the balanced panel find themselves in households with no connection to the labour market or access to a state grant. It is these households that are likely to be pulled further into poverty through trying to support the unemployed.

In general, household composition appears to be important to the unemployed as they can seek income support from parents and family through co-residency. This paper extends the previous work done in international studies that only take into account parental characteristics. Taking account of a broader definition of household support, we confirm that the unemployed have a higher propensity to move in search of support or employment. We also confirm that greater gains are being made by the unemployed movers through examination of the change in real log per capita household income. Through our probit regression analysis we are able to show that moving plays an important role in enabling one to find a job when taking into account individual and household demographics.

However, moving and searching for a job comes at a cost that is hard to bear for very poor households. This leaves those who are potentially employable stuck in areas far from labour market opportunities. The benefits of gaining employment outweigh the costs and we see that despite these costs the unemployed are in fact moving out and getting ahead. A positive impact of moving on employment may reflect those who have more favourable unobservable employment characteristics. With the use of panel data we displayed the results of the fixed effects model which takes into account any time invariant characteristics. Our core results remain.

The research approach does not deal with individuals who moved in wave 2 but return to the original wave 1 location in wave 3. We suspect that this might not be a big problem as we argue that the employed have higher privacy costs and are unlikely to move back in.

In South Africa, unemployment persists at high levels in both rural and urban areas and there is little direct support to the unemployed. In this environment, private safety nets provide some support and ensure that the majority of the unemployed have some way to survive. However, there are still some unemployed who have no private or public safety net and are more susceptible to severe

poverty. Other than showing that such unemployed face constrained options in terms of getting ahead, we have not probed the survival strategies of such unemployed and their households. However, this is certainly an important exercise. Similarly, it would be worthwhile if future research looks more deeply into whether moving or finding a job comes first and how the distance moved affect employment probabilities.

APPENDIX

We use three waves of NIDS data to construct a fixed effects model that allows for individual fixed effects. Our regression is in the following form:

$$E_{it} = \beta_1 M_{it} + \varepsilon_i$$

We focus on the employment outcome, for individual *i* observed in wave *t*. We are still interested in the coefficient of moving status, that is, the effect of moving on employment status. We expect the coefficient to be positive and significantly different from zero as in the previous regressions.

The unobservable component in the fixed effects model can be written as:

$$\varepsilon_i = \alpha_i + \mu_{it}$$

where α_i is an individual-specific fixed effect for gaining employment. This effect will absorb all determinants of employment that are constant within the individual person *i* over time *t*. This may include unobserved ability and characteristics of the individual such as gender, age and years of completed schooling. Only individuals who moved anytime between waves 1 and 3 supply information to the coefficient of the mover variable. The effect of those who do not move are absorbed into the individuals' fixed effects.

Table A1: ***Fixed effects model of Employment status***

	(1)
Mover	0.381***
	(0.00038)
Urban (=1)	0.081***
Rural (omitted)	(0.00057)
HH receives grant income(=1)	-0.009***
	(0.00026)
	-0.095***
	(0.00029)
Observations	2,063

Note: Own estimates using working-age sample of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights Standard errors reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The fixed effects model confirms that moving has a positive, significant relationship on finding employment.

Table A2: ***Remittances and Grants as sources of Household income***

Household-level analysis						
	All (%)			African (%)		
	2008	2010	2012	2008	2010	2012
Proportion of household in rural areas	46.0	43.9	43.6	51.6	50.3	49.6
Receives remittance	14.8	7.4	13.6	15.6	8.1	14.1
Share of remittance receiving households in rural areas	56.6	45.1	47.1	52.2	41.2	42.7
Grant income	52.5	57.1	64.1	55.6	61.0	67.4
Share of grant receiving households in rural areas	50.9	44.8	47.2	46.3	40.6	43.0

Note: Own estimates using full samples of NIDS (SALDRU, 2013a; 2013b; 2013c). Observations weighted using calibrated panel weights

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southern africa labour and development research unit

The Southern Africa Labour and Development Research Unit (SALDRU) conducts research directed at improving the well-being of South Africa's poor. It was established in 1975. Over the next two decades the unit's research played a central role in documenting the human costs of apartheid. Key projects from this period included the Farm Labour Conference (1976), the Economics of Health Care Conference (1978), and the Second Carnegie Enquiry into Poverty and Development in South Africa (1983-86). At the urging of the African National Congress, from 1992-1994 SALDRU and the World Bank coordinated the Project for Statistics on Living Standards and Development (PSLSD). This project provide baseline data for the implementation of post-apartheid socio-economic policies through South Africa's first non-racial national sample survey.

In the post-apartheid period, SALDRU has continued to gather data and conduct research directed at informing and assessing anti-poverty policy. 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; public works and public infrastructure programmes, financial strategies of the poor; common property resources and the poor. Key survey projects include the Langeberg Integrated Family Survey (1999), the Khayelitsha/Mitchell's Plain Survey (2000), the ongoing Cape Area Panel Study (2001-) and the Financial Diaries Project.

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