



## WAVE 1

National Income Dynamics  
Study (NIDS) – Coronavirus  
Rapid Mobile Survey (CRAM)

# Who moves during times of crisis? mobility, living arrangements and COVID-19 in South Africa

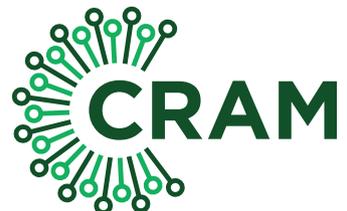
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**N.i.D.S.**  
NATIONAL INCOME DYNAMICS STUDY



CORONAVIRUS RAPID MOBILE SURVEY 2020

# Who moves during times of crisis? Mobility, living arrangements and COVID-19 in South Africa

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## Abstract

The COVID-19 lockdown, the requirement that people “shelter-in-place”, the physical closure of learning institutions, and the suspension or loss of employment, changed the living arrangements of a sizeable share of South Africans. For some, the change was temporary, while for others, it may be more long-lasting. As the effects of the pandemic and ensuing economic contraction ripple through the labour market, more people are expected to move into different households and to rely on kin and social networks in the absence of other means of economic support. In this paper, we explore the spatial connectedness of the South African population, both from the perspective of households which are “stretched” to include non-resident members, and from the perspective of adults who moved during the early stages of the lockdown. In doing so, we highlight the importance, but also the limitations, of living arrangements and kin networks in helping to absorb the costs of the COVID-19 crisis.

**Keywords**— *Mobility; migration; flexible living arrangements; COVID-19; South Africa*

# Executive Summary

In times of crisis – if people lose their jobs, if they do not receive social assistance, if they do not have savings to see them through the next month, if they become ill and need care – then what options for support and survival do they have available to them?

For many, their only source of support comes from family or social networks. However, these networks are often already strained, with little capacity to sustain more dependents over an extended period.

This study analyses data from households before COVID-19, and from adults during various stages of the COVID-19 lockdown, to explore family networks and changes in living arrangements during times of crisis in South Africa.

**The study highlights the “translocality” or “double-rootedness” of adults, who remain attached to another “family” home to which many are likely to have returned during the lockdown; it points to the importance of living arrangements as a livelihood strategy when employment is lost; and it underlines the strain on resources placed on households into which (one-way) migration occurs.**

## Specific findings

### **1. Many households in South Africa are “extended” or “stretched” over space:**

In 2017, there were about 3.3 million households (or a little less than one in five households) that were stretched to include a person who was viewed as a household member but who was not regularly resident in the household for at least four nights of the week.

### **2. Stretched households were already more vulnerable to poverty before COVID-19:**

In 2017, 38% of stretched households (households with non-resident members) were poor (the average per capita household income in these households was below the poverty line of R1138). This is compared to an overall poverty rate among households in 2017, of 26%.

### **3. Stretched households therefore have little capacity to absorb additional dependent members:**

In 2017, if stretched households were each to absorb one more dependent member, without a change in income, then poverty rates in these households would increase by more than ten points, to 49%.

### **4. There was considerable mobility among the adult population before the start of different levels of the COVID-19 lockdown:**

During the first few months of the COVID-19 lockdown, between 5 and 6 million adults, or approximately 15 percent of those aged 18 years and older, had moved into a different household. Most of this movement (70%) occurred at the end of March, and approximately half (51%) of all moves in March were inter-provincial. A smaller percentage of adults moved at the end of April or in May, and only three percent of all adults (or about one million adults) moved twice.

### **5. Adults who moved twice are likely to represent labour migrants who retained employment:**

Adults who moved twice were mostly men; they were the most likely to report receiving support from their community or neighbours; and of all adults, they were the most likely to have employment to return to at the end of April.

For example, only 6% the “double-movers” reported employment in February but not in April (a difference which is also not statistically significant), in comparison to 15% of non-movers, and over 25% of those who moved only in May/June.

**6. Most adults who moved had only moved once, and they include students returning home, and adults who had lost employment:**

Among all movers, almost 82% moved only once. Those who moved at the end of March include students who would have moved when tertiary learning institutions and residences were closed. But other movers include people who had no other means of support.

People who moved later in April or in May seem to have been the most destitute: they were the most likely to have lost employment over the lockdown period; and to live in households that had run out of money to buy food (59%) and that experienced hunger (36%).

**7. The co-residence of men and children changed during the COVID-19 lockdown:**

During the COVID-19 lockdown, men were more likely to be living in households with children. At the end of 2017, only 48% of men were living in a household with at least one child (<18 years). However, 61% of men reported living in the same household as at least one child at the time they were interviewed during the COVID-19 lockdown.

### Policy implications

- Policy which recognises “translocality” among South Africans, and which allows people the opportunity to move at various stages of the lockdown, needs to be maintained if subsequent lockdowns are implemented, affording people the time to move “home” or to another “home” before they are required to “shelter in place”.
- As in responses to the HIV/AIDS pandemic, social policy needs to recognise the strain which will be placed on kin networks as the crisis deepens, and to respond in ways that strengthen the ability of these networks to withstand the effects of job/remittance loss and increased dependency in households.
- The mobility of South African adults in times of crisis highlights the importance of safety protocols and measures implemented in the transport corridors. Given the role of public taxis as the mode of transport for most of the population, and the difficulty of maintaining social distancing in these vehicles, there is the real risk that the coronavirus will continue to move as the population moves.

# 1. Introduction

In considering the implications of COVID-19 for families and livelihoods, Alon et al. (2020: 11) note that the nature of “family arrangements will play a large role in the current crisis”. They identify, as an example, households with single parents (and single earners) as being likely to be more severely affected than dual parent households, both because they are more vulnerable to job loss and because childcare demands will be felt more acutely in these household types.

However, living arrangements are also not static, and they may change considerably in response to economic and health shocks. A range of studies have shown that household boundaries in South Africa are fluid, and that household formation, dissolution or reconfiguration form part of people’s livelihood strategies, particularly when resources are scarce (Edmonds et al. 2005; Klasen & Woolard 2009; Hall 2017). Kin networks have played an important role in providing support to family members during times of crisis and insecurity, including the effects of the HIV/AIDS epidemic and very high and sustained rates of unemployment (Schatz & Ogunmefun 2007; Klasen & Woolard 2009; Mathis 2009; Ardington & Leibbrandt 2010). Studies also describe the persistence of “stretched” households that traverse (often) urban and rural nodes, highlighting the “translocality” of movers, or the extent to which people who migrate remain connected to the households they left behind (Bank et al. 2020).

In this paper, we explore flexibility in living arrangements during times of crisis by investigating movement patterns at various stages of the COVID-19 related lockdown in South Africa. The announcement on the 22 March 2020 of a “hard lockdown” (referred to as “alert level 5”), which would start on 27 March, offered people the opportunity to move to households in which they would “shelter in place”. The announcement that the lockdown would be eased to “alert level 4” from 1 May then offered people the “once-off” opportunity to move again between provinces or district areas if they needed to “return to their places of residence or work”. Thereafter they were “required to stay in place” until the start of “alert level 3” on 1 June 2020 (Gazette number 43258 of 29 April 2020).<sup>1</sup>

Existing empirical research which has explored the translocality of migrants, and the permeable nature of household boundaries in South Africa, has typically analysed data collected from the household to which people, or migrants specifically, remain attached, rather than from the mobile individuals themselves (Posel & Marx 2013). We present data on these stretched households in the first part of the empirical analysis, drawn from the most recent wave of the National Income Dynamics Study (NIDS), conducted in 2017. We describe their extent and distinguishing characteristics and we consider how income and vulnerability to poverty would change if the number of people living in these households was to increase. We then analyse data, collected in the first wave of the NIDS-CRAM (Coronavirus Rapid Mobile) survey during May and June 2020, which provide a unique opportunity to explore movement and fluidity in living arrangements during the onset of the COVID-19 crisis from the perspective of adults who move.

Recognising the “endogeneity” of household arrangements to living conditions and circumstances has important implications for the design of social and economic policy that responds to the socio-economic consequences of COVID-19. If people move during times of crisis, then where the economic costs of the crisis are absorbed, and who absorbs these costs, will also change. Understanding mobility patterns and the translocality of migrants in South Africa is also important for identifying corridors of possible transmission, and therefore for attempts to contain the spread of the virus in the months or years to come, before a vaccine is developed. We develop these arguments further at the end of the paper. We first provide a brief review of the literature on flexible and stretched households in South Africa before discussing the data analysed. We then present the empirical findings and conclude with a discussion which also reflects on their implications for policy that responds to the COVID-19 crisis as it unfolds.

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<sup>1</sup> Gazette number 43258 of 29 April 2020 (p.17) states: “Any person who was not at their place of residence or work before the lockdown period and who could not travel between provinces, metropolitan and district areas during the lockdown, will be permitted, on a once-off basis, to return to their place of residence or work and will be required to stay in such place until the end of Alert level 4”.

## 2. A brief review

There is increasing recognition in the economics literature of the importance of household living arrangements as a livelihood strategy (Stack 1974; Ermisch & di Salvo 1997; Frankenberg et al. 2003; Edmonds et al. 2005; Fafchamps & Quisumbing 2007; Klasen & Woolard 2009). In adverse circumstances, living in bigger households or merging smaller households offers a means to reduce living costs by realising economies of scale in fixed costs, food purchases and other expenses (Deaton & Muellbauer 1986; Deaton & Paxson 1998; Bellù & Liberat 2005; Klasen & Woolard 2009; Posel et al. 2020). Larger and extended households also provide opportunities to share domestic and caring responsibilities, making it easier for household members to combine reproductive responsibilities and productive work. For individuals without any other means of support from employment or the state, living with kin who have access to income may be the only option that they have available for their subsistence (Klasen & Woolard 2009).

Many studies have described the flexibility of household composition and the permeable nature of household boundaries in South Africa (e.g. Spiegel 1986; Spiegel et al. 1996; Edmonds et al. 2005; Klasen & Woolard 2009). This flexibility has a long history, that “almost certainly predate(s) the economic and political upheavals of colonialism and industrialism” (Russell 2003:25). For example, Russell (2003) describes the practice of distributing African children between households, influenced partly by the ability of the household to support them. However, restrictions on African migration and urbanisation, which lasted until the late 1980s, would certainly have contributed to the flexibility of household living arrangements.

Patterns of individual labour migration, enforced during the decades of apartheid, gave rise to families that were geographically stretched across originating and destination nodes. Although this type of migration has declined (in the last decade in particular (Posel 2020)), and rates of African urbanisation have increased considerably (Anderson 2006), the legacy of apartheid restrictions on urban settlement remain, and some migrants continue to be members of another household typically in a rural area (Posel & Casale 2003; Posel et al. 2006; Collinson et al. 2007; Ardington et al. 2009; Ardington et al. 2016; Posel 2020). However, even migrants who are settled “permanently” in their destination area may be “double-rooted”, in that they retain a close association with a household in the countryside or elsewhere, where other family members (often parents or grandparents) reside (Bank et al. 2020).

The persistence of “translocality” or “spatial connectedness” (Greiner & Sakdapolrak 2013: 373) associated with migration derives partly from an attachment to the place of ancestors, culture and tradition (Spiegel et al 1996; Bekker 2001; James 2001; Bank et al 2020). It is also explained by conditions in urban areas, including higher costs of living, limited access to affordable formal housing, the poor quality of state-provided housing (so-called RDP homes), and insecurity in the labour market. These factors reinforce the appeal of the rural home as the place for retirement, and also its importance as an economic and social safety net in the event of unemployment or ill health (Huchzermeyr 2003; Du Toit & Neves 2006; Klasen & Woolard 2009; Posel & Marx 2013; Hall 2017; Bank et al 2020; Posel 2020). For example, Klasen and Woolard (2009) show that given the absence of unemployment insurance or direct support from the state, one survival strategy for the unemployed in South Africa is to attach themselves to households where income is received. Many studies have also documented the importance of the extended family in providing support during the HIV/AIDS epidemic, by absorbing family members who were ill or children who became orphaned (e.g Duflo 2003; Hosegood et al. 2004; Hill et al. 2008; Bohman, van Wyk & Ekman 2009; Ardington & Leibbrandt 2010; Mathis 2011).

As in many countries around the world, the COVID-19 lockdown in South Africa had a dramatic effect on education and employment. All places of learning were physically closed for the duration of the “hard lockdown” (officially level 5 lockdown) and students or pupils who had been living in residences had to return home, a situation that persisted also during May, with a few exceptions (e.g. medical students returning to university). During level 5, many parts of the economy were also physically “shut down”: only essential workers were allowed into the workplace and the mines (with some exceptions), factories, leisure and tourist venues, and a range of retail outlets as well as services (in both the formal and informal sectors) were closed. The restrictions on employment were

eased somewhat when the country transitioned to level 4 (on 1 May 2020), and an array of non-essential services could re-open at their physical premises provided work-from-home measures were not possible. This included the partial return to work in the mining industry, which historically has been one of the main employers of male migrant workers in the country. Whilst millions of South Africans retained their job over levels 5 and 4 – by working from home, taking paid leave, or accepting a pay-cut or an employment furlough – millions did not, and South Africa’s already very high pre-COVID-19 unemployment rate, of approximately 29 percent<sup>2</sup> in 2019 (Statistics South Africa 2019), was expected to increase significantly as the health and economic crisis unfolded.

Exploring the mobility of adults in anticipation of these phases of the COVID-19 lockdown offers a unique opportunity to shine a light on translocality and flexible living arrangements in South Africa. If the lockdown came with the loss of employment or reduced pay, then family homes, perhaps particularly in rural areas, may have offered a refuge to family members who had no other means of support. But even if the employed did not face an income shock as a result of the lockdown, they may have wanted to “go home” before the start of the “shelter-in-place” regime, and especially if their living conditions before the lockdown were cramped and not conducive to social distancing. For these migrants, the lockdown may also have provided a unique opportunity to spend time with their family.

### 3. Data

We first provide a pre-COVID-19 description of “stretched” households in South Africa using data collected in the fifth wave of the National Income Dynamics Study (NIDS), undertaken in 2017. NIDS, which was conducted by the Southern African Labour and Development Research Unit (SALDRU), is the only current national household survey that does not impose a strict residency requirement on household membership. Rather, individuals can be included in the “household roster” even if they only lived in the household for 15 days over the previous year. NIDS therefore makes it possible to identify stretched households, but specifically from the perspective of the household whose boundaries are stretched to include non-resident members.

We analyse the NIDS wave 5 data to provide some measure of the extent and distribution of households with non-resident members. We also use these data to conduct a simple “pressure-test”, which measures the implications for per capita household resources if a non-resident member was to become resident in the household, and if private transfers received by the household were to cease.

We then examine data collected in the most recent extension of NIDS, referred to as the NIDS-CRAM survey, to explore patterns of mobility and changes in living arrangements during the initial months of the COVID-19 lockdown. The first wave of the NIDS-CRAM survey can be viewed as the sixth wave of NIDS, in that its sample was drawn from individuals who were in the NIDS wave 5 sample (from 2017). However, whereas NIDS is a household survey (and therefore includes a household roster), NIDS-CRAM is a survey of individuals. The data which we analyse therefore capture mobility, and indicate stretched households, from the perspective of individuals who moved before the start of different lockdown levels, where these moves, at least in one direction, may have been into a household in which individuals are viewed as a non-resident household member.

The first wave of NIDS-CRAM was conducted from 7 May to 27 June 2020 and it surveyed 7074 adults aged 18 years and older using telephonic interviews. Not surprisingly, given the short duration over which the wave was conducted, the sample of adults is considerably smaller than the resident adult sample from NIDS wave 5, of 29,327 adults. Moreover, as NIDS-CRAM was restricted to a twenty-minute telephonic interview, the number of questions asked of adults is substantially smaller, and the information collected is less nuanced than in NIDS. As NIDS is a panel survey, the individuals in NIDS-CRAM can be linked to their information collected in 2017, which also includes the characteristics of the household in which they were then resident members. But it is not possible to establish whether individuals were living in the same household at the start of 2020 as in 2017, or whether they had also been identified as non-resident members of another household in NIDS wave 5.

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2 This represents the narrow definition of unemployment which requires the unemployed to have engaged in active job search.

Our key categories of interest concern whether adults moved into a different household at different stages of the lockdown. These categories are derived from information collected in NIDS-CRAM on two moves: first, did people move into a different household when the lockdown was announced (and did this involve an inter-provincial move)<sup>3</sup>; and second, “in the month of May” did they move “from the house or dwelling (in which they) were living during April”<sup>4</sup>? People who were interviewed during May are likely to have reported on mobility early in the month, when once-off travel for the period of lockdown level 4 was permitted (from 1 to 7 May).<sup>5</sup> However, people who were interviewed during June could have reported on mobility towards the end of May, in response to the further easing of lockdown conditions to level 3 (from 1 June).<sup>6</sup>

We use responses to these questions to identify three sub-groups of “movers”: adults who moved in anticipation, or at the start, of the “hard lockdown” and who did not move again (in May) by the time they were interviewed; adults who only moved in May; and adults who moved in both March and May. Among those who moved at the end of March, we also distinguish, where relevant, those who moved inter-provincially.<sup>7</sup>

Mobility in both March and May is suggestive of circular migration patterns, typically associated with temporary labour migration. With the data available, we cannot confirm that the “double-movers” returned after their move in May to the same household that they left in March.<sup>8</sup> But we can compare the share of double-movers and “once-off movers” who had employment to return to in May. If double-movers represent labour migrants who moved to their family home whilst employment was suspended (but not lost), then once-off movers are more likely to include adults who do not have jobs to return to, and who moved into another household (possibly their family home) for economic support.

## 4. Describing stretched households in South Africa pre-COVID-19

In 2017, the NIDS wave 5 data estimate that almost one in five households in South Africa (or about 3.3 million households) included at least one person who did not usually reside in the household for four or more nights of the week, but who was nevertheless considered to be a member of the household (*Table 1*). This provides some measure of the extent to which households are “stretched” over place, although many more households may have had permeable boundaries that would accommodate family members in times of crisis.

The share of households with non-resident members is far higher in rural (25%) than urban (14%) areas (although the absolute number of households is larger in urban areas). The share also varies considerably across the nine provinces and is typically lower in provinces that have a smaller rural population. It is lowest in the Western Cape (7.5%) and Gauteng (14%), provinces that contain the two largest metropolises in the country and are therefore provinces to which people migrate. It is also relatively low in the Free State (15%), where only 14 percent of the population is rural. In contrast, the share of stretched households is highest in Limpopo (almost 28%), a province where over 80 percent of the population lives in a rural area. Provinces that include a larger rural population are more likely to be provinces from which, or within which, people migrate (often for employment reasons).

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3 See questions B6.3 and B7, page 5 of the NIDS-CRAM questionnaire.

4 See question B8, page 6 of the NIDS-CRAM questionnaire.

5 In a media release on 1 May 2020, it was announced that: “The Minister of COGTA has published Regulations allowing a once-off special dispensation for persons who were not at their places of residence before the lockdown period and who could travel between Provinces, Metropolitan and District areas during the lockdown, to return to their homes. Those people are now permitted to travel between 1 May 2020 and 7 May 2020”. <https://www.gov.za/speeches/minister-fikile-mbalula-coronavirus-covid-19-alert-level-4-transport-directions-1-may-2020>

6 Adults who were interviewed earlier in May could have moved at the end of the month, in which case, the data will not reflect all May movers (and therefore people who moved more than once over the period could also be under-represented). However, we do not find that people who were interviewed in June were more likely to have moved in May compared to people who were interviewed in May, suggesting that most of the May moves occurred early in the month.

7 Unfortunately, no information is collected on whether adults moved alone or with others (e.g. their children), or whether children moved independently of adults.

8 NIDS-CRAM only collected information from the individual on the household in which he or she is currently resident (i.e. at the time of the interview, which would have taken place between 7 May and 27 June). We therefore have no information on the household from which people moved. This is discussed further in section 5.

In addition to their geo-spatial characteristics, households with non-resident members are distinctive in several other respects (*Table 2*). On average, they include significantly more resident household members than the average South African household (3.7 compared to 3.0), reflecting more children in particular (both younger and older children), but also more working-age adults (18 – 59 years) and elderly adults (> 59). A substantially larger percentage of these households received at least one social grant (57% compared to 43% of all households), and because receipt of social grants is means-tested<sup>9</sup>, it is not surprising that per capita household income is significantly lower in households with non-resident members, compared to households overall. However, in a country with such high rates of inequality, mean per capita household income also considerably over-states median access to income. In almost 38 percent of households with non-resident members, income was below the upper bound poverty line of R1138 per person in 2017. This is approximately 12 percentage points higher than the overall headcount poverty rate of 26 percent of all households<sup>10</sup> in 2017.

**Table 1. Stretched households (with at least one non-resident household member) & rurality in South Africa, 2017**

	Number of households with non-resident members	% of households with non-resident members	% of households (by area) that are rural
<b>All households</b>	3 337 276	17.9 (0.6)	25.0 (1.0)
<b>Urban households</b>	1 833 157	14.5 (0.7)	0
<b>Rural households</b>	1 504 119	25.0 (1.0)	100
<b>Western Cape</b>	160 734	7.5 (1.2)	6.0 (0.7)
<b>Eastern Cape</b>	395 893	19.1 (1.4)	53.4 (2.0)
<b>Northern Cape</b>	78 311	19.1 (3.8)	20.4 (3.9)
<b>Free State</b>	153 194	14.8 (1.7)	14.2 (1.9)
<b>KwaZulu-Natal</b>	713 893	22.3 (1.3)	43.7 (1.7)
<b>North West</b>	249 844	19.4 (1.8)	64.5 (2.5)
<b>Gauteng</b>	784 883	14.7 (1.3)	5.5 (0.84)
<b>Mpumalanga</b>	335 223	22.4 (2.3)	42.1 (2.7)
<b>Limpopo</b>	465 301	27.8 (2.0)	83.0 (1.8)

**Source:** NIDS wave 5

**Notes:** The data have been weighted to represent population estimates. A non-resident member is a person who is not resident in the household for at least four nights of the week but is still considered to be a member of the household and has lived in the household for at least 15 days of the previous year. Standard errors are in parentheses.

To simulate the possible implications for these stretched households of in-migration in response to the COVID-19 lockdown, *Table 2* also reports how average per capita household income and the poverty rate would change if each of these households was to absorb one non-resident member (as a resident member). Average household size would increase (from 3.7 to 4.7), and if household

<sup>9</sup> The poverty rate for all grant-receiving households, measured using the 2017 NIDS data, was 47 percent.

<sup>10</sup> The household poverty rate is lower than the individual poverty rate (which is estimated at 39% of all individuals in 2017) because households that are poor are larger than households that are not poor.

income remained unchanged, average per capita household monthly income would fall sharply (from R3603 to about R2294), and the headcount poverty rate would increase by over ten percentage points, from almost 38 percent to 49 percent of households.

**Table 2. Household characteristics, with measured and simulated poverty headcount rates, 2017**

	All households	Households with non-resident members
<b>Household size (residents only)</b>	3.0 (0.0)	3.7* (0.1)
<b>Number of young children (0-5)</b>	0.4 (0.0)	0.6* (0.0)
<b>Number of older children (6-17)</b>	0.7 (0.0)	1.0* (0.0)
<b>Number of working-age adults (18-59)</b>	1.7 (0.0)	1.9* (0.0)
<b>Number of elderly (&gt;59)</b>	0.3 (0.0)	0.3* (0.0)
<b>Household receives at least 1 social grant (%)</b>	42.5 (0.7)	56.6* (1.8)
<b>Grant income/household income, unconditional (%)</b>	13.9 (0.3)	19.1* (0.8)
<b>Household receives private transfers (%)</b>	18.4 (0.6)	26.2* (1.4)
<b>Transfers/total household income, unconditional (%)</b>	6.2 (0.3)	8.6* (0.8)
<b>Per capita household monthly income (Rands)</b>	6166.6 (250.8)	3603.5* (257.5)
<b>Poor households (%)</b>	26.0 (0.0)	37.7* (0.0)
<b>Characteristics with simulation</b>	<b>One non-resident returns</b>	
<b>Household size (residents + 1 non-resident)</b>		4.7** (0.1)
<b>Per capita household monthly income (Rands)</b>		2293.7** (141.5)
<b>Poor households (%)</b>		49.3** (1.7)
	<b>Private transfers are also lost</b>	
<b>Per capita household monthly income (Rands)</b>		2192.9** (142.7)
<b>Poor households (%)</b>		52.0** (1.7)

**Source:** NIDS wave 5

**Notes:** The sample is of households. The data have been weighted to represent population estimates. Income values are in 2017 prices. Households are identified as poor if average per capita household is below the upper-bound poverty of R1138 per person per month. Standard errors are in parentheses. \* Estimates are significantly different at the 95 percent level, between all households and households with at least non-resident member. \*\* Estimates are significantly different at the 95 percent level, between the measured characteristics of households with non-resident members and their simulated characteristics.

Moreover, the vulnerability of stretched households would be compounded if, in addition to in-migration, the household also had to suffer a fall in transfer income. In 2017, about 18 percent of all households reported receiving an income or in-kind transfer from people who do not usually live in the household<sup>11</sup>, which would include maintenance and child support. It would also include remittances, which helps to explain why the share of households receiving private transfers is significantly higher (26%) in households with non-resident household members. If these households were both to absorb an additional member and to lose the private transfers received (e.g. because of the migrant's employment loss), then the poverty rate among these households with (previously) non-resident members would increase further, to 52 percent.

## 5. Mobility before lockdown and during lockdown changes

The 2017 data analysed in the previous section identify stretched households, and therefore flexible living arrangements, from the perspective of households into which people may move in times of crisis, "shutdown" or furlough. Three years later, the NIDS-CRAM data make it possible to observe flexibility from the perspective of individuals who move.

Shortly before the COVID-19 hard lockdown at the end of March, until the end of May, between 5 and 6 million adults, or approximately 15 percent of those aged 18 years and older, had moved into a different household (*Table 3*). Most of this movement (70%) occurred at the end of March, and approximately half (51%) of all moves in March were inter-provincial. A smaller percentage of adults moved in May, and only three percent of all adults (or about 800 000 to 1.2 million adults) moved in both periods.

**Table 3. The extent of mobility in March and May 2020**

	Number	Percentage
All adult movers (moved in March; in May)	5 407 207 (382609)	15.5 (0.8)
Moved in March only	2 709 421 (241278)	7.8 (0.6)
Moved in May only	1 693 112 (222474)	4.9 (0.5)
Moved in both March and May	1 004 673 (115397)	2.9 (0.3)
Share of all March moves that were inter-provincial	1 904 184 (180769)	51.3 (3.0)

**Source:** NIDS-CRAM, wave 1 (2020)

**Notes:** Adults are individuals older than 17 years. The sample has been weighted to represent population estimates benchmarked to the adult population from 2017. Standard errors are in parentheses.

The sample size for NIDS-CRAM is too small to provide robust provincial-level estimates that can be compared with statistical confidence. But there is the suggestion in *Table 4* that some provinces experienced relatively more mobility than others, and at different times. For example, the largest share of adults who moved inter-provincially in March were living pre-lockdown in the province of Gauteng, which includes the largest metropole in the country. Relative to their share of the adult population, adults who were living in Limpopo before the lockdown (the most rural of the provinces) were more likely to move in both March and May, but also more likely to move only in March and to migrate inter-provincially. Adults living in the Eastern Cape were also relatively more likely to migrate, and particularly in May, although they are not over-represented among adults who had migrated twice.

<sup>11</sup> Question F3.1 of the NIDS 2017 adult questionnaire asks respondents whether "in the last 12 months", they received "money, food or any other kind of contribution from people who do not usually sleep under this roof for four nights a week?"

**Table 4. The province movers were living in before the COVID-19 lockdown (%)**

Province before lockdown	% of adults who moved				% of the total adult population
	In March only	In May only	In March and May	March: inter-provincial	
<b>Western Cape</b>	9.1 (2.4)	14.5 (4.9)	9.9 (3.6)	4.9 (2.0)	11.4 (1.7)
<b>Eastern Cape</b>	14.2 (2.8)	15.6 (4.4)	10.6 (3.3)	9.9 (2.5)	11.6 (1.3)
<b>Northern Cape</b>	2.4 (0.6)	1.0 (0.4)	5.9 (3.5)	4.5 (2.0)	2.9 (0.4)
<b>Free State</b>	5.1 (1.6)	5.8 (2.4)	2.6 (1.5)	6.1 (2.2)	5.6 (0.9)
<b>KwaZulu-Natal</b>	15.9 (2.4)	12.6 (3.4)	21.0 (4.6)	17.7 (3.0)	18.7 (1.6)
<b>North West</b>	4.3 (1.3)	1.5 (0.7)	3.9 (1.7)	3.5 (1.2)	5.0 (0.7)
<b>Gauteng</b>	29.3 (3.5)	29.7 (7.3)	20.7 (4.4)	32.4 (3.5)	26.3 (2.3)
<b>Mpumalanga</b>	6.9 (1.5)	14.4 (3.4)	7.7 (2.4)	6.5 (1.5)	8.4 (1.1)
<b>Limpopo</b>	12.8 (3.4)	5.0 (1.5)	17.8 (5.2)	14.5 (3.2)	10.0 (1.2)

**Source:** NIDS-CRAM, wave 1 (2020)

**Notes:** Adults are individuals older than 17 years. The sample has been weighted to represent population estimates benchmarked to the adult population from 2017. Because less than 0.1 percent of the population reported living outside South Africa and because of rounding, each column may not sum to 100 percent. Standard errors are in parentheses.

In comparison to adults who did not move, there appear to be several distinguishing characteristics of adults who moved, although with small sample sizes, the differences (which are sometimes numerically large) are not always statistically significant, particularly when movers are further disaggregated into sub-groups. We would expect that adults who moved twice are the most likely to include “circular” migrants, who spent time during the lockdown at their “other” or “family” home, while those who moved once may include adults who could work or study “from home”, those whose employment remained suspended, and those whose employment had been lost. These associations are largely supported in *Table 5*, which describes the characteristics of adults according to their movement status.

Consistent with research on internal migration patterns in South Africa, men are significantly over-represented among movers and particularly among adults who moved twice (Posel & Casale 2003; Montgomery et al. 2006; Posel 2020). A significantly smaller share of movers is elderly (older than 59 years), and significantly larger shares had employment in February and April. These employment characteristics appear most pronounced among adults who moved twice, who are also the most likely to have retained employment or to have employment to return to. These are all attributes which support the suggestion that included in this group of movers are circular labour migrants, who spent the weeks of the hard lockdown at their other home and then likely returned to resume employment when lockdown level 4 was introduced.

However, this group of movers is also the least common: by the time they were interviewed for wave 1 of NIDS-CRAM, almost four out of five adults who moved had only done so once, either in March or in May. The relative concentration of young adults (18 to 29 years), and the lower employment rate among those who moved only at the end of March, suggests that this group is the most likely to include students who moved after institutions of higher learning closed. Adults who moved later are

distinguished by the very large difference in employment status before and after the hard lockdown in April, and by a smaller share who are grant recipients, suggesting that this group of movers is the most likely to include adults who lost employment as a result of the hard lockdown and who were without other means of economic support. More than a quarter of these movers reported employment in February but not in April, compared to 15 percent of non-movers.

**Table 5. Individual characteristics of movers and non-movers**

Percentage (share) who is:	Did not move	Moved	Moved in March only	Moved in May only	Moved in March & May
<b>18 – 29 years</b>	28.4 (1.0)	36.7* (2.3)	39.8** (3.6)	33.5 (4.4)	33.8 (5.0)
<b>30 – 59 years</b>	56.3 (1.0)	54.1 (2.3)	51.3 (3.5)	54.2 (4.0)	61.5 (5.3)
<b>60 and older</b>	15.3 (0.9)	9.2** (1.6)	9.0* (2.4)	12.3 (3.1)	4.7** (1.9)
<b>Female</b>	54.9 (1.1)	45.2* (2.4)	46.4 (3.6)	44.5 (4.6)	42.9* (5.3)
<b>African</b>	77.4 (2.3)	81.4 (3.2)	83.4 (3.0)	74.6 (7.7)	87.5 (4.4)
<b>Coloured</b>	9.7 (2.0)	9.5 (3.0)	5.1 (1.4)	18.2 (8.0)	6.3 (2.5)
<b>Indian</b>	2.7 (0.8)	1.5 (0.9)	2.6 (1.7)	0.6 (0.4)	0
<b>White</b>	10.2 (1.2)	7.7 (1.6)	8.9 (2.3)	6.5 (2.3)	6.2 (3.9)
<b>Employed in February</b>	50.4 (1.1)	60.8** (2.6)	57.9* (3.8)	61.4* (4.2)	67.6* (5.1)
<b>Employed in April</b>	42.7 (1.1)	51.3* (2.6)	50.3 (3.8)	45.5 (5.0)	63.9** (5.0)
<b>Grant recipient</b>	18.2 (0.9)	14.9 (1.6)	17.3 (2.8)	12.1 (2.7)	13.13 (3.1)
<b>Unweighted sample size (n)</b>	5954	984	496	286	202

**Source:** NIDS-CRAM, wave 1 (2020)

**Notes:** Adults are individuals older than 17 years. The sample has been weighted to represent population estimates benchmarked to the adult population from 2017. Standard errors are in parentheses. \*\* Differences between non-movers and movers, or categories of movers, are significant at the 95 percent confidence level. \* Differences between non-movers and movers, or categories of movers, are significant at the 90 percent confidence level.

Information on the households in which people live is collected from the individuals themselves and only about the individual's current household. This has no implications for describing the households of adults who did not move, as they are living in the same household as before the lockdown. But it does have implications for adults who moved. Among those who are recorded as moving twice, it is not possible to identify the characteristics of the household into which people moved after their first move, nor can we confirm that the current household which adults are describing is the same household as the one they initially left (although this may be a reasonable assumption to make). For all the other movers, individuals are describing the households into which they moved at the end of March or in May, and we have no information on the household they left behind.

As earlier when describing individual characteristics, there are some large numerical differences in the household characteristics of movers compared to non-movers, but they are often not significant because the sample sizes for the different groups of movers are small (and the standard errors are

therefore large). However, the statistics in *Table 6* are suggestive of the types of living conditions, networks and economic changes that encouraged or enabled migration in anticipation of the different lockdown levels.

**Table 6. Current (May) household characteristics of movers and non-movers**

	Did not move	Moved	Moved in March only	Moved in May only	Moved in March and May
<b>Household size (average)</b>	5.1 (0.1)	4.8 (0.2)	4.8 (0.3)	5.0 (0.3)	4.7 (0.4)
<b>Percentage (share):</b>					
<b>Social pension household</b>	33.1 (1.2)	29.1 (2.3)	32.1 (2.9)	26.8 (4.6)	21.9 (4.0)
<b>Child support grant household</b>	53.5 (1.5)	53.3 (2.9)	51.4 (3.8)	55.7 (4.6)	54.4 (5.9)
<b>Young child/ren in household</b>	44.3 (1.2)	44.1 (3.0)	41.1 (3.9)	51.3 (4.8)	39.5 (5.5)
<b>Child/ren in household</b>	68.8 (1.2)	59.8** (2.6)	54.6** (3.6)	71.1 (4.1)	54.8 (5.9)
<b>Rural</b>	17.4 (1.1)	18.8 (2.0)	18.5 (2.7)	18.2 (2.8)	20.6 (4.9)
<b>Formal dwelling</b>	80.1 (1.2)	75.3 (2.8)	84.4 (2.6)	64.8* (5.5)	67.9* (5.5)
<b>Informal dwelling</b>	10.2 (1.0)	16.5 (2.5)	9.2 (2.2)	29.0** (5.7)	15.2 (4.4)
<b>Traditional dwelling</b>	8.7 (0.8)	6.4 (1.1)	5.2 (1.2)	5.2 (1.6)	12.1 (3.7)
<b>Access to running water</b>	82.4 (1.1)	80.5 (2.1)	80.2 (3.3)	83.6 (3.7)	75.7 (5.2)
<b>Run out of money to buy food</b>	46.0 (1.1)	51.0 (3.1)	45.6 (4.1)	58.9 (5.9)	52.4 (5.8)
<b>Hunger experienced</b>	21.2 (0.9)	27.3* (2.1)	21.2 (2.6)	36.2** (4.2)	28.5 (5.3)
<b>Supportive neighbours or community</b>	8.3 (0.7)	14.8* (2.2)	15.0* (3.1)	11.4 (3.3)	20.4* (5.4)
<b>Unweighted sample size (n)</b>	5768	958	486	279	193

**Source:** NIDS-CRAM, wave 1 (2020)

**Notes:** The sample is adults who are older than 17 years. The sample has been weighted to represent population estimates benchmarked to the adult population from 2017. Standard errors are in parentheses. \*\* Differences between non-movers and movers, or categories of movers, are significant at the 95 percent confidence level. \* Differences between non-movers and movers, or categories of movers, are significant at the 90 percent confidence level.

In general, the data identify that in comparison to non-movers, a significantly larger share of movers reported being part of a household that experienced hunger in the previous week, which suggests that overall, moving is associated with economic hardship. A significantly larger percentage of adults who moved also reported having social networks from which they had to draw (for food or shelter) since the lockdown. This seems particularly evident among the group of movers who moved in March and May, which includes “circular labour migrants” and points to the social-spatial

connectedness associated with translocality<sup>12</sup>. Adults who moved twice were also less likely to be living in a household with children at the time of the interview, which suggests that migration for the duration of April may have afforded migrants, who usually live elsewhere, the opportunity to spend time with their children. As these migrants were also significantly less likely to be living in a formal dwelling, migration to another home may further have offered an environment that was more conducive to lockdown living.

As described earlier, adults who moved in May appear distinctive in that a substantially larger share had lost employment following the lockdown. An analysis of their current household characteristics identifies that among the three groups of movers, they are also most likely to report experiencing hunger in their household in the previous week and to have run out of money to buy food. Compared to non-movers, a significantly larger share of these movers lived in an informal dwelling (and a significantly smaller share lived in a formal dwelling). This group of adults therefore appears particularly likely to have moved into another home (of kin or kith) as a means of economic survival following the economic consequences of the COVID-19 lockdown. The characteristics of the households into which they moved, including the very high share (almost 60%) which reported running out of money to buy food, points to the strain placed on the resources of the receiving household.

## 6. Discussion

From late March 2020 when lockdown level 5 was announced in South Africa, to the end of May 2020 when lockdown level 4 ended, approximately one in six adults (or between 5 and 6 million people aged 18 years and older) had moved from where they had been living. Some adults moved twice, most likely returning to the household they originally left at the end of March; but most (almost 82%) moved only once. Movers would have included students particularly at tertiary institutions that had closed (and had moved to online teaching), as well as labour force participants who moved temporarily when all non-essential economic activity was suspended or who moved when employment was lost and whose move may be for a longer term.

By June 2020, business confidence in South Africa was estimated to be at an all-time low (Bureau of Economic Research 2020), and it is likely that the economic consequences of the COVID-19 pandemic and lockdown will be felt for a long time to come, as more businesses close and workers are retrenched. The first wave of the NIDS-CRAM survey, which we used to describe adult mobility, therefore coincides with only the first wave of job losses in the country. Studying movement patterns during the lockdown points to likely changes in where people will live and who they will live with as the economic crisis deepens, and it therefore sharpens our understanding of where the burden of support will fall.

Before the COVID-19 pandemic, South Africa was “distinguished” by already high rates of poverty and unemployment. In 2017, the NIDS wave 5 data identify 26 percent of households, or 39 percent of individuals as living in poverty, and the unemployment rate (based on active jobseekers only) was estimated to be 29 percent in 2019. The economic shutdown exacerbated the daily struggle of many households for economic survival. Despite the promise of economic relief by the South African government, this took weeks or months to materialise for some, and for many, attempts to access COVID-19 relief grants proved unsuccessful (e.g. de Vos 2020; Janse van Rensburg & Neer 2020). For individuals who lost employment, changing their living arrangements may have been the only livelihood strategy they had available, and family may have been the only source of economic support on which they could rely.

The role of family or social networks and household reformation in helping to absorb the negative effects of crises has helped to explain the resilience of many South Africans to the shocks caused by HIV/AIDS (and other illnesses) and to the insecurity and very limited opportunities in the South African labour market. But as earlier research has also highlighted, the capacity of the household

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<sup>12</sup> It is also possible that supportive neighbours would have looked after a migrant's dwelling (particularly if this was a shack and could not be secured), while the migrant was away during level 5.

and kin networks to provide a private safety net is not limitless, and households absorbing the unemployed (or ill or orphaned) over sustained periods of time may be pushed (deeper) into poverty (Klasen & Woolard 2009).

The 2017 NIDS data provide an estimate of stretched households, or the households to which individual migrants are likely to return, by identifying households with non-resident members. By this measure, there were about 3.3 million stretched households in South Africa in 2017. These households were considerably more vulnerable to poverty than households overall before the lockdown and economic contraction in 2020. Not surprisingly therefore, simulations describe a significant increase in poverty (from almost 38 percent to 49 percent of these households) if they were forced to absorb an additional household member without an increase in income. Among adults who moved only in May during the COVID-19 lockdown, the very high shares who reported their household running out of money to buy food in April (almost 60%), and going hungry in the previous week (36%), underlines the economic vulnerability of the households into which adults have moved.

There are important cost savings for individuals of living together in larger households, which the simulations do not consider; nor do the later data capture what conditions would have been like for adults had they not moved in response to the lockdown and economic contraction. Even if the savings of living together do not significantly reduce vulnerability to poverty in households where resources are scarce, this does not discount their consequence in the absence of other livelihood strategies. The cramped nature of living conditions in urban areas – both in the small RDP houses provided by the government and in informal dwellings or shacks – means that this strategy can often only be realised by moving to more rural areas. It also means that not all adults who moved during the lockdown would have done so under conditions of hardship. For some “circular” labour migrants who returned to a family home while employment was suspended (but not lost), for example, the lockdown may have provided not only more spacious living conditions in which to “shelter in place”, but also the opportunity to connect with family in ways that are not possible outside of (often very limited) annual leave.

## Policy considerations

Although the effectiveness of government policies in ameliorating the economic and social costs of the COVID-19 crisis has been called into question, the importance of policy which recognised translocality among the South African population, and which allowed people the opportunity to move at various stages of the lockdown, has perhaps not been adequately appreciated. (Consider, in contrast, the approach adopted in India, where before the enforcement of a hard lockdown and the suspension of public transport, millions of migrant workers were not given the opportunity to travel back to their households of origin.<sup>13</sup>)

However, it should also not be assumed that private safety nets can absorb the economic fallout of COVID-19. Rather, social policy will need to recognise the strain which is placed on kin networks as the crisis deepens, and to respond in ways that strengthen the ability of these networks to withstand the effects of job/remittance loss and increased dependency in households.

The mobility of South African adults in times of crisis also highlights the importance of safety protocols and measures implemented in the transport corridors, which seek to reduce the geographical spread of the virus as people move during times of economic contraction. Given the role of public taxis as the mode of transport for the majority of the population, and the difficulty of maintaining social distancing in these vehicles, there is the real risk that the coronavirus will continue to move as the population moves.

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13 Pandey, V. “Coronavirus lockdown: The Indian migrants dying to get home”. BBC News 20 May 2020. <https://www.bbc.com/news/world-asia-india-52672764>

### Policy advice for the next 1 – 3 months

**Transport routes:** The extent of mobility in response to the economic contraction requires careful monitoring and the enforcement of safety protocols in public transport over longer distances, particularly in common transport corridors (into and out of Gauteng; between the Western Cape and the Eastern Cape; and within provinces with a large rural population).

**Basic income security of households:** Given the limited ability of family networks to act as “shock absorbers”, the reach of income transfers and food parcels will need to be extended to offer immediate income relief.

### Policy advice 3-6 months, and beyond

**Allow movement before “shelter in place”:** Maintain the policy of allowing people to move before they are required to “shelter in place” (which requires giving people notice of changes in lockdown levels), while at the same time ensuring proper safety protocols are in place to reduce transmission between districts and provinces.

**Increase food security in households:** Given the extent of hunger and inadequate resources, particularly in households that are absorbing new members, facilitate the development of community food gardens to strengthen the ability of families to withstand the effects of economic contraction, job loss and increased dependency.

## REFERENCES

- Alon, T.M, Doepke, M., Olmstead-Rumsey, J. and Tertilt, M. (2020) "The impact of COVID-19 on gender equality". National Bureau of Economic Research Working Paper 26947.
- Anderson B.A. (2006) Migration in South Africa in comparative perspective. In P Kok, D Gelderblom, J O Oucho and J van Zyl (Eds) (2006) Migration in South and Southern Africa: Dynamics and determinants. Cape Town: HSRC Press, pp. 97 – 117.
- Ardington, C., Case, A. and Hosegood, V. (2009) "Labour supply responses to large social transfers: Longitudinal evidence from South Africa". *American Economic Journal: Applied Economics* 1(1): 22–48.
- Ardington, C. and Leibbrandt, M. (2010) "Orphanhood and schooling in South Africa: Trends in the vulnerability of orphans between 1993 and 2005". *Economic Development and Cultural Change* 58(3): 507 – 536.
- Ardington, C., Bärnighausen, T., Case, A. and Menezes, A. (2016) "Social protection and labor market outcomes of youth in South Africa". *ILR Review* 69(2): 455 – 470.
- Bank, L. Posel, D. and Wilson F. (2020) Migrant labour after apartheid. The inside story. Cape Town: HSRC Press.
- Bekker S (2001) Diminishing returns: Circulatory migration linking Cape Town to the Eastern Cape. *SA Journal of Demography* 8(1): 1–8.
- Bellù, L.G. and Liberati, P. (2005) "Equivalence scales: Subjective methods." EASYPol Module 033, Food and Agriculture Organization of the United Nations, FAO.
- Bohman, D., van Wyk, N. and Ekmanm S-L. (2009) "Tradition in transition – intergenerational relations with focus on the aged and their family members in a South Africa context." *Scandinavian Journal of Caring Studies* 23: 446 – 455.
- Collinson M., Tollman, S. and Kahn, K. (2007) "Migration, settlement change and health in post-apartheid South Africa: Triangulating health and demographic surveillance with national census data." *Scandinavian Journal of Public Health* 33 (Suppl 69): 77–84.
- Deaton, A.S. and Muellbauer, J. (1986) "On measuring child costs: with applications to poor countries." *Journal of Political Economy*, 94(4): 720-744.
- Deaton, A. & Paxson, C. (1998) "Economies of scale, household size and the demand for food." *Journal of Political Economy* 106(5): 897-930.
- De Vos, P. (2020) "Court ruling on Covid-19 relief criteria affirms that the pandemic is not the 'great equaliser' ". *Daily Maverick* 23 June 2020.
- Duflo, E. (2003) "Grandmothers and granddaughters: Old-Age Pensions and intrahousehold allocation in South Africa." *World Bank Economic Review* 17 (1): 1–25.
- Du Toit, A. and D. Neves (2006) Vulnerability and Social Protection at the Margins of the Formal Economy. Pretoria: USAID
- Edmonds, E., Mammen, K., and Miller, D. (2005) "Rearranging the family? Income support and elderly living arrangements in a low-income country". *Journal of Human Resources* XL (1): 186–207.
- Ermisch, J. and di Salvo, P. (1997) "The economic determinants of young people's household formation." *Economica*, 64:627-644.

- Fafchamps, M. and Quisumbing, A.R. (2007) "Household formation and marriage markets in rural areas." *Handbook of Development Economics*, Vol. 4, Elsevier, Amsterdam, pp. 3187–3247.
- Frankenberg, E., Smith, J., and Thomas D. (2003) "Economic shocks, wealth, and welfare." *Journal of Human Resources*, XXXVIII (2): 280-231.
- Greiner, C. and Sakdapolrak, (2013) "Translocality: Concepts, applications and emerging research perspectives". *Geography Compass* 7(5): 373- 384.
- Hall, K. (2017) *Children's spatial mobility and household transitions: A study of child mobility and care arrangements in the context of maternal migration*. PhD Thesis: University of the Witwatersrand.
- Hill, C., Hosegood, V. and Newell, M-L. (2008) "Children's care and living arrangements in a high HIV prevalence area in rural South Africa." *Vulnerable Children and Youth Studies* 3(1):65–77.
- Hosegood, V., McGrath, N., Herbst, K. and Timaeus, I. (2004) "The impact of adult mortality on household dissolution and migration in rural South Africa." *AIDS* 18:1585–1590.
- Huchzermeyer, M. (2003) "The legacy of control? The capital subsidy for housing and informal settlement in South Africa." *International Journal of Urban and Regional Planners* 27(3): 594–606.
- Ingle, K., Brophy, T., & Daniels, R (2020). NIDS-CRAM Panel user manual. NIDS-CRAM Technical Document C. (Online). Available: <https://cramsurvey.org/reports/> [15 July 2020]
- James, D. (2001) "Land for the landless: Conflicting images of rural and urban in South Africa's land reform programme." *Journal of Contemporary African Studies* 19(1): 93–109.
- Janse van Rensburg, L. and Neer, L. (2020) "Three out of four SMMEs will close: Bold steps are required to avert a crisis". *Daily Maverick*, 21 May 2020.
- Kerr, A., Ardington, C., & Burger, B (2020). NIDS-CRAM sample design and weighting. NIDS-CRAM Technical Document B. (Online). Available: <https://cramsurvey.org/reports/> [15 July 2020]
- Klasen, S. and Woolard, I. (2009) "Surviving unemployment without state support: unemployment and household formation in South Africa". *Journal of African economies* 18(1): 1 - 51.
- Mathis, S. (2011) "Disobedient daughters? Changing women's roles in rural households in KwaZulu-Natal". *Journal of Southern African Studies* 37(4): 831–48.
- Montgomery, C.M, Hosegood, V., Busza, J. and Timæus, I.M. (2006) "Men's involvement in the South African family: Engendering change in the AIDS era". *Social Science & Medicine* 62(10): 2411-2491.
- National Income Dynamics Study-Coronavirus Rapid Mobile Survey (NIDS-CRAM). 2020, Wave 1 [dataset]. Version 1. Cape Town: Allan Gray Orbis Foundation Endowment [funding agency]. Cape Town: Southern Africa Labour and Development Research Unit [implementer], 2020. Cape Town: DataFirst [distributor], 2018.
- Posel, D. (2020) "Measuring labour migration after apartheid: Patterns and trends". In Bank, L. Posel, D. and Wilson F. *Migrant labour after apartheid. The inside story*. Cape Town: HSRC Press.
- Posel, D. and Casale, D. (2003) "What has been happening to internal labour migration in South Africa, 1993-1999?" *South African Journal of Economics* 71(3): 455–479.
- Posel, D., Casale, D. and Grapsa, E. (2020) "Household variation and inequality: the implications of equivalence scales in South Africa". *African Review of Economics and Finance* 12(1): 102 – 122.
- Posel, D., Fairburn, J. and Lund, F. (2006) "Labour migration and households: A reconsideration of the effects of the social pension on labour supply in South Africa". *Economic Modelling* 23(4): 836-853.

Posel, D. and Marx, C. (2013) "Circular migration: a view from destination households in two urban informal settlements in South Africa." *Journal of Development Studies* 49(6): 819–831.

Russell, M. (2003) "Understanding black households: The problem." *Social Dynamics* 29(2): 5–47.

Schatz, E. and Ogunmefun, C. (2007) "Caring and contributing: The role of older women in rural South African multi-generational households in the HIV/AIDS era." *World Development* 35(8): 1390–1403.

Southern Africa Labour and Development Research Unit. National Income Dynamics Study (2017) Wave 5 [dataset]. Version 1.0.0 Pretoria: Department of Planning, Monitoring, and Evaluation [funding agency]. Cape Town: Southern Africa Labour and Development Research Unit [implementer], 2018. Cape Town: DataFirst [distributor], 2018.

Spaull, N., Wills, G., Makaluza, N., Carel, D., Ingle, K., Brophy, T., Daniels, R., Burger, R., Burger, R., Posel, D., Ranchood, V., Van der Berg, S. (2020). The NIDS-CRAM Wave 1 Questionnaire. NIDS-CRAM Technical Document A. (Online). Available: <https://cramsurvey.org/reports/> [15 July 2020]

Spiegel, A. (1986) "The fluidity of household composition in Matatiele, Transkei: A methodological problem." *African Studies* 45(1): 17–35.

Spiegel A, Watson V, and Wilkinson P (1996) "Domestic diversity and fluidity among some African households in Greater Cape Town." *Social Dynamics* 22(1): 7–30.

Stack, C.B. (1974) *All our kin: Strategies for survival in a black community*. New York: Harper & Row.

Statistics South Africa (2017) *Poverty trends in South Africa*. Report No. 03-10-06. Statistics South Africa, Pretoria.

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