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Structural poverty dynamics in urban South Africa: A mixed-methods investigation

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WIDER Working Paper 2019/100

Structural poverty dynamics in urban South Africa

A mixed-methods investigation

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Abstract: This paper examines the extent and determinants of structural poverty dynamics in South Africa, focusing on the socio-economically disadvantaged urban African population. The quantitative analysis using panel data is triangulated with evidence from a qualitative case study integrating focus group discussions and life history interviews conducted in the township of Khayelitsha, Cape Town. Data visualization methods in the form of asset pentagons and livelihood diagrams help illustrate the complex processes, livelihood strategies, and asset dynamics that condition movements into and out of structural poverty. Results emphasize meagre job opportunities for low-skilled labour, low schooling quality, and relationships of dependency as important dimensions. Lack of access to financial capital as well as the costs and risks associated with the geographic location of the urban poor, often residing in precarious areas that are spatially separated from the urban centres, further constrain opportunities.

Key words: poverty, social mobility, livelihood assets, mixed methods, sub-Saharan Africa, South Africa

JEL classification: D31, I32, C23, J62

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1 Introduction

Throughout the developing world, increasing attention is being paid to the study of poverty dynamics. Going beyond cross-sectional comparisons of poor versus non-poor groups, the recent proliferation of panel surveys in developing countries has allowed researchers to examine the duration of poverty, and thus to distinguish chronic from transitory poverty (for sub-Saharan Africa see, for example, Deininger and Okidi 2003; Finn and Leibbrandt 2017; Kedir and McKay 2005; Mberu et al. 2014; Schotte et al. 2018).

However, a critical aspect that remains underexplored in most of these studies is whether the assessed movements into or out of monetary poverty are also reflected in the assets upon which households rely to generate their income.[1] Accordingly, for some of those exiting monetary poverty, the escape may have been facilitated by an accumulation of productive assets or an increase in their returns (*structural poverty escape*), while others may have simply been lucky in the present period, without any accompanying change in the underlying income-generating processes and asset structure that would alter their prospects to escape poverty in the long run (*stochastic poverty escape*). Analogously, for some of those entering monetary poverty, this may reflect a likely permanent descent into structural poverty caused by a decline in productive assets or a reduction in their returns (*structural poverty descent*), while others may have simply been unlucky in the present period (*stochastic poverty descent*). These structural versus stochastic poverty transitions represent distinctly different experiences that are likely to result in dissimilar long-term livelihood trajectories (Carter and Barrett 2006; Radeny et al. 2012).

South Africa is among the few countries where the use of asset-based approaches to distinguish between structural and stochastic forms of poverty has a longstanding tradition (Carter and May 1999, 2001). However, earlier work in this area has been confined to exploring poverty traps and transition pathways in predominantly rural settings (Adato et al. 2006; Adato et al. 2007; Agüero et al. 2007; Carter and May 1999, 2001). As urban populations continue to grow, and poverty becomes an increasingly urban phenomenon, investigating the building blocks that either pave or bar the way for structural poverty escapes in urban contexts remains underexplored. Studies by Azomahou and Yitbarek (2015), Bigsten and Shimeles (2004), Kedir and McKay (2005), and Mberu et al. (2014) are among the relatively few that analyse poverty dynamics in urban Sub-Saharan Africa, but none of them focus on South Africa, and none has made an attempt to differentiate between structural and stochastic mobility.

The present paper aims to address this gap. My empirical approach builds on the one recently suggested by Radeny et al. (2012), drawing on earlier works by Carter and May (1999, 2001) and Carter and Barrett (2006). Distinctively, instead of directly estimating the relationship between assets and household income, as a first step, I use factor analysis to construct five asset indices that are theoretically founded on the concept of sustainable livelihoods. These are intended to capture the income-generating processes and livelihood strategies available to a household, as approximated by its ownership of and access to (i) human capital, (ii) financial capital, (iii) physical capital, (iv) social capital, and (v) geographic capital. As a second step, I map these livelihood-asset

[1] By defining an asset poverty line that reflects the endowment level required to generate an income level above poverty, a poor household can be classified as structurally poor if its asset position falls below the asset poverty line, and stochastically poor otherwise. Analogously, poverty entries or exits are defined as structural if accompanied by a depletion or accumulation of assets that moves the household across the asset poverty line, and stochastic otherwise (Carter and May 1999, 2001; Carter and Barrett 2006).

scores to the household income or expenditure space and construct an asset poverty line. This is applied to panel data from the National Income Dynamics Study (NIDS) to decompose poverty transitions into structural and stochastic components.

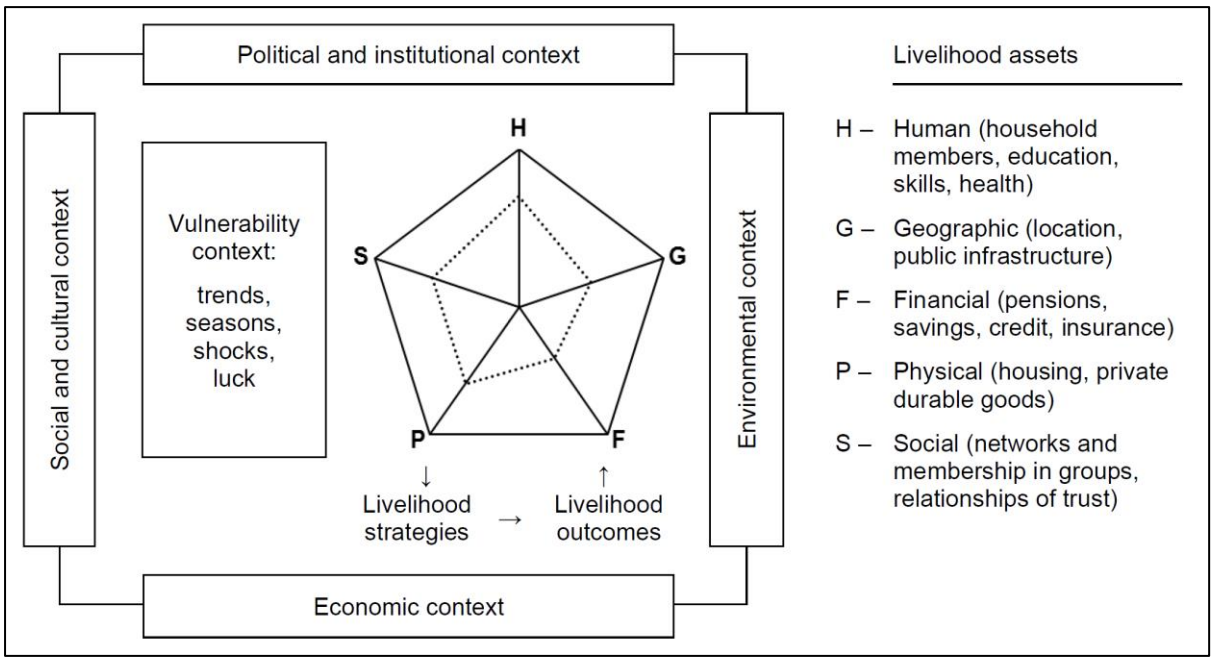
To further explore the key factors associated with structural poverty dynamics, I triangulate my quantitative research findings with evidence from a qualitative case study, focusing on the socio-economically disadvantaged urban African population in South Africa. The primary data source for this qualitative research element consists of 30 life history interviews (LHIs) that I conducted, together with a local research team, between July and September 2017 in the township of Khayelitsha, Cape Town. The qualitative research design was partly informed by the LHI techniques used by Davis and Baulch (2011) in rural Bangladesh and Adato et al.'s (2007) 'household events mapping' technique used in rural KwaZulu-Natal, which I combined and adopted to the South African urban context. Using this mix of quantitative and qualitative research methods for poverty analysis, I attempt to provide a deeper understanding of the multidimensional causal mechanisms, processes and pathways that underpin structural poverty escapes and descents (see also Barrett 2005; De Weerdt 2010; Kanbur 2003; Kanbur and Shaffer 2007; Kedir 2005; Radeny et al. 2012; White 2002).

The remainder of this paper is organized as follows. Section 2 briefly introduces the conceptual framework. Section 3 describes the panel survey data and the qualitative case study design. Section 4 decomposes the transitions in monetary poverty into structural and stochastic components. Section 5 explores the main determinants of transition patterns using a mixed-methods approach. Section 6 discusses and concludes.

2 Sustainable livelihood frameworks

The analysis in this paper is embedded in the sustainable livelihoods framework, which I adapt to the South African urban context. The main components are depicted in Figure 1.

Figure 1: Livelihoods framework



Source: author's illustration developed from Rakodi (2002).

At the centre of the framework is the portfolio of assets on which households or individuals draw to generate a flow of income or other benefits. This portfolio, which is the focal point of this study, includes both tangible and intangible assets, grouped into five types of capital: human, financial, physical, social, and geographic (for a brief description of each type, see Schotte 2018).[2]

As a visual analytical tool, a pentagon can be used to describe people's access to each capital type, where the centre point represents zero access, and the outer perimeter represents maximum access to assets (Carney 1998; Rakodi 2002). To give an example, the dotted line in Figure 1 shows reasonable access to human, physical, and social capital but limited access to geographic and financial capital. While there may be trade-offs, the five capital types complement each other, and households or individuals will need to draw on all five to construct their living. The ways people combine and use their available assets are described as livelihood strategies, and economic activities are at the core of these. In addition, migration movements, maintenance of and participation in social networks, and investment decisions (such as in education or property) can present important components. The outcomes of these strategies are defined in terms of higher or lower welfare.

Importantly, households or individuals are assumed to operate in a context of vulnerability. This describes the external uncontrollable factors and sources of insecurity (trends, seasons, positive or negative shocks) to which poor people and their assets are vulnerable. The vulnerability context is influenced by and interacts with the economic, political and institutional, environmental, and social and cultural contexts. Generally, the greater the diversity of livelihood strategies available to a household, the less vulnerable it is to external risk factors (Rakodi 2002).

3 Data and methodology

3.1 Panel data description and quantitative poverty measures

The data for the quantitative analysis comes from NIDS, implemented by the Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town (SALDRU 2016a–d). NIDS is South Africa's first national panel study, which started in 2008 with a nationally representative sample of over 28,000 individuals in 7,300 households. At the time of the present study, there are four rounds available, spaced approximately two years apart. For the dynamic analysis, individuals must be successfully tracked over at least two consecutive survey waves. Data from pairs of consecutive waves were pooled, such that transitions that occurred from wave 1 to 2, wave 2 to 3, and wave 3 to 4 are treated identically in the analysis. The sample for the dynamic analysis contains 74,217 individual observations.[3]

Monetary welfare measures

In South Africa, there exist three official poverty lines that have been defined by Statistics South Africa (StatsSA) in 2015 using a cost-of-basic-needs approach (StatsSA 2015a). Each of these lines captures a different degree of poverty. The food poverty line (FPL) is the level of consumption

[2] Drawing on Chambers and Conway (1992) in relation to Sen's (1985) capability approach, a livelihood is defined as comprising '[…] the capabilities, assets (including both material and social resources) and activities required for a means of living' (Carney 1998: 4). Coupled with this definition, a livelihood is regarded as sustainable 'when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base' (Carney 1998: 4). In what follows, I focus my analysis on the first element of sustainability in the sense of lasting and sustained escapes from poverty.

[3] Panel weights have been constructed to correct for panel attrition, following a regression-based approach suggested by Finn and Leibbrandt (2017).

below which individuals are unable to purchase sufficient food to fulfil their caloric requirements for good health (fixed at about 2,100 kilocalories a day), even if all expenditures are dedicated to food. The lower-bound poverty line (LBPL) allows for spending on non-food items but requires that individuals sacrifice some food consumption to fulfil their non-food needs. Only at the upper-bound poverty line (UBPL) can individuals purchase both adequate food and non-food items.

Throughout this paper, household expenditure is used as the relevant monetary welfare measure, which is assumed to provide a better approximation of permanent household income than of reported income. Different to StatsSA's usual practice, I adjust all monetary welfare measures to account for economies of scale in household consumption and differences in food and non-food needs between adults and children, taking into account that school-age children in South Africa will generally require higher expenses (e.g. fees for schooling, materials, and transport) than younger children. Using a simple scaling method (similar to Carter and May 1999), I define the number of adult equivalences (E) in each household as:

$$E = (N_A + 0.5\, N_{YC} + 0.75\, N_{SC})^{0.9} \tag{1}$$

where N_A is the number of adult (age 16 years or older) household members, N_{YC} is the number of young children (age 6 years or younger), N_{SC} is the number of school-aged children (age 7–15 years), and 0.9 is the scaling parameter that captures modest economies of scale in household consumption (for a comparison of alternative equivalence scales suggested for South Africa, see Woolard and Leibbrandt 2006).

On this basis, StatsSA's (2015a) three official poverty lines are rescaled using a reference household of five members, including three adults, one school-aged child, and one younger child (reflecting the median household composition of poor households in NIDS). Using this approach, the FPL, LBPL, and UBPL were respectively estimated at R585, R855, and R1,309 per adult equivalent per month, in January 2015 prices.[4]

Asset-based poverty measures

The asset-based approach used to differentiate between structural and stochastic poverty is conceptually similar to the one recently suggested by Radeny et al. (2012) in their study of rural poverty dynamics in Kenya, drawing on earlier works by Carter and May (1999, 2001) and Carter and Barrett (2006).

A household, i, is classified as poor at time t if its consumption expenditure in equivalence scales, c_{it}, falls below the monetary poverty line, PL. That is,

$$c_{it} < PL. \tag{2}$$

Parallel to PL, an *asset poverty line* is defined. Identification of this threshold requires estimation of the relationship between the per-capita adult equivalent expenditure, c_{it}, and the bundle of assets held by the household in period t, A_{it}. To this end, in a first step, I use multiple correspondence analysis (MCA) to construct five asset indices, normalized to a range between zero and one (for details on the methodology, see Booysen et al. 2008; Shimeles and Ncube 2015). These indices are

[4]All monetary values used in this paper are deflated to January 2015 prices using StatsSA's (2015b) headline consumer price index (CPI). To adjust for inflation, for each line the food component (equal to the FPL) is inflated by using the food-specific StatsSA CPI and the non-food component (equal to the difference between the FPL and the LBPL or UBPL, respectively) is inflated by using the non-food-specific StatsSA CPI.

intended to capture the income-generating processes and livelihood strategies available to a household, as approximated by its ownership of and access to human capital (H_{it}), financial capital (F_{it}), physical capital (P_{it}), social capital (S_{it}), and geographic capital (G_{it}). The choice of variables was guided by the conceptual framework introduced in Section 2 and previous similar studies (e.g. see Carter and May 1999, 2001; Shimeles and Ncube 2015; Radeny et al. 2012), taking data availability into account (for a detailed variable list and the MCA results, see Schotte 2018).

In a second step, I map the livelihood-asset scores to the household income or expenditure space, using a regression-based approach.[5] To account for the fact that the relationship between household assets and income or expenditure is very likely to be non-linear (Carter and May 1999, 2001; Carter and Barrett 2006), I adopt a flexible parametric estimation approach similar to the one used by Radeny et al. (2012).[6] Using a polynomial expansion, the employed functional form allows for diminishing (or increasing) returns to capital, as well as for interaction effects across capital types. The explicit model is specified as:

$$\ln(c_{it}) = \alpha + \sum_j \beta_j X_{it}^j + \sum_k \sum_l \gamma_{kl} X_{it}^k X_{it}^l + \sum_j \delta_j \left(X_{it}^j\right)^2 + \sum_t \varphi t_t + \varepsilon_{it} \tag{3}$$

where X is a vector of asset indices, j, k, and l denote the five capital types (with $k \in j$, $l \in j$, and $k \neq l$), t_t represents period-specific dummies (controlling for exogenous fluctuations), and ε_{it} is an idiosyncratic error term. To account for unobserved heterogeneity across households, Equation (3) is fitted to NIDS panel data using a random-effects model.[7] Clustered standard errors are used to allow for intragroup correlations across survey clusters (see Appendix Table A1).

As a robustness check, a non-parametric (NP) kernel estimator has been used that allows $g(X_{it})$ to take on any functional form (Lybbert et al. 2004) (see Appendix Table A2):

$$\ln(c_{it}) = g(X_{it}) + \epsilon_{it} = g(H_{it}, F_{it}, P_{it}, S_{it}, G_{it}) + \epsilon_{it}. \tag{4}$$

Drawing on the regression results, the *asset poverty line*, $\underline{A}_t$, simply denotes the combination of assets that yields an expected level of household welfare, $\hat{c}(A_{it})$, equal to the money-metric poverty line, PL, in the respective period. Accounting for measurement and other random errors in the estimation of $\hat{c}(A_{it})$, a household is considered stochastically poor in any period t if its realized income or expenditure falls below PL, and yet I can reject the hypothesis that it is expected to be poor, given its assets (Carter and May 2001). That is,

$$\text{if } c_{it} < PL \text{ and reject } H_0\text{: } \hat{c}(A_{it}) < PL. \tag{5}$$

Analogously, a household is considered stochastically non-poor

$$\text{if } c_{it} \geq \text{PL and reject } H_0\text{: } \hat{\text{c}}(A_{it}) \geq \text{PL}. \tag{6}$$

---

[5] Because the five specified capital types are unlikely to be completely independent of each other, multicollinearity may be a concern. An investigation of the correlation coefficients (τ) between the derived asset scores, however, only shows a weak (τ<0.2) to modest (τ<0.4) relationship across most capital types (for details, see Schotte 2018).

[6] Note that Radeny et al. (2012) do not construct asset indices but directly use survey asset variables and demographic characteristics as explanatories of total household expenditure.

[7] I experimented with higher-degree polynomials in Equation (3) with very similar results.

Following Radeny et al. (2012), I use the 95 per cent confidence bands of $\hat{c}(A_{it})$ to account for imprecision in the estimation of $\hat{c}(A_{it})$. A household with $c_{it}<PL$ is stochastically poor if the lower-bound estimate of $\hat{c}(A_{it})$ falls above PL $(\hat{c}_{LB}(A_{it}) \geq PL)$, and structurally poor otherwise. Similarly, a household with $c_{it}\geq PL$ is stochastically non-poor if the upper-bound estimate of $\hat{c}(A_{it})$ falls below PL $(\hat{c}_{UB}(A_{it}) < PL)$, and structurally non-poor otherwise.

3.2 Qualitative case study design and description of study sites

The primary data source for the qualitative research element consists of 30 semi-structured LHIs conducted between July and September 2017 in the township of Khayelitsha, situated about 30 kilometres south east of Cape Town's city centre.

Khayelitsha was selected as a study site because it closely resembles many of the context characteristics that typically condition the livelihoods of the urban poor in South Africa (for details, see Schotte 2018). On the one hand, service delivery, economic activity, and opportunities for employment are generally better in urban than in rural areas and continue to entice rural-to-urban migration (Burger et al. 2017; Schotte et al. 2018). On the other hand, rapid urbanization has left many on the fringes of society, resulting in a proliferation of informal settlements and increasingly densely populated townships, suffering from high unemployment and underemployment, socio-economic insecurity, and crime (Turok and Visagie 2018).

Established in 1985 by the apartheid government as a site for relocations from other overcrowded African townships in Cape Town, Khayelitsha initially accommodated 30,000 people. Since then it has grown rapidly, driven by endogenous population growth and continuing rural-to-urban migration. According to the latest census information, in 2011 it had a population of 391,749 inhabitants grouped into 118,809 households, making it South Africa's second largest township after Soweto in Johannesburg. Roughly every second inhabitant is under 24 years of age, and 55.8 per cent were born outside of the Western Cape, almost all of whom migrated from rural areas in the Eastern Cape. Culturally, the population structure is relatively homogenous in terms of race (98.6 per cent African) and language (90.5 per cent isiXhosa).

Using data on the small area level from the 2011 census, 15 study areas were selected, where a short sampling survey was administered to 300 households chosen using a random walk technique. The survey collected basic information on the households' human, physical, and financial capital, allowing for a quick wealth assessment. While falling short of making claims of representativeness, this approach guaranteed that selected interview participants show some degree of heterogeneity in terms of their asset base and livelihood strategies.

Drawing on the sample collected in the first field-research stage, 30 respondents were selected for participation in the LHIs, covering different areas and welfare levels. Participants were asked to recount their individual life history, starting from their parental background and living conditions during childhood, and up to and including the present.[8] As visual aids, all events reported during the interview were recorded on two sets of cards, where one colour was assigned to positive events and another colour to negative events (following the 'household events mapping' technique of

[8] All interviews were conducted in isiXhosa by a moderator who was intensively trained during preparation for fieldwork. Following common practice among qualitative researchers in South Africa, the interviews were simultaneously translated by a second research assistant, and the translation was transcribed by the researcher, who was present during the interview (Du Toit and Neves 2007, 2009; De la Hay and Beinart 2017). Transcriptions and audio recordings were analysed and discussed with the moderator and translator in a post-interview de-brief to ensure the accuracy of the translation and transcription and to analyse preliminary findings.

Adato et al. 2007). At the end of each interview, respondents were asked to rank their own welfare level at different points in time on a four-point scale. With the help of the interviewee, the researcher would then map out the respondent's life trajectory on a large sheet of blank paper (in line with the methodology suggested by Davis and Baulch 2011), capturing the respondent's welfare level at each stage in life and the events that (according to the respondent's perception) had caused transitions within and between welfare categories.

As a preparatory step for this final exercise, four focus group discussions (FGDs) were conducted in advance, with participants from the local community (again drawing on the sample collected in the first field-research stage).[9] The FGDs were designed to develop a scale capturing social and material welfare levels in the local context, which could be used during the LHIs. This welfare scale was intended to be more subjectively meaningful than narrow, money-metric proxies of income and expenditure, while at the same time facilitating a degree of comparability between cases. To this end, visual aids in the form of four boxes representing different 'levels' of society were used during the discussions.[10] Importantly, all groups arrived quite easily and naturally at a common interpretation of what it meant for someone to be on level four (lowest) to one (highest) in the given context and that these perceptions were relatively consistent across groups (see Table 1). Across groups, participants saw a relatively large distance in terms of the satisfaction of basic needs between boxes one and two, on the one hand, and boxes three and four, on the other. For the subsequent analysis, boxes three and four are thus considered poor, with those in box four being considered food-poor.

Table 1: Welfare levels

Box 1	Those in box one are the economic success stories of the township. They are either successful entrepreneurs in the community, such as taxi or tavern owners, or are stably employed in permanent and well-paid work in the public or private sector. Their children are educated, employed and/or married, and live on their own.
Box 2	Those in box two are neither poor nor wealthy. They are employed, usually in a lower-level white collar or higher-level blue-collar occupation. Compared with those in box one, they tend to face the need to support a larger number of dependents, which may also include members of the extended family.
	Poverty
Box 3	Those in box three have their most elementary needs such as food and electricity satisfied but still need to economize a lot. They cannot put any money to the side because all income is consumed. They tend to derive income from the labour market but are typically in jobs that are poorly paid, are of limited duration, are unregulated by labour legislation, or are subject to seasonal fluctuations. This box also includes smaller households with access to an old-age pension/disability grant.
	Food poverty
Box 4	Those in box four have repeatedly been characterized as 'going to sleep on an empty stomach'. They typically have no access to income from the labour market but survive on child-support grants and/or support from others in the community, including food donations by neighbours. Some engage in survivalist forms of self-employment and/or do ad hoc jobs. These people live hand-to-mouth. They have few assets, live in informal dwellings, and lack access to basic services.

Source: author's compilation based on own field research.

[9] FGDs ranged from three to ten participants. Two groups were single gender (male/female), and two were mixed. The FGDs were conducted by a trained moderator in isiXhosa and lasted approximately 2 hours each. In line with the technique used during the LHIs, the discussions were simultaneously translated by a trained research assistant and the translation was transcribed by the researcher, who was present during the discussions.

[10] The boxes were introduced through vague definitions such as 'those in box one are the most well-off, and those in box four are the least well-off'. Words with strong connotations such as 'rich' or 'poor' were strictly avoided by the moderator. Participants were prompted to discuss what it meant for someone to be in each respective box, along with the main factors conditioning movements between boxes. In both elements of the discussion, participants drew on their own experiences and the experiences of people known personally to them.

4 Magnitude of structural and stochastic poverty transitions

In the first part of the analysis, I offer a quantitative assessment of the extent of movements into and out of monetary poverty in South Africa. Using the asset-based approach introduced earlier, I decompose these transitions into structural and stochastic components.

4.1 Movements into and out of monetary poverty

Apartheid represented a rigid racialized system of unequal resource distribution in South Africa, resulting in an extremely polarized society. After two decades of democracy, its legacy persists in the country's economic conditions and continues to shape South African society along racial and geographic divides. Even though South Africa ranks as an upper-middle income country, close to two-thirds of its people—and close to three-quarters of the African population—are still living in moderate to extreme poverty. The incidence, depth, and severity of poverty are clearly higher in rural than in urban areas. Nevertheless, it should be emphasized that one in five urban dwellers cannot satisfy their food needs, and almost every second one is unable to purchase adequate food and non-food items (see Table 2).

Table 2: Measured poverty rates (cumulative percentage shares)

	By area		By race group				Total
	Urban	Rural	African	Coloured	Asian/Indian	White	
c_{it}<FPL	22.1	54.7	41.6	16.1	1.4	0.5	34.7
c_{it}<LBPL	35.1	71.5	58.0	31.5	3.2	1.1	49.2
c_{it}<UBPL	49.9	84.3	72.8	49.9	14.9	3.9	63.3
c_{it}≥UBPL	50.1	15.8	27.2	50.1	85.1	96.1	36.8
Share in total population	61.1	38.9	79.8	8.9	2.5	8.8	100

Note: the poverty profile is very similar to the one that would have been obtained if no adjustments were made to account for child costs and economies of scale. While there is an important overlap, this does not mean that exactly the same households are identified as poor.

Source: author's calculation based on pooled NIDS sample, 2008–14/15.

To illustrate the extent of mobility into and out of monetary poverty over time, Table 3 presents a set of poverty transition matrices for the pooled sample of wave-to-wave transitions. To account for the depth of poverty, I define five welfare levels in terms of household expenditure per adult equivalent: c_{it}<FPL, FPL≤c_{it}<LBPL, LBPL≤c_{it}<UBPL, UBPL≤c_{it}<2.5 UBPL, and 2.5 UBPL≤c_{it}.

The values on the diagonal of the transition matrices indicate the share of individuals in each row who remain in the same welfare category between time periods t and t+1 (grey shaded area), whereas those below the diagonal are downwardly mobile and those above the diagonal are upwardly mobile.

As the results presented in Table 2 indicate, persistence is highest at the lower and upper extreme of the income or expenditure distribution. At 61.2 per cent, those living below the FPL are the most likely to be trapped in extreme poverty. Their chance of moving above the UBPL is just above 10 per cent. At the same time, 70.5 per cent of the most well-off (2.5 UBPL≤c_{it}) were able to maintain their income position. On average, they face an aggregate risk of 8.7 per cent of falling below the UBPL. Those falling into one out of the three middle welfare classes (FPL≤c_{it}<2.5 UBPL) are substantially more mobile (here none of the main diagonal elements significantly exceeds 40 per cent).

On average, downward mobility is higher among the African population compared with other race groups. Interestingly, the best-off group appears substantially less stable. Only every second person in this group could sustain this income position (2.5 UBPL≤c_{it}) from one survey wave to the next.

Moreover, upward mobility is higher in urban than in rural areas, and rural-to-urban migrants face above-average chances of moving up the income ladder. Specifically, urban dwellers with incomes falling below the FPL are about 10 percentage points less likely to be locked in extreme poverty, compared with the population average. Combining the two effects, there is a substantial extent of downward mobility—a low extent of stability and security—among the urban African population.

Table 3: Measured poverty transition matrix (per cent of row)

	c_{it+1}<FPL	c_{it+1}<LBPL	c_{it+1}<UBPL	c_{it+1}<2.5 UBPL	2.5 UBPL≤c_{it+1}
Total population					
c_{it}<FPL	61.2	17.1	11.5	8.3	1.9
c_{it}<LBPL	40.0	20.7	19.0	16.5	3.8
c_{it}<UBPL	24.9	19.5	23.7	25.5	6.5
c_{it}<2.5 UBPL	12.5	11.7	18.5	37.9	19.4
c_{it}≥2.5 UBPL	2.6	1.6	4.5	20.8	70.5
African population					
c_{it}<FPL	61.9	17.0	11.2	8.1	1.9
c_{it}<LBPL	42.0	20.5	17.9	15.9	3.8
c_{it}<UBPL	27.7	19.8	22.8	23.7	6.1
c_{it}<2.5 UBPL	15.2	13.4	19.1	36.7	15.7
c_{it}≥2.5 UBPL	6.6	4.0	9.1	30.3	50.0
Urban population					
c_{it}<FPL	52.3	19.7	14.7	11.0	2.3
c_{it}<LBPL	33.0	20.0	21.7	20.8	4.6
c_{it}<UBPL	20.3	20.2	24.6	27.0	8.0
c_{it}<2.5 UBPL	9.6	10.2	17.9	40.2	22.1
c_{it}≥2.5 UBPL	1.2	1.4	3.9	20.1	73.4
Urban African population					
c_{it}<FPL	52.7	19.6	14.5	10.8	2.4
c_{it}<LBPL	34.9	19.9	20.2	20.5	4.5
c_{it}<UBPL	23.8	20.2	23.0	25.6	7.4
c_{it}<2.5 UBPL	11.8	11.6	19.1	40.0	17.6
c_{it}≥2.5 UBPL	3.2	3.6	8.2	30.4	54.6
Urban African population, including rural-to-urban migrants					
c_{it}<FPL	50.3	19.4	15.1	12.3	2.9
c_{it}<LBPL	34.1	19.5	20.0	21.3	5.2
c_{it}<UBPL	23.4	19.9	23.2	26.1	7.3
c_{it}<2.5 UBPL	11.7	11.6	19.1	40.0	17.6
c_{it}≥2.5 UBPL	3.3	3.7	8.6	30.5	54.0

Note: rural-to-urban migrants are defined as those who stayed in rural areas in *t* and urban areas in *t*+1. Grey shaded area represents share of individuals in each row who remain in the same welfare category between time periods *t* and *t*+1.

Source: author's calculation based on pooled NIDS sample, 2008–14/15.

4.2 Decomposing poverty transitions into structural and stochastic components

The transition estimates presented in the previous section are likely to overestimate the actual extent of poverty dynamics in South Africa for two main reasons. First, the transition matrices presented in Table 3 do not distinguish between structural and stochastic mobility. Second, as Burger et al. (2016) show, measurement error in household income (or expenditure) tends to inflate transition estimates.

Following the methodology outlined in Section 3.1, in what follows I therefore decompose poverty transitions into structural and stochastic components. The results are summarized in Table 4. The structure of Table 4 is a simplified version of Table 3, in which the various welfare levels have been collapsed into poor and non-poor groups, using the UBPL as the relevant poverty threshold. Three out of four individuals did not change their poverty status between two subsequent waves of the NIDS data. Out of these, two are observed to be twice poor and one is observed to be twice

non-poor (see Table 4, upper panel).[11] Only about 4–5 per cent of these immobile individuals experience what Carter and May (2001) call a dual entitlements failure. That is, their income level places them above (below) the money poverty line in both periods, even though they would (not) be expected to be poor given their asset holdings (see Table 4a+d). That is, they are stochastically non-poor (poor) in both periods.

Table 4: Decomposing poverty transitions (per cent of individuals)

	c_{it+1}<PL	c_{it+1}≥PL
c_{it}<PL	**a) Twice poor:** 54.44	**b) Upwardly mobile:** 11.17
c_{it}≥PL	**c) Downwardly mobile:** 8.67	**d) Twice non-poor:** 25.72
Total	63.11	36.89

Poor in *t*	**a) Twice poor**			**b) Upwardly mobile**		
	Structural $A_{it+1} < \underline{A}_{t+1}$	*Stochastic* $A_{it+1} \geq \underline{A}_{t+1}$	Total	*Stochastic* $A_{it+1} < \underline{A}_{t+1}$	*Structural* $A_{it+1} \geq \underline{A}_{t+1}$	Total
$A_{it} < \underline{A}_t$	85.50	6.94	92.45	41.01	33.30	74.31
$A_{it} \geq \underline{A}_t$	3.51	4.04	7.55	3.77	21.92	25.69
Total	89.01 (NP: 87.28)	10.99 (NP: 12.72)	100	44.78 (NP: 44.02)	55.22 (NP: 55.98)	100

Non-poor in *t*	**c) Downwardly mobile**			**d) Twice non-poor**		
	Structural $A_{it+1} < \underline{A}_{t+1}$	*Stochastic* $A_{it+1} \geq \underline{A}_{t+1}$	Total	*Stochastic* $A_{it+1} < \underline{A}_{t+1}$	*Structural* $A_{it+1} \geq \underline{A}_{t+1}$	Total
$A_{it} < \underline{A}_t$	46.07	5.97	52.04	5.25	6.51	11.76
$A_{it} \geq \underline{A}_t$	24.60	23.36	47.96	5.86	82.38	88.24
Total	70.67 (NP: 68.91)	29.33 (NP: 31.09)	100	11.10 (NP: 10.74)	88.90 (NP: 89.26)	100

Note: for comparison, numbers in parenthesis refer to the decomposition results from the non-parametric (NP) kernel estimation. Differences in cell shares are in a range of 1–2 percentage points.

Source: author's calculation based on pooled NIDS sample, 2008–14/15.

The upwardly mobile, who escape monetary poverty from one period to the next, consist of two very distinct groups of individuals. On the one hand, three-quarters emerge from a situation of structural poverty. Out of these, 44.8 per cent are considered structurally upwardly mobile, while the other 55.2 per cent are stochastically upwardly mobile. That is, more than half of these escapers would still be expected to be poor, given the assets they hold. For them, the observed rise in monetary outcomes may rather be driven by luck or measurement error and therefore must be considered less likely to be sustained through time. On the other hand, one-quarter of the upwardly mobile emerge from a position of stochastic poverty. For them, the escape from poverty reflects a return to an expected non-poor standard of living.[12] These cases will be excluded from any further analysis of structural poverty escapes through the successful accumulation of assets, presented in the next section.

The same argumentation applies to about half of the downwardly mobile group, made up of initially stochastically non-poor individuals, for whom the descent into poverty presents a

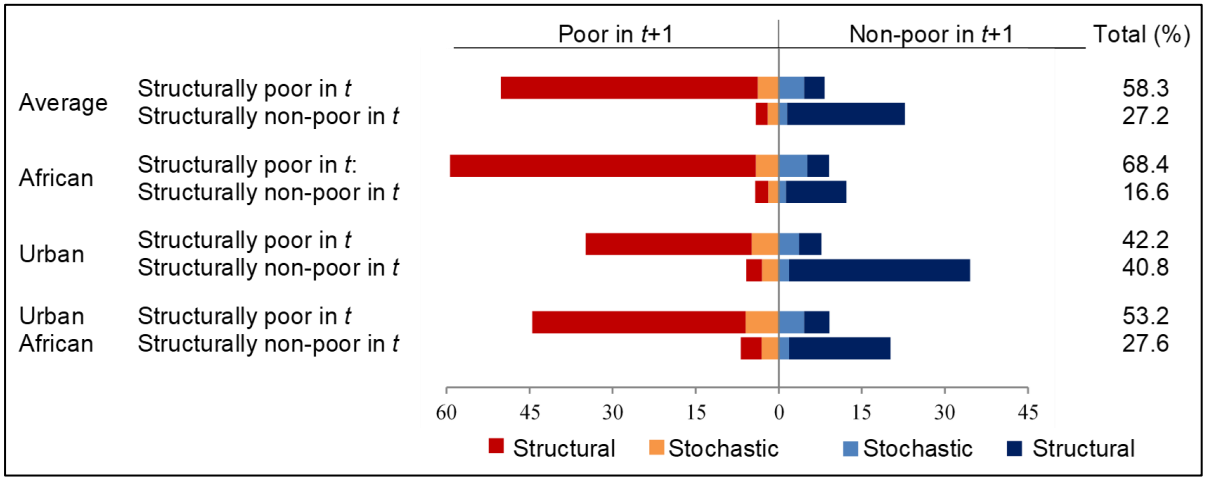
[11] All percentage shares refer to the total number of individuals in the pooled sample. As the NIDS is an individual-level panel, individuals can switch households between waves. This implies that members of the same initial household may take different poverty trajectories. Nevertheless, all explanatory variables entering the asset-poverty estimation are measured at the household level.

[12] The previous literature, therefore, subsumes this group by definition with the group of the stochastically upwardly mobile (Carter and May 1999, 2001; Radeny et al. 2012). Because my main research interest here is in the question of which movements into and out of monetary poverty are likely to be sustained over time, this definition could lead to confusion.

regression to their expected level of livelihood. The other half initially dispose of asset holdings sufficient to be considered structurally non-poor. For at least every second person (51.3 per cent) in this latter group, the descent into poverty is structural. That is, it is accompanied by a decline in the asset base that causes the person to slip below the asset poverty line.

The extent of structural upward mobility tends to be higher, and the share of structural downward mobility tends to be lower, in urban than in rural areas. Nonetheless when restricting the sample to urban African respondents, still 54.7 per cent of the descents into poverty and only 49.6 per cent of the escapes from poverty are structural (see Figure 2).

Figure 2: Decomposing poverty transitions



Source: author's calculation based on pooled NIDS sample, 2008–14/15.

It is worth noting that the differentiation between structural and stochastic transitions only gives an indication that a movement into or out of poverty is more or less likely to be sustained over time. Clearly, also those who experience structural upward mobility remain vulnerable to a number of risk factors that threaten their asset base, as discussed in more detail in the next section. In fact, two-thirds of the stochastically upwardly mobile and one-third of the structurally upwardly mobile urban African population, classified based on the mobility patterns observed between t and t+1, had slipped back into poverty in t+2 (see Table 5). Conversely, for those who experience a structural descent into poverty, the asset base provides little reason to expect any re-escape from poverty in the near future. However, poverty tends to be self-perpetuating (see Schotte et al. 2018) and even for those who hold assets above the asset poverty line, a descent into monetary poverty may manifest in a gradual dissolution of the asset base. In fact, only about half of the stochastically downwardly mobile had moved out of poverty two years later (see Table 5).

Table 5: Transition patterns, urban African population

Transition pattern between periods t and t+1		Poverty status in t+2	
		c_{it+2}<PL	c_{it+2}≥PL
c_{it}<PL	Twice poor	78.80	21.20
	Stochastically upwardly mobile	67.05	32.95
	Structurally upwardly mobile	32.66	67.34
c_{it}≥PL	Structurally downwardly mobile	69.41	30.59
	Stochastically downwardly mobile	47.77	52.23
	Twice non-poor	15.62	84.38

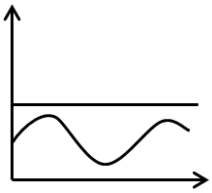
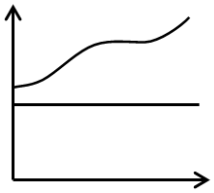
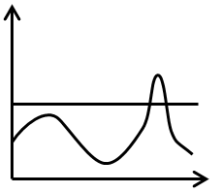
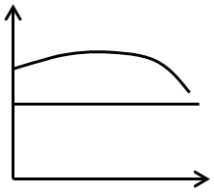
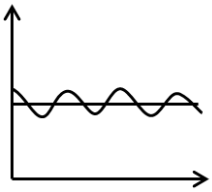
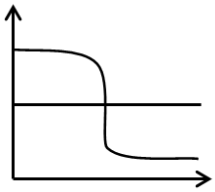
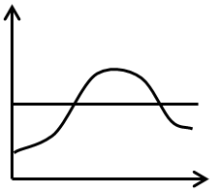
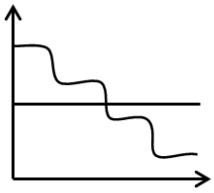
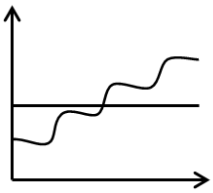
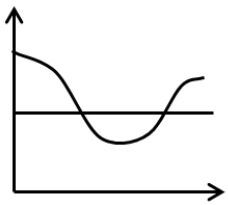
Note: sample restricted to African population living in urban areas in period t.

Source: author's calculation based on pooled NIDS sample, 2008–14/15.

5 Drivers of structural poverty escapes and descents

In this second part of the analysis, I combine quantitative and qualitative research methods to gain a more comprehensive understanding of the multidimensional causal processes and pathways that condition poverty escapes and descents. To this end, each life history diagram was examined and placed into one out of ten categories defined in Table 6 [following a similar approach as Davis and Baulch (2011) and Hulme and Shepherd (2003)]. The first important distinguishing criterion is whether the respondent started off structurally poor or structurally non-poor (based on the schema of social stratification introduced in Box 1). Then, in line with the analysis presented in Section 4, patterns of upward and downward mobility are explored, distinguishing between structural and stochastic movements.

Table 6: Livelihood trajectory patterns and poverty dynamics (based on LHIs)

Starting poor			Starting non-poor		
Trajectory pattern	**Depiction**	**Cases** (migrant)	**Trajectory pattern**	**Depiction**	**Cases** (migrant)
Structurally poor (generally with fluctuation into and out of food poverty)		**10** (6)	**Structurally non-poor and upwardly mobile** (stably non-poor and further accumulation of livelihood assets)		**2** (0)
Stochastically upwardly mobile (structurally poor with one single short-lived poverty escape not accompanied by change in asset base)		**4** (4)	**Structurally non-poor and stable** (stably structurally non-poor but contraction of livelihood assets towards old age)		**3** (1)
Churners (livelihood assets above typical structurally poor level, but always just at the edge to poverty)		**2** (1)	**Structurally downwardly mobile (one-step)** (dissolution of assets caused by single shock or series of co-occurring shocks)		**2** (2)
Structurally upwardly mobile (reverted) (structural poverty escape during working life, reverted in old age)		**4** (4)	**Structurally downwardly mobile (multiple steps)** (gradual dissolution of livelihood assets interrupted by short periods of recovery)		**2** (0)
Structurally upwardly mobile (non-reverted) (structural poverty escape that is not reverted)		**0** (0)	**U-shaped** (prolonged period of difficulty, but sufficient asset base to prevent a fall into deep poverty)		**1** (0)

Note: numbers in brackets refer to respondents who migrated from a rural area in the Eastern Cape.

Source: author's illustration based on own field research.

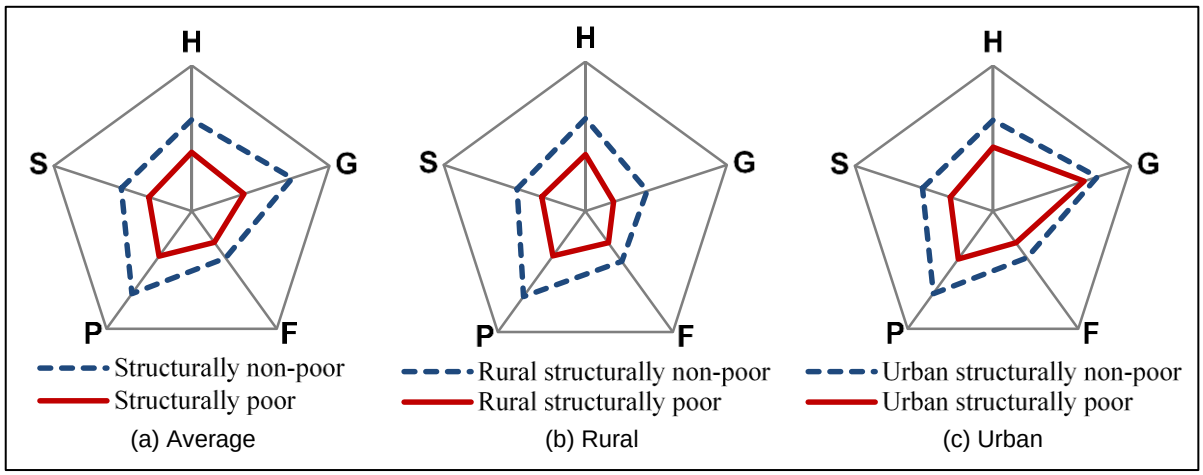
5.1 Starting poor

Markers of structural poverty

Operationalizing the livelihoods framework introduced in Section 2, the quantitative evidence suggests that structurally poverty generally implies deprivation along all five livelihood dimensions (see Figure 3). The qualitative evidence further substantiates and exemplifies this multidimensional deprivation. As indicated in Table 6, two-thirds of the LHI respondents (20 out of 30) started off in a situation of structural poverty (boxes three or four), and half of these never ascended to boxes two or one (see the example of Lindelwa in Schotte 2018). These *structurally poor* respondents were typically born into families with no or little livestock and/or other physical assets, often but not always in a rural context. Also, they reported having been deprived in terms of human and social capital. They often grew up with a single parent or were raised by other relatives, following the death or separation of their biological parents. In many cases, they dropped out of school with at most primary education complete, due to a lack of money and the need to support the family, or other events such as pregnancy. As a consequence, during later life they were constrained to relying primarily on casual jobs in unqualified occupations with low pay, which were rarely kept for more than two years. They generally faced a combination of different constraints (affecting either them directly or their close family members), including sickness or disability, alcohol and/or substance abuse, crime, and domestic violence. These were intensified by an unstable family network, a large number of dependents, and a lack of financial and physical capital to (re-)start business activities.

According to the quantitative evidence, the key criterion that distinguishes the urban poor from those located in rural areas is the overall better access to public infrastructure (compare Figures 3b and 3c). During the LHIs, respondents who had migrated from rural areas confirmed this picture to the extent that they typically rated their living and housing conditions in Khayelitsha higher than that before migration. Nevertheless, the quality and delivery of public services were often perceived as poor. This was evident in respondents reporting issues such as leaking roofs and pipes in government-provided housing, frequent electricity cuts, high transport costs for work, and overcrowded township schools confronted with challenges such as youth gangsterism and poorly trained teachers.

Figure 3: Asset pentagons, urban versus rural areas (NIDS)

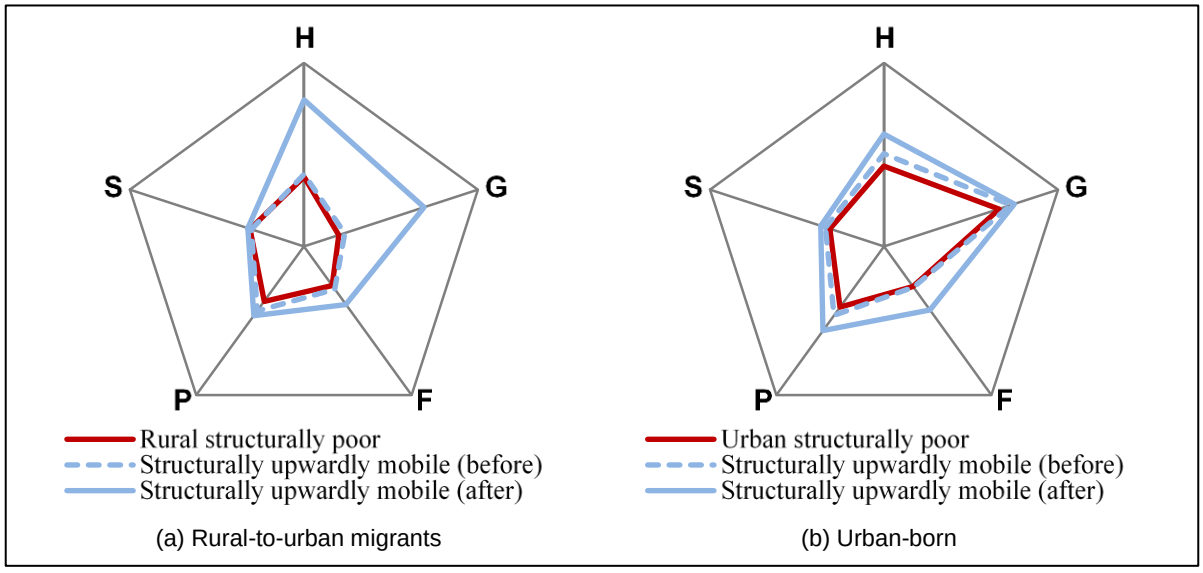


Source: author's illustration based on pooled NIDS sample, 2008–14/15.

Structural upward mobility

In the NIDS data, those who experience *structural upward mobility* generally see a rise in all five asset dimensions. For those originating from rural areas, the strongest expansions are observed in terms of geographic capital, generally indicating rural-to-urban migration, and human capital (see Figure 4). The LHI evidence generally confirms these patterns and, in addition, provides a more nuanced understanding of the role played by social networks, which—depending on the quality of the network—can both enable and constrain upward mobility.

Figure 4: Asset pentagons, structurally poor versus structurally upwardly mobile (NIDS)



Source: author's illustration based on pooled NIDS sample, 2008–14/15.

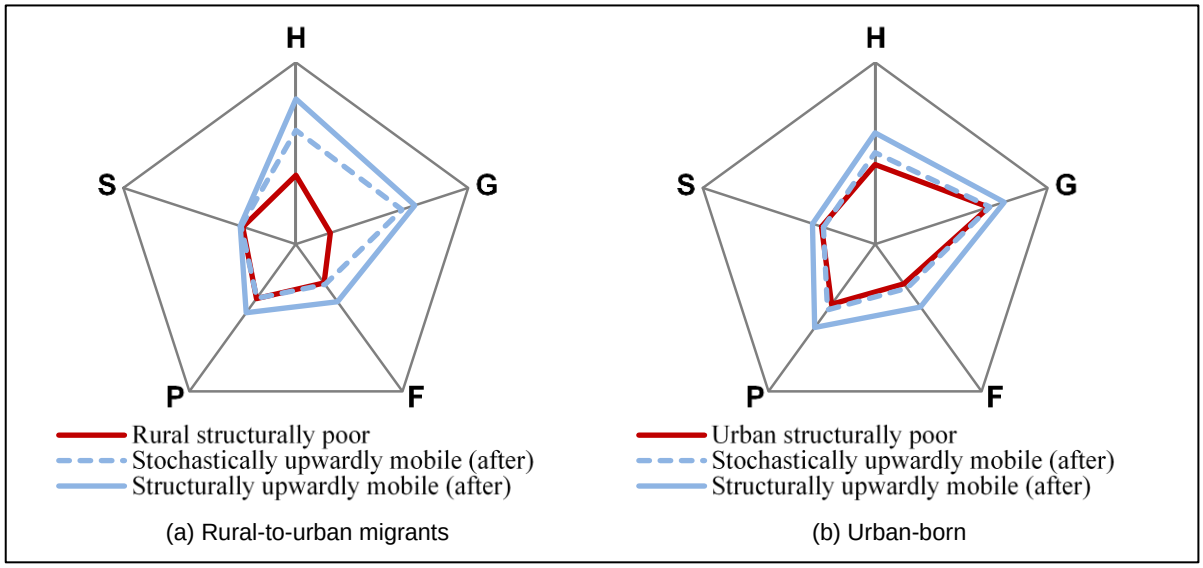
All four LHI respondents who experienced *structural upward mobility* were born in rural areas in the Eastern Cape. In contrast to those who remained structurally poor, they were integrated into better-functioning family networks and were more successful in seizing opportunities to enhance their human capital. They were more effective and strategic in their job search after arriving in Cape Town and experienced an important gradual improvement in their standard of living, often facilitated by successful job-to-job transitions, with only short spells of unemployment in between. Importantly, at least some of these jobs were kept for prolonged periods of time of 10–20 years.

In the other four cases in which respondents experienced *stochastic upward mobility*, these short-lived poverty escapes were also made possible when individuals found employment in better paying jobs. In these cases, however, respondents could not maintain these jobs over the longer term, due to issues such as contract expiration, business closure, or health issues. In addition, the time period during which these individuals benefitted from higher wage income was too brief to build up financial, physical, or human capital which could have pushed these individuals onto a path of sustained upward mobility. This observation matches with the asset profiles observed for stochastically versus structurally upwardly mobile individuals in the NIDS panel (see Figure 5).

Based on the small number of cases, it is difficult to trace the factors that facilitate structural as opposed to stochastic poverty escapes. To some extent, the timing of migration and the type and duration of the first job taken on after migrating seem to have played a role. Compared with the structurally upwardly mobile group, those who experienced a short-lived stochastic poverty escape tended to be younger and, on average, came to Cape Town at a later point in time when pass laws, which restricted the movement of black South Africans to urban centres, had been abolished, and competition for jobs was picking up. However, this does not hold in all cases. Furthermore, those

migrating to places where they already had contacts that could facilitate acquiring employment were more successful. Among those who had more difficulty in finding a permanent job at the start, gaining additional qualifications was decisive. That is, while upwardly mobile individuals were not necessarily more educated than the structurally poor at the outset, their success in acquiring work experience and supplementary training consequentially improved their fortunes in the labour market (see the example of Mcingini in Appendix Box A1).

Figure 5: Asset pentagons, stochastically versus structurally upwardly mobile (NIDS)



Source: author's illustration based on pooled NIDS sample, 2008–14/15.

Importantly, none of the structural poverty escapes observed in the life histories was sustained beyond retirement. This is mainly due to a decline in human capital, as health and the capacity to work deteriorate towards old age (see Appendix Figure A3). This implies that even those among the poor who were structurally upwardly mobile failed to accumulate sufficient financial capital and other assets over their working lives to provide for old age. This is what differentiates them from the group of individuals classified as initially structurally non-poor and upwardly mobile (see discussion below).

Churners

Finally, two LHI respondents are classified as *churners* because they remained very close to the edge of poverty for most of their life cycle—in one of the two cases, with frequent fluctuations between boxes two and three. These churners grew up in households with reasonable but declining and/or unstable access to livelihood assets. This unsecure position was attributable to the presence of only one main breadwinner working at low or unstable pay, often without a permanent work contract, who kept the close and extended family (generally a large number of dependents) with their heads just above water.

5.2 Starting non-poor

Structural upward mobility

One-third of the LHI respondents (10 out of 30) were not affected by poverty early in their lives. That is, they were born into a household that had access to a reasonable asset base (compare with Figure 3 above) and where basic needs were being met. These individuals generally reported growing up with both parents, of whom at least one was working.

However, only two out of the ten respondents were able to sustain and to improve their livelihood outcomes; that is, they were *structurally non-poor and upwardly mobile*. Both are female and were born and raised in Cape Town, and both were successful in developing and drawing on all five capital types to construct their living. Despite using two relatively different strategies to enhance their livelihood opportunities, both life histories emphasize the role played by labour market success and access to financial capital (also see Appendix Figures A3 and A4) in facilitating upward mobility.[13] In both of these cases, formal insurances (funeral policies, burial societies, and life insurance) along with informal support networks played an important role in buffering negative events. Furthermore, both respondents used their access to finance, through credit and cashed-in pension funds, to build flats at the back of their houses, which they rented out as a form of additional income and provision for retirement.

This old-age provision through the accumulation of property and/or other financial assets is the main criterion that distinguishes the two described cases from the three respondents who were also stably structurally non-poor but experienced a dip in livelihood outcomes towards old age, leaving them on the brink of poverty (see the example of Vivian in Appendix Box A2).[14] Similar to the discussion above regarding the reversal of structural escapes from poverty, this contraction in livelihood assets generally resulted from a depletion of human and physical capital due to business closure, job loss, or retirement, sometimes in combination with other negative events (such as sickness). Critically, most respondents in the structurally non-poor group took on substantial debt in the form of bonds and loans during their working lives. In one of the cases, this debt became a heavy burden after income from the labour market had dried up.

Structural downward mobility

Four out of the ten LHI respondents who started off their lives structurally non-poor (box one or top of box two) had fallen into deep structural poverty over time (box four). In two cases, the impoverishment occurred within a narrow time frame (single step), caused in the first case by a major external shock that irrevocably destroyed human or physical capital, and in the second case by a combination of events that occurred simultaneously.[15]

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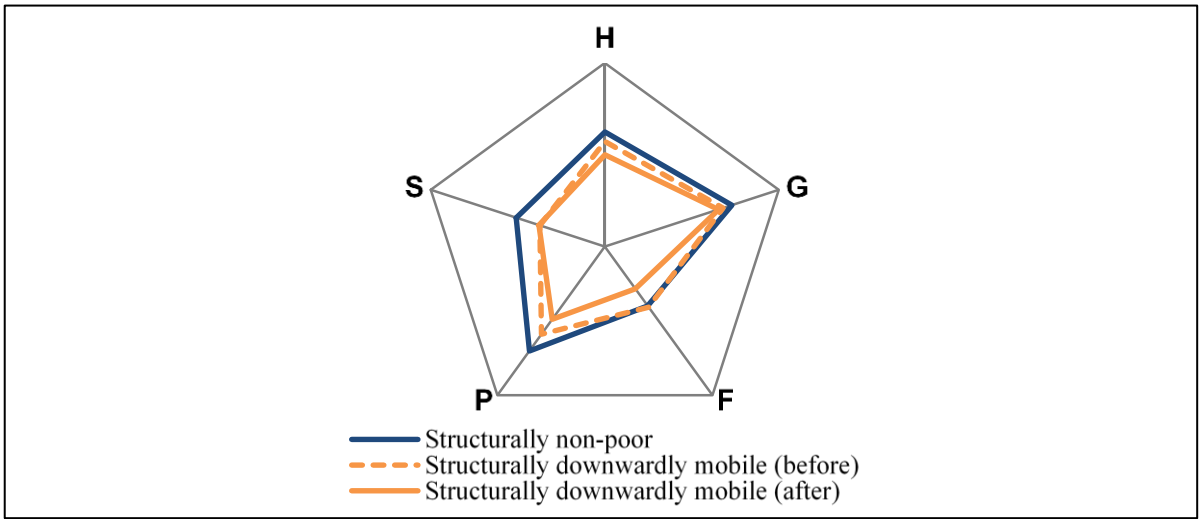
[13] In one of the cases, a combination of inherited physical, acquired human, pursued social, and borrowed financial capital was key. After dropping out of high school, the respondent took a course in hairdressing and decided to go into business with her father, who had a barber shop. After his death, she inherited the barber shop, joined a business organization—through which she gained access to credit—and gradually expanded the business, such that today she rents out different working stations in the community. In the second example, the individual seized the opportunities offered by the changing political environment at the end of apartheid, relying on a combination of human capital accumulation, contacts, and access to financial capital. After finishing high school, she started working at a medical aid establishment as an administrator—she was the first African to work for that company. She then got a bursary to go to college, studied to become a teacher, and then completed two additional diplomas to move to higher positions.

[14] The life history of Vivian is exceptional in the sense that she managed to sustain a high degree of stability throughout her life despite being in a low-skilled occupation.

[15] In the first case, the respondent had been self-employed running a spaza shop (i.e. convenience shop) out of his home. His whole economic base was wiped away by one key event, in his case a natural disaster in the form of a fire. The fire destroyed his house, the shop, and his savings, which he guarded at home. After this, no successful recovery had been possible, particularly due to a lack of access to financial capital to restart the business. In the second case, the respondent paid a high bride price (*lobola*) for his wife, giving away the livestock that he had inherited from his father. He then lost his job and since then has only been able to find irregular piece jobs in construction (his wife is also not working). In addition, his son fell sick and requires regular treatment. Even though the public hospital provides the treatment free of charge, large expenses are required for transport (to the hospital) and for traditional healers, whom they consult in addition.

In the other two cases, the impoverishment occurred rather gradually, in multiple linked steps (for a general overview of the frequency with which different trigger events were reported, along with the subjective welfare effect that LHI respondents attached to these events, see Appendix Figures A3 and A4). Individuals in this group commonly started their lives growing up with both parents. Conditions then began to worsen as one parent fell sick, died, or left the family due to separation. Respondents further experienced an accumulation of several negative and often interrelated events, which included job loss, sickness, being a victim of crime, experiencing the destruction of household property, domestic violence, and alcohol or drug abuse. As both the quantitative and the qualitative data illustrate, the lack of a functioning family network to buffer these events is an important criterion distinguishing these cases from those who were able to maintain a stable and economically secure position (see Figure 6). Those who experienced gradual structural downward mobility reported trying to get back on their feet several times, which became increasingly difficult with every additional shock that occurred. Importantly, in two cases, another family member (husband, father) intentionally and repeatedly negatively interfered with the person's business or employment opportunities.

Figure 6: Asset pentagons, structurally downwardly mobile (NIDS)



Source: author's illustration based on pooled NIDS sample, 2008–14/15.

6 Conclusion

Combining quantitative and qualitative data and methods, this paper makes an effort to better understand the multidimensional pathways that condition structural transitions into or out of poverty in South Africa, with special attention given to the urban African population. The urban focus and differentiation between structural and stochastic movements distinguish this research from previous mixed-methods investigations of poverty dynamics in sub-Saharan Africa, which—to my knowledge—either focus on rural settings or do not separate between stochastic and structural mobility patterns.

Using economic transition matrices based on NIDS panel data, I find considerable mobility across income groups, except for the most and the least well-off [this observation matches the findings by Finn et al. (2017) on patterns of intergenerational mobility]. Analysing households' access to, and holdings of, livelihood assets in terms of human, financial, physical, social, and geographic capital, I estimate how much of the observed patterns in income mobility can be accounted for by structural as opposed to stochastic factors. My findings suggest that for about half of the individuals who begin in a situation of structural poverty and who experience upward mobility in

incomes, the escape from poverty must be considered stochastic, suggesting a limited accumulation of assets that could help facilitate successful long-run escapes from poverty. Conversely, close to 70 per cent of the non-poor who experience downward mobility fall into a situation of structural poverty. One-third of this group is made up of initially stochastically non-poor individuals, for whom the descent into structural poverty presents a regression to their expected level of livelihood. The other two-thirds initially dispose of asset holdings sufficient to be considered structurally non-poor. For them, the descent into poverty is accompanied by a dissolution of assets that places them below the asset poverty line.

Using data visualization methods in the form of asset pentagons and livelihood trajectory diagrams, this paper then combines evidence from quantitative and qualitative data to illustrate the multidimensional deprivation and main risk factors that structurally poor households experience. Four interrelated dimensions characterizing urban poverty in South Africa can be extracted from the analysis. *First*, because work is generally the most important source of household income, transitions into or out of employment and job-to-job transitions are among the main trigger events associated with both poverty entries and exits (this reconfirms the results from Schotte et al. 2018).

Second, given the low returns and high job volatility associated with low-skilled labour, people require additional physical and social assets to achieve and sustain a position of economic security (for rural South Africa, compare with Carter and May 1999). In this regard, family networks and dependency relationships may play a dual role, both enabling and constraining upward mobility. Going beyond the simply mechanical effect that household size has on per-capita incomes in most quantitative assessments (e.g. see Finn et al. 2017), this paper emphasizes that the *quality* of the network is an important criterion that needs to be taken into consideration.

Third, as is well-established in the literature, higher levels of education constitute an important enabling factor for upward social mobility (e.g. see Adato et al. 2006). Nonetheless, today's youth struggle to enter the labour market and have particular difficulties in finding stable employment, this despite often having completed secondary schooling. This may be related to the poor quality of education as well as to a lack of work experience and the non-existence of a social network that could facilitate contacts with potential employers (for further discussion, see Spaull 2015). In line with the previous evidence on intergenerational mobility (Finn et al. 2017), I find that both advantages and disadvantages are being passed on, be it in the form of inherited physical capital, the importance parents attach to schooling and their ability to pay for high-quality education, or work contacts.

Fourth, reconfirming the findings by Carter and May (1999) for rural South Africa, poverty is not only a matter of few assets, but also of constraints to effectively use these assets. A specific constraint in this regard concerns the lack of access to financial capital, which especially affects people preparing for retirement. While access to credit generally presents an important enabling factor, my findings also suggest that accumulated debt can easily turn into a curse. Another constraint concerns the environmental or geographic context confronted by the urban poor, who are obliged to live in cheap, high-density locations that are spatially separated from the urban centres. This not only places a cost burden of commuting for work and job search, but is also associated with a higher exposure to risk factors from natural hazards and crime that threaten life and property (e.g. see Turok and Visagie 2018).

Along all four dimensions, the qualitative data provide more depth of information and offer a more nuanced and differentiated understanding of the processes that condition poverty dynamics, than could be obtained when relying on the available quantitative data alone. A major limitation of this research is that the causal chains of events that lead to poverty entries or exits rely on subjectively perceived information. However, cross-checks with the dynamics observed in the

NIDS data show that the key drivers of poverty escapes and descents identified are consistent between the quantitative and qualitative evidence.

References

Adato, M., F. Lund, and P. Mhlongo, P. (2007). 'Methodological Innovations in Research on the Dynamics of Poverty: A Longitudinal Study in KwaZulu-Natal, South Africa'. *World Development*, 35(2): 247–63.

Adato, M., M.R. Carter, and J. May (2006). 'Exploring Poverty Traps and Social Exclusion in South Africa Using Qualitative and Quantitative Data'. *The Journal of Development Studies*, 42(2): 226–47.

Agüero, J., M.R. Carter, and J. May (2007). 'Poverty and Inequality in the First Decade of South Africa's Democracy: What Can Be Learnt from Panel Data from KwaZulu-Natal?'. *Journal of African Economies*, 16(5): 782–812.

Azomahou, T.T., and E.A. Yitbarek, E.A. (2015). 'Poverty Persistence and Informal Risk Management: Micro Evidence from Urban Ethiopia'. Working Paper Series, 2015-006, Maastricht: UNU-MERIT and Maastricht Graduate School of Governance (MGSoG).

Barrett, C.B. (2005). 'Mixing Qualitative and Quantitative Methods in Analysing Poverty Dynamics'. In W. Odhiambo, J.M. Omiti, and D.I. Muthaka (eds), *Quantitative and Qualitative Methods for Poverty Analysis*. Nairobi: KIPPRA.

Bigsten, A., and A. Shimeles (2004). 'Dynamics of Poverty in Ethiopia'. Research Paper 2004/39. Helsinki: UNU-WIDER.

Booysen, F., S. van der Berg, R. Burger, M. Von Maltitz, and G. Du Rand (2008). 'Using an Asset Index to Assess Trends in Poverty in Seven Sub-Saharan African Countries'. *World Development*, 36(6): 1113–30.

Burger, R., S. van der Berg, S. van der Walt, and D. Yu (2017). 'The Long Walk: Considering the Enduring Spatial and Racial Dimensions of Deprivation Two Decades After the Fall of Apartheid'. *Social Indicators Research*, 130(3): 1101–23.

Burger, R.P., S. Klasen, and A. Zoch (2016). 'Estimating Income Mobility When Income Is Measured with Error: The Case of South Africa'. Working Paper 607. Cape Town: Economic Research Southern Africa (ERSA).

Carney, D. (ed.) (1998). *Sustainable Rural Livelihoods—What Contribution Can We Make?*. London: Department for International Development (DFID).

Carter, M.R., and C.B. Barrett (2006). 'The Economics of Poverty Traps and Persistent Poverty: An Asset-Based Approach'. *The Journal of Development Studies*, 42(2): 178–99.

Carter, M.R., and J. May (1999). 'Poverty, Livelihood and Class in Rural South Africa'. *World Development*, 27(1): 1–20.

Carter, M.R., and J. May (2001). 'One Kind of Freedom: Poverty Dynamics in Post-Apartheid South Africa'. *World Development*, 29(12): 1987–2006.

Chambers, R., and G. Conway (1992). 'Sustainable Rural Livelihoods: Practical Concepts for the 21st Century'. Discussion Paper 296. Sussex: Institute for Development Studies (IDS).

Davis, P., and B. Baulch (2011). 'Parallel Realities: Exploring Poverty Dynamics Using Mixed Methods in Rural Bangladesh'. *The Journal of Development Studies*, 47(1): 118–42.

Deininger, K., and J. Okidi (2003). 'Growth and Poverty Reduction in Uganda, 1999–2000: Panel Data Evidence'. *Development Policy Review*, 21(4): 481–509.

De la Hey, M., and W. Beinart (2017). 'Why Have South African Smallholders Largely Abandoned Arable Production in Fields? A Case Study'. *Journal of Southern African Studies*, 43(4): 753–70.

De Weerdt, J. (2010). 'Moving Out of Poverty in Tanzania: Evidence from Kagera'. *The Journal of Development Studies*, 46(2): 331–49.

Du Toit, A., and D. Neves (2007). 'In Search of South Africa's Second Economy: Chronic Poverty, Economic Marginalisation and Adverse Incorporation in Mt. Frere and Khayelitsha'. Working Paper 102. Cape Town: Chronic Poverty Research Centre.

Du Toit, A., and D. Neves (2009). 'Informal Social Protection in Post-Apartheid Migrant Networks: Vulnerability, Social Networks and Reciprocal Exchange in the Eastern and Western Cape, South Africa'. Working Paper 74. Manchester: Brooks World Poverty Institute (BWPI).

Finn, A., and M. Leibbrandt (2017). 'The Dynamics of Poverty in South Africa'. SALDRU Working Paper 174/NIDS Discussion Paper 2016/1. Cape Town: SALDRU, University of Cape Town.

Finn, A., M. Leibbrandt and V. Ranchhod (2017). 'Patterns of Persistence: Intergenerational Mobility and Education in South Africa'. SALDRU Working Paper 175/ NIDS Discussion Paper 2016/2. Cape Town: SALDRU, University of Cape Town.

Hulme, D., and A. Shepherd (2003). 'Conceptualizing Chronic Poverty'. *World Development*, 31(3): 403–23.

Kanbur, R., and P. Shaffer (2007). 'Epistemology, Normative Theory and Poverty Analysis: Implications for Q-squared in Practice'. *World Development*, 35(2): 183–96.

Kanbur, R. (ed.) (2003). *Q-squared: Combining Qualitative and Quantitative Methods in Poverty Appraisal*. Delhi: Permanent Black.

Kedir, A.M. (2005). 'Understanding Urban Chronic Poverty: Crossing the Qualitative and Quantitative Divide'. *Environment and Urbanization*, 17(2): 43–54.

Kedir, A.M., and A. McKay (2005). 'Chronic Poverty in Urban Ethiopia: Panel Data Evidence'. *International Planning Studies*, 10(1): 49–67.

Lybbert, T.J., C.B. Barrett, S. Desta, and D. Layne Coppock (2004). 'Stochastic Wealth Dynamics and Risk Management Among a Poor Population'. *The Economic Journal*, 114(498): 750–77.

Mberu, B.U., J.M. Ciera, P. Elungata, and A.C. Ezeh (2014). 'Patterns and Determinants of Poverty Transitions among Poor Urban Households in Nairobi, Kenya'. *African Development Review*, 26(1): 172–85.

Radeny, M., M. Van den Berg, R. and Schipper (2012). 'Rural Poverty Dynamics in Kenya: Structural Declines and Stochastic Escapes'. *World Development*, 40(8): 1577–93.

Rakodi, C. (2002). 'A Livelihoods Approach—Conceptual Issues and Definitions. In C. Rakodi with T. Lloyd-Jones (eds), *Urban Livelihoods: A People-Centred Approach to Reducing Poverty*. London: Earthscan Publications Ltd.

SALDRU (2016a). National Income Dynamics Study 2008, Wave 1 [dataset]. Version 5.3. Cape Town: SALDRU [producer], Cape Town: DataFirst [distributor].

SALDRU (2016b). National Income Dynamics Study 2010–2011, Wave 2 [dataset]. Version 2.3. Cape Town: SALDRU [producer], Cape Town: DataFirst [distributor].

SALDRU (2016c). National Income Dynamics Study 2012, Wave 3 [dataset]. Version 1.3. Cape Town: SALDRU [producer], Cape Town: DataFirst [distributor].

SALDRU (2016d). National Income Dynamics Study 2014–2015, Wave 4 [dataset]. Version 1.0. Cape Town: SALDRU [producer], Cape Town: DataFirst [distributor], Pretoria: Department of Planning Monitoring and Evaluation [commissioner].

Schotte, S. (2018). 'Poverty, Social Mobility, and the Middle Class'. Doctoral dissertation submitted at the University of Göttingen. Available at: http://hdl.handle.net/11858/00-1735-0000-002E-E4E1-9 (accessed 13 November 2019).

Schotte, S., R. Zizzamia, M. and Leibbrandt (2018). 'A Poverty Dynamics Approach to Social Stratification: The South African Case'. *World Development*, 110: 88–103.

Sen, A. (1985). *Commodities and Capabilities*. Amsterdam: North-Holland.

Shimeles, A., and M. Ncube (2015). 'The Making of the Middle-Class in Africa: Evidence from DHS Data'. *The Journal of Development Studies*, 51(2): 178–93.

Spaull, N. (2015). 'Schooling in South Africa: How Low-Quality Education Becomes a Poverty Trap'. *South African Child Gauge*, *12*, 34–41.

StatsSA (2015a). Consumer Price Index: January 2015. (Statistical release P0141). Pretoria: Statistics South Africa. Available at: http://www.statssa.gov.za/ (accessed 10 July 2018).

StatsSA (2015b). 'Methodological Report on Rebasing of National Poverty Lines and Development of Pilot Provincial Poverty Lines. Technical Report 03-10-11. Pretoria: Statistics South Africa.

Turok, I., and J. Visagie (2018). 'Does Moving to a City Mean a Better Life? New Evidence'. *Econ3x3*. Available at: www.econ3x3.org (accessed 7 December 2019).

White, H. (2002). 'Combining Quantitative and Qualitative Approaches in Poverty Analysis'. *World Development*, 30(3): 511–22.

Woolard, I., and M. Leibbrandt (2006). 'Towards a Poverty Line for South Africa'. USAID/DFID Background Note. Cape Town: SALDRU, University of Cape Town.

Appendix

Table A1: Parametric regression: Average marginal effects

	2008	2010/11	2012	2014/15	Panel
Mean					
Log household expenditure per adult equivalent (ln(c_{it}))	7.001***	6.813***	6.916***	7.075***	6.959***
	(0.045)	(0.051)	(0.041)	(0.036)	(0.029)
Effect					
Human capital index (H_{it})	1.265***	1.311***	1.439***	1.472***	1.337***
	(0.057)	(0.062)	(0.053)	(0.045)	(0.033)
Financial capital index (F_{it})	1.557***	1.666***	1.214***	1.058***	1.239***
	(0.093)	(0.112)	(0.082)	(0.065)	(0.043)
Physical capital index (P_{it})	2.113***	1.587***	2.039***	2.016***	1.811***
	(0.087)	(0.089)	(0.072)	(0.067)	(0.048)
Social capital index (S_{it})	0.104*	0.251***	0.209***	0.219***	0.231***
	(0.062)	(0.081)	(0.067)	(0.064)	(0.044)
Geographic capital index (G_{it})	0.553***	0.499***	0.659***	0.639***	0.646***
	(0.058)	(0.061)	(0.053)	(0.045)	(0.039)
Time fixed effects					
2010/11					–0.137***
					(0.016)
2012					–0.147***
					(0.015)
2014/15					–0.080***
					(0.015)
Observations	7,277	6,765	8,025	9,610	31,677
R-squared	0.6092	0.4597	0.5304	0.5153	0.5308
Within					0.1058
Between					0.5927

Note: standard errors (adjusted for 400 survey clusters) in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Source: author's calculation based on NIDS 2008–14/15.

Table A2: Non-parametric regression: Average marginal effects

	2008	2010/11	2012	2014/15
Mean				
Log household expenditure per adult equivalent (ln(c_{it}))	7.040***	6.845***	6.990***	7.117***
	(0.012)	(0.015)	(0.012)	(0.011)
Effect				
Human capital index (H_{it})	1.352***	1.328***	1.493***	1.471***
	(0.051)	(0.056)	(0.046)	(0.045)
Financial capital index (F_{it})	1.347***	1.475***	1.135***	1.032***
	(0.062)	(0.084)	(0.064)	(0.058)
Physical capital index (P_{it})	2.319***	1.708***	2.060***	1.988***
	(0.063)	(0.073)	(0.063)	(0.057)
Social capital index (S_{it})	0.131**	0.249***	0.338***	0.195***
	(0.038)	(0.081)	(0.057)	(0.045)
Geographic capital index (G_{it})	0.464***	0.439***	0.595***	0.650***
	(0.056)	(0.040)	(0.039)	(0.033)
Observations	7,277	6,765	8,025	9,610
R-squared	0.6436	0.4973	0.5451	0.5340

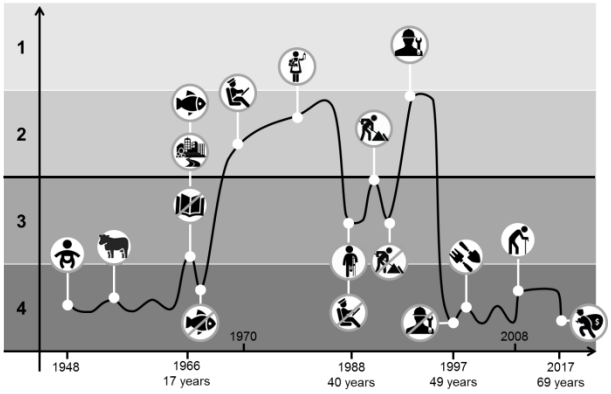
Note: bootstrapped standard errors (100 replications) in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Source: author's calculation based on NIDS 2008–14/15.

Box A1: Escape from poverty during working life and re-impoverishment at old age

Mcingini was born in 1948 in the Eastern Cape. He grew up with both his parents and seven siblings in a simple stone house in the mountains. They had a kraal, but the number of cattle fluctuated as a result of droughts and veterinary infections. At the age of 17 years, he left school (grade 8) and moved to Cape Town in search of work. He found a job as a fisher and was sending money home. The contract ended after six months and he started moving from one temporary job to the next, working in different low-skilled occupations. In 1969, he got a job as a driver at a factory; he says he taught himself how to drive. He worked there for almost 20 years. During this time, he got married and his wife opened a crèche at their home, such that there were two incomes.

Figure A1: Mcingini's life history



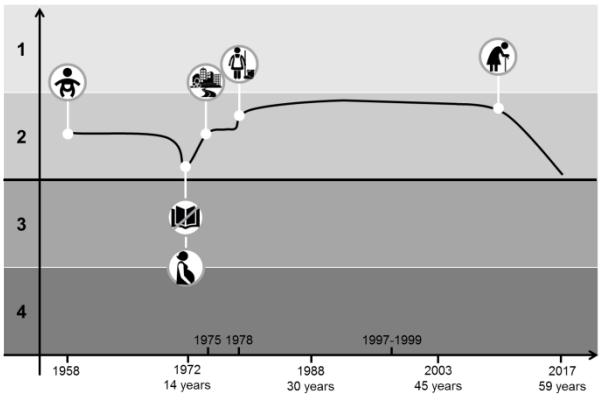
Source: author's illustration based on own field research.

In 1988, Mcingini fell sick and had to leave his job and move back to the Eastern Cape. He was supported by his older brother for three years, until he got better and moved back to Cape Town. He then was working at a construction site for a year. The contract ended and after another short period of unemployment, he found a job as a mechanic. In 1997, he lost this job. Since then, he was only able to find piece jobs as a gardener, but retired from this in 2006, because he would get no more jobs (people told him he was too old). Since 2008, he is receiving the state old-age pension. His wife still works as a nanny, but the number of children has decreased because of the expansion of public crèches. In 2017, they were robbed at their house.

Box A2: High stability from long-term employment and family networks

Vivian is an elderly domestic worker living with her sister and niece in Makhaza, Khayelitsha. She was born in 1958 in a smaller town in the Western Cape, where she grew up with both parents and five siblings. Her father was working and they were living in a formal house. They were not suffering at all when she grew up. At the age of 14 years, she became pregnant and dropped out of school (grade 5). In 1975, when her child was 2 years old, she moved to Cape Town, leaving the child with her family. She started working as a domestic worker. After three years, she switched jobs and started working for a couple, for whom she still works today. She has been working for this family for almost 40 years. They always treated her well and her salary increased whenever the couple got a pay rise. Vivian's household has experienced several traumatic deaths in the last 20 years. Between 1997 and 1999, both her parents and her brother died in short succession. More recently, two nephews were murdered and her daughter died from sickness.

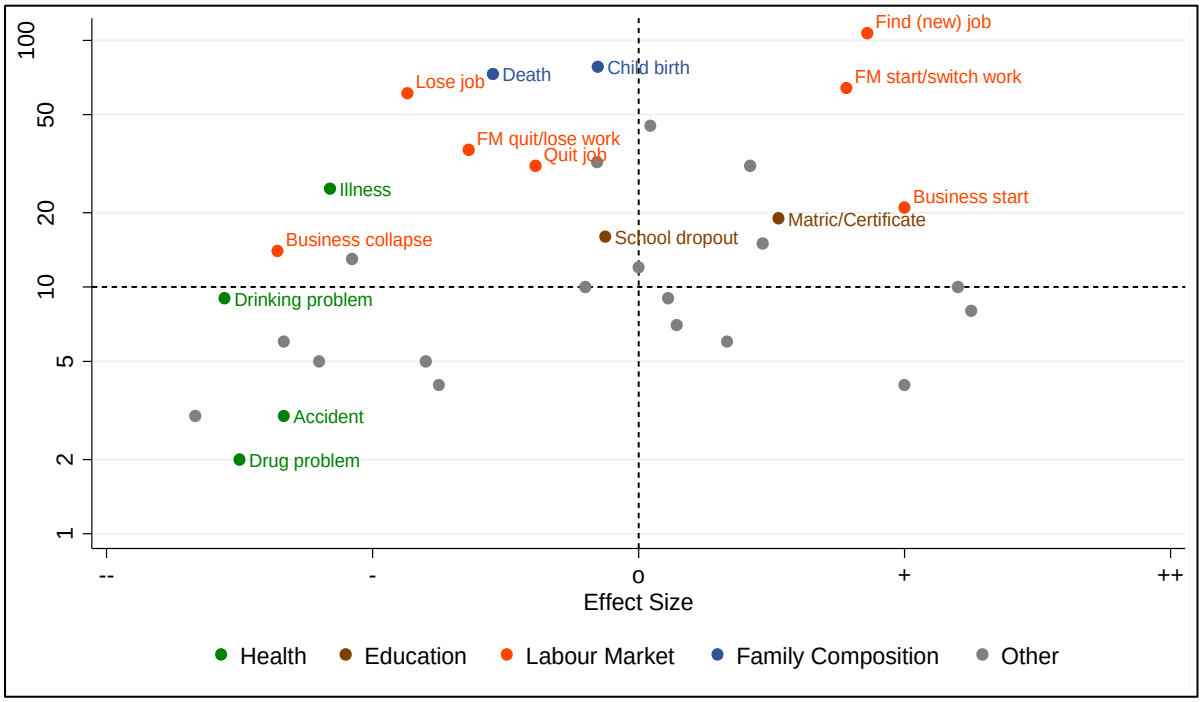
Figure A2: Vivian's life history



Source: author's illustration based on own field research.

Several factors helped to keep the household financially stable: i) Vivian is the breadwinner of the household and her income was unaffected; ii) membership of burial schemes minimized the immediate cost of funeral expenses; and iii), the extended family united in solidarity to ensure that costs were shared. However, things became difficult in the last years. For health reasons, Vivian now can only work three days a week and thus earns less. In addition, she is paying for the living expenses of her granddaughter, who is the first in the family to be attending university, which makes Vivian very proud.

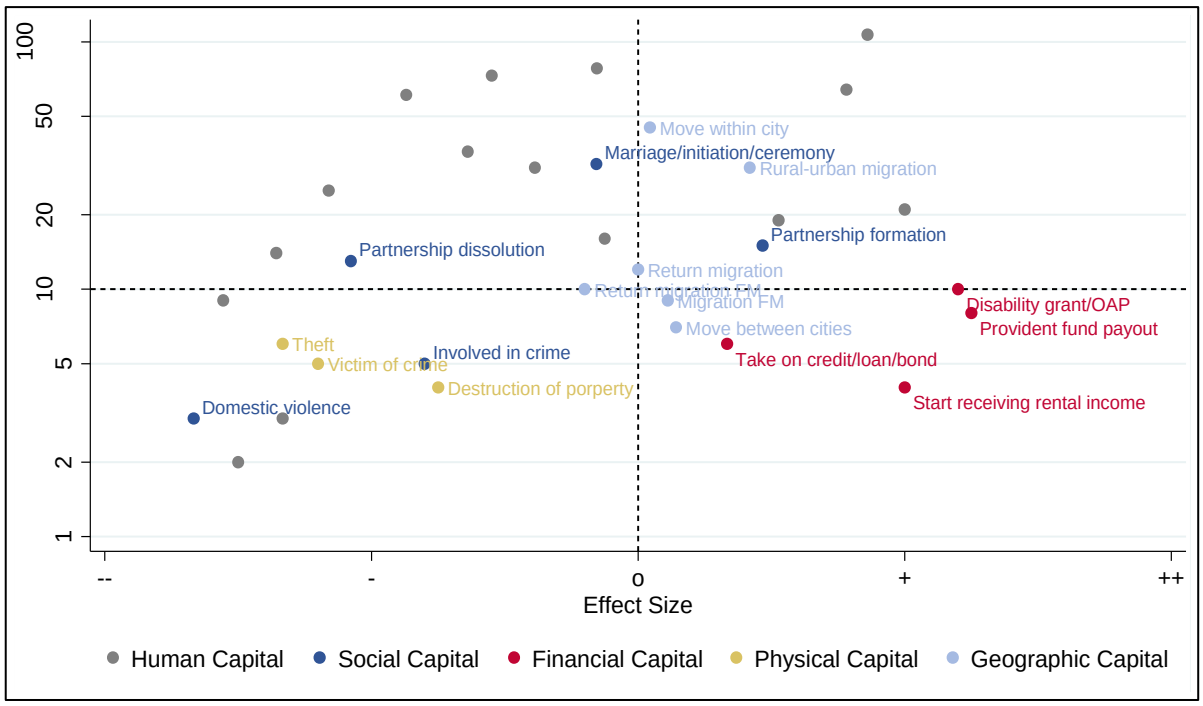
Figure A3: Trigger events associated with a rise/fall in human capital (LHIs)



Note: in total, 786 events had been reported during the LHIs, grouped into 35 event categories. Each event was manually coded and transformed into numerical information. Based on the interview transcript and the life history diagram, four effect sizes were distinguished: large negative (– –), small negative (–), no effect (0), small positive (+), and large positive (++).

Source: author's illustration based on own field research.

Figure A4: Trigger events associated with a rise/fall in other capital types (LHIs)



Note: in total, 786 events had been reported during the LHIs, grouped into 35 event categories. Each event was manually coded and transformed into numerical information. Based on the interview transcript and the life history diagram, four effect sizes were distinguished: large negative (– –), small negative (–), no effect (0), small positive (+), and large positive (++).

Source: author's illustration based on own field research.