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Exploring Poverty Traps and Social Exclusion in South Africa Using Qualitative and Quantitative Data

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ABSTRACT *Recent theoretical work hypothesises that a polarised society like South Africa will suffer a legacy of ineffective social capital and blocked pathways of upward mobility that leaves large numbers of people trapped in poverty. To explore these ideas, this paper employs a mix of quantitative and qualitative methods. Novel econometric analysis of asset dynamics over the 1993–98 period identifies a dynamic asset poverty threshold that signals that large numbers of South Africans are indeed trapped without a pathway out of poverty. Qualitative analysis of this period and the period 1998–2001 more deeply examines patterns of mobility, and confirms the continuation of this pattern of limited upward mobility and a low-level poverty trap. In addition, the qualitative data permit a closer look at the specific role played by social relationships. While finding ample evidence of active social capital and networks, these are more helpful for non-poor households. For the poor, social capital at best helps stabilise livelihoods at low levels and does little to promote upward mobility. While there is thus some economic sense to sociability in South Africa, elimination of the polarised economic legacy of apartheid will ultimately require more proactive efforts to assure that households have access to a minimum bundle of assets and to the markets needed to effectively build on those assets over time.*

I. Rethinking the Washington Consensus in Polarised Societies

To no one's surprise, South Africa in the immediate post-apartheid period was characterised by high economic inequality and levels of poverty not usually found in an upper middle income country. In the Poverty and Inequality Report (PIR) prepared for then Deputy-President Thabo Mbeki, May et al. (2000) capture this distributional reality most succinctly when they calculated that South Africa was economically two worlds: one, populated by black South Africans where the Human Development Index (HDI) was the equivalent to the HDI of Zimbabwe or Swaziland. The other, was the world of white South Africa in which the HDI rested comfortably between that of Israel and Italy.

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More surprising, however, has been the further deepening of inequality, and poverty, in the post-apartheid period.¹ While it is always possible to argue that these trends are the temporary aberrations of structural adjustment, this paper explores the idea that they represent a deeper and more systemic component of the South African social and economic reality, arising from poverty traps such as those identified by Woolard and Klasen (2004). In particular, this paper explores the idea that the apartheid pattern of socio-economic polarisation – in which class and colour were almost perfectly correlated – created a world of inequality in which conventional avenues of upward mobility were cut short, and that highly segmented, and ultimately ineffective patterns of social capital accumulation play a role in the persistence of this constrained mobility.² While social capital has been identified in the literature as an important avenue of upward mobility for poorer people (see the comprehensive, though often critical review in Durlauf and Fafchamps, forthcoming), this paper explores whether a legacy of apartheid is an economy in which social exclusion and poverty continue to interact in a mutually self-sustaining fashion, an attribute that could be a general feature of unequal societies such as South Africa.

This question, or legacy hypothesis, has particular salience given the general tenor of economic policy making in South Africa over the last decade. National economic policy in the first post-apartheid government adopted the liberal stance of the so-called Washington Consensus with the adoption of the GEAR (Growth, Employment and Redistribution) programme in 1996. Its name notwithstanding, GEAR displaced the emphasis that the ANC and its allies in the trade unions and NGO sector had initially given to direct government responsibility for meeting basic human needs. With its emphasis on fiscal discipline and incentives for private investment, South Africa under GEAR was clearly betting that time would prove to be an ally of the poor on the playing field of an expanding free market economy.

In retrospect, this confidence in time as an ally appears to have been misplaced. As May, et al. (2004) document, despite the fact that macroeconomic policy met its targets and conformed closely to the discipline of the Washington Consensus, time and the South African economy have proven to be rather feeble allies in the fight against poverty, generating neither sufficient growth, nor improvements in income distribution and poverty measures. The recent South African Human Development Report (UNDP, 2003) goes further and argues that the employment elasticity of growth actually declined during the implementation of GEAR, while inappropriately targeted fiscal discipline and a preoccupation with cost recovery undermined advances in the delivery of social services.

It seems that the current South African government is recognizing the need for alternatives. In the September 2003 issue of its popular periodical *Finance & Development*, the International Monetary Fund published a set of papers that revisit the wisdom of the Washington Consensus. Included among them is a piece by South African finance minister, Trevor Manuel, the architect of GEAR (Manuel, 2003). Manuel argues that government needs to take a more pro-active stance than foreseen in the Washington Consensus, and must now take affirmative steps to ensure that citizens are positioned to be able to respond to the new opportunities provided by the liberalised, post-apartheid economy. In the same issue of *Finance & Development*, John Williamson (who coined the term Washington Consensus in 1990) more

pointedly says that governments must assure that citizens have the minimum asset base and market access required to save, accumulate and succeed in a market economy (Williamson, 2003).

The failure of time and the Washington Consensus suggests the existence of a persistent, time-resistant poverty that is not easily eliminated. Section II begins this paper's analysis with a brief review of polarisation and exclusion, providing a foundation for the legacy hypothesis. Section III develops some of the analytical tools needed to investigate the structural poverty dynamics suggested by this hypothesis. Section III then implements an analysis of structural dynamics using the 1993–98 KIDS panel data set and finds that South Africa over that time period was indeed characterised by the sort of low level structural poverty trap suggested by the legacy hypothesis. Section IV then deepens the analysis, drawing on qualitative data gathered from a subset of 50 KIDS households that was undertaken in 2001. This later data confirms the general patterns of immobility found in the quantitative data, and explores the factors that constrain or enable mobility. It also provides some insight into what social capital does (help less well-off households stabilise their level of well-being), versus what it does not do (help less well-off households move ahead over time). Section V concludes the paper with some reflections on economic policy and income distribution dynamics in polarised societies.

II. Apartheid's Legacy of Polarisation and Exclusion

Carter and Barrett (this volume) emphasise that poverty traps can emerge when: (1) Increasing returns to scale, fixed costs or risk create a reality in which marginal returns to investment increase as wealth increases over some range; and, (2) Poor households have inadequate access to financial services (loans and insurance). In this circumstance, poor households may become mired in situations of low assets and failed attempts to accumulate and move ahead. Income distribution would, in this case, be a divergent process, with the initially poor trapped at low levels of well-being, while the initially better-off move ahead to higher levels of well-being. On the other hand, when poor households can borrow against future earnings to capitalise investment projects, and enjoy insurance that permits them to ride out economic downturns without sacrificing past gains, then income distribution will tend to be characterised by a convergent process in which the initially poor tend to catch up economically with the rest of their society.

If the economic theory of poverty traps is correct, then the ability of the poor to access capital and insurance becomes a key determinant of longer term poverty dynamics. Unfortunately, the ability of markets themselves to deliver financial services to poor people is suspect. As now well-developed theoretical and empirical literatures make clear, such markets may simply not exist, may carry disproportionate costs for poor people, or indeed, they may tend systematically to exclude low wealth people.

The arm's length anonymous transactions of markets are, of course, not the only mechanisms of access to capital and insurance. A variety of informal, relational or socially mediated mechanisms can, and in many places do, provide access to financial services. Indeed, much of the growing interest within economics about social capital stems precisely from an interest in understanding the ability of social mechanisms to substitute for incomplete markets.

What then determines socially mediated access to capital and insurance? Figueroa et al. (1996) point out that social capital has resonance with the concept of social exclusion that has been the subject of debate concerning poverty in Europe. In this debate, social exclusion is seen to focus 'primarily on relational issues (such as) the lack of social ties to the family, friends, local community, state services and institutions or more generally to the society to which an individual belongs' (Bhalla and Lapeyre, 1997: 417). In a similar spirit, Townsend (1985: 665) talks of social needs such as being able/unable to fulfil the roles of parent, kin, citizen, neighbour and so forth. Being ashamed to appear in public and not being able to participate in the activities of the community are also noted by Sen as being aspects of deprivation (Sen, 1985:169, 161). In this way, exclusion may be posed as the opposite of social integration.

Exclusion has both economic and social dimensions. The economic dimension refers to exclusion from the opportunities to earn income, the labour market and access to assets. The social dimension refers to exclusion from decision making, social services and community and family support. At one level then, social exclusion can refer to the exclusion to the rights of citizenship; while at another, the concept refers to relationships within families and communities. The usefulness of the concept is the support that it lends to the importance of social relationships in resource allocation and usage. Social exclusion may thus be linked to the existence of discriminatory forces, such as racism, and the outcome of market failures and unenforced rights. Alternatively, it could be argued that exclusion is a consequence of hierarchical power relations, in which group distinctions and inequality overlap (de Haan, 1998:13) and it is conceivable that inclusion may occur, but under unfavourable or exploitative conditions, sometimes referred to as 'adverse incorporation' (Bracking, 2003). In South Africa, Moser (1997) has gone further, linking the exclusionary policies of apartheid and the social dynamics set in motion by the apartheid struggle to the erosion of social capital.

In a recent theoretical paper, Mogues and Carter (forthcoming) further explore these themes by asking how an individual's investment in social capital is shaped by social identity. In particular they show that as what Stewart (2001) calls horizontal inequality increases (that is, as ethnicity or other markers of social identity becomes increasingly correlated with economic status), social capital becomes more narrowly constructed and increasingly ineffective as a mechanism of economic advance for poor people.

Taken together, these theoretical considerations and empirical observations suggest that social mechanisms of access to capital and insurance are likely to be ineffectual in highly unequal societies such as South Africa. The remainder of this paper will now use both quantitative and qualitative data to see if social exclusion and ineffectual social capital help explain emerging South African patterns of economic mobility and poverty dynamics.

III. Quantitative Evidence of Asset Thresholds and Poverty Traps

Both the quantitative and qualitative portions of this study draw on data collected from households in the KwaZulu-Natal Income Dynamics Study (KIDS). KIDS households were originally selected at random in 1993 from the universe of KwaZulu-Natal households (as part of a broader national survey), and were again interviewed

in 1998. The province of KwaZulu-Natal is home to approximately 20 per cent of South Africa's population of 44 million. Although not the poorest province in South Africa, it arguably has the highest incident of deprivation in terms of access to services and perceived well-being (Klasen, 1997; Leibbrandt and Woolard, 1999).

Table 1 presents a suite of poverty indicators drawn from prior analysis of the household expenditure data from the KIDS study.³ The rows of the table present information on 1993, while the columns present information on 1998. When measured against a standard poverty line, 27 per cent of KIDS households were poor in 1993 with an average poverty gap that was 27 per cent of the poverty line. The number of poor had risen to almost 43 per cent by 1998, while the average poverty gap rose to 33 per cent. While these figures are striking, they do not reveal the extent of mobility (for example, how many of the initially poor households were also poor in 1998), nor do they identify the causes of mobility.

Table 1 allows a first look at these mobility issues by including a standard mobility decomposition. The rows of the table give the 1993 well-being class, while the columns give the 1998 classification. Looking at the top bold row in each cell of the table first, the results of this two-way classification scheme are provided. As can be seen, 18 per cent of the households were poor in both periods, or were chronically poor in the language of standard dynamic poverty analysis. Another 35 per cent of households were poor in one period only and hence can be classified as transitorily poor. The chronically or twice poor thus constitute between 42 per cent and 64 per cent of overall poverty.⁴

While these standard mobility indicators are informative, they do not address a key challenge facing the empirical analysis of poverty, that of distinguishing between households that can expect to escape poverty over time from those that cannot. Carter and May (2001) take a first step towards answering this challenge by defining the asset poverty line, defined as the level of assets needed to generate an expected living standard equal to the poverty line.⁵ Households with assets below the asset poverty line would be expected to be poor (at least in the short to medium term), while those with assets above that line would be expected to be non-poor. Stochastic shocks can of course move people away from these expected positions.

Using the asset poverty line, Carter and May are able to further decompose the mobility patterns shown in Table 1. The 25 per cent of the KIDS sample that fell

Table 1. Decomposing poverty transitions in South Africa (per cent surveyed households)

		1998	
		Poor 43%	Non-poor 57%
1993	Poor 27%	18% Chronically poor, of which: ● 8% dual entitlement failures*** ● Structurally poor/ ≤92%	10% Got ahead, of which: ● 58% Stochastically mobile* ● Structurally mobile ≤42%
	Non-poor 73%	25% Fell behind, of which: ● 15% Stochastically mobile** ● Structurally poor/ ≤85%, of which 51% had entitlement losses	48% Never poor

Source: Based on Carter and May (2001).

behind between 1993 and 1998 can be split into those whose movement was structural, based on the accumulation of assets (or increased returns to assets), and those whose movement was stochastic, based on bad luck and the failure to earn expected returns to assets. As can be seen in Table 1, perhaps 15 per cent of the households that fell behind did so for stochastic reasons, meaning that their asset base in 1998 was firmly above the 1998 asset poverty line. The fact that they were observed to be poor in 1998 despite being above the asset poverty line thus indicates bad luck in the form of failure of to achieve expected returns to their assets. In the short- to medium-term (with no further changes in assets or in the structure of the economy), these households would be expected to return to a non-poor status.

The other 85 per cent of the households that moved downwards between 1993 and 1998 are likely structurally poor, with assets below the asset poverty line. Either they were non-poor in 1993 for reasons of good fortune (returns to their assets in excess of the expected returns), or they suffered asset losses between 1993 and 1998 which moved them beneath the asset poverty line. Indeed, over 50 per cent of the households that moved downward between 1993 and 1998 report losses of productive assets (for example, death of a wage earner, or loss of enterprise assets to fire or other disaster). In contrast to the households whose downward mobility was stochastic, these households have a structural basis to their poverty and would be expected to remain poor over the short- to medium-term.

Carter and May similarly decompose the 10 per cent of KIDS households that moved ahead between 1993 and 1998 into those whose upward mobility was structural versus those whose mobility reflected the operation of random factors. Stochastic upward mobility – which Carter and May estimate was the case for 58 per cent of the upwardly mobile households – could occur when a household that was above the 1993 asset poverty line was observed to be poor in 1993, presumably because of bad luck that depressed returns to assets (for example, a lost job, poor business performance). The move by such a household to a non-poor standard of living would reflect a return to the standard of living that would be expected given the household's asset base. Upward structural mobility, on the other hand, would occur when a household that was below the 1993 asset poverty successfully engineered an escape from poverty by accumulating additional assets, moving above the 1998 asset poverty line, and gaining the returns expected for those assets. Carter and May estimate that no more than 42 per cent of upward mobility (roughly 4 per cent of the overall sample) reflected this structural process of poverty relief. Thus modest pattern of upward structural mobility, coupled with the relatively large amounts of structural poverty, are at least consistent with the hypothesis that social exclusion and ineffective social capital are an important legacy of apartheid.

While the Carter and May decomposition gives important information about how the economy is working, and also gives a sense of how much poverty is likely to persist in the short- to medium-term (holding assets and the structure of the economy constant), it does not tell us how many of the structurally poor are likely to remain poor over the longer term. Are some structurally poor households on an upward trajectory of steady asset accumulation such that they would be expected to some day exit poverty? Is another subset caught in a poverty trap from which upward mobility is not possible?

Similarly, the Carter-May decomposition does not tell us whether all of the structurally non-poor are in a defensible position. Is there a subset of households above the asset poverty line in 1998 that are on a downward trajectory of de-accumulation such that they would be expected to become poor over the longer term? In other words, are they below a critical threshold of assets necessary to successfully sustain a non-poor standard of living or move ahead over time? Alternatively are all structurally non-poor households in positions from which they can maintain or improve upon their non-poor status? In an effort to answer these questions, we turn now to further quantitative and qualitative analysis.

(a) *Poverty Traps and Asset Dynamics*

As discussed by Carter and Barrett (this volume), if poverty traps exist, they should be visible in the pattern of asset dynamics. Figure 1 illustrates hypothetical alternative asset dynamics. For the moment, assume that we have devised an appropriate index that compresses the multiple economic assets of a household at time t , given by the vector A_t , into a one-dimensional index, $\Lambda(A_t)$. In the next section we will discuss the creation of an appropriate multi-asset index. The horizontal axis in Figure 1 measures initial or early period stocks of the assets used to generate incomes and livelihoods, $\Lambda(A_0)$. The vertical axis measures asset stocks for a later period, $\Lambda(A_t)$. The different curves express $\Lambda(A_t)$ as a function of $\Lambda(A_0)$. Note that the 45-degree line gives equilibrium points where $\Lambda(A_t) = \Lambda(A_0)$.

The convergent trajectory in Figure 1 illustrates the case in which poorer households tend to build up assets and livelihood potential over time, converging to

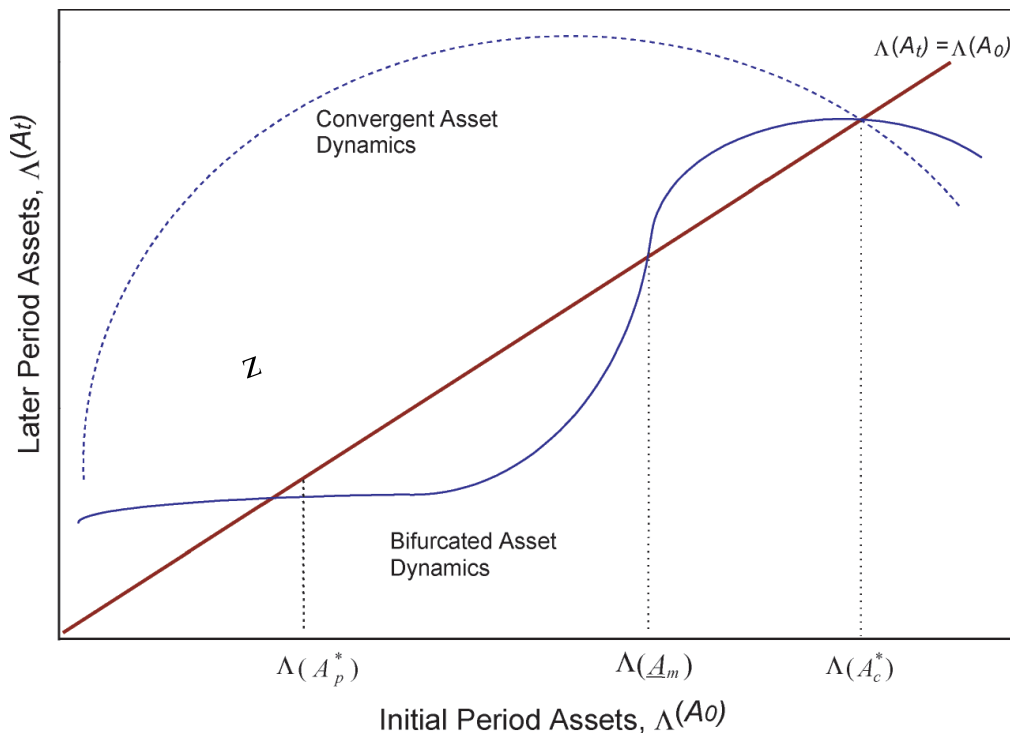


Figure 1. Hypothetical asset dynamics

the equilibrium level, $\Lambda(A_c^*)$.⁶ Households with stocks initially in excess of $\Lambda(A_c^*)$ would tend over time to retreat back towards that level.

In contrast, the stylised bifurcated asset trajectory in Figure 1 illustrates the case of a poverty trap. Asset level $\Lambda(\underline{A}_m)$ is the critical asset threshold (which Zimmerman and Carter, 2003 label the ‘Micawber threshold’⁷) around which accumulation trajectories split. Households that begin below this level tend to fall behind (as $\Lambda(A_t) < \Lambda(A_0)$) and approach the low-level poverty trap of $\Lambda(A_p^*)$. Households above that critical threshold will tend to get ahead and approach the high asset and income equilibrium, denoted $\Lambda(A_c^*)$.⁸ While either convergent or bifurcated dynamics can in principal exist, the empirical challenge is to identify whether the South African economy exhibits convergent dynamics or the sort of poverty trap equilibrium hypothesised by the social exclusion perspective.

(b) A Livelihood-Weighted Asset Index

Prior to estimating the relation between $\Lambda(A_t)$ and $\Lambda(A_0)$, assets themselves must be measured and aggregated. Fortunately, the asset poverty line, discussed above suggests a simple and analytically convenient measure. Note that identification of the asset poverty line requires estimation of the following regression function that relates livelihood of household i at time t (ℓ_{it}) to the bundle of assets held by the household at that time (A_{it})

$$\ell_{it} = \sum_j \beta_j(A_{it})A_{ijt} + \varepsilon_{it}, \quad (1)$$

We measure household livelihood or material well-being as household consumption expenditures divided by the money value of the household’s subsistence needs. The dependent variable thus equals one if expenditures exactly equal the poverty line. Note that the coefficients of the regression relationship (the $\beta_j(A_{it})$) give the marginal contribution to livelihood of the j different assets.⁹

Given estimates of the β_j , we can then calculate the fitted value of the regression function, Λ_{it} , defined as:

$$\Lambda_{it} = \sum_j \hat{\beta}_j(A_{it})A_{ijt}. \quad (2)$$

Note that Λ_{it} is an asset index, where assets are weighted by their marginal contribution to livelihood as given by the estimated regression coefficients, $\hat{\beta}_j$. The advantages of this livelihood-weighted asset index Λ_{it} are several. First its weights can be estimated quite flexibly such that returns to assets depend on levels of other assets. In addition, the coefficients can be permitted to vary over different years as macro policy and other changes influence the returns to assets and endowments. Second, the index is expressed in a convenient livelihood metric. In the particular application used here, the asset index is expressed in poverty line units (PLUs), such that a value of one means that the particular bundle predicts a poverty level of material well-being, a value of 0.5 would mean that the assets predict a livelihood at half the poverty line, and so forth.

Four key assets were used as the base for the index: human capital (educated labour and uneducated labour), natural and productive capital (land, livestock, small business machinery and equipment, and so forth), and unearned or transfer income which includes South Africa's much discussed Old Age Pension grant. The latter was included as a measure of resources available for self-finance of income earning and investment activities. Not included among the core assets was social capital or other less tangible economic assets.

Returns to these core assets were estimated using a polynomial expansion of the basic assets. This specification permits marginal returns to assets to both diminish (or increase) with the level of the assets, as well as to be influenced by holdings of other assets (for example, marginal returns to capital assets may be boosted by the presence of educated labour or exogenous income). The interest with these regressions is less in identifying the precise marginal returns to any individual assets, and more with deriving a set of weights that reliably predict the impact of an asset bundle on expected livelihood. Many of the estimated coefficients are significant, and the overall regression fit yields an R^2 of 0.56 for the 1993 and 0.37 for the 1998 data. Using these estimated coefficients, a fitted value, or estimated livelihood index, was calculated for each observation in the dataset. Full results of the regression analysis are available from the authors.

(c) Bifurcated Asset Dynamics in South Africa

Using these estimated asset indices for 1993 and 1998, we are now in a position to explore patterns of asset dynamics in South Africa. As discussed in Carter and Barrett (this volume), flexible, non-parametric methods offer significant advantages in estimating the sort of non-linear relationships that are hypothesised to characterise asset dynamics. For purposes of the analysis here, local regression methods (see Cleveland et al., 1988) were employed to estimate the bivariate relationship between the a household's estimated 1998 asset index, Λ_{i98} , and its 1993 index, Λ_{i93} .¹⁰ The solid curve in Figure 2 graphs the resulting estimate of expected 1998 asset index given Λ_{i93} , while the two surrounding dashed lines represent the 95 per cent confidence band estimate of Λ_{i98} . The range of the graph has been truncated at 4 PLUs. As can be seen, the curve first cuts the 45-degree line at about 90 per cent of the poverty line, and cuts it a second time at an asset index value of two PLUs. The curve crosses the 45-degree line for a third and final time at about 5 PLUs.

The dynamics implied by this figure are precisely those of the hypothetical case of bifurcated dynamics. The Micawber Threshold is estimated to be at an asset level that predicts a level of well-being that is about twice the poverty line. Households with assets below that level would be expected to experience deterioration in their position, heading back toward the poverty trap level of assets that predicts a level well-being of about 90 per cent of the poverty line. Households with asset indices above the Micawber threshold would be expected to move toward an upper equilibrium asset level that predicts a living standard of about 5 PLUs. Households that begin in abject poverty with asset indices less than 90 per cent of the poverty line would be expected to improve their situations, moving toward the poverty trap equilibrium.

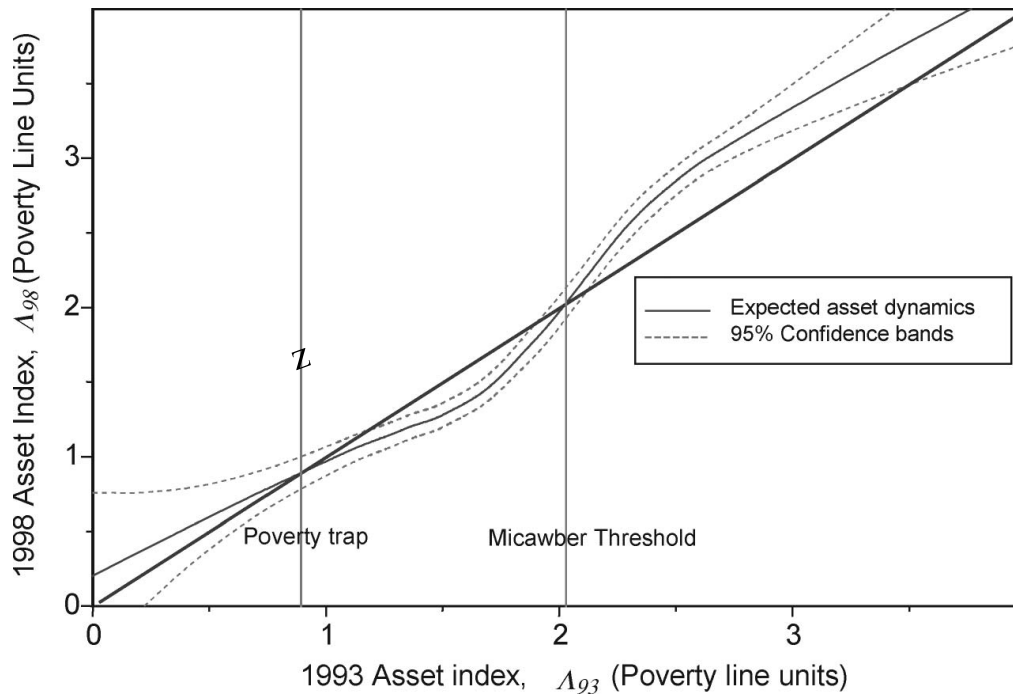


Figure 2. Predicted asset dynamics

Using Figure 2, households can be assigned to one of three long-term mobility classes:

- (1) Caught in the poverty trap equilibrium $\leftrightarrow \Lambda_{98} < 0.9 \text{ PLUs}$
- (2) Downwardly mobile toward the poverty trap $\leftrightarrow 0.9 \text{ PLUs} < \Lambda_{98} < 2.1 \text{ PLUs}$
- (3) Converging to the non-poor equilibrium $\leftrightarrow 2.1 \text{ PLUs} < \Lambda_{98}$

Using these class assignments as predictors of the long-term position of households of course assumes that the underlying mobility process captured by the 1998 data persists over time. The next section will use later period qualitative information in part to test the accuracy of this assumption.

The estimates that underlie Figure 2 can be used to calculate the implied velocity of asset changes for households with different initial asset levels. A household that began just above the Micawber threshold (with an asset index of 2.5 PLUs) would have a predicted annual growth in assets of about 2.5 per cent, or over five years would experience a 15 per cent increase in expected well-being – meaning that its level of well-being would be expected to rise from 2.5 to almost 2.9 PLUs. A household that began below the Micawber threshold (at an asset level of say only 1.5 PLUs) would be expected to have assets that predict a living standard of only 1.25 times the poverty line after five years.

Figure 2 is as striking for what it does not show as for what it does show. Given the low standard of living and the high levels of unemployment suffered by households in our sample, it is surprising that these figures do not exhibit significant asset accumulation by less well-off households. Such households would appear to have every incentive to accumulate and surplus resources that could be profitably brought into use. Their failure to do so would seem to reflect the lack of access to capital and risk management services as discussed earlier. While there may,

of course, be other constraints at work, this pattern is at least consistent with an unequal and polarised society in which neither market nor social mechanisms broker opportunities for upward mobility for the least well-off households.

In addition to these structural patterns, the estimated asset dynamics also imply that temporary shocks or setbacks can have permanent effects. For example, imagine a household that initially enjoyed an asset index above the Micawber threshold. If this household experienced an asset shock that pushed its assets below the Micawber threshold, then the estimated pattern of bifurcated asset dynamics predicts that this household will experience long-term effects as its expected long-term asset position drops from 4 PLUs to the lower equilibrium of 0.9 PLUs. This observation of the potentially permanent effects of one time shocks is of much more than academic interest. Fully 60 per cent of the KIDS households that exhibited downward mobility between 1993 and 1998 had experienced shocks that reduced their assets, as discussed above. In addition, households that experience income (not asset) losses may still find themselves in a position where they are forced to liquidate assets to meet immediate consumption needs. If drawing down such assets pushes the household below the Micawber threshold, the pattern of bifurcated asset dynamics again predicts that the temporary shock will have permanent, long-run effects.

Before turning to a deeper consideration of these results, one statistical comment is in order. As the confidence bands show, the estimated asset dynamics are quite imprecise at lower asset levels. Projecting the asset index data onto Figure 2 shows that this imprecision is not only the result of somewhat thinly distributed data, but also of a highly variable experience. We thus need to be extremely cautious with inferring that households below the poverty trap level of 0.9 PLUs will grow towards that level. Put differently, the interval estimate includes values that are both above and below the 45-degree line, meaning that we can have little confidence as to whether households below that level will improve or fall further behind over time. The contrast with asset positions above the Micawber threshold is both striking and somewhat discouraging if the convergent trajectory of pro-poor growth was anticipated. Not only can we be more certain of the data for this group, but we are also more certain that this group will carry on improving, as shown by their steeply rising rate of growth.

In summary, we thus find evidence that the very low ceiling of a poverty trap truncated upward mobility derived from the conventional set of assets in South Africa over the 1990s. While this pattern is consistent with the hypothesis that ineffectual social capital truncates upward mobility in polarised societies, it would be nice to have more direct confirmation of the roles played by social capital. In an effort to explore this issue further we turn to qualitative methods to see what role social capital played – or failed to play – in facilitating and constraining mobility.

IV. Qualitative Analysis of Poverty Traps, Mobility and Social Capital

In 2001, in-depth interviews from a sub-set of nearly 50 KIDS households were carried out.¹¹ The data from these interviews offer insights on three key issues relevant to this paper. First, they provide detailed accounts of the role of different types of events and assets in explaining mobility. Second, they allow observations on

a second time span (1998–2001) that can be used to confirm, or reject, the predictions of the quantitative analysis of poverty traps. Third, they permit a close look at the role social capital plays, or does not play, in patterns of mobility and stasis.

The qualitative study combined ‘household events mapping’ (Adato et al., A, forthcoming) with semi-structured interviewing to trace and elicit stories about events from 1993 through 2001.¹² ‘Households’ were defined more broadly than in the quantitative study. All immediate or extended family members who gave or took resources from the household on a regular basis or in a significant manner, and thus affected the household’s poverty or well-being status, were included.¹³ The construction of ‘household trees’ probed for additional relationships not initially mentioned by household members; the household events map also discovered additional members of significance over the course of the interview (Adato et al., A, forthcoming). Using the assets framework adopted by this paper, we examined all events that had an impact on a household’s well-being status for each year, and then categorised each event by its impact on the four types of assets already analysed: human, productive, natural and financial. To this list, we were able to examine a fifth category: social assets.¹⁴ Events affecting each of the asset categories were first considered separately, and then in relation to each other. Outcomes were evaluated separately for each of the two periods: 1993–98 and 1998–2001.¹⁵ Detailed accounts of household events throughout two periods, the processes that followed events (that is, whether a household gained, coped, or did not cope), and the impacts over time were all used to assess whether a household became better or worse off, the stability of that movement, and the characteristics of the households that explain mobility.

(a) Findings of the Qualitative Analysis

Using this information, and following the discussion in Section III, households can be divided into six mobility classes that closely mimic those used by Carter and May (2001):

- (1) Chronic structural poverty
- (2) Structurally downwardly mobile
- (3) Stochastically downwardly mobile
- (4) Stochastically upwardly mobile
- (5) Structurally upwardly mobile
- (6) Stable non-poor.

While these mobility patterns are not defined around a rigid asset poverty line, they do permit analysis of the ongoing mobility processes, an analysis that allows insight into the existence of poverty traps and longer-term poverty dynamics.

Using these mobility classes, Table 2 shows where the qualitative analysis places households for each of the two periods, 1993–98 and 1998–2001. As in the quantitative analysis, Table 2 shows that over an eight-year time horizon, most households are locked into one of two unequal positions: either poor and unable to change this situation or non-poor and relatively stable. The 36 cells in Table 2 are clustered into four groups. Group 1 (gray shading) includes households that appear to be trapped in poverty. This the largest cluster of households at 44 per cent of the

Table 2. Qualitative analysis of mobility over two periods (per cent of total households in qualitative sample)

	1998 to 2001 mobility					
	Chronic poor	Structurally downward	Stochastically downward	Stochastically upward	Structurally upward	Never poor
1993–98 mobility (Qualitative Observation)	Chronic poor	14%	2%	4%	2%	
	Structurally downward	10%	10%	4%	2%	
	Stochastically downward		2%			6%
	Stochastically upward					
	Structurally upward		2%			
	Never poor		10%	2%		26%

total. Group 2 (horizontal stripe shading) represents those households that manage to move structurally upward – at 2 per cent of the total – displaying a striking absence of upward mobility. Group 3 (vertical stripe shading) represents households that fell structurally downward, with 12 per cent of the total. Group 4 (no shading) represents the cluster of households who were stably non-poor, with 38 per cent of the cases.

We now analyse the characteristics of the households that fall into each of these mobility classes. An important finding to note at the outset is the particular significance of stable income sources, such as formal employment or state grants. In the South African context of high and rising unemployment throughout the 1990s, formal employment is more than a matter of possessing a stock of human or financial capital; it also involves opportunities to obtain such employment. Such opportunities depend largely on the extent to which the economy provides them. Social networks can help in enabling access, though these are more effective for better-off households. Similarly, the Old Age Pension (OAP) grant is more than an immediate and exogenous source of financial capital; by providing access to a stable and secure income stream, the OAP also serves as surety with which to leverage further financial and – potentially – social resources. In both cases, the *stability* of the availability/accessibility of the income source is what enables the initial economic asset to make a structural difference.¹⁶ An assets framework narrowly interpreted may be inadequate to explain poverty dynamics. The qualitative methodology that we adopt allows the interpretation to be broadened to include notions of availability, access and stability when assessing economic assets and their implications for household well-being and mobility. Below is a more detailed analysis of the characteristics of the four mobility groups, including the role of social assets.

Group 1 – Households trapped in structural poverty: In Group 1, households that were poor in both periods (1993–98 and 1998–2001), there is often no formal work, or only one formal job that is insufficient given the household size or other factors. Instead, the household relies on members that move in and out of informal or casual jobs. Some households depend on one OAP as the major, or only, reliable income source. Households that were structurally poor in 1998 and fell structurally further downward start out with similar conditions, but then lose their one stable income stream. Formal work is replaced by informal or casual work. There may be a substantial increase in the number of dependents as a former guardian dies or moves away. Ubiquitous in both periods are shocks, such as fire, illness, accident, death of a wage earner or pensioner, funeral and attendant expenses, or the payment of a dowry (*lobola*). Households in both the above categories tend to belong to burial societies when they can afford the membership dues, but have few other important social assets. Furthermore, they lose *potential* social assets when a formal worker with connections to employment opportunities dies, or when an employer who used to provide loans no longer does so.

Households that were moving structurally downward over the 1993–98 period and either remained poor or became worse off after 1998 look similar to those described above, though the situations are reversed across the two periods. In these cases, the significant event occurs *before* 1998: the death of a wage earner or pensioner, major job loss, or failure of a small business. Organisational memberships that could keep

the household from falling deeper into crisis (burial societies, food stokvels¹⁷) are out of reach because of small but unaffordable membership fees. In the case of households that fall structurally downward again between 1998 and 2001, the household usually loses more than one major financial asset. This may be compounded by other events, such as family conflict that leads to the disintegration of the family or loss of social capital. For the structurally poor households that stochastically improve their situation, a one-time influx of or cash from a retrenchment package or savings are used to improve their home or buy furniture. They thus feel that they are improving their lives, but there are no structural changes in terms of livelihood earning potential in the long run, and they are likely to be found back in poverty in the next period.

Group 2 – Upwardly mobile households: Group 2 households look like the structurally poor households in the 1993–98 period, but after 1998 their situation changes. In one household, two small businesses were started and grew after 1998, appearing stable and relatively lucrative. The businesses involved investment in productive assets made with funds provided after a formal employer closed down and from income from the businesses. In another case, investment in human capital paid off, with two teaching jobs acquired between 1998 and 2001 and another household member studying at the technikon. Social assets do not appear to be substantially changed with this upward movement; however, the households in this cell do not report the type of family conflict that plagued a number of downwardly mobile households.

Group 3 – Downwardly mobile households: Group 3 households experienced stable conditions over the 1993–98 period, but things fell apart thereafter. Stable income (some mix of formal, domestic and informal work, and a pension over) was lost after 1998. Investments do not provide stability in the long run. Businesses started during 1998–2001 fail. There is also a large shock in the second period, such as death of a major wage earner or pensioner, or loss of retirement savings due to severe illness in the family, or a bureaucratic error. In some of these cases, social exclusion means a lack of status, power and resources to use the legal system to exercise rights to financial assets. Burial societies and community gardens are helpful, but do not provide any structural change. Family members can be relied on to prevent destitution, but they are not in a position to help the household out of poverty because they too lack resources.

Group 4 – Stable non-poor households: Group 4 households are structurally non-poor in both periods. Conditions are the reverse of those in Group 1 households. There is more than one formal job and/or pension. There are also casual, domestic and informal jobs *in addition to*, rather than instead of, formal work. Multiple small businesses operate simultaneously, so that if one fails there are still others, or else a new business quickly replaces the failed one. The households are better able to weather shocks. One household lost its house, furniture and clothing in a fire, but it had access to credit (hire purchase) in order to replace them. The resources of households in this group enable them to put social assets to better use. People within their networks send remittances and/or provide

information about jobs (structurally poor households also report this exchange of information, but the non-poor networks seem to be more fruitful). Organisational memberships often involve income generation. Home and community gardening contribute to subsistence of the non-poor, as well. Although fundamentally it is access to stable work and pensions that keep these households out of poverty, social networks enable fortification of household well-being through the spreading of opportunities. The ability to afford participation in organisations provides additional (if not large) forms of support.

(b) Comparing Qualitative and Quantitative Mobility Findings

Table 3 compares the results of the qualitative analysis with the quantitative analysis from Section III. The columns define the predicted long-term mobility of a household based on its 1998 estimated asset index and the livelihood dynamics predicted in the prior section. The rows display mobility outcomes for the 1998–2001 period as determined by the qualitative analysis.

The cells in Table 3 are clustered into four groups based on an initial prediction, the direction and type of mobility experienced over the 1998–2001 period. Group 1 (grey shading) includes households that appear to be trapped in poverty, either remaining poor in both periods, falling structurally downward into a worse position and staying there, or stochastically better or worse but not structurally different. Group 2 (horizontal stripe shading) are those households that started out structurally poor, or poor and falling in the first period, but managed to move structurally upward in the second period. Group 3 (vertical stripe shading) represents households that were structurally non-poor in the first period, but then moved structurally downward in the second period. Group 4 (no shading) represents households that were non-poor in the first period, and whose position appears to be stable; that is, they either remained non-poor in the second period, moved structurally further upward, or moved stochastically downward, but nevertheless were stable.

The finding of the quantitative analysis in the prior section has three major implications that can be tested against the qualitative information on 1998–2001 mobility. First, the existence of a low-level poverty trap equilibrium just below the poverty line suggests that many of the poor (especially the ‘better off’ poor) should exhibit little change in their situation. Second, there should be very little structural upward mobility for the poor and near-poor households, as the Micawber dynamic asset poverty threshold is estimated to be two times the conventional poverty line.¹⁸ Third, there should be substantial downward mobility among households that were non-poor but below the Micawber threshold.

Table 3 confirms each of these implications. Of the 13 households that appeared to be caught in the poverty trap equilibrium 1998, 11 of those remained in the same position or experienced a further deterioration in their structural position. Only two advanced structurally. Of the 18 households estimated to move downward toward the poverty trap equilibrium, ten appear to be structurally poor by 2001, another three experienced favourable shocks that improved their positions, and the remaining five avoided the predicted slippage towards poverty. Finally, of the 14 households predicted to be converging toward the higher-level equilibrium, only

Table 3. Qualitative and quantitative analysis of post-1998 mobility
Absolute numbers of observations (Per cent of column in parentheses)

	Predicted mobility class (<i>Quantitative prediction</i>)		
	Poverty trap equilibrium (<i>n</i> = 13)	Downwardly mobile toward poverty trap (<i>n</i> = 18)	Converging to non- poor equilibrium (<i>n</i> = 14)
1998–2001 mobility (<i>Qualitative observation</i>)			
Chronic structural poverty	6 (46%)	5 (27%)	1 (7%)
Structurally downward	3 (23%)	5 (27%)	2 (14%)
Stochastically downward	2 (15%)	–	1 (7%)
Stochastically upward	--	3 (17%)	1 (7%)
Structurally upward	--	--	1 (7%)
Stable non-poor	2 (15%)	5 (27%)	8 (57%)

three moved downwards structurally, while the other 11 maintained their advantaged structural positions.

(c) The Role of Social Assets in Explaining Mobility and Stasis

The role of social capital in explaining poverty dynamics has several dimensions that emerge from the qualitative research. The main way in which social capital influences well-being is by mediating access to work (see Adato et al. B, forthcoming). Friends or relatives provide information about jobs in the city, contacts with employers, and advice on how to get a job. They sometimes also provide transportation fees and accommodation for job seekers. Better-off households tend to have more effective networks for these purposes, since those who have work also have better connections and information.

Remittances are highly important and often the main or only source of income. Remittances would be even more important if work were not so scarce in urban as well as rural areas (Adato et al., 2003). However, to the extent that the main paths through which social relationships provide economic benefits are through information about work and remittances, the high unemployment rate in the province, and country as a whole, means that these paths are more often than not closed off to those who are poor and marginalised.

The qualitative research revealed approximately 20 additional ways in which social assets are used. Some of these have an effect on livelihoods, though not necessarily offering protection from poverty. Others have no effect. Categories of socially-mediated assistance most frequently reported by households are (in descending order from 70 per cent to 18 per cent): assistance in looking for work; burial societies; cash (loan or gift); stokvels, savings and borrow groups; and community gardens. A smaller number of households mentioned lending tools/equipment and helping with work, religious groups, and sports and music groups.

The qualitative research also uncovered ways in which social relationships *negatively* influenced household economic advance. One mechanism is where people who know a small business owner pressure him or her to provide goods on credit, which is not repaid; another is where jealousy and competition undermine the success of a fledgling small business (Adato et al. B, forthcoming). In addition, one-third of households report problems of conflict and distrust within and between families that also make economic improvement difficult.

Looking across the different groups represented in Table 2, we see interesting patterns emerge in the functioning of social capital between structurally poor and non-poor groups. Providing assistance in looking for work emerges frequently in poor and non-poor households. Yet, this assistance does not necessarily mean that work is obtained, and it is likely that the access provided by a working person is more fruitful than that of an unemployed person. Burial societies are equally common across the two groups, while saving groups are found almost entirely in the non-poor group. Respondents explained that lack of money was an obstacle to participation in the latter, while the cost of burial societies is more affordable and a high priority even if hard to afford. Cash assistance and in-kind assistance are more common among poor households (non-poor households probably need this less). Community gardens

are used by both groups, but more so by poor households. Interestingly, conflict and distrust is equally prevalent across the groups. This has had negative economic consequences in many households, where conflict is directly associated with worsening economic conditions as both a cause and consequence. While non-poor households seem to be less negatively affected by conflict, it is not the primary explanatory variable of the status of either poor or non-poor households.

In summary, what is evident from the qualitative research is that social connections often attempt to help households look for work, get by in times of need, or cope with shocks. Yet, they are not connections that provide pathways out of poverty. Poor people do not have the resources to provide much to each other, and they are not connected with others who do. In fact, poverty causes conflicts over resources and other strains among family and among neighbours, further diminishing sources or potential sources of support. The results provide empirical confirmation of Mogues and Carter's (forthcoming) argument that social capital becomes more narrowly constructed and increasingly ineffective as a mechanism of capital access for poor people in a country facing a legacy of horizontal inequality and social exclusion.

V. Conclusion

The problem of chronic or persistent poverty has received increasing attention of late, punctuated by the publication of the *Chronic Poverty Report* (Chronic Poverty Research Centre, 2004). While South Africa has living standards that are on average significantly above those in countries where chronic poverty is assumed to be most severe, its peculiar polarised legacy of racially embedded inequality and poverty raises particular questions about the ability of South African poor to use social mechanisms of access to capital to engineer a pathway from poverty.

Drawing on new asset-based approaches to poverty and poverty dynamics, this paper has used panel data from the 1993–98 period to estimate patterns of asset dynamics. In sharp contrast to the expectation that the end of apartheid would signal the creation of an economy that worked for all South Africans, these estimates identify a dynamic asset poverty threshold. Households that begin with an asset base expected to yield a livelihood less than two-times the poverty line are predicted to collapse toward a low-level poverty trap with an expected standard of living equal to 90 per cent of the South African poverty line. Households that begin above that threshold are estimated to advance over time.

While these findings unavoidably reflect the broader confluence of factors that struck the South African economy across the 1990s including sluggish economic growth, rising unemployment and HIV/AIDS, this study employed a distinctive qualitative methodology to examine events at the household level from 1993 through 2001. The qualitative analysis found particular patterns underlying mobility dynamics, and broadly confirms the quantitative finding of a dynamic poverty threshold and a low-level poverty trap equilibrium. In addition, the qualitative analysis underwrites a close look at the role played by social networks and social relations in the evolving pattern of poverty and income distribution. While there is ample evidence of active social relationships, with the exception of a few atypical

cases, social networks and relations at best seem to stabilise incomes, but provide little in the way of longer-term accumulation or economic advance. The broader problem of poverty alleviation seems unlikely to be resolved until deeper structural changes make time and markets work more effectively for the broader community of all South Africans.

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Notes

1. See the studies of Hoogeveen and Ozler (2004), van der Ruit and May (2003); Meth and Dias (2004); Van den Berg and Louw (2003). In addition, using several national surveys undertaken subsequent to the 1993 survey, Leibbrandt and Woolard (1999) calculate a suite of consumption-based poverty measures that confirm this racial distribution of poverty.
2. Although debate still persists concerning the notion of social capital, this paper accepts that social networks of trust, support, cooperation and information are a form of capital that mediate economic transactions.
3. Fields et al. (2003), using income data from KIDS, find evidence of a more convergent income distribution process. While the contrast between the income and expenditure data is worrisome, the KIDS expenditure data produces poverty estimates that closely match those found in other South African datasets (for example, see Hoogeveen and Ozler, 2004).
4. Note that measurement error will lead to an overstatement of transitorily poor households.
5. Carter and May estimate the asset poverty line by regressing livelihoods on asset holdings. Using those estimates, it is possible to calculate the expected level of well-being for each household given its assets. A household was deemed above the asset poverty line if it was possible to reject the hypothesis that their expected level of well-being was below the asset poverty line. Note that two things influence the level of expected well-being: the household's asset holdings, and the general structure of the economy that determines returns to assets. Both factors potentially change over time.
6. Note that $\Lambda(A_c^*)$ is an equilibrium because it lies on the 45-degree line (where $\Lambda(A_t) = \Lambda(A_0)$) and hence an individual with an initial stock of A_0 would tend to remain at that asset and livelihood level over time.
7. Charles Dickens' character Wilkins Micawber (*David Copperfield*) extolled the virtues of savings with his statement 'Annual income twenty pounds, annual expenditure nineteen nineteen and six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery'. The Micawber threshold divides those able to engage in a virtuous circle of savings and accumulation from those who cannot.
8. There is no significance to the fact that we draw that the upper equilibrium to be the same for both convergent and bifurcated dynamics – we were only trying to eliminate clutter in the graph.
9. This notation indicates the use of flexible regression techniques so that marginal livelihood contribution of an asset depends on the full vector of assets, A_i , controlled by the household.
10. There is, of course, no reason to think that everybody within a given society would be characterised by same asset dynamics. Indeed, the theory of poverty traps itself suggest that those individuals with poor access to capital would be on a divergent trajectory, while those with better access could be on the convergent trajectory. However, as discussed earlier, one of apartheid's legacies may be both thinly developed markets and ineffective social capital, exposing most individuals to the possibility of a divergent, poverty trap asset dynamics. In this situation, it may well be that most individuals lack both

market and socially mediated access to capital. In this paper's first effort to explore asset dynamics, we will in fact only try to characterise a single (dominant) trajectory.

11. Households were selected for inclusion in the qualitative study to assure coverage of each of the main cells in the transition matrix shown in Table 1.
12. This method was particularly effective in triggering recall to elicit retrospective data.
13. The survey defined the household as comprising individuals who lived in the dwelling for at least 15 days out of the year and shared food and other resources when co-resident.
14. These five types of assets are a categorisation found in the sustainable livelihoods framework (Ashley and Carney, 1999). Though this framework was not used in this research, this categorisation of assets was helpful in distinguishing different factors in the analysis.
15. These periods have an overlapping year – 1998 – because it was seldom possible for people to recall whether an event occurred early or late in the year. For the purpose of determining change across two periods from the qualitative data alone, this overlap is not a problem. However, in comparing the qualitative with the quantitative findings, the placement of 1998 can be important because the survey recorded people's status at a particular point in 1998.
16. A stream of income can be from an unstable source, for example, a one-time pay-out of a retrenchment package, or income from an informal business that may collapse at any time.
17. A food stokvel is an informal organisation where members make contributions for the purchase of food, serving either as a form of savings or rotating fund.
18. Note that the quantitative analysis does not rule out upward mobility for either the lucky few, or for those households who enjoy exceptional access to market or socially-mediated access to capital and other services.

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