

**A Dynamic Analysis of Household Livelihoods and Asset
Accumulation in Post-Apartheid South Africa:
Evidence from KwaZulu-Natal**

Benjamin Roberts and Julian May

**School of Development Studies
University of Natal, Durban 4041, South Africa**

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‘No political democracy can survive and flourish if the majority of its people remains in poverty, without land, without their basic needs being met and without tangible prospects for a better life. Attacking poverty and deprivation will therefore be the first priority of the democratic Government’ (Government of National Unity, 1994: 5)

Since the inception of the post-apartheid dispensation in the early 1990s, poverty alleviation has come to represent an increasingly significant developmental concern in South Africa. This mirrors the international poverty agenda that gained momentum with the publication of the World Development Report 1990 and that has come to characterise the nineties. A concomitant response has been a reconfiguration of the contours of poverty research in South Africa, one that reflects this commitment to understanding the nature and causes of impoverishment and formulating appropriate policy interventions.

A critical milestone in this new poverty research agenda occurred in late 1993 with the Project for Statistics on Living Standards and Development (PSLSD) under the auspices of the South African Labour and Development Research Unit (Saldru).¹ This study was the first fully representative household income and living standards survey in South Africa, incorporating approximately 8800 households nation-wide (of which 4259 were rural African households), and is generally considered the benchmark for comprehensive poverty-related data in the country.² The results from the survey revealed, *inter alia* that:

- With a Gini coefficient of 0.58, South Africa has one of the highest levels of inequality in the world.
- Apartheid policies, by engendering a situation of inequitable access to employment, services and resources to the African population, have resulted in poverty being characterised by a strong racial dimension.
- Poverty is geographically concentrated, with the largest share of the poor (72%) residing in rural areas, especially the former homelands.
- There is a marked tendency for poverty to be more prevalent among female-headed households and among children. (Klasen, 1997; Donian and Humphries, 1998; May, 1998a).

Supporting evidence for this pernicious deprivation, inequality and insecurity experienced by rural households has since emerged through the South African Participatory Poverty Assessment (SA-PPA, 1997; May, 1996, 1998b) and the Speak Out On Poverty Hearings (1998), which were phenomenological processes whereby the poor and marginalised voiced and analysed their own experiences.³

Although great strides have been made in poverty research in South Africa in the 1990s, notably by addressing the paucity of inclusive and experiential studies on poverty, the dynamics of poverty, and the opportunities for its reduction remain under-researched. The debate that underpins this issue revolves principally around the respective benefits of static versus dynamic poverty studies. This theoretical-cum-methodological debate originates in the USA in the 1970s, when the conception of a permanent ‘culture of poverty’ as developed in the work of Michael Harrington (1962), Edward Banfield (1968) and Oscar Lewis (1959, 1966) began to be challenged by the results of longitudinal poverty surveys, notably the Panel Study on Income Dynamics.⁴ The culture of poverty thesis viewed the poor primarily as an underclass who would live in squalor even if their incomes were doubled or in spite of policy interventions. This was

due to their radically “present-oriented” outlook that attached no value to work, sacrifice, self-improvement or service to friends or community. The results of the panel data started to reveal a more nuanced perspective of poverty, particularly in respect of an understanding that the poor were a heterogeneous group and that only a small minority were in fact permanently poor. To some extent this was also echoed by Michael Lipton’s conceptualisation in developing countries of the ultra poor (Lipton, 1988).

The PSLSD, predicated upon a cross-sectional analysis of poverty, is exemplary of static poverty studies. In spite of the importance of the survey, it suffers from the fact that it is essentially a snapshot portrayal of poverty and welfare in South Africa. Such static, cross-sectional analyses of poverty are able to distinguish the depth of poverty at a certain moment in time and the characteristics which prevail in the detected group of the poor. However, they are not able to explain the distribution across households of the duration of poverty or the reasons that pushed a certain household into poverty, or enabled others to exit a poverty situation. The implication, according to Baulch (1996), is that it informs policy minimally about the causes of poverty, which serves to complicate the formulation of appropriate interventions.

Four fundamental research questions present themselves in the case of South Africa. Firstly, how has the magnitude of poverty changed between 1993 and 1998? Secondly, to what extent is the chronic-transitory taxonomy of poverty manifest in the country? Thirdly, if this classification does prove to be apposite, in what ways have households adapted their livelihood strategies between 1993 and 1998 in their endeavour to increase their earnings. Finally, can an underpinning pattern of asset accumulation be discerned that suggests that a sustained improvement in well-being is possible

The remainder of the paper is structured as follows. Section 2 provides an overview of the literature pertaining to poverty dynamics. Section 3 then introduces the KwaZulu-Natal Income Dynamics Study (KIDS) dataset, with particular attention being afforded to survey design, the data collection process, as well as the limitations of the study. In exposing the extent of poverty in South Africa, section 4 presents a suite of single poverty measures for both 1993 and 1998. Section 5 examines poverty transitions and mobility within the income distribution by means of transition matrices. It also disaggregates the matrix into expenditure sequence patterns which allows for the classification of households into chronically, transitorily and never poor cohorts. Drawing upon the findings of this analysis, section 6 constructs a poverty profile by separating out the characteristics of each of the three poverty classes, focussing on the livelihood strategies and asset portfolios of each. Section 7 gives brief attention to policy issues related to the poverty findings of earlier sections. Finally, section 8 concludes by summarising the key findings of the article and suggesting directions for future research on the dynamic conception of poverty in South Africa.

AN INTERNATIONAL REVIEW OF RESEARCH INTO POVERTY DYNAMICS

Studies of the persistence of poverty are relatively rare. A key publication was Bane and Ellwood (1986) who, using longitudinal or panel data from the Panel Study of Income Dynamics (PSID) in the United States, noted that those identified as poor at any point in time include two very distinct groups – those whose incomes quickly rise above the poverty lines and those who experienced prolonged spells of poverty. More recently, there has come to exist a small but burgeoning body of literature documenting the findings of research into poverty dynamics in developing countries.

Through the findings of these developing country case studies, the observations initially made by Bane and Ellwood (1986) have become a common trait of poverty dynamics studies, specifically

the distinction made between persistent (or chronic) and transitory poverty. There are effectively two fundamental and interrelated reasons why the measurement of the persistence of poverty is of import (Rodgers and Rodgers, 1993; Jarvis and Jenkins, 1998; Duncan et al., 1984). Firstly, it lends itself towards the construction of more realistic models of causation and persistence. Popular belief has long dictated that poverty is a long-term phenomenon, but there is mounting statistical proof from longitudinal surveys in industrialised countries and developing countries that poverty is not only dominated by an underclass of permanently impoverished people. It also contains a sizeable contingent of people who enter poverty due to transitory shocks (for instance, morbidity or unemployment) that are reversed within a couple of years (Baulch and McCulloch, 1998; Jalan and Ravallion, 1998; Gaiha and Deolalikar, 1993). Actually, most research on poverty dynamics since the seventies has tended to illustrate that the bulk of the impoverished are poor for only several years with only a small minority of persistently poor.

This leads us to the second reason, one that has already been mentioned, namely the design of cost-effective poverty alleviation strategies. In a macroeconomic context dominated by neoliberal policy and manifold competing social needs, an imperative exists for poverty alleviation strategies that are well designed and financially sustainable. Given that transitory and persistent poverty are likely to have divergent causes and thus require different sets of preventative measures, their measurement is paramount to the development, targeting and evaluation of poverty programmes (Toye, 1999).

This dualistic rationale is highly relevant in the South African context. The country is presently at a critical juncture, one which reflects a tension between the essentially pro-poor stance originally adopted by the first democratically elected government as enshrined by the Reconstruction and Development Programme (RDP)⁵ and the neo-liberal agenda which has gradually emerged as a significant development trajectory (Marais, 1998; Habib and Padayachee, 2000; Lund, 1998). In consequence, an environment of competing social needs has arisen, one that generates an explicit need to effectively target anti-poverty interventions. In order for this to be attained, a good understanding of the nature of poverty becomes a fundamental prerequisite. However, the static nature of previous poverty research acts as a hindrance in the fulfilment of this objective, and thus necessitates the more pragmatic and detailed conceptualisation of poverty that a study into poverty dynamics can deliver.

Even though there have not previously been any large sample longitudinal poverty studies in South Africa, John Iliffe (1987) in his book *The African Poor* makes the following remarks on the antecedence of the notion of poverty dynamics in Africa:

Examination of the sources [of poverty] suggests that two levels of want have existed in Africa for several centuries. On one level have been the very large numbers – perhaps most Africans at most times – obliged to struggle continuously to preserve themselves and their dependants from physical want. These will be called the poor. On another level have been smaller numbers who have permanently or temporarily failed in that struggle and have fallen into physical want. These will be called the very poor or destitute. Of course, there was no sharp dividing line between them. Yet the distinction has cross-cultural validity. (p.2)

This lends credence to the possibility of there being a persistent-temporary taxonomy of poverty in South Africa.

THE KWAZULU-NATAL INCOME DYNAMICS STUDY (KIDS)

In this section a concise overview of the PSLSD survey, which forms the first wave of the panel study,⁶ will be provided, followed by an explanation of the nature of the recontact survey. The second part of this section will outline the descriptive and econometric strategies for addressing

the primary questions of interest. Reference is made to the limitations of the study, especially as it pertains to the determination of the appropriate methodology for meeting the research objective. For those interested in a more thorough discussion of the project's conceptualisation, implementation and shortcomings, May et al. (1999) have examined the methodological concerns.

The Project for Statistics on Living Standards and Development (PSLSD), undertaken in the last half of 1993, was the country's first nationally representative, multi-purpose household survey. The Survey was conducted by a consortium of South African survey groups and universities, under the co-ordination and management of the Southern Africa Labour Development Research Unit (Saldru) in the School of Economics at the University of Cape Town, with funding and technical support provided by the World Bank. The sample consisted of approximately 9000 households in 360 clusters. The survey was undertaken in the nine months prior to the country's first democratic elections in April 1994, and as such signifies an important baseline against which to monitor the progress of the government in its determination to reduce poverty and inequality (Klasen, 1997).

The principal survey instrument, a comprehensive household questionnaire, was modelled upon a Living Standards Measurement Survey (Grosch and Munoz, 1996; Deaton, 1997), and contained information on a series of subjects, *inter alia* household demographics, household environment, education, fertility, food and non-food expenditures, remittances, employment and income, agricultural activities, health and anthropometry. A community questionnaire was also administered in each sample cluster to garner information on the general environment in which the sampled households resided.

The 1993 sample was selected using a two-stage self-weighting design. In the first stage, clusters were chosen proportional to size from census enumerator subdistricts (ESDs) or approximate equivalents where not available. In the second stage, all households in each chosen cluster were enumerated and then a random sample of them selected (see PSLSD 1994 for further details). The process of collecting these data and their subsequent analysis have been immensely useful in both the capacity strengthening of the South African policy research community and ultimately in guiding South African policies since the first national elections.

The KwaZulu-Natal Income Dynamics Study (KIDS), the second wave of the panel study, was developed in response to the perceived neglect of poverty dynamics studies in South Africa. The re-survey was directed by a consortium including the University of Natal, the University of Wisconsin-Madison, and the International Food Policy Research Institute. In brief, the objective of the study is to collect and analyse follow-up data on an important subset of the households in the 1993 PSLSD survey, namely those in the KwaZulu-Natal province, in order to understand the dynamics of poverty. The choice of KwaZulu-Natal was in part the result of practical considerations. This included a confluence of research interests, resources, and the feasibility of locating the households interviewed in 1993. The decision was also predicated upon an understanding that the 1993 survey identified rural Africans living in KwaZulu-Natal as the most severely deprived grouping, using a multi-dimensional definition of poverty (Klasen, 1997).⁷

The resurveying process, which occurred between March and June 1998, has led to the creation of a longitudinal or panel data set. Recognising the importance of maintaining continuity and comparability with the PSLSD statistical output, the original survey instrument was adopted, but with some modifications. Firstly, four new sections were added to the household questionnaire, including economic shocks (both positive and negative), social capital (including group membership, kin networks, civic engagement, and trust), assets brought to marriage, and

household decision. Retrospective techniques were utilised in order to control for the absence of 1993 data on specific issues and to be able to form asset and 'shock' histories for the interviewed households. Secondly, there was a greater focus on the individual, especially in terms of ownership of assets and control over their use. Finally, there was an expanded emphasis on the set of individuals not living in the household but economically linked to it.

In 1993, the KwaZulu-Natal sample was representative at the province level, conditional on the accuracy of the 1991 census used as the sampling frame, and contained 1558 households. It was decided not to re-survey white and coloured households in 1998. While there were advantages to retaining these groups, namely the maintenance of overall sample size and the political cover provided by sampling all ethnic groups in the province, the sample size of these two sets of households was small (112 white and 53 coloured), thus precluding comparative ethnic analyses. Moreover the households in these groups are entirely located in a small number of clusters (due to the general lack of spatial integration of the population), which appear to be non-representative at the ethnic group level (Maluccio et al., 1999).

Of the 1389 KwaZulu-Natal households⁸ in the PSLSD sample, a total of 1178 were re-interviewed, equating to 85% of the original sample.⁹ In addition, 41 split-offs (those households in which at least one core person has left to establish a new household) were interviewed, yielding in all 1219 total observations. Some may argue that an attrition rate of 15% may be problematic in that this missing grouping could well represent the most vulnerable households in the sample, thereby introducing bias into the survey results. While recognising the validity of such an argument, it should be realised that:

In fact, in the African context, characterised by high mobility and difficult conditions of survey field work, retaining 85-90 percent of households for a panel survey can be considered quite a success. (Grootaert and Kanbur, 1995, pp. 606-7)

A significant determinant of the attrition appears to be the fact that a substantial number of households had left their former places of residence without leaving any forwarding address with neighbours or friends. The stipulated causes of this migration varied, ranging from violence (both domestic and political) to evictions from, and bankruptcy of, white-owned farms. There were even instances where households had disappeared overnight without warning or any apparent justification. A further factor that affected the rate of attrition was the problem of cheating in the 1993 sample. Although, for the most part, the households captured in 1993 were able to be retraced, there were several instances where households were non-existent and where cheating is likely to have occurred.¹⁰

ISSUES PERTAINING TO POVERTY MEASUREMENT

Most poverty studies begin by selecting a single monetary indicator of household welfare, usually either total expenditure on consumption or total income over a certain period. However, expenditure is the generally preferred of the two indicators, as decades of research prompted by Friedman's (1957) permanent income hypothesis has revealed that income is a poor proxy for standard of living, even in low-income households (Slesnick, 1993). The fundamental reasoning for this is that expenditure is often more reliably reported and more stable than income. The aforementioned rationale resulted in the adoption of expenditure as the living standards indicator of choice for the analysis of the KIDS data, in concert with the desire for conformity with the 1993 analysis, which also used expenditure figures.

Yet, in spite of this preference for using expenditure to measure welfare and poverty, a problem arises when endeavouring to compare households, owing to their varied size and demographic composition. Converting expenditure from a household to an individual level by dividing total

expenditure by number of people in the household (i.e., *per capita* expenditure) is widespread, but it is flawed by the spurious assumption that everyone in the household receives equal allocation of resources, the failure to consider that not everyone in the household has the same needs, as well as by the ignoring of the economies of scale of living together. This has led to the introduction of ‘equivalence scales’, the origins of which date back to the work of Ernst Engel (1857). Equivalence scales consist of:

A system of weights, whereby children count as some fraction of an adult, with the fraction dependent on age, so that effective household size is the sum of these fractions, and is measured not in numbers of persons, but in numbers of *adult equivalents*. Economies of scale can be allowed for by transforming the number of adult equivalents into “effective” adult equivalents, so that if two [single adults] cannot live as cheaply as one, four adult equivalents can perhaps live as cheaply as three single adults. (Deaton, 1997, p. 242)

Although this method does have its detractors,¹¹ it is an unquestionably better measure than *per capita* expenditure. Following May et al. (1995) and Woolard and Barberton (1998), the equivalence scale used for the KIDS data assumes that children younger than 15 have half the consumption requirements of an adult and small economies of scale are allowed for, as illustrated by the following equation:

$$\text{ADEQ} = (A + 0.5 \times C)^{0.9} \quad \text{Equation 1}$$

Where A represents the number of resident adult household members older than 15 years of age, C the number of children, and 0.9 is the scaling parameter which reflects modest economies of scale. Dividing total household expenditure by ADEQ results in scaled per capita measures (May et al., 1999).

In order to account for inflation between the two waves, the poverty threshold was adjusted using a community-level consumer price index (CPI). This was constructed by means of the data extrapolated from the community questionnaire, which included a section on the prices of certain publicly supplied goods both within the sample cluster and at the nearest town or business centre. Therefore, the preferred indicator of living standards that has been selected to analyse the KIDS data can be described as CPI-deflated total expenditure per equivalent.

Initially, a suite of poverty cut-off points or poverty lines were specified for the analysis of the KIDS data. Firstly, use was made of one of the better known poverty lines applied in South Africa, namely the household subsistence level (HSL) developed by the Institute for Planning Research at the University of Port Elizabeth. The IPR poverty line was, for the purposes of the study, converted into a scaled, per-capita basis, resulting in a value of R237 per-adult equivalent expenditure per month (Carter and May, 2000). Secondly, in order to facilitate international poverty comparisons, the crude international poverty line used by Chen, Datt and Ravallion (1996) that was based on the purchasing power parity-adjusted equivalent of 1 US-\$ per capita per day (in 1985 prices) was selected. This was also converted into a per-scaled-adult equivalent total real monthly expenditure (1993 rands). However, the resultant cut-off point so closely approximated a value equal to half the adjusted ISR poverty line (R118.5) that it was decided any household falling below this particular poverty line would be considered ultra-poor, whilst those households with an expenditure level less than the IPR poverty would be classified as poor.

The final two poverty lines chosen were derived from Klasen’s (1997) analysis of the 1993 survey data, according to which the poorest 40 percent of households are considered poor and the poorest 20 percent of households are considered ultra-poor. In 1993 terms, these stood at approximately R300 and R178 monthly expenditure per adult equivalent respectively. However,

during the course of the analysis, it was found that the statistics generated using Klasen's poverty lines were similar to those generated using the ISR and ½ x ISR poverty lines. As a consequence, this paper provides a poverty analysis based upon the ISR-based cut-off points only.

The appropriate aggregate measures for ascertaining the incidence, depth and severity of poverty in the sample are now briefly discussed. In keeping with the seminal axioms that Amartya Sen (1974) posited as fundamental requirements for a good poverty measure,¹² the *Foster-Greer-Thorbecke (FGT)* or P-alpha class of poverty measures have been adopted for the KIDS analysis. The general equation for these measures is as follows:

$$P_{\alpha} = \frac{1}{n} \sum_{i=1}^q \left[\frac{z - y_i}{z} \right]^{\alpha} \quad \text{Equation 2}$$

Where q is the number of poor households, z is the poverty line, y_i is the standard living standard (i.e., expenditure) of the i th household, and α is the 'aversion to poverty' parameter.

When $\alpha=0$, the *headcount ratio (H)* is produced, which is simply the proportion of the population for whom consumption is less than the poverty line (i.e., poverty incidence). When $\alpha=1$, the *poverty gap (PG)* is given, which shows the aggregate shortfall of the expenditure of poor households from the poverty line (i.e., the depth of poverty). Finally, the *squared poverty gap (SPG)* is attained when $\alpha=2$, and shows heightened sensitivity to the situation of the poorest households (i.e., severity index).

For a fuller outline of the measures and the manner in which they reflect the depth of poverty through sensitivity to the expenditure distribution among the poor, reference should be made to Foster et al. (1984), Woolard and Leibbrandt (1999), in addition to Leibbrandt and Woolard (1999).

INCIDENCE, DEPTH AND SEVERITY OF POVERTY IN SOUTH AFRICA

Tables 2 and 3 provide estimates of poverty in South Africa for various poverty measures and for both poverty lines. By comparing the 1998 measures based on the same cohort of households interviewed in 1993, it is evident that poverty defined in terms of expenditure-based measures has increased. The basic headcount ratio or incidence of poverty between 1993 and 1998 for the sample is shown to have increased from approximately 34% to 42%, while the headcount using the lower poverty line, indicating extreme or ultra poverty, has risen from 5% to 9%. In addition, Table 2 reveals that, between the two waves, the depth of poverty has shown a marked increase too. The same holds true for the lower poverty line, though the increase in depth is proportionally smaller for ultra poor households than for poor households as a whole.

Table 2: FGT Poverty Measures (Total and Gendered)

	Total		1993		1998	
	1993	1998	Male Headed HH	Female Headed HH	Male Headed HH	Female Headed HH
Headcount ratio						
HSL (R237/month)	33.7%	41.5%	30.2%	41.4%	38.7%	46.0%
1/2 x HSL (R118.5/month)	5.3%	9.4%	4.5%	6.5%	8.3%	11.1%
Poverty Gap ratio						
HSL (R237/month)	0.098	0.140	0.086	0.125	0.128	0.159
1/2 x HSL (R118.5/month)	0.014	0.020	0.012	0.019	0.016	0.026
Squared Poverty Gap						
HSL (R237/month)	0.042	0.063	0.037	0.055	0.056	0.073
1/2 x HSL (R118.5/month)	0.0062	0.0064	0.0053	0.0081	0.0048	0.0087
Number of Households	1169	1170	807	362	711	459

The $P\alpha$ values for both poverty lines are higher for female-headed households than male-headed households, which serves to reconfirm Klasen's (1997) finding that female-headed households are overrepresented amongst the poor. Although Shaffer (1998, p. 2131) stipulates that 'in Sub-Saharan Africa the evidence on the relationship between poverty and female headship is mixed and sensitive to choice of welfare metric (income consumption), welfare deflator (per capita, per adult equivalent) and poverty measure (P_0 , P_1 , P_2)', the majority of research in the sub-continent corroborates the finding of the KIDS panel data (cf. Lachaud, 1994; Haddad et al., 1995).

The poverty measures, disaggregated by location into rural, urban (small towns) and metropolitan households (Table 3), starkly portray the geographical concentration of poverty that exists within KwaZulu-Natal. In both 1993 and 1998 the risk of being a consumption poor household in a rural area is more than double that experienced by urban and metropolitan households. The headcount ratio shows that households in rural locations in the province have experienced a considerable increase in the incidence of poverty in the intervening five years between the waves, whereas urban households show a moderate increase and metropolitan households a slight reduction. However, the depth of poverty for all three locational groupings has risen. This implies that poverty is not only becoming more pervasive in rural areas, but that the severity of the poverty is deepening too. Also, for the metropolitan areas, where there has been virtually no change in the level of poverty, those that are poor have become progressively more impoverished since 1993.

Table 3: FGT Poverty Measures (by Location)

	1993			1998		
	Rural	Urban	Metro	Rural	Urban	Metro
Headcount ratio						
PL = HSL = R237/month	43.9%	15.7%	16.3%	54.4%	21.2%	16.1%
PL = 1/2 x HSL = R118.5/month	6.9%	2.9%	2.0%	13.4%	2.9%	1.9%
Poverty Gap ratio						
PL = HSL = R237/month	0.131	0.044	0.035	0.191	0.057	0.043
PL = 1/2 x HSL = R118.5/month	0.020	0.005	0.003	0.028	0.006	0.003
Squared Poverty Gap						
PL = HSL = R237/month	0.057	0.018	0.014	0.087	0.022	0.017
PL = 1/2 x HSL = R118.5/month	0.009	0.001	0.001	0.009	0.002	0.001
Number of Households	742	274	153	741	274	155

POVERTY TRANSITIONS IN KWAZULU-NATAL, 1993-1998

Having completed a cross-sectional analysis of poverty for both waves, the issue of the dynamics of poverty during the course of the five years between the two surveys will now be addressed by generating tabulation statistics. The basic analytical tool that will be employed is the Markov chain. A Markov chain, as it pertains to poverty, describes a process that can be considered to be in exactly one of a number of 'states' of poverty at any given time. The heart of the Markov chain is the analysis of the transitions between the different poverty states.¹³ The key is the so-called transition matrix, which is best described as follows:

A poverty transition matrix shows the number of households in and out of poverty in a particular period, broken down by their poverty status in a previous period. Thus it is easy to see the number of households who have been poor and non-poor in both periods along with the number who have escaped poverty and those who have entered poverty. (Baulch and McCulloch, 1998, p.4)

This tabulation approach is often described as the simplest approach to the study of poverty dynamics, whereby the number of those who are poor and non-poor in consecutive time periods is tabulated in what is referred to as a transition matrix (Grootaert and Kanbur, 1995; Glewwe and Hall, 1995; Walker and Ryan, 1990). The off diagonals of such matrices reveal the number who were poor in the one period but were non-poor in the previous period and vice versa.

Table 4 presents a transition matrix using the KIDS data. It consists of transition rates between four expenditure classes, where class membership is a function of the size of the household's CPI-deflated total expenditure per equivalent relative to three fixed expenditure thresholds. The pattern revealed by the matrix is one of significant mobility, albeit predominantly short-range in nature. Around 45 percent of the households in the sample remained in the same class between wave 1 and wave 2, with 23% moving to a higher class and 32% to a lower class. Nonetheless, the majority of those who have moved (79.7%) have ended up in the adjacent expenditure class. The mobility observed in the matrix in Table 4 is particularly pronounced in the lowest expenditure class, where more than 80 percent of households have moved to a higher expenditure class.¹⁴

Table 4: Poverty Transition Matrix, 1993-1998 (Expressed in Row Percentages)

Expenditure Classes, Wave 1 (1993)	Expenditure Classes, Wave 2 (1998)					
	0 – 0.5×PL	0.5×PL – PL	PL - 2×PL	> 2×PL	All	(Col. %)
0 – 0.5×PL	17.7	50.0	25.8	6.5	100	(5.3)
0.5×PL – PL	17.2	48.6	25.4	8.8	100	(28.3)
PL - 2×PL	8.0	32.4	36.8	22.8	100	(38.4)
> 2×PL	1.8	11.9	27.5	58.7	100	(28.0)
Row %	9.4	32.2	30.4	28.0	100	(100.0)

Table 5 reveals conceptually how expenditure sequence patterns¹⁵ for the KIDS panel data, according to which households with expenditure falling below the poverty line are represented as P (poor) and as N (non-poor) if their expenditure exceeds that of the poverty line, can be extrapolated from the transition matrix presented in Table 4. As such, the table indicates the relative incidence of each of the four possible sequences, which can subsequently be classed into chronically, transitorily and never poor households.

Table 5: Conceptual diagram illustrating expenditure sequence patterns within the transition matrix

Expenditure Classes, Wave 1 (1993)	Expenditure Classes, Wave 2 (1998)			
	0 – 0.5×PL	0.5×PL – PL	PL - 2×PL	> 2×PL
0 – 0.5×PL	Poor in 1993; Poor in 1998 (Chronically poor)		Poor in 1993; Non-poor in 1998 (Transitorily poor)	
0.5×PL – PL				
PL - 2×PL	Non-poor in 1993; Poor in 1998 (Transitorily poor)		Non-poor in 1993; Non-poor in 1998 (Never poor)	
> 2×PL				

The expenditure sequence patterns themselves can be found in Table 6. The first row of the table shows that 22.3% of the households in the sample are characterised by chronic poverty. In other words, almost one quarter of the households surveyed had an expenditure below the poverty line in both 1993 and 1998. As for transitory poverty, 30.7% of the sampled households experienced poverty in one of the two waves.

Shifting emphasis now specifically to those households classified as poor in 1993, approximately 66% remained in poverty at the time of the 1998 interview.¹⁶ Assuming that the sample is taken to be provincially representative, this indicates that just over two thirds of the *poor* households in KwaZulu-Natal are persistently or chronically poor. The remaining 34% of those households deemed poor in 1993 have managed to exit poverty by 1998.

Table 6: Expenditure Sequence Patterns by Poverty Line

Expenditure Sequence	Low Expenditure Cut-off = R237 per month (1993 rands)		
	Wave 1 – Wave 2	Percent	Cumulative Percent
1 PP		22.3	22.3
2 PN		11.4	33.7
3 NP		19.3	53.0
4 NN		47.0	100.0
All		100.0	
Base n		1168	

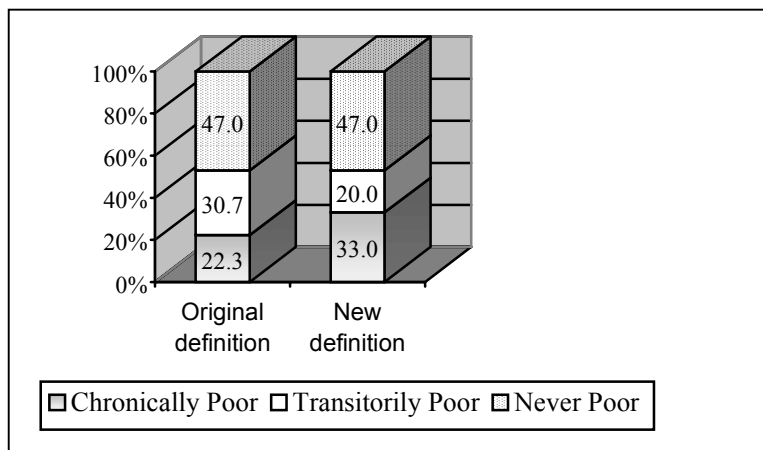
The tabulation approach, in the context of the KIDS dataset, does have its limitations. The poverty line chosen to distinguish between the poor and the non-poor is essentially arbitrary, which means the levels of persistent and transitory poverty vary according to the preferred cut-off point. Consequently, there is a need to gauge how robust the observed numbers of chronically poor, transitorily poor and never poor households in the KIDS sample are to definitional changes. This can be achieved by applying the definitions for each of the three groups that McCulloch and Baulch (1999) have employed in their research in Pakistan. They are as follows:

A household is deemed to be chronically poor if its mean income is below the poverty line, while a household is transitorily poor if its mean income is above the poverty line but its annual income falls below the poverty line at least once during the period under consideration. Never poor households are simply those in which annual income is always above the poverty line. (p.5)

Therefore, the main distinction between the definitions used to classify poverty in Table 5 and the one presented here is the introduction of mean expenditure over the two waves.¹⁷ Moreover, in line with McCulloch and Baulch (1999), it is assumed that a household must cross the poverty line and experience a change in expenditure equal to or greater than 10% before it is considered to have entered or exited poverty. This serves to eliminate those cases that merely ‘straddle’ the poverty line, rather than there being a consummate shift.

Figure 1 illustrates the effect that the new definition has upon the levels of the three poverty categories. In short, it has produced a moderate adjustment in the proportions of chronically and transitorily poor households in the sample, to the extent that the relative weighting is reversed. In other words, chronically poor households now constitute a greater proportion of the poor than do transitorily poor households. Chronic poverty has increased from 22.3% to 33.0%, whereas transitory poverty is reduced from 30.7% to 20.0%.

Figure 1: Comparative poverty shares (to test definitional robustness)



By applying the new definition, a substantial number of households classed as transitorily poor in the original estimate¹⁸ have been recategorised as chronically poor. This owes to the fact that their mean expenditure is less than R237 per-adult equivalent expenditure per month. The share of households in the never poor category, however, remains unchanged.

Therefore, upon preliminary investigation, it seems that whilst classifying households into different poverty cohorts is useful as a heuristic device, at the same time caution needs to be exercised in the choice of definition, *for it can have an estimable influence on the robustness of outcomes.*

OPPORTUNITIES FOR THE ‘MOVERS AND SHAKERS’

Having discussed the nature of poverty dynamics in the country, as revealed by the 1993 and 1998 waves of the KIDS panel dataset, this section makes a first attempt at determining some of the characteristics that differentiate the transitorily poor from the chronically poor, and these two

cohorts from the never poor. In essence this involves the construction of a poverty profile, which may be considered a decomposition of an aggregate poverty measure to reveal how the measure varies across sub-groups of society (Lipton and Ravallion, 1995). Discerning whether chronically and transitorily poor households are associated with a particular set of characteristics is of immediate relevance to policy-makers, for the type of anti-poverty interventions that are required to address chronic poverty are distinct from those directed at alleviating transitory poverty (Lipton, 1988; Jalan and Ravallion, 1998; McCulloch and Baulch, 1999). This view is supported by Alderman and Garcia's (1993) work in rural Pakistan, which revealed that:

Any measures aimed at improving the welfare of the rural population and at alleviating poverty – whether relative or absolute poverty – must begin with an understanding of the characteristics of poor households. (p.2)

This section cross-tabulates the chronically poor, transitorily poor and never poor cohorts against a set of correlates in order to unearth some of the traits that serve to distinguish the groupings from one another. The aforementioned correlates include characteristics relating to household structure, capabilities in the form of educational attainment, as well as access to productive assets (land, labour and capital). They are not intended to be exhaustive in scope, but merely serve as a first step in an ongoing process of refinement in explaining how the three cohorts differ from one other.

The poverty status definition used for this analysis is the one originally outlined in Table 5 rather than the Baulch and McCulloch (1999) definition.¹⁹ This owes primarily to a concern that the latter definition appears to exaggerate the number of chronically poor households, but also because the relative ranking of chronically and transitorily poor households using the original definition corresponds to the findings of empirical research in other developing countries (cf. Section 2). However, a profile was also generated using the IDS definition, for both comparative purposes and to examine the effect of definitional changes upon the robustness of the poverty profile.

Subsequent observation has revealed that the characteristics of the chronically, transitorily and never poor households do not diverge to any significant degree between the two profiles. The only notable exceptions are with regard to household size and mean total expenditure, but even here the overall trends remain the same. It is only the direction of the change in these variables between 1993 and 1998 for the chronically poor households that differs between profiles. For example, while household size has marginally declined between 1993 and 1998 for chronically poor households in the profile using the original poverty status definition, there has been a modest increase in household size in the profile using the IDS definition. Nevertheless, in both profiles, the average household size for chronically poor households is still higher than for transitorily and never poor households respectively. The same is applicable in the case of mean total expenditure. Therefore, the poverty profile appears less sensitive and consequently more robust to the choice of definition of poverty status.

Spatial profile

Much of the literature on the measurement and nature of poverty in South Africa emphasises the disproportionate concentration of the poor in rural areas (see, for example, Wilson and Ramphela, 1989; May, 1996; Klasen, 1997). The spatial location of households in the KIDS sample correspondingly emerges as a crucial factor separating the chronically from the transitorily poor and, in turn, these two groupings from the never poor (Table 7).

Table 7: Location of households by poverty class (expressed as percentages of households)

	Chronically Poor	Transitorily Poor	Never Poor
Rural	86.9	76.9	43.5
Urban (small towns)	8.8	15.3	35.7
Metropolitan	4.3	7.8	20.8
N	260	359	549

Of the households designated chronically poor, 86.9% are found to be in rural locations, with only 8.8% in small towns and just over four percent in metropolitan areas. Transitorily poor households are still predominantly rural (76.9%), but a greater share are found to be residing in small towns and metropolitan areas. In contrast to the other two poverty status groupings, less than half of the never poor households are rurally based, with the largest share in small towns and metropolitan areas. This is likely to be ascribable, at least in part, to access to economic opportunities.

Demographic characteristics

In terms of household size and adult equivalency, the chronically poor tend to have larger households than the transitorily poor (Table 8). Both of the aforementioned poverty groupings have larger households than the never poor. With respect to the age dependency ratio, there exists a slight differentiation between chronically and transitorily poor households (the former being higher in both waves than the latter), though a more substantial gap exists between these two groupings and the never poor. The chronically poor households have, on average, more children than the transitorily poor. Similarly, the transitorily poor households are characterised by a noticeably higher mean number of children than never poor households.

On the whole, chronically poor households have a greater predisposition towards being female-headed than either the transitorily poor or the never poor, though it should be mentioned that the proportion of female headship in all three cohorts has increased steadily since 1993. Additionally, the average age of the household head is approximately three years older in chronically poor households as compared to transitorily poor households. The difference in the average age of heads in transitorily and never poor households was four years, but it seems this has closed to just over two years in the intervening period between the two waves.²⁰

Table 8: Demographic Characteristics by Poverty Class

Correlates	Chronically Poor		Transitorily Poor		Never Poor	
	1993	1998	1993	1998	1993	1998
Household size	8.56	8.45	6.40	6.52	5.01	4.93
Adult equivalency	5.43	5.53	4.17	4.39	3.46	3.56
Age Dependency Ratio	0.47	0.43	0.46	0.42	0.38	0.33
Avg. no. kids (age<15) in the household	3.91	3.40	2.91	2.54	1.97	1.57
Proportion of HH that are female headed	39.2	48.8	31.8	39.6	26.6	34.6
Mean age of household head	54.1	57.1	51.2	53.8	47.4	51.7
Sample size (HH)	260 (22.3%)		359 (30.7%)		549 (47.0%)	

Most of the above trends are consistent regardless of whether one looks separately at the 1993 or 1998 data, or both in conjunction with one another. Nonetheless, it is worth noting that, with regard to the change in household size between the two waves, only the transitorily poor experienced an increase. The chronically poor and never poor households encountered marginal declines in household size. However, this trend does not appear to be related to increasing fertility

rates in the transitorily poor households in contrast with the other two cohorts. The age dependency ratio and mean number of children younger than fifteen statistics exhibit downward trends between 1993 and 1998 for all three poverty groupings. This suggests that whilst fertility rates are declining,²¹ there has been an increase in the number of adults (aged 15-64) living in transitorily poor households since 1993. Future research will need to investigate whether this observed pattern is attributable to factors such as increasing unemployment and the return of migrant workers to rural households, or if it is attributable to a life cycle effect (coupled with declining fertility).

Educational Characteristics

With regard to educational attainment, a clear pattern emerges which serves to distinguish the chronically from the transitorily poor (Table 9). Children in transitorily poor households tend to be slightly better educated than those in chronically poor households. For never poor households, the proportion of children with primary education in 1993 was 2.5 times greater than that of chronically poor households, a situation which only marginally improved by 1998.

Table 9: Educational Status by Poverty Grouping

Correlates	Chronically Poor		Transitorily Poor		Never Poor	
	1993	1998	1993	1998	1993	1998
Proportion of kids with primary education	7.2	6.6	12.0	7.8	18.0	10.8
Proportion of adults who are illiterate (<5yrs of education)	35.8	26.8	28.7	19.4	13.7	9.9
Proportion of adults who are primary school educated (age 15-64)	49.4	59.9	56.5	67.0	76.3	81.8
Proportion of adults who are secondary school educated (age 15-64)	4.4	12.1	8.3	14.6	26.1	32.2
Sample size (HH)	260 (22.3%)		359 (30.7%)		549 (47.0%)	

Levels of adult illiteracy are particularly high for chronically poor households, affecting a little over a quarter of adults in 1998. Transitorily poor households had a high adult illiteracy rate in 1993, though this seems to have declined significantly by 1998, while never poor households have a comparatively low illiteracy rate. Irrespective of poverty status, there has been a general reduction in adult illiteracy between 1993 and 1998. However, the variance in adult illiteracy rates between chronically and transitorily poor households has expanded somewhat, whilst the differential between transitorily and never poor households has narrowed. Levels of primary and secondary education amongst adults appear to be related to the poverty status of the household. In never poor households, the percentage of adults that have primary education is notably higher than in transitorily and chronically poor households. The same trend applies with regard to secondary education, where almost one-third of adults in never poor households have matric or above, as compared to less than one-sixth of adults in transitorily and chronically poor households.

Economic Characteristics

Table 10 presents some broad economic indicators for the three poverty status cohorts. As expected, given that a money-metric measure has been applied to define poverty, the suite of income and expenditure figures in the table are lower for chronically poor households than for transitorily and never poor households (in that order). The share of household expenditure devoted to food (food share) is a commonly applied indicator of welfare, the premise being that

the share will be higher the poorer the household. In the KIDS sample, the food share for the chronically poor exceeds that of transitorily and never poor households. Nonetheless, the discrepancy in food share between chronically and transitorily households is not nearly as pronounced as between these groupings and never poor households.

Table 10: Economic indicators by poverty status, 1993-1998

Correlates	Chronically Poor		Transitorily Poor		Never Poor	
	1993	1998	1993	1998	1993	1998
Mean total household income	726.84	1210.54	900.10	1520.71	2117.10	3404.72
Mean per capita income	90.90	157.06	169.91	257.11	503.19	774.80
Mean total household expenditure	899.90	816.67	1250.45	1027.27	2025.08	2246.75
Mean per capita expenditure	109.13	103.56	228.72	179.77	483.18	533.15
Mean expenditure by adult equivalence	166.04	151.57	319.41	249.58	633.34	679.78
Food expenditure as a percentage of total expenditure (food share)	58.0	46.8	56.9	42.7	42.1	29.5

The expansion of capabilities forms a cornerstone of a policy approach that focuses on enlarging the opportunities available to poor households. This suggests an important link to A.K. Sen's analysis of entitlement failure. Sen describes the *relationship* of people to the resources that they have and the commodities that they require when meeting their basic sustenance requirements.¹ The elements identified as being important in the expansion of individual, household and community capability are:

- The assets, claims and resources that are available;
- The activities that can be undertaken in order to generate a sustainable livelihood²;
- The commodities and services that are required by people for an acceptable standard of living (Sen, 1984: 509-510).

At least four broad categories of assets, claims and resources can be identified:

- Human capital
- Natural resources;
- Social and institutional rights;
- Livestock and other productive assets.

The following table examines these assets by the poverty class of the households interviewed in the panel study.

¹ For a fuller discussion of the approach, see Sen (1981) and Dreze and Sen (1990:9-10).

² Chambers and Conway (1992) define a livelihood as seen as comprising "the capabilities, assets (stores, resources, claims and access) and activities requires for a means of living".

Table 11: Assets and Endowments by Poverty Status, 1993-1998

Correlates	Chronically Poor		Transitorily Poor		Never Poor	
	1993	1998	1993	1998	1993	1998
Proportion of households owning land	45.0	57.7	39.0	53.2	27.3	33.0
Mean total Cultivated land (ha) [median in brackets]	0.95 (0.5)	0.65 (0.4)	0.96 (0.5)	0.83 (0.5)	3.85 (0.75)	1.02 (0.5)
Cultivated land per capita (ha)	0.12	0.08	0.17	0.13	0.77	0.24
Proportion of households owning livestock	40.4	43.8	35.7	39.3	19.7	23.9
Average value of livestock [median in brackets]	5313.18 (2934)	6275.26 (1500)	3626.39 (1870)	6962.98 (1800)	4550.07 (2770)	6416.30 (3000)
Proportion of households with a migrant adult	45.4	55.0	49.0	45.1	34.3	28.6
Proportion of households with a pensioned income	35.0	42.7	32.0	38.7	21.3	24.8
Mean number of years of education for adults aged 15-64 [median in brackets]	4.2 (4.3)	5.1 (5.4)	4.6 (4.8)	5.7 (6.0)	6.6 (7.0)	7.4 (7.6)
Sample size (HH)	260 (22.3%)		359 (30.7%)		549 (47.0%)	

In respect of access to land for the cultivation of crops, 58% of chronically poor households in the sample owned land in 1998, in contrast to 53% of transitorily poor and one third of never poor households. There has been a slight increase in ownership for the three cohorts since 1993, though this has not altered the relative ranking. It is important to note that, in spite of the greater percentage of land owners amongst the chronically poor, the average size of the land possessed by chronically poor households is generally smaller than that owned by the households falling into the other two poverty classes. Obviously there is the potential for a life cycle change to have taken place over the 5 year period between the two waves, in which households ‘graduate’ into their land rights. Examination of the mean age of the head suggests that this has occurred, with a larger proportion of the younger heads of households having moved from no land ownership in 1993, to having land in 1998.

The ownership of livestock in chronically poor households, like land, is slightly more widespread than in transitorily poor households. The difference in the proportion of households owning livestock is more tangible when contrasting chronically and transitorily poor with the never poor.

Chronically poor households are more inclined to have a migrant adult than either transitorily or never poor households, though in 1993 the proportion of transitorily poor households with a migrant adult was fractionally higher than for chronically poor households. Even though this is most probably related to the dearth of livelihood opportunities that exist in former KwaZulu and the consequent search for employment in either urban or other rural locales (Champion, 1995; Castles and Miller, 1993; Ardington and Lund, 1997; Lipton, 1995), recent research by Cross et al. (1998, p. 638) points to a wider set of influencing factors, such as “access to infrastructure, services and social networks which underpin security, help to resolve conflict over resources and facilitate refugee processes”. Therefore, there seems to be a positive relationship between a household’s vulnerability (or poverty status) and the extent of migration among adults.

Table 11 also reveals that the percentage of households in receipt of old-age pensions increases from never poor to chronically poor households in both 1993 and 1998. This suggests that public social spending in the form of old-age pensions is well targeted in KwaZulu-Natal.²² Since 1993, the percentage of households with a pensioned income has increased for all three poverty cohorts,

with the percentage change rising incrementally from never poor to chronically poor households. The cause of this upward trend is equivocal, though it could be associated with improvements in the coverage, and equalisation, of pensions during the nineties (Ardington, 1999).

Poverty Profile: A Summary

The poverty profile reveals that chronically poor households tend to reside in rural as opposed to urban or metropolitan localities, in addition to exhibiting larger (resident) family numbers and dependency burdens, a propensity towards being female-headed, and high illiteracy and low educational attainment levels. Moreover, they are not well endowed with financial capital, but have relatively high levels of access to physical capital (land and livestock) albeit in small quantities. A large proportion of the households receive a pensioned income, and have a migrant adult. Transitorily poor households share many of the same traits as the chronically poor households. In common with their chronically poor counterparts, households in this vulnerable poverty class are also predominantly rurally based, have a high dependency ratio and food expenditure share, and have amongst them a significant proportion of landowners (though with slightly larger average plot sizes than the chronically poor). They do, however, distinguish themselves from the chronically poor in that they have a lower mean household size, are less likely to be female-headed, have better educational attainment levels, in addition to having more financial capital and lower levels of livestock ownership.

Finally, the households designated never poor in the KIDS sample are identifiable from the other two poverty cohorts in that they are geographically concentrated in small towns and metropolitan areas, have a distinctly lower household size and average number of children, are comparably well educated, have significantly more financial capital and lower food shares, and are far less reliant on welfare and migration as livelihood strategies.²³

To a certain extent, the above findings coincide with the identifiers of poverty class found to be significant in other poverty dynamics research in developing countries. For example, in Chile, Pakistan, semi-arid India and Cote d'Ivoire, low physical capital (land, livestock and farm equipment), larger family numbers, and residence in particular regions tended to be associated with increasing poverty levels (Scott, 1999; Scott and Litchfield, 1994; Baulch and McCulloch, 1998; Walker and Ryan, 1991; Grootaert et al., 1997). Other research in China, India and Hungary show chronically poor households as being overrepresented amongst certain occupational categories (e.g., agricultural labourers), such as the less educated, the landless and households with larger dependency burdens (Jalan and Ravallion, 1998; Gaiha, 1989; Chaudhuri and Ravallion, 1994; Galasi, 1998).

POLICY ISSUES

The quotations at the beginning of the paper serve to illustrate, at least in the arena of political rhetoric, that the eradication of poverty and inequality and meeting of basic needs are primary concerns of the democratic government in South Africa. Nonetheless, translating this into appropriate policy interventions is a formidable challenge, especially given the extent of impoverishment and the limited public resources available. In this context, the design of well-targeted poverty alleviation strategies is of utmost importance. This section briefly highlights certain policy issues relating to the findings of the analysis of the KIDS. The intention is not to provide prescriptive policy advice, but rather to raise issues for future discussion.

Throughout the paper reference has variously been made to the relationship between a dynamic view of poverty and effective anti-poverty policies, the emphasis being on the differing, though not necessarily mutually exclusive, types of measures required to address chronically and

transitory poverty. The poverty literature suggests that the transitorily poor households, a grouping that is considered prone to fluctuations in well-being following negative economic shocks, require policies that help them to avoid risk-reducing responses, such as asset depletion, that are ultimately costly to the house in the long-term. Examples of safety net policies that can assist such households in smoothing income and consumption over time include providing micro-credit, public works schemes, crop insurance and food price stabilisation schemes (Baulch and McCulloch, 1999; Lipton and Ravallion, 1995). Alternatively, it is recognised that chronic poverty is best addressed through policies directed at increasing the human and physical assets of households falling within this category, the prime example being pure redistribution in the guise of land reform, but also investments in education, health and rural development (Jalan and Ravallion, 1998).

The core thrust of South Africa's poverty alleviation strategies since the coming into power of the democratic government in 1994 has been to increase budgetary expenditure on social services, with particular emphasis on education, health, social security and housing. The government also launched upon an ambitious land reform programme (May, 1998a). Whilst this conforms with the type of policy required to assist the chronically poor, analysis revealed that for the most part these activities are, as of yet, poorly targeted, reaching mainly the middle quintiles as opposed to the poorest quintile (May, 1998a, p.57). However, earlier examination of the magnitude of chronically and transitorily poor households in the KIDS sample revealed that not only is there a sizeable contingent of people who persistently remained in poverty, but there is an even greater proportion who are transitorily poor. The singular emphasis of pro-poor policy towards alleviating chronic poverty, to the neglect of the transitory poor, is a cause for concern, as it fails to address the existing risks to which this grouping is exposed.

This is not to say that there are not policy initiatives that are appropriate to the reduction of transitory poverty,²⁴ but rather that they are both insufficient and inadequate in their conceptualisation, planning and implementation. It is paramount that future poverty strategies adopted by government, be it national or provincial, adhere to a more inclusive approach, one that incorporates policies designed to target both chronic and transitory poverty, but that concomitantly seeks to maximise the complementarities between them.²⁵ The Poverty and Inequality Report (May, 1998c) was a milestone in this regard, for it identified over 50 programmes, pilot projects and grants relevant to both poverty groupings. The government has adopted its proposals and completed the preparatory work for most of these, but it still remains to be seen whether they can be effectively implemented.

CONCLUSION

The cross-sectional nature of previous poverty research in South Africa has precluded a dynamic understanding of how impoverishment is changing over time and has fostered inadequately designed poverty alleviation strategies. This paper has provided a preliminary analysis of the KwaZulu-Natal Income Dynamics Study data. In particular, the magnitude and severity of poverty between the two waves of the panel was explored using various measures. Moreover, the levels of chronic and transitory poverty were investigated, together with the characteristics that distinguish households within these groupings from one another.

Using an expenditure-based definition of poverty, the proportion of poor households in the sample is shown to have increased from 34% to 42% between 1993 and 1998. Subsequent application of the decomposable Foster-Greer-Thorbecke (FGT) measures revealed that, in addition to the rising *incidence* of poverty, the *severity* of poverty has also been deepening. These trends were found to be more pronounced in rural as opposed to urban and metropolitan localities, as well as for female-headed households. Transition analysis shows that in spite of significant

mobility between expenditure classes, some two thirds (66.3%) of the households below the poverty line in 1993 remained poor in 1998. Moreover, relatively large numbers of households who were just above the poverty line in 1993 had fallen into poverty by 1998.

As was mentioned in the literature review section, poverty dynamics research has shown that the majority of the poor are so for several years, whereas only a minority are persistently poor. Analysis of the KIDS panel data exposed a slightly different situation. Though the majority of households (30.7%) were found to be experiencing transitory poverty, a significant proportion, in lieu of the expected small minority, of households were chronically poor (22.3%). Applying Baulch and McCulloch's (1999) definitions of transitory and chronic poverty as a robustness test had the effect of reversing the ranking, so that 33% of the sampled households were chronically poor as opposed to the one fifth that were transitorily poor. Consequently, South Africa's problem is not only the poor *per se*, but the persistently poor.

The poverty profile reveals that household size, gender of the household head, educational attainment, financial capital and migrancy rates seemed to be key factors in distinguishing transitorily from chronically poor households. The finding that transitorily poor households share many of the same traits as the chronically poor households, such as a common propensity towards being rurally based, as well as high dependency ratios and food expenditure shares, suggests that future research explore regression analysis, perhaps in the form of Logit estimation. The variables that appeared to separate households classified as never poor in the KIDS sample from the other two poverty cohorts were geographic location, dependency ratio, average number of children, food share, land ownership, migrancy rates and access to a pensioned income.

Given that the principal emphasis of the paper is on exploratory research into poverty dynamics in South Africa, and not policy analysis, a comprehensive discussion of policy recommendations is not endeavoured here. Nevertheless, the relative degree of chronic and transitory poverty found in the data does raise one notable policy-related issue. While longer-term, redistributive interventions for the chronically poor are unquestionably significant²⁶ and have been the focus of pro-poor policy since the early nineties, it is clear that these will be insufficient to eradicate poverty in South Africa. There is thus a case for the development of more inclusive poverty alleviation strategies, ones that encompass short-term, insurance policies to assist the transitorily poor to smooth their income and consumption needs in the face of negative economic shocks.

NOTES

- ¹ Saldru is a research unit based at the University of Cape Town.
- ² In spite of its importance, the PSLSD has its problems, for which it has been variously critiqued. For example, Prof. Pieter le Roux (1995) of the University of the Western Cape found there to be problems with pension data. Ardington and Lund (1997) found certain classifications used to categorise households in the sample unnecessarily reductionist. Standing, Sender and Weeks (1996) also provide useful commentary on the shortcomings of the study.
- ³ For a useful discussion of the Speak Out On Poverty Hearings, reference should be made to Mthintso (1999).
- ⁴ The Panel Study of Income Dynamics (PSID), conducted by the Survey Research Center in the Institute for Social Research at the University of Michigan, was initiated in 1968. It is a longitudinal study of a representative sample of American individuals (men, women, and children) and the family units in which they live. Further information on the PSID can be obtained through their website: <http://www.isr.umich.edu/src/psid/index.html> .
- ⁵ The Reconstruction and Development Programme (RDP), introduced in 1994 by the African National Congress, is an ambitious developmentalist and regulatory economic vision for redressing the inequities in access to resources and economic opportunities that resulted from decades of discriminatory policies and practices. For a comprehensive analysis of the RDP and its progress, it is suggested that reference be made to Adelzadeh and Padayachee (1994), Adelzadeh (1996) and Marais (1998).
- ⁶ A panel data set is defined by Hsiao (1986:1) as follows: “A longitudinal, or panel, data set is one that follows a given sample of individuals over time, and thus provides multiple observations on each individual in the sample”.
- ⁷ Klasen created a deprivation index, a composite indicator that included the variables of income, health, education, access to services, and perceptions of well-being.
- ⁸ This figure incorporates the African and Indian population only, as was the case with the 1998 re-survey. If all the population groups in the 1993 survey are counted, then the total sample would be 1558 households. Four households in which all the household members have died prior to the 1998 re-survey are excluded from the 1389 total.
- ⁹ Urban re-interview rates proved to be higher than the rural, where approximately 90% of the target households were contacted again.
- ¹⁰ Maluccio, Thomas and Haddad (1999) provide a fuller account of the protocol that was developed to minimise attrition, whilst May, Carter, Haddad and Maluccio (1999) should be referred to for more detail on the survey process and the conceptualisation of the study.
- ¹¹ Lipton and Ravallion (1995) provide an outline of this critique.
- ¹² These are (i) the *monotonicity axiom*: a reduction in the expenditure of a poor household must increase the poverty measure (vice versa); and (ii) the *transfer axiom*: a pure transfer of expenditure from a poor household to any other household that is richer must increase the poverty measure (Sen, 1976; Foster et al., 1984).
- ¹³ Singer and Spilerman (1976) provide an exhaustive review of Markov models and their application to the social sciences.
- ¹⁴ The share of households remaining in the same expenditure class (45%) is the sum of the number of households contained in the main diagonal of the matrix (the cells in bold), expressed as a percentage of

the total number of households in the sample. The percentage that moved to a higher class (23%) is the sum of the number of households falling in the cells of the matrix *above* the main diagonal, expressed as a percentage of the total number of households in the sample. Similarly, the percentage that moved to a lower class (32%) is the sum of the number of households falling in the cells of the matrix *below* the main diagonal, expressed as a percentage of the total number of households in the sample.

¹⁵ The notion of generating expenditure sequence patterns owes primarily to the work of Jarvis and Jenkins (1997, 1998).

¹⁶ The figure of 66% is derived from the sum of the number of households contained in the top-left block of Table 5 (the chronically poor), expressed as a percentage of the combined number of households contained in the top-left and top-right cells of the table.

¹⁷ It should be noted that whilst Baulch and McCulloch use income as the preferred money-metric poverty measure (as opposed to expenditure in the case of KIDS), this does not affect the relevancy of their definitional tool to the analysis. They also rely upon annual figures whereas in the KIDS analysis, monthly expenditure is favoured.

¹⁸ In other words, households with 1993 expenditure values *below* the poverty line and 1998 expenditure values *above* the poverty line, as well as those with 1993 expenditure values *above* the poverty line and 1998 expenditure values *below* the poverty line.

¹⁹ Henceforth, this will be referred to as the IDS definition, owing to Baulch and McCulloch's affiliation to the Institute of Development Studies (IDS) at the University of Sussex, Brighton.

²⁰ Whether or not this is associated principally with changing headship between 1993 and 1998 is, as of yet, unresolved. Misspecification of the ages in one of the two surveys cannot be ruled out, though it is unlikely given the protracted data cleaning process involved.

²¹ There is mounting evidence for a declining trend in South Africa's fertility data. For a fuller exposition on this issue, reference should be made to Caldwell and Caldwell (1993), Chimere-Dan (1997), and Sibanda and Zuberi (1999).

²² In spite of this finding, social safety nets in South Africa, inclusive of old-age pensions, have traditionally been predicated upon discriminatory policies. Bhorat (1995) provides a useful history of these developments.

²³ To acquire a fuller and more precise understanding of the relative influence of various household characteristics on their poverty status, and to be able to clearly distinguish between the three classifications, Logit estimation is required. While this is beyond the scope of this paper, it is to be included in a forthcoming article by May and Roberts (2000).

²⁴ For example, micro- and agricultural credit schemes do exist in rural areas, but they tend to serve an 'elite'. Ardington (1999) gives an in-depth look at the nature and shortcomings of rural finance in KwaZulu-Natal.

²⁵ Lipton and Ravallion (1995) give a fairly detailed account of the policies required for chronic and transitory poverty, and suggest what some of these complementarities might be.

²⁶ Especially given the magnitude of chronic poverty found in the data.

REFERENCES

- Adelzadeh, A., 1996, 'From the RDP to GEAR: The Gradual Embracing of Neo-Liberalism in Economic policy', Transformation, No.31, pp.65-95.
- Adelzadeh, A. and V. Padayachee, 1994, 'The RDP White Paper: Reconstruction of a Development Vision?', Transformation, No. 25, pp.1-18.
- Alderman, H. and M. Garcia, 1993, 'Poverty, Household Food Security and Nutrition in Rural Pakistan', IFPRI Report No 93, Washington DC: IFPRI.
- Appleton, S., 1996, 'Problems of Measuring Changes in Poverty Over Time: the case of Uganda 1989-92', IDS Bulletin, Vol.27, No.1, pp.43-55.
- Ardington, E.M., 1999, 'Demand or Support: What Counts in Rural Finance', Research Report No. 26, Durban: School of Development Studies.
- Ardington, E. and F. Lund, 1997, 'Questioning Rural Livelihoods' in Lipton, M., Ellis, F. and M. Lipton (eds.), 1999, Land, Labour and Livelihoods in Rural South Africa Volume 2: KwaZulu-Natal and Northern Province, Durban: Indicator Press.
- Bane, M.J. and D.T. Ellwood, 1986, 'Slipping Into and Out of Poverty: The Dynamics of Spells', Journal of Human Resources, Vol.21, No.1, pp.1-23.
- Banfield, E.C., 1968, The Unheavenly City, Boston: Little, Brown.
- Baulch, B., 1996, 'Neglected Trade-Offs in Poverty Measurement', IDS Bulletin, Vol.27, No.1, pp.36-42.
- Baulch, B. and N. McCulloch, 1998, 'Being Poor and Becoming Poor: Poverty Status and Poverty Transitions in Rural Pakistan', IDS Working Paper No 79, University of Sussex, Brighton: IDS.
- Bhorat, H., 1995, 'The South African social safety net: past, present and future', Development Southern Africa, Vol. 12, No.4, pp.595-604.
- Caldwell, J.C. and P. Caldwell, 1993, 'The South African Fertility Decline', Population and Development Review, Vol.19, No.2, pp.225-261.
- Cantó-Sánchez, O., 1996, 'Poverty Dynamics in Spain: A Study of Transitions in the 1990s', Distributional Analysis Research Programme Discussion Paper No 15, London School of Economics, London: STICERD.
- Carter, M. and J. May, 2000, 'Getting Ahead or Falling Behind?: the Dynamics of Poverty in Post-Apartheid South Africa', forthcoming Department of Agricultural and Applied Economics (AAE) working paper, University of Wisconsin-Madison.
- Castles, S. and M. Miller, 1993, The age of migration: international population movements and in the modern world, New York: Guildford.
- Champion, A., 1995, 'International migration and demographic change in the developed world' in Paddison, R., Money, J. and B. Lever (Eds), International perspectives in urban studies 3, London: Jessica Kingsley.
- Chaudhuri, S. and M. Ravallion, 1994, 'How well do static indicators identify the chronically poor?', Journal of Public Economics, No.53, pp.367-94.
- Chen, S. and M. Ravallion, 1996, 'Data in Transition: Assessing Rural Living Standards in Southern China', China Economic Review, Vol.7, No.1, pp.23-56.

- Chimere-Dan, O., 1997, 'Recent fertility patterns and population policy in South Africa', Development Southern Africa, Vol.14, No.1, pp.1-20.
- Cross, C., Mngadi, T. and T. Mbhele, 1998, 'Constructing migration: infrastructure, poverty and development in KwaZulu-Natal', Development Southern Africa, Vol.15, No. 4, pp.635-659.
- Deaton, A., 1997, The Analysis of Household Surveys, London: The Johns Hopkins University Press.
- Demery, L. and L. Squire, 1996, 'Macroeconomic Adjustment and Poverty in Africa: An Emerging Picture', The World Bank Research Observer, Vol.11, No.1, pp.39-59.
- Dercon, S. and P. Krishnan, 1998, 'Changes in Poverty in Rural Ethiopia 1989-1995: Measurement, Robustness Tests and Decomposition', Centre for the Study of African Economies Working Paper WPS/98-7 CSAE, Oxford: University of Oxford.
- Dercon, S. and P. Krishnan, 1999, 'Poverty, seasonality and intra-household allocation', Paper presented at the IDS/IFPRI Workshop on Economic Mobility and Poverty Dynamics in Developing Countries, 7-8 April 1999, Institute of Development Studies, Brighton.
- Donian, C. and R. Humphries, 1998, 'Poverty in South Africa: The challenge of changing the nature of the state and redressing poverty in a decentralised System of Governance', Paper presented at the International Conference on Poverty: Emerging Challenges, 9-11th February 1998, Dhaka, Bangladesh.
- Duncan, G.J., Coe, R.D., Corcoran, M.E., Hill, M.S., Hoffman, S.D. and J.N. Morgan, 1984, Years of Poverty, Years of Plenty: The Changing Economic Fortunes of American Workers and Families, Michigan: Institute for Social Research, The University of Michigan.
- Engel, E., 1857, 'Die productions- und consumtionsverhältnisse des Königsreichs Sachsen', in Ernst Engel, Die lebenskosten belgischer arbeiter-familien, Dresden: C. Heinrich.
- Foster, J., Greer, J. and E. Thorbecke, 1984, 'A Class of decomposable Poverty Measures', Econometrica, Vol.52, No.3, pp.761-6.
- Friedman, M., 1957, A Theory of the Consumption Function, Princeton, New Jersey: Princeton University Press.
- Gaiha, R., 1989, 'Are the Chronically Poor Also the Poorest in Rural India?', Development and Change, No.20, pp.295-322.
- Gaiha, R. and A.B. Deolalikar, 1993, 'Persistent, expected and innate poverty: estimates for semi-arid rural India, 1975-1984', Cambridge Journal of Economics, No.17, pp.409-21.
- Galasi, P., 1998, 'Income Inequality and Mobility in Hungary 1992-1996', Innocenti Occasional Paper 64, Florence: UNICEF.
- Glewwe, P. and G. Hall, 1998, 'Are some groups more vulnerable to macroeconomic shocks than others? Hypothesis tests based on panel data from Peru', Journal of Development Economics, No.56, pp.181-206.
- Government of National Unity, 1994, 'RDP White Paper Discussion Document', Pretoria: Government Printers.
- Grootaert, C. and R. Kanbur, 1995, 'The Lucky Few Amidst Economic Decline: Distributional Change in Côte d'Ivoire as seen through Panel Data Sets, 1985-88', Journal of Development Studies, Vol.31, No.4, pp.603-19.

Grootaert, C., Kanbur, R. and G.-T. OH, 1995, 'The Dynamics of Poverty: Why some people escape from poverty and others don't', World Bank Working Paper No. , Washington DC: World Bank.

Grootaert, C., Kanbur, R. and G.-T. OH, 1997, 'The Dynamics of Welfare Gains and Losses: An African Case Study', Journal of Development Studies, Vol.33, No.5, pp.635-57.

Grosh, M.E., and J. Munoz, 1996, 'A Manual for Planning and Implementing the Living Standards Measurement Study Survey', Living Standards Measurement Study Working Paper No. 126, Washington D.C.: World Bank.

Habib, A. and V. Padayachee, 2000, 'Economic Policy and Power Relations in South Africa's Transition to Democracy', World Development, Vol.28, No.2, pp. 245-263.

Haddad, L. *et al*, 1995, 'Poverty and Nutrition within Households: Review and New Evidence', Washington, D.C.: IFPRI-WHO Collaborative Work on Intrahousehold Resource Allocation.

Harrington, M., 1962, The Other America: Poverty in the United States, New York: MacMillan.

Hsiao, C., 1986, Analysis of Panel Data, Cambridge: Cambridge University Press.

Illiffe, J., 1987, The African Poor: A History, Cambridge: Cambridge University Press.

Jalan, J. and M. Ravallion, 1998, 'Transient Poverty in Postreform China', Journal of Comparative Economics, No.26, pp.338-57.

Jarvis, S. and S. Jenkins, 1997, 'Low Income Dynamics in 1990s Britain', Fiscal Studies, Vol.18, No.2, pp.123-42.

Jarvis, S. and S. Jenkins, 1998, 'Low Income Dynamics in 1990s Britain', IDS Bulletin, Vol.29, No.1, pp.32-41.

Klasen, S., 1997, 'Poverty, Inequality and Deprivation in South Africa: An Analysis of the 1993 SALDRU Survey', Social Indicators Research, Vol.41, Nos.1-3, pp.51-94.

Lachaud, J.P., 1994, 'Pauvreté et marché du travail urbain en Afrique subsaharienne: Analyse comparative', Geneva: International Institute for Labour Studies.

Lanjouw, P. and N. Stern, 1991, 'Poverty in Palanpur', World Bank Economic Review, Vol.5, No.1, pp.21-55.

Leibbrandt, M. and I. Woolard, 1999, 'A comparison of poverty in South Africa's nine provinces', Development Southern Africa, Vol.16, No.1, pp.37-54.

Le Roux, P., 1995, 'The Impact of Social Old Age Pensions on Household Income in South Africa: The Results of a Study Based on the South African Living Standards Survey', unpublished mimeograph.

Lewis, O., 1959, Five Families: Mexican Case Studies in the Culture of Poverty, New York: Basic Books.

Lewis, O., 1966, 'The Culture of Poverty', Scientific American, Vol.215, No.4, pp.19-25.

Lipton, M., 1988, 'The Poor and the Poorest: Some Interim Findings', World Bank Discussion Paper No. 25, Washington, D.C.: World Bank.

Lipton, M., 1995, 'Rural financial services, demography and migration: international experience', unpublished report to the Commission of Enquiry into Rural Financial Services.

- Lipton, M. and M. Ravallion, 1995, 'Poverty and Policy' in Behrman, J. and T.N. Srinivasan (Eds), Handbook of Development Economics, Vol.3B, Amsterdam: Elsevier.
- Lund, F., 1998, 'Who's in and who's out? The effects of poverty and inequality on participatory and institutional development', AVOCADO Series No. 2, Durban: Olive (OD and Training).
- Maluccio, J., Thomas, D. and L. Haddad, 1999, 'The Mobility of Adults in Post-Apartheid South Africa: Levels, Determinants, and Consequences', International Food Policy Research Institute (IFPRI) mimeo.
- Marais, H., 1998, South Africa: Limits to Change: The Political Economy of Transformation, London: Zed Books.
- May, J., 1996, 'The South African Participatory Poverty Assessment – Synthesis Report', Data Research Africa Working Paper, Durban: DRA.
- May, J., 1998a. 'Poverty and Inequality in South Africa', Indicator SA, Vol.15, No.2, pp.53-8.
- May, J., 1998b (Ed), 'Experience and Perceptions of Poverty in South Africa', Durban: Praxis Publishing.
- May, J., 1998c (Ed.), Poverty and Inequality in South Africa, Durban: Praxis Publishing.
- May, J., Carter, M. and D. Posel, 1995, 'The composition and persistence of rural poverty in South Africa: an entitlements approach', Policy Paper No. 15, Johannesburg: Land and Agriculture Policy Centre.
- May, J, Carter, M.R., Haddad, L. and J. Maluccio, 1999, 'KwaZulu-Natal income dynamics study (KIDS) 1993-1998: A longitudinal household data set for South African policy analysis', CSDS Working Paper No. 21, Durban: Centre for Social and Development Studies.
- McCulloch, N. and B. Baulch, 1999, 'Distinguishing the Chronically from the Transitorily Poor: *Evidence from Pakistan*', Working Paper No. 97, Brighton: Institute of Development Studies.
- Mthintso, V., 1999, 'The War on Poverty Forum', Development Update, Vol.2, No.4, pp.99-106.
- Mueller, C., 1997, 'Transient Seasonal and Chronic Poverty of Peasants: Evidence from Rwanda', Mimeo, Oxford: Centre for the Study of African Economies.
- Office of the President, 25 June 1999, 'Mbeki: Opening of Parliament', <<http://www.gov.za>>.
- PSLSD, 1994, 'Project for Statistics on Living Standards and Development: South Africans Rich and Poor: Baseline Household Statistics', University of Cape Town: South African Labour and Development Research Unit
- Ravallion, M. and M. Huppi, 1991, 'Measuring Changes in Poverty: A methodological case study of Indonesia during an adjustment period', The World Bank Economic Review, Vol.5, No.1, pp.57-82.
- Ravallion, M., 1996, 'Issues in Measuring and Modelling Poverty', The Economic Journal, Vol. 106, September, pp.1328-1343.
- Rodgers, J.R. and J.L. Rodgers, 1993, 'Chronic Poverty in the United States', The Journal of Human Resources, Vol.28, No.1, pp.25-54.
- SA-PPA, 1997, 'The Experience and Perceptions of Poverty: The South African Participatory Poverty Assessment', Durban: Praxis Publishing.

Scott, C.D., 1996, 'Peasantry, Property and Poverty: State, Markets and economic Institutions among the Rural Poor in Chile', London: London School of Economics and Political Sciences. First Draft.

Scott, C.D., 1999, 'Mixed Fortunes: A Study of Poverty Mobility Among Small Farm Households in Chile, 1968-1986', Paper presented at the IDS/IFPRI Workshop on Economic Mobility and Poverty Dynamics in Developing Countries, 7-8 April 1999, Brighton: Institute of Development Studies.

Scott, C.D. and J.A. Litchfield, 1994, 'Inequality, Mobility and the Determinants of Income Among the Rural Poor in Chile 1968-86', STICERD Development Economics Programme DEP 35, London: London School of Economics.

Sen, A.K., 1976, 'Poverty: An ordinal approach to measurement', Econometrica, Vol.44, No.2, pp.219-231.

Shaffer, P., 1996, 'Beneath the poverty debate: some issues', IDS Bulletin, Vol.27, No.1, pp.23-35.

Shaffer, P., 1998, 'Gender, Poverty and deprivation: Evidence from the Republic of Guinea', World Development, Vol.26, No.12, pp.2119-2135.

Sibanda, A. and T. Zuberi, 1999, 'Contemporary Fertility Levels and Trends in South Africa: Evidence from Reconstructed Census Birth Histories', Paper presented at the Third African Population Conference: The African Population in the 21st Century, 6-10 December 1999, Durban.

Singer, B. and S. Spilerman, 1976, 'The Representation of Social Processes by Markov Models', American Journal of Sociology, Vol. 82, No.1, pp.1-54.

Slesnick, D.T., 1993, 'Gaining Ground: Poverty in the Postwar United States', Journal of Political Economy, Vol.101, No.1, pp.1-38.

Standing, G., Sender, J. and J. Weeks, 1996, Restructuring the labour market: the South African challenge, Geneva: International Labour Organisation.

Toye, J., 1999, 'Nationalising the Anti-Poverty Agenda', IDS Bulletin, Vol.30, No.2, pp.6-12.

Walker, T. and J. Ryan, 1991, Village and Household Economies in India's Semi-Arid Tropics, Baltimore: John Hopkins University Press.

Wilson, F. and M. Ramphela, 1989, Uprooting Poverty: the South African Challenge, Cape Town: David Philip.

Woolard, I. and C. Barberton, 1998, 'The extent of poverty and inequality' in Barberton, C., Blake, M. and H. Kotzé, Creating Action Space: The Challenge of Poverty and Democracy in South Africa, Cape Town, IDASA and David Philip Publishers.

Woolard, I. and M. Leibbrandt, 1999, 'Measuring Poverty in South Africa', unpublished mimeograph.

World Bank, 1990, World Development Report 1990, Washington, D.C.: Oxford University Press.

Yaqub, S., 1999, 'Poverty Dynamics in Developing Countries – A Literature Review', Paper presented at the IDS/IFPRI Workshop on Economic Mobility and Poverty Dynamics in Developing Countries, 7-8 April 1999, Brighton: Institute of Development Studies.