

1. Introduction

The microfinance community has given a commitment to reach 100 million of the poorest people throughout the world by 2005. "Poorest" in this context has been defined in economic terms as the number of individuals living below the '\$1 a day' poverty line (Microcredit Summit Campaign 2002). The Millennium Development Goals have posed additional challenges to microfinance organisations (MFOs), as poverty eradication targets have been set according to improvements in a broad selection of welfare indicators (Littlefield, Morduch and Hashemi 2003). Increasingly, donor resources are being channelled to meet international poverty eradication targets. This has placed MFOs under pressure to substantiate claims about levels of poverty outreach and positive improvements in client well-being. The effectiveness of such impact monitoring is contingent upon the quality and availability of empirical data.

Until recently, there has been a paucity of simple instruments that could collect information on client well-being reliably and at low cost (Morduch 1999). However, concerted efforts have been made to improve the quality of poverty assessments in the microfinance sector. Methods include external poverty assessments, an example being the Poverty Assessment Tool (Zeller *et al.* 2001). In addition, MFOs have developed internal poverty monitoring and targeting instruments including a Participatory Wealth Ranking (PWR) and the Housing Index (Simanowitz 2000). However, opportunities to aggregate the poverty profiles of clients generated by local level poverty assessments remain limited. Both external poverty assessments and internal organisational poverty measures are relative measures of poverty, comparing the well-being of clients to non-clients. Most of these instruments measure broad dimensions of poverty based upon a basket of locally specific indicators and they seldom incorporate money metric measures. This prevents comparison with national or international poverty profiles.

In an attempt to find a solution to this limitation, this article has three objectives: firstly to evaluate the reliability of local relational poverty assessments; secondly to identify indicators that are relevant to both local and national contexts,

2. Triangulating Qualitative and Quantitative Approaches to the Measurement of Poverty: *A Case Study in Limpopo Province, South Africa*

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therefore enabling both relational and absolute poverty measurement to take place; and third to match local poverty assessments to national and international absolute poverty measures. This research uses data previously gathered at the Small Enterprise Foundation (SEF), an MFO in the Limpopo Province of South Africa, using PWR. In addition, an independent survey using the Poverty Assessment Tool (PAT)¹ was conducted in October 2000 in which relative poverty scores were added which was matched to the PWR poverty scores (van de Ruit *et al.* 2001). Finally, absolute poverty levels of households with similar scores have been estimated using a national Income and Expenditure Survey (IES), also conducted in October 2000.

2. Poverty measurement and definition

One of the most common definitions of deprivation is the inadequate command over commodities, proxied by consumption or income (Lipton 1997). Poverty lines define the minimum level of consumption required and individuals or households falling below the threshold are considered poor. Indeed, many argue that the most reliable indicator of well-being is private consumption, scaled according to adult equivalence and summed to the household as the unit of analysis, then calculated as a ratio of the threshold income required to purchase a minimum basket of goods, using the well-known Foster-Greer-Thorbecke (FGT) class of measures (Lanjouw 2001; Lipton 1997; Shaffer 1996). Of these measures, the headcount ratio – the proportion of the population who are poor – is the most commonly reported indicator, although other indicators allow for the measurement of the depth and severity of poverty. The World Bank promotes the notion of ‘\$1 a day’ as an international threshold intended for comparisons to be made across countries. This threshold can be adjusted according to purchasing power. A recent critique of the ‘\$1 a day’ poverty line argues that the measure is inherently flawed and likely to have distorted global poverty estimates (Reddy and Pogge 2003). Among other concerns, it is Reddy and Pogge’s (2003) contention that the selection of commodities in the basket are not grounded in a meaningful definition of poverty, nor are the purchasing power factors employed

adequately and matched according to national currency equivalents. Broader concerns continue to be the inadequacy of measuring poverty using consumption as the sole dimension of well-being and the household as a meaningful unit for analysis.

Composite indices contain several measures that try to capture the different dimensions of poverty (Zeller *et al.* 2001). Two sets of indicators are advocated. The first includes the ‘means to achieve welfare’ and incorporates human, physical and social capital. The second deals with ‘achievements in consumption’ necessary to satisfy basic needs. These include access to basic services, and the quality of shelter and food security (Zeller *et al.* 2001: 11). Studies drawn from a number of Demographic Health Surveys (DHS) and Living Standards Measurement Studies (LSMS) throughout the developing world have tested the validity of proxy measures in measuring well-being (Filmer and Pritchett 1998; Montgomery *et al.* 2000; Morris *et al.* 2000). These studies found that proxy measures had significant explanatory power over specific demographic outcomes. Filmer and Pritchett (1998) argued that proxy measures were more stable than consumption measures, while Sahn and Stifel (2000) found proxy measures to be powerful in panel series data. These experiments suggest that proxy indicators are reliable indicators of well-being.

At the same time, the definition of deprivation is increasingly being recognised as having a wider meaning than material ill-being, and includes social and physical isolation; powerlessness and lack of voice; gender inequality; low social status; and physical and bodily weakness. These experiences are not easily captured through quantitative research. Participatory Poverty Assessments (PPAs) emerged in response to the limitations of quantitative methods. Narayan *et al.* (2000: 15) define a PPA as an ‘iterative, participatory research process that seeks to understand poverty from the perspective of a range of stakeholders, and to involve them directly in planning follow-up action’. PPAs thus provide local level information representing a variety of interest groups and mainly provide relational measures of poverty nature rather than absolute measures. PWR, in which local people define what constitutes poverty, and then apply this definition in a ranking

exercise, is a tool used in PPAs for such poverty measurement that has been widely adopted by MFOs.

2.1 Poverty in South Africa

Comprehensive and reliable poverty data for South Africa only began to emerge from 1993 onwards, and a variety of data gathered during the post-apartheid period is now available. The World Development Report of 2000 uses data collected in 1993 by the South African Labour and Development Research Unit (SALDRU) at the University of Cape Town to show that 11.5 per cent of the South African population lived on less than \$1 per day, while 35.8 per cent of the population lived on less than \$2 per day (World Bank 2001: 64). At the time of its transition to democracy, South Africa could thus be compared to countries such as Bolivia (11.3 per cent), Colombia (11.0 per cent) or Côte d'Ivoire (12.3 per cent) in terms of the '\$1 a day' measure of poverty.

Despite the proliferation of poverty studies during the 1990s, South Africa has yet to develop an official national poverty line. Research has shown that the extent of poverty in South Africa as a whole shows little variation between different poverty lines or across different data, but that the distribution of poverty differs significantly according to the spatial location, race, age and gender of the population (Leibbrandt and Woolard 1999). Analysis of the IES 2000 using a national nutrition-based poverty line reveals that 43.6 per cent of the population were categorised as poor in 2000.² A PPP-adjusted³ '\$1 a day' measure suggests that poverty levels may have increased from 11.5 per cent in 1993 to 19.7 per cent in 2000. Although only approximately 40.5 per cent of the population were categorised as non-urban by the IES 2000,⁴ more than 59 per cent of the poor in South Africa live in non-urban and rural areas. Not surprisingly, black Africans are disproportionately represented among the poor, with 95 per cent of the poor being black African, although black Africans comprise some 80 per cent of the total population. Although there is some disagreement as to the ranking of provinces in terms of the incidence of poverty, all studies agree that the province in which the case study is located, Limpopo Province, is the poorest region in South Africa in terms of household

income or consumption. In 2000, almost 60 per cent of the population in the province were categorised as being poor in the IES.

Participatory methodologies reveal a surprisingly consistent view of poverty in South Africa, some aspects of which would be difficult to measure using quantitative data, and unlikely to be available in national surveys. These include:

- Alienation from the community and government: The poor were seen to be isolated from the institutions of kinship and community as well as from the structures of government.
- Food insecurity: Participants saw the inability to provide sufficient or good quality food for the family as an outcome of poverty. In particular, households where children went hungry or were malnourished were seen as living in poverty.
- Crowded and poorly maintained homes: The poor were perceived to live in overcrowded conditions and in homes in need of maintenance. Having too many children was seen as a cause of poverty – not only by parents, but by grandparents and other family members who had to assume responsibility for the care of children. By contrast, wealth was regarded as having good houses that were well maintained and durable.
- Usage of basic forms of energy: The poor lacked access to safe and efficient sources of energy. In rural communities the poor, particularly women, walked long distances to gather firewood. In addition, women reported that wood collection increases their vulnerability to physical attack and sexual assault. Wealth was seen to be using more convenient forms of energy, especially electricity, and owning appliances both to reduce effort and for entertainment.
- Lack of adequately paid, secure jobs: The poor perceived lack of employment opportunities, low wages and lack of job security as major contributing factors to their poverty.
- Fragmentation of the family: Many poor households were characterised by fathers or

children living apart from their parents. Households were sometimes split over a number of sites as a survival strategy (May *et al.* 1997).

This discussion suggests that although consumption may be an important component, poverty should be thought of as comprising a mix of characteristics, some of which may be measurable and possible to capture through other types of indicator, while others will require different methodologies from the conventional quantitative survey. Triangulating the results of these different approaches seems a fruitful exercise for both practitioners attempting to target their interventions and researchers trying to capture the multiple dimensions of poverty in their analysis.

3. The context and methodology for triangulation

The Small Enterprise Foundation (SEF) is a non-profit organisation based in the Limpopo Province of South Africa. Its mission is to work toward poverty alleviation through the creation of a:

Supportive environment where credit and savings services foster sustainable income generation, job creation and social empowerment (SEF 2000).

SEF began its operations in 1992. It employs a group lending methodology modelled on the Grameen Bank. Loan sizes range from R100 to R10,000 while effective interest rates are based on a declining balance, and range from 70 per cent to 82 per cent. In May 2003, SEF had a membership base of 18,008 clients and since its inception up until the date of writing, had disbursed 124,150 loans amounting to R121 million (\$15,921). The principal outstanding on the loan, as of May 2003, was R12.4 million (\$1,632) and the portfolio at risk over 30 days was 1.2 per cent. SEF is currently operating at 68 per cent self-sufficiency and 67 per cent financial self-sufficiency. SEF has two separate programmes: the Microcredit Programme (MCP), which is a non-targeted microcredit programme with 9,594 members, and the Tshomisano Credit Programme (TCP), a poverty-targeted programme with 8,414 members. These programmes operate in different geographic regions within Limpopo Province.

The majority of SEF clients are women (98 per cent), many of whom operate small enterprises from their homes such as hawking, selling new and used clothes and running small tuck-shops. A minority of the clients (18 per cent) are involved in manufacturing activities. The sizes of the loans and short repayment schedules were expected to encourage poorer women to join the programme. In practice, before the establishment of TCP, SEF found that the programme was dominated by less poor people who were entering the programme in the hopes of gaining larger loans at a later stage (SEF 2000: 2). SEF realised that the microcredit programme would not attract poorer women unless they introduced a targeting mechanism.

With this in mind SEF initiated the TCP in 1997. This poverty-targeted programme encouraged unemployed women to join and to start businesses. The solidarity group lending approach was adopted for the programme. Loan sizes for the first loan ranged from R300 (\$39.47) to R600 (\$78.95). Loan sizes increase per loan cycle, although clients have to demonstrate increased capacity in their businesses. In 2000, the average disbursed loan size in TCP stood at R884 (\$116.32) compared to MCP which had average loan sizes of R1311 (\$172.50). Most TCP clients are inexperienced at running and managing small businesses and thus TCP field staff dedicate additional time to supporting clients in their businesses.

SEF employs the PWR method as a targeting tool. It is a community-driven process whereby members of a village define conditions of poverty in their village and rank community members according to these conditions. Poverty definitions are fairly consistent across villages, comprising of indicators including income and food security, control over assets and basic needs satisfaction. At least three separate reference groups, made up of a small number of community members, are involved in ranking all villagers. This allows the facilitator to measure the consistency of the process and avoid bias. Each community included in the PWR study is allocated a poverty line. Households with scores below the poverty line are eligible for membership into TCP (Simanowitz 2000).

PAT is a rapid quantitative research method that uses key indicators as proxy measures of poverty. It was

Table 1: Principal components model

Indicator	Component 1
Family structure	
Per person expenditure on clothing and footwear	.573
Per cent of adults in a household who can write	.485
Per cent of households which have wage and salaried workers	.446
Per cent of adults within households who have attended high school	.360
Food consumption	
Number of days rice served	.486
Number of days chicken served	.416
Number of months in the past year the household did not have enough to eat	-.385
Housing	
Type of cooking fuel used	.685
Type of external walls	.644
Structural conditions of the main house	.643
Type of roofing material used	.619
Assets	
Value of furniture aggregated per person	.690
Value of appliances and electronics aggregate per person	.619

n = 500

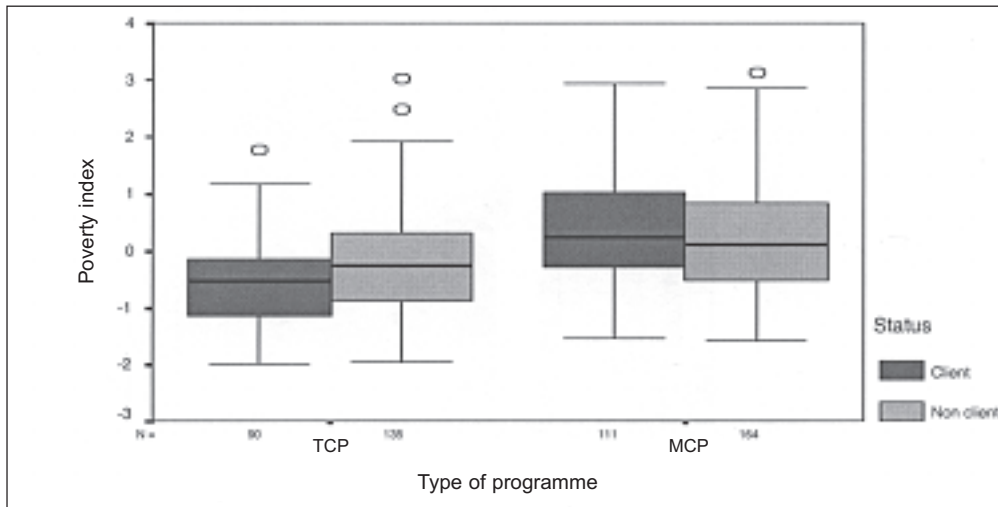
designed to measure the levels of well-being of clients entering microcredit programmes. The methodology was designed by the International Food Policy Research Institute (IFPRI) (Zeller *et al.* 2001) and adapted for the Consultative Group to Assist the Poorest (CGAP)⁵ to be used in the context of microfinance. Poverty assessments of microfinance institutions using a comparable sample of non-participants have been limited (Morduch 2000: 618). The SEF catchment area in Limpopo Province was the fifth case study assessment conducted to assess whether the approach is applicable to microfinance generally, and more specifically, whether the approach could be adapted to circumstances in South Africa. Other studies had already been conducted in Kenya, Madagascar, Nicaragua and India.⁶ The survey took place from October to December 2000. The sampling method required that only new clients entering either of the microcredit programmes be included in the survey. In total 500 households were interviewed: 201 clients and 299 non-clients. Amongst the client sample, 90 clients were selected from the poverty-targeted TCP branches, and the remaining 111 clients selected

from the self-targeted MCP branches.⁷ Using SEF's records, PWR scores for 199 of the 225 households located in the TCP branch areas could be matched to the households sampled for the PAT survey. Scores were available for both clients and non-clients.

The IES is undertaken every five years in South Africa to collect information required for the calculation of the consumer price index (Statistics South Africa 2002). The most recent survey was undertaken in October 2000 and is a nationally representative survey sampling approximately 30,000 households according to the 1996 South African census enumeration areas. The sample frame stratified households according to province and spatial location. The IES 2000 is linked to the September 2000 Labour Force Survey. The combination of these two data sets affords a wide selection of indicators covering income and expenditure, assets, food security, employment status and educational attainment.

These three studies, plus the already mentioned SALDRU survey, allow us to explore the overlap

Figure 1: Distribution of poverty scores



between relational measures of poverty such as that gathered by the PWR, the composite index used by PAT, and an absolute poverty line which can be calculated from the IES. The analysis in this article thus assesses the extent to which a national sample of households categorised as poor using the components of the PAT and PWR are also categorised as poor using a conventional money metric poverty line.

3.1 Calculating a composite poverty index

A composite poverty index was constructed from the PAT instrument using a set of variables which best describe levels of well-being. This model uses proxy variables which replace data on income and expenditure, and used the principal components methodology to construct a poverty index.⁸ During the trial phase of the model, only non-clients were used, as they were the representative control group. The model was constantly refined, and variables which did not impact on the model were excluded. Successive changes were made to improve the robustness of the instrument. Table 1 shows the final selection of indicators used in the model.

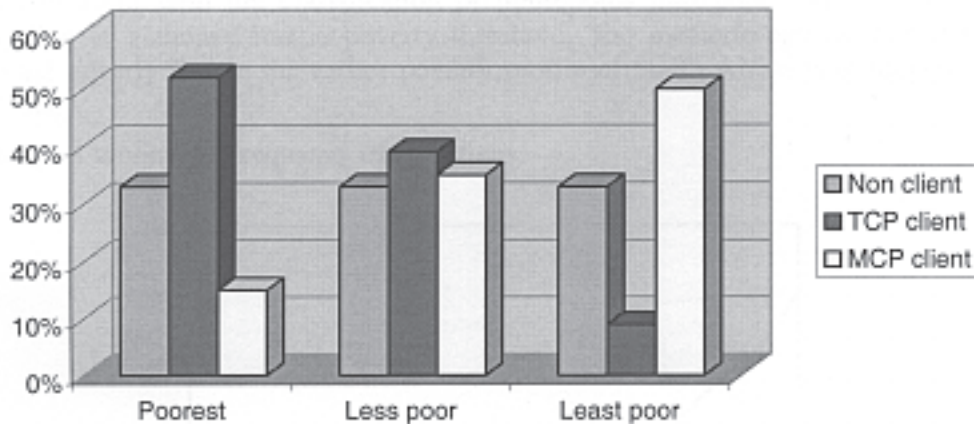
The final selection for the model consisted of 14 variables which covered the broad themes of the assessment: food consumption, quality of housing, demographic data and household assets. Each

household was assigned a score and ranked along the index. The highest scores reflected the least poor households, while lowest scores indicated the poorest households. There was a great degree of variance at the higher end of the scale suggesting that there were households at the top end of the scale substantially better off than the rest of the sample.

A comparison of the average poverty scores between clients and non-clients in each of the programmes produced striking results. Figure 1 shows the distribution of poverty scores of clients and non-clients in each of the programmes.

Both clients and non-clients in the targeted credit programme, TCP, have, on average lower scores than the clients and non-clients in MCP, the non-targeted programme. The poverty scores for TCP clients and non-clients alike are concentrated on the lower end of the scale, while the scores for both clients and non-client are concentrated at the upper end of the scale. The mean score for clients in TCP, shown by the dark line, was -0.6 while the average score for MCP clients was 0.4. The difference between means was statistically significant at the 99 per cent level. The average scores for non-clients in each of the programmes were also found to be significantly different. Non-clients located in TCP areas of operation had a mean score of -0.2 while non-clients located in

Figure 2: Clients and non-clients in microcredit programmes



n = 500

MCP areas of operation had a mean score of 0.2. These differences were also statistically significant at the 99 per cent level.

In the PAT methodology, the sample population is divided into three poverty groups in order to compare clients with non-clients. Non-clients were evenly dispersed into three terciles, the first group being the poorest, the second group the less poor and the third group the least poor. The clients were then classified into the groups according to the range assigned to the non-clients. This exercise reveals that there were as many clients in the poorest category (32 per cent) as there were clients in the least poor category (31 per cent) and that the distribution of clients follows that of the non-clients and is thus fairly representative of the broader community. The combined data hides the contrasting results of the two SEF programmes and a significantly different picture emerges once the data is disaggregated according to the two programmes.

The majority (52 per cent) of TCP clients, targeted by PWR methodologies, are located in the poorest category, as opposed to 9 per cent in the least poor category. The remaining 39 per cent are in the less poor category. In comparison, 15 per cent of MCP clients fell into the poorest category, and 35 per cent are in the less poor group with 50 per cent in the least poor group. The TCP poverty profiles

indicate that SEF is reaching the poorest people with this programme, and the result also suggests that PAT and PWR categorise similar groups of people as being poor.

3.2 Comparison to Participatory Wealth Ranking (PWR)

This is confirmed when the poverty scores derived from the PWR were compared with PAT for the households where this information was available. In Table 2, following the PAT methodology, "poor" refers to households in the bottom tercile of the distribution.

There was a substantial overlap in the results, with almost 70 per cent of the matched households falling into the same categories using both methodologies. In addition, the two methodologies show the strongest relationship where they agree on the poorest. Three-quarters of those defined as poor by the poverty assessment were also defined as poor by the PWR. Almost half of the cases classified as non-poor by the PAT were also classified as such by the PWR. These results were statistically significant at the 95 per cent level. Mismatches between the two methods occurred in defining both the poor (21 per cent) and the non-poor (10 per cent), and overall 31 per cent of the scores were misclassified, with the PAT tending to classify more households as being poor than the

Table 2: Match between the PAT and the PWR

Per cent of households considered poor by the PAT and poor by the PWR	59	118
Per cent of households considered non-poor by PAT and non-poor by the PWR	9	18
Per cent of households considered poor by the PAT and non-poor by the PWR	21.6	43
Per cent of households considered non-poor by PAT and poor by the PWR	10	20
Total	100	199

n = 199

PWR. Most of the disparities between the PWR and PAT scores occur at the wealthier end. These findings suggest that targeting errors incurred in the use of PWR as a targeting instrument are more likely to misclassify the better off than the most vulnerable, and thus the PWR is a reliable and effective mechanism for locating the poor, particularly poorer, women to join the programme.

Correlations testing the associations between five measurable indicators in the PAT survey and the PWR poverty scores were then conducted.

Quality of roofing material had the strongest positive association to the PWR. This is a simple and observable indicator and it is not surprising that it has strong associations to the participatory wealth ranking score. Control over assets had equally strong statistical associations (<0.01), although the coefficients were smaller. As expected, poor educational attainment had a negative association (<0.05) with the PWR score. Finally, access to safe drinking water showed a positive association with the PWR score. The selection of indicators reflected in this table confirms that the PWR measures broad dimensions of human

poverty. However, the correlation coefficients are relatively small, suggesting that other unexplained indicators play an important role in defining the perceptions of poverty and possibly account for the 30 per cent mismatch in results between the PAT and PWR poverty groups.

3.3 Comparison to a National Composite Index

Having established that the PWR and PAT methodologies produce a substantially consistent identification of the poorest households, the PAT methodology was applied to the IES 2000 to examine the likelihood of being poor according to PAT indicators and poor according to a conventional money metric poverty line. Using a similar set of variables to those included in the SEF study, a poverty index was created by means of correlation and principal components analysis. Having done this, poverty dominance tests were applied to determine whether a poverty ranking using the newly developed index was consistent with the classification of households into poor and non-poor cohorts according to a money metric poverty threshold. The methodology used to

Table 3: Correlation coefficients between the PWR and PAT

Indicator	Pearson correlation
Quality roofing material	0.24**
Assets: aggregate per adult	0.18**
Appliance values aggregated per person	0.16*
Source of drinking water	0.17*
Per cent of adult household members without formal education	-0.18*

n = 199

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4: Correlations of expenditure and selected indicators

Indicator	Pearson correlation		N
Per cent of adults who completed secondary education	0.50	**	25,885
Rooms per person	0.38	**	25,726
Source of drinking water	0.33	**	25,391
Quality of exterior walls	0.27	**	25,786
Access to a savings account	0.37	**	25,846
Owns telephone	0.35	**	25,842
Food insecurity	-0.20	**	25,909
Owns TV	0.26	**	25,852
Owns radio	0.15	**	25,865
Access to a state pension	-0.15	**	25,909
Per cent of adults who can write	-0.13	**	25,880
Per cent of adult household members without formal education	-0.11	**	25,894

n = 26,687

** Correlation is significant at the 0.01 level (2-tailed).

generate a national poverty line in the earlier poverty profile of South Africa presented in section 2.1 was adopted for this analysis.

poor households, whatever poverty line might be used.

Figure 3 shows that the “PAT poverty curve” for African households classified as poor in money metric terms is always above and never crosses the “PAT poverty-curve” for non-poor households. This signifies that households classified as poor using a money-metric measure are *unambiguously* worse off in terms of their PAT index than non-

The next issue is then to determine which of specific indicators within the PAT are likely to have strong associations with money metric measures. An aggregate household consumption measure was developed from IES 2000. Aggregate household expenditure was divided per household member, scaled according to per adult equivalence.

Figure 3: Cumulative frequency distributions

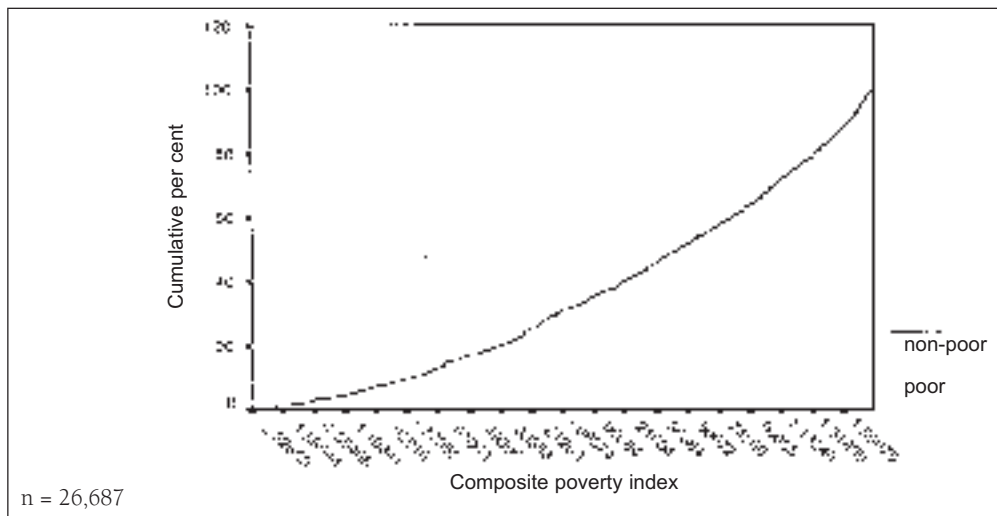


Table 5: Logarithm adult equivalent monthly expenditure by indicators of welfare

	Model 1	Model 2	Model 3
(Constant)	4.87 **	4.24 **	4.52 **
Rooms per person	0.25 **	0.18 **	0.17 **
Source of drinking water	0.22 **	0.17 **	0.11 **
Quality of exterior walls	0.08 **	0.07 **	0.05 **
Food insecurity	-0.57 **	-0.50 **	-0.40 **
Per cent of adults who completed secondary education		0.01 **	0.01 **
Per cent of adults who can write		0.87 **	0.60 **
Owns a television			0.06 **
HH savings account			0.52 **
Owns radio			0.11 **
Access to telephone			0.31 **
Access to state old age pension			-0.21 **
n	25,344	23,762	23,641
R ²	0.36	0.46	0.53

* p <0.05
** p <0.01

Table 4 presents correlations between annual expenditure per adult equivalent and a selection of development indicators which were similar to those covered in the PAT. They include household assets, educational attainment and employment status, basic needs satisfaction including safe drinking water and food security, and variables relating to the structural condition of the home.

The strongest associations between annual expenditure per adult equivalent and human poverty indicators included educational attainment, quality of housing structures, assets and basic needs satisfaction. The results of this analysis suggest there are shared characteristics of poverty between the PAT, PWR and money metric measures.

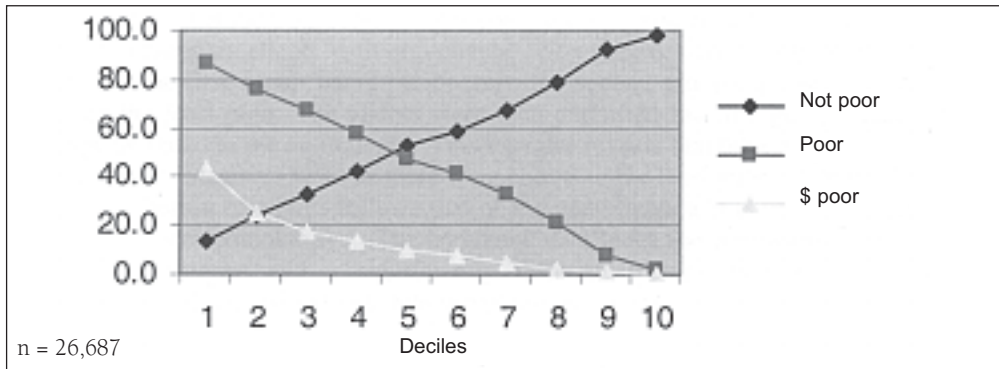
Finally, linear regression analysis was undertaken using the logarithm of monthly expenditure per adult equivalent as the dependant variable. The intention was to assess the extent to which a basket of non-money metric measures could predict economic well-being. This was an iterative model and changes were made to improve the overall fit of the model.

Three model iterations were undertaken. In the first regression the model had a moderate R square

value of 0.36, and included four indicators relating to basic needs satisfaction, structural condition of the home and access to basic services. With the exception of food security, which had a negative association to the dependant variable, each of the coefficients led to corresponding positive increases in expenditure. The second regression included adult educational assets and saw a dramatic strengthening of the model fit overall ($R^2 = 0.46$). Although the variable educational attainment had a low regression coefficient (0.01) the inclusion of this indicator led to a substantial improvement in the model. The third model included control over household and financial assets, and achieved the best fit overall ($R^2 = 0.53$).

The regression coefficients in the model are statistically significant predictors of the dependant variable. The indicators which explain greater proportions of variance in the model include: number of rooms per person (T value 37.1), access to safe sources of drinking water (T value 29.5), food insecurity (T value -30.3), completion of secondary education (T value 44.9), and access to a savings account (T value 45.4). The wide range of indicators influencing the model reinforces the notion of poverty as a multifaceted experience. These results support the argument that indicators

Figure 4: IES and '\$1 a day' poverty lines by PAT Indicator



common to the PWR and PAT methodologies are robust predictors of consumption.

This brings the analysis to the final step, comparing the categorising of households as poor using a money-metric indicator with their position in the composite poverty index. Figure 4 shows the percentage of households categorised as consumption poor in each decile of the PAT index.

Just less than 87 per cent of the bottom decile of the PAT index were classified as poor in terms of the national poverty line measure, falling steadily to 66 per cent of the third decile. Also shown is the percentage of households categorised as poor using a PPP-adjusted '\$1 a day' poverty line which reveals a similar pattern falling from 43 per cent of the bottom decile of the PAT index to below 14 per cent of the fourth decile. Indeed, almost 60 per cent of the '\$1 a day' poor, and 40 per cent of the national poverty line poor are to be found in the bottom two deciles of the PAT index.

4. Conclusion

The results of the study highlight the usefulness of triangulating research results using both qualitative and quantitative data sources. The findings illustrate the relationship between a composite indicator, participatory poverty measures and money-metric poverty lines. The PAT and PWR classify some 70 per cent of households in the same way in terms of their level of welfare. This overlap tends to be stronger at the poorer end of the distribution,

reaching 75 per cent of those categorised as being poor. PWR tends to be more conservative in identifying households as poor compared to PAT.

When a similar indicator is constructed in a national database, households in the lower third of the distribution of the PAT indicator are more likely to be classified as poor using a conventional money-metric measure, with 60 per cent of '\$1 a day' poor households located in the bottom two deciles of the PAT indicator. It seems reasonable to infer that since PWR poor households match PAT poor households, and PAT poor households match poverty line poor households, the majority of PWR poor households are also poverty line poor households.

However, this relationship is complex and needs further unpacking. For example, spatial differences are also important, and the strength of these relationships will differ between provinces and between urban and rural areas. Households in the more rural provinces of South Africa, such as the Eastern Cape or KwaZulu-Natal, are more likely to show a stronger correlation between housing type and income than households in urban Gauteng or the Western Cape. Moreover, relational poverty categorisations may be more difficult to operationalise in communities that are more unequal than is the case in areas such as those surveyed in the generally poor Limpopo Province. However, this case study does support the merit of triangulating different methodologies as well as the usefulness of targeting instruments such as PAT and PWR for microfinance practitioners.

Notes

1. The CGAP Poverty Assessment Tool (PAT) is a survey-based poverty assessment methodology developed by CGAP (the Consultative Group to Assist the Poorest) to allow for external assessment of the poverty outreach of MFOs.
2. The analysis in this article uses the Household Subsistence Level (HSL) to generate poverty thresholds for each household based on their size, composition and location, and adjusted to 2000 prices. This yielded a mean poverty line of R1,073 per household. At the time of the surveys, the South African Rand was worth approximately \$0.13. See Carter and May (2001) for more information on the calculation of this threshold.
3. PPP = Purchasing Power Parity, meaning that the value is adjusted for the relative cost of living.
4. At the time of writing, the IES 2000 data set was weighted according to the 1996 population census. The population weights based on the 2001 census results had not been introduced. The introduction of the 2001 population weights will affect the poverty estimates presented in this profile.
5. CGAP is a consortium of 29 bilateral and multilateral donor agencies with the mission to improve the capacity of microfinance institutions to deliver flexible financial services to the very poor on a sustainable basis.
6. The standard questionnaire located in the CGAP Poverty Assessment Manual (CGAP 2000) was used to allow for international comparisons to be made, although some amendments were made to the questionnaire in order to suit local conditions.
7. A greater proportion of SEF's clients belong to the non-targeted programme, MCP. Clients selected from the targeted programme, TCP, were over-sampled in order to measure the effectiveness of the targeting instrument. See van de Ruit *et al.* (2001) for details of the methodology.
8. There were over 40 variables which were associated with the benchmark indicator. The indicators listed in Table 1 have significant relationships to the benchmark indicator. They consist of a wide range of characteristics of poverty, from the quality and quantity of food consumed, the quality of housing and access to infrastructure and services, the ownership of household assets and demographic data including education and employment levels. These indicators were then incorporated in the principal components model. Only one variable on household consumption, used as a benchmark indicator, is included in the data analysis: per person expenditure on clothing and footwear and was used during the screening process to identify common correlations. During the later stages of the analysis this indicator was treated no differently to other variables.

References

- Carter, M.R. and May, J., 2001, 'One kind of freedom: poverty dynamics in post-apartheid South Africa', *World Development*, Vol 29 No 12: 198–2006
- Consultative Group to Assist the Poorest, 2000, *Assessing the Relative Poverty of Micro-finance Clients: A CGAP Operational Tool*, Washington DC
- Filmer, D. and Pritchett, L., 1998, 'Estimating wealth effects without income or expenditure data – or tears: educational enrolment in India', *World Bank Policy Research Working Paper* 1994, Washington DC: Development Economics Research Group, World Bank
- Lanjouw, J.O., 2001, *Demystifying Poverty Lines*, www.undp.org/poverty/publications/pov_red/Demystifying_Poverty_Lines.pdf
- Leibbrandt, M. and Woolard, I., 1999, 'A comparison of poverty in South Africa's nine provinces', *Development Southern Africa*, Vol 16 No 1: 37–54
- Lipton, M., 1997, 'Editorial: Poverty – are the holes in the consensus', *World Development*, Vol 25 No 7: 1003–6
- Littlefield, E., Morduch, J. and Hashemi, S., 2003, 'Is microfinance an effective strategy to reach the Millennium Development Goals?', *CGAP Focus Note* 24, Washington DC: World Bank
- May, J., Ewang, P., Lund, F. and Wentzal, W., 1997, *The Experience and Perceptions of Poverty: The South African Participatory Poverty Assessment*, Durban: Praxis Publishing
- Microcredit Summit Campaign, 2002, *State of the Microcredit Summit Campaign Report*, www.microcreditsummit.org/pubs/reports/socr/2002/socr02_en.doc
- Montgomery, M.R., Gragnolati, M., Burke, K.A. and Paredes, E., 2000, 'Measuring living standards with Proxy variables', *Demography*, Vol 37 No 2: 155–74
- Morduch, J., 2000, 'The microfinance schism', *World Development*, Vol 28 No 4: 617–29
- Morduch, J., 1999, 'The micro-finance promise', *Journal of Economic Literature*, Vol 37: 1569–1614
- Morris, S.S., Carletto, C., Hoddinott, J. and Christiaensen, L.J.M., 2000, 'Validity of rapid estimates of household wealth and income for health surveys in rural Africa', *Journal of Epidemiol Health*, Vol 54: 38–87

- Narayan, D., with Patal, R., Schafft, K., Rademacher, A. and Koch-Schulte, S., 2000, *Voices of the Poor: Can Anyone Hear Us?*, New York: Oxford University Press
- Reddy, S. and Pogge, T., 2003, *How Not to Count the Poor*, www.socialanalysis.org
- Sahn, D.E. and Stifel D.C., 2000, 'Poverty comparisons over time and across countries in Africa', *World Development*, Vol 28 No 12, Oxford: Elsevier Science Ltd
- Shaffer, P., 1996, 'Beneath the poverty debate: some issues', *IDS Bulletin*, Vol 27 No 1: 23–35
- Simanowitz, A., 2000, 'Targeting the poor: a comparison between visual and participatory methods', *Small Enterprise Development*, Vol 11 No 1: 29–39
- Small Enterprise Foundation (SEF), 2000, *Annual Report*, Tzaneen, South Africa
- Statistics South Africa, 2002, *Income and Expenditure Survey*, Pretoria: Statistics South Africa
- van de Ruit, C., May, J. and Roberts, B., 2001, 'A poverty assessment of the Small Enterprise Foundation on behalf of the Consultative Group to Assist the Poorest', *CSDS Research Report 39*, Durban: University of Natal
- World Bank, 2001, *World Development Report 2000/2001: Attacking Poverty*, New York: Oxford University Press
- Zeller, M., Sharma, M., Henry, C. and Lapenu, C., 2001, 'An operational tool for evaluating poverty outreach of development policies and projects', *Food Consumption and Nutrition Division Discussion Paper 111*, Washington DC: International Food Policy Research Institute