Estimates for Poverty Alleviation in South Africa, with An Application to a Universal Income Grant

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Abstract

Through the use of the standard tools of poverty analysis, this paper attempts to firstly measure the minimum financial contribution required from the state to eliminate poverty in the society. Secondly, we measure the absolute and relative household poverty impact of instituting a universal income grant, set at different monthly values. Finally, a brief costing exercise of such a grant is undertaken. The minimum financial contribution simulations are very useful insights into the scale and nature of the poverty challenge in South Africa. The universal income grant numbers testify to the importance of balancing the undoubted need for poverty alleviation as against the pressure on the fiscus. such interventions are likely to induce.

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Table of Contents

Introduction

Previous analysis of the South African labour market has made it clear that employment in the medium-term will be provided in the main to those individuals at the top-end of the skills ladder (see Bhorat & Hodge, 1999). These employment shifts indicated massive job losses, particularly in the primary sectors, matched on the other hand by significant increases in the demand for labour in the services sectors, notably in financial and business services. In terms of skill levels, this sectoral change in employment revealed that the need for highly skilled workers (concentrated in the services sectors) has risen dramatically. In contrast, the demand for unskilled workers plummeted, with the restructuring of the public sector a significant post-apartheid contributor. Importantly, these employment trends are likely not only to continue, but in all probability to intensify over the medium term. Simplistically, the winners have been the highly skilled, while the losers have been almost without exception, unskilled workers.

In terms of the unemployed, this means that those individuals who are not skilled or have low levels of education will in all probability not get a job. Furthermore those who are older and not well-educated will most likely never obtain a job in their lifetime. Many of the unemployed are indeed, unemployable. It is primarily within the context of these empirical co-ordinates then, that a policy debate has emerged around the notion of basic income grant to all individuals in the society. It is to this policy debate that this paper turns, while attempting at the same time to link the issues within the debate to the empirical work that has preceded this paper.

The specific intention of undertaking these policy simulations is to determine, firstly in a hypothetical world, the cost to the state of alleviating poverty through an extensive income transfer scheme. This section of the paper is deliberately general and somewhat grandiose, as its focus is to deliver baseline estimates of what the potential once-off costs of different income transfer schemes could be. Different permutations of such a hypothetical income transfer scheme are considered, through utilising an established methodology drawn from the approach of the FGT poverty analysis. The second component of the paper utilises the same methodology, but differs on two counts: firstly a more recent, unofficial, data set is used and secondly simulations are undertaken on the basis of the specific policy proclamations that have been made on a universal income grant for South Africa.

The Theoretical Approach

The most useful measure for simulating the effects on poverty of various policy interventions is the poverty gap measure. The poverty gap measure is derived from the general class of poverty measures developed by Foster, Greer and Thorbecke (1984). The FGT index of poverty measures, can be represented in general form as:

$$P \quad \frac{1}{n} \sum_{i\ 1}^{n} \quad \frac{z \quad y_i}{z} \quad \Big| \; y_i \quad z \qquad (1)$$

where n is the total sample size, z is the chosen poverty line, and y_i is the standard of living indicator of

agent *i*. The parameter measures how sensitive the index is to transfers between the poor units. Note that the index is conditional on the agent's income, y_i, being below the designated poverty line, z. The poverty gap measure (PG) is generated when =1, and therefore for a given poverty line z[1] is presented as:

$$P_1 \quad \frac{1}{n} \sum_{i \ 1}^{n} \quad \frac{z \quad y_i}{z} \ \Big| \ y_i \quad z \qquad (2)$$

As is clear, the PG represents a direct measure of agents' incomes relative to the poverty line. It is a money metric of poverty in the group under scrutiny. A first advantage of the FGT index, is its additive decomposability, which allows for sub-group poverty measures to be summed to form a society-wide measure without any loss of generality. More importantly here, the PG measure, in being linked to money values, can be utilised to run simulations on the poverty impacts of income transfers to the poor for any given reference group in the society. Remembering that P_1 is a measure not simply of how many poor agents there are, but also of how poor the poor are, one arrives at a fairly nuanced analysis of the welfare outcomes of poverty alleviation strategies.

Utilising the poverty gap measure then, it is possible to calculate the minimum financial cost of poverty alleviation. This is done by assuming that the poverty outcome in each sub-group is for P_1 to be zero. Put differently, it means that the income to each agent in the sub-group or society (y_i), would at least be equal to the value of the poverty line (z). This value can be determined from the equation (2) by calculating $\sum_{i \ 1}^{n} (z \quad y_i) \ \Big| \ y_i \quad z$. In other words, we sum the value of the resources required to place each agent in the society just above the poverty line.

A reformulation of this, and one that is easier for calculation purposes, is nzP_1, which is derived directly from equation (2). Using the latter as a basis, we can therefore present the minimum financial cost of alleviating poverty as measured by P_1, to the sub-group or society by the value associated with nzP_1 (Kanbur,1987:71). This figure represents the minimum commitment required of the state in that it assumes perfect targeting, with zero administrative and other costs generally associated with welfare transfer schemes. It is also assumed that the scheme would elicit no behavioural responses from any potential recipients. These responses are particularly important when individuals' returns to labour supply fall within the range of the transfer value. While these assumptions are of course extreme, and are discussed in greater detail below, the value of nzP_1 does provide a very useful first step in trying to gauge the importance and magnitude of the problem facing the society or the public sector.

The value of nzP_1 can be extended to include sub-divisions of the total sample. Hence, what can be determined is a matrix of the minimum financial commitment required to eradicate poverty amongst different groups at the household and individual level in the society.

[1] If we assume an infinite number of poverty lines, we can then trace what is known as the Poverty Deficit Curve, which is represented as: $P_1 \quad \int_0^z \frac{z \quad y}{z} \quad f(y)dy$

This is the area under the Poverty Incidence Curve, which is associated with the headcount index.

A Generic Estimate for Poverty Alleviation

Utilising the above methodology, it is possible to estimate the once-off costs of eradicating poverty amongst different groups in the society. An important conceptual issue is to deal adequately with the unit of analysis in the different simulations. This relates to the problem of individuals and households in poverty analysis. In the language of the labour market, individuals earn or receive income, but from a strict poverty perspective it is households that should be examined when trying to understand income in relation to poverty something alluded to but not adequately dealt with above. The analysis here will be diligent in trying to ensure that both individual and household level impacts of poverty alleviating expenditure are adequately dealt with. This is particularly important, as each approach offers separate conceptual advantages.

Expenditure for Zero Poverty

It was noted that the minimum expenditure required to yield zero poverty in the society is represented by nzP_1. The tables below provide these estimates for different sub-groups in the society. A few things need to be noted about the tables. Firstly, the analysis is based on the October Household Survey of 1995 (OHS95), which sampled about 30 000 households, drawn from 10 selected households in each of 3 000 clusters. For the household-specific data, the accompanying Income and Expenditure Survey (IES) was also utilised, and income rather than expenditure data manipulated to estimate household earnings. Secondly, for all the calculations that follow, the household poverty line chosen was R903 per month, a scale based on May et al (1995). The resultant individual poverty line drawn directly from this measure was R293 per month, based on the assumption, albeit simplistic, of an average of just over three individuals in a household. Given that the expenditure figures below will be presented as annual commitments, the equivalent household poverty line is R10 836 and the individual annual poverty line, R3 516. Finally, given the date of the survey, the money values presented are in 1995 prices.

Table 1: Minimum Poverty Alleviation Expenditure for Households[2]

Sub-Group	No. of Households (n)	No. of Poor Households	Poverty Measure (P_1)	Expenditure per annum. (R. bill.)	% of Total National Budget Exp.
Total	*9 475 165*	*3 010 855*	0.125 1	12.8	8.29
African	6 625 570	2 749 295	0.1180	12.1	7.82
Coloured	783 595	187 707	0.0060	0.6	0.40
Asian	249 906	11 356	0.0001	0.01	0.01
White	1 816 094	62 497	0.0010	0.1	0.07
Urban	5 122 047	831 863	0.0360	3.7	2.39
Semi -urban	177 302	52 081	0.0020	0.2	0.13
Rural	4 175 816	2 126 911	0.0871	8.9	5.77

[2] The decomposability properties of the FGT measure is particularly useful here, and the P_1 measures are calculated according to the formula, $P \frac{\sum_{j=1}^{m} P_j n_j}{n}$ where the *j* individuals are summed by the *m* sub-groups in the sample and then weighted by the total sample,*n*, to derive the composite P_1 value. It should be noted that using this formula, the value for the minimum financial commitment by *m* sub-groups will be equal to $nz \sum_{j=1}^{m} \frac{n_j P_j}{n}$. In this table and all that follow, the poverty measure P_1 represents weighted shares of total poverty.

Table 1 provides baseline estimates of the minimum financial commitment required to eradicate poverty at the household level, and therefore is based implicitly on the assumption that each household's poverty gap is perfectly predicted. The different sub-groups of households, are those characterised by the race of the household head and the location of the household. The total number of households in the society is about 9.5 million, of which about 3 million are poor households. The national poverty gap measure for this group is about 0.13. As a consequence, the minimum financial commitment necessary to eradicate poverty at the household level in the economy using the 1995 data, is approximately R12.8 billion per annum. The state's total expenditure in 1995, at current prices was about R154.9 billion, and thus the cost of eradicating household poverty in the society constitutes 8.29percent of this expenditure.

In terms of the race-household distribution of public expenditure, a disproportionate share needs to be allocated to African households. While African households form about 70 percent of the total household population, they constitute 95 percent of poor households in the society. As a result R12.1 billion of the total expenditure needs to be allocated to households where the head is African. Coloured households are marginally under-represented amongst poor households relative to their share in the total household population. Coloured households thus form 8.3 percent of the population, and 4.8 percent of the required poverty eradication expenditure. The commitment needed from government for these households is less than 1 percent of total expenditure outlays. No significant financial commitment is required from the fiscus to eradicate poverty amongst Asian and White households. For White households, despite the fact that they form close to 20 percent of all households in the society, the required commitment from the state constitutes under 1 percent of the poverty eradication expenditure. The location results reveal the importance of rural household poverty in South Africa. To eradicate poverty amongst rural households, the state would need to commit at least an additional R8.9 billion per annum, constituting 5.8 percent of the state's total expenditure in 1995. Notwithstanding the expected predominance of rural household poverty, 30 percent of fiscal expenditure on poverty alleviation would still need to be allocated to urban households.

The household poverty alleviation figures may be complemented by a description of the magnitude of commitment required from the state, by the different labour market cohorts in the society. In a more general vein, this is an analysis of poverty and public expenditure at the individual rather than the household level. Table 2 attempts to achieve this division of individual poverty alleviation expenditure, by calculating the value of nzP_1 for individuals identified by their labour market status, where z is now R293 per month, and the unemployed are of course zero earners.

The data illustrates, for example, that the state would need to spend approximately R15 billion per annum more, to keep all individuals in the labour force out of poverty. This static figure constitutes 9.7 percent of total government spending in 1995. Note that the individual expenditure value is greater than the household figure above, indicating that the cost to keeping a household out of poverty involves economies of scale not realised when dissecting the sample by individuals only. In particular, it reflects the fact that some individuals who are earning low or zero wages, belong to households that are not poor, particularly in urban areas. The racial division of the labour force again shows the dominance of African individuals. While the state would need to spend about R485 million per year on

Table 2: Minimum Poverty Alleviation Expenditure for Labour Market Individuals

Sub-Group	No. of Individuals (n)	No. of Poor Individuals (q)	Poverty Measure (P_1)	Expenditure per annum (R. bill.)	% of Total National Budget Exp.
Labour Force					
Total	*13 817 522*	4 499 617	*0.3100*	*15.1*	9.72
African	9 550 773	3 971 141	0.2700	13.1	8.47
Coloured	1 509 564	379 631	0.0300	1.5	0.94
Asian	414 511	49 675	0.0000	0.0	0.00
White	2 342 674	99 170	0.0100	0.5	0.31
Urban	8 528 908	2 100 535	0.1600	7.8	5.02
Semi-Urban	263 791	81 463	0.0200	1.0	0.63
Rural	5 004 374	2 301 880	0.1300	6.3	4.08
Employed					
Total	*9 947 208*	721 625	0.03	1.0	0.68
African	6 146 540	622 992	0.03	1.0	0.68
Coloured	1 191 020	84 206	0.00	0.0	0.00
Asian	364 780	1 932	0.00	0.0	0.00
White	2 244 868	12 495	0.00	0.0	0.00
Male	6 127 107	269 078	0.01	0.4	0.23
Female	3 820 101	452 547	0.02	0.6	0.45
Urban	6 546 947	182 856	0.01	0.3	0.23
Semi-urban	189 015	10 036	0.00	0.0	0.00
Rural	3 207 066	528 733	0.02	0.7	0.45
Agriculture	1 266 183	288 918	0.01	0.4	0.23
Mining	463 743	2 085	0.00	0.0	0.00
Manufacturing	1 497 292	21 833	0.00	0.0	0.00
Construction	92 470	10 386	0.00	0.0	0.00
Utilities	472 457	370	0.00	0.0	0.00
Wholesale	1 730 487	68 001	0.00	0.0	0.00
Transport	510 099	4 081	0.00	0.0	0.00
Finance	643 354	2 526	0.00	0.0	0.00
Comm. Services	3 271 123	323 425	0.02	0.6	0.37
Manager	570 923	7 201	0.001	0.03	0.02
Professional	351 518	347	0.000	0.0	0.00
Technicians	1 137 083	3 698	0.000	0.0	0.00
Clerks	1 205 348	10 194	0.001	0.03	0.02
Service	1 124 283	30 872	0.001	0.03	0.02
Skilled Agric.	129 267	9 143	0.000	0.0	0.00
Craft	1 211 344	25 556	0.002	0.07	0.05
Machine Operators	1 152 070	26 551	0.002	0.07	0.05
Domestic Helpers	379 684	22 973	0.001	0.03	0.02
Agric. Labourer	944 531	250 972	0.008	0.27	0.18
Mining Labourer	256 891	8 925	0.001	0.03	0.02
Manuf. Labourer	352 742	12 770	0.000	0.0	0.00
Transport Labourer	38 307	934	0.000	0.0	0.00
Domestic Workers	713 035	267 439	0.013	0.45	0.29

white workers in order to keep them out of poverty, the corresponding figure for Africans is 27 times greater. The racial disparities are also evident in that Africans form 69 percent of the labour force but 88 percent of all poor individuals in the labour force, while the corresponding figures for Whites are 17 percent and 2.2 percent.

The second set of figures for the labour market concentrate on employed individuals, by race, gender, location, sector and occupation. It is immediately apparent that the required resources from the fiscus decline sharply when only employed individuals are included. The expenditure required falls by over R14 billion, suggesting that the large numbers of unemployed would capture a substantial portion (93 percent) of the state's poverty eradication expenditure. Hence, a labour market focused poverty eradication programme would be overwhelmingly targeted at the unemployed. It is tempting then to describe the fault line of poverty in the labour market, as between the employed and the unemployed. However, as the discussion below will illuminate, pockets of poverty do exist amongst specific categories of the employed as well that may require modification of this strict division.

Expenditure on the employed by race, once again yields over-expenditure on Africans, relative to their share in the population. The financial resources required for the employed according to gender, shows greater spending is required for women than men. Despite the fact that women form only 38 percent of the workforce, the state needs to spend twice as much on poor employed females compared to males in order to end poverty in this cohort.

It is the sector and occupation cohorts though that provide for an interesting analysis of labour market poverty. At the sectoral level, the two poorest sets of individuals are those in Agriculture and Community and Social Services. These two sectors account for 85 percent of all the poverty amongst employed individuals in the labour market. Community and Social Services has marginally more poor individuals than Agriculture. These two sectors account for close to 90 percent of all the required expenditure on the employed poor. More specifically, the state would need to spend about R400 million in Agriculture and R600 million in Community and Social Services every year to eradicate poverty in these sectors. This sectoral picture of poverty is mirrored in the poverty results by occupation. The two poorest occupations are Domestic Services and Agricultural Labourers. These two occupations account for 72 percent of all the employed poor in the labour market. Note that there are more poor individuals that are domestic workers than farm labourers. As a result, the state would need to spend about R450 million per annum in domestic services versus R270 million amongst farm workers, to eliminate poverty amongst these cohorts. These two occupations would have accounted for 0.47 percent of the government's total expenditure in 1995.

From table 2 then, it can be argued that the majority of public expenditure would need to be committed to the unemployed. A strict separation in poverty terms between the employed and the unemployed does not, however, exist. This is particularly true in the case of farm workers and domestic workers who represent the core of the working poor in the labour market. These two groups of workers would require a substantial public expenditure commitment aimed at poverty reduction. This suggests that should public expenditure take the form of a labour market intervention, due

consideration should be given to the fact that poverty exists not only amongst the unemployed, but also amongst sections of the employed. There would remain though, the real danger of disincentive effects on the labour supply decision of these two cohorts of workers, from this type of government support.

Perhaps a stronger mechanism for displaying this shared poverty amongst the unemployed and a segment of the employed is found in Table 3. The table presents household level data, but these are households categorised according to their labour market status. Hence each labour force individual – in this case domestic workers, farm workers and the unemployed – is linked back to their respective households. The sub-groups therefore, are of households characterised by a labour market status variable. The sample in each category is mutually exclusive. Hence, the households that domestic workers are found in, refers specifically to those households where domestic workers, and no unemployed individuals or farm workers, reside. This is to avoid double-counting in our poverty measures, which would bias our poverty gap estimates. In addition, the households wherein combinations of these three labour force types are found, are included under the sub-group termed 'Combined'. Note that this category represents a minor share of these selected indigent household types. The data illustrates that while these four household types account for 54 percent of the total population, they represent 73 percent of all poor households in the society[3]. In terms of trying to gain a labour market view of household poverty then, it is evident that these four sub-groups of households are a fairly strong representation of how labour market earnings generate the observed household poverty levels in the society.

In terms of public expenditure, the state would need to spend over 70 percent of its total poverty eradication budget on these households. Hence, over two-thirds of fiscal support for the poor would need to be targeted at only four types of labour market groupings in the society, accounting for 6.4 percent of the government's total expenditure. The largest share of the additional annual expenditure would accrue to households with unemployed individuals (R5.9 billion), followed by farm worker (R1.8 billion), combined worker households (R1.4 billion) and then domestic worker households (R800 million). Ultimately, if one were to use a general targeting rule of capturing the most disadvantaged labour market participants, together with ensuring that their households were the recipients of public support, this sub-group meets the requirement in a powerfully optimal manner.

With regard to farm workers and domestic workers, an interesting switch occurs when moving from the individual level data to household data. In the table 2 domestic workers were poorer than farm workers, and hence required greater expenditure than the latter to place them out of poverty.

Table 3: Minimum Poverty Alleviation Expenditure for Selected Households

Sub-Group	No. of Households (n)	No. of Poor Households	Poverty Measure (P_1)	Expenditure per annum (R. bill)	% of Total National Budget Exp.
Total	9 475 165	3 010 855	0.1251	12.8	8.29
Domestics	407 247	185 841	0.008	0.8	0.52
Farm workers	662 888	424 002	0.018	1.8	1.16
Unemployed	3 386 180	1 371 302	0.058	5.9	3.82
'Combined'	698 632	230 745	0.014	1.4	0.92

[3] The category for the unemployed refers to households where the unemployed reside. There may of course have other income earners co-resident in the household, as long as they are not, for our purposes here, earning an income through domestic or farm work.

However data on which Table 3 is based make it clear that farm workers come from poorer households than domestic workers. Not only is the number of farm worker households in poverty larger than those of domestic workers, but the intra-group poverty measure, not shown in the table, is also higher for farm workers. The household Headcount measure for domestics is 45.63, while for farm workers it is 63.96. The respective P_1 measures are 0.18 for domestics and 0.25 for farm workers. A possible reason for this outcome is that farm worker households are by their very nature found in rural or semi-urban areas. This location effect is a strong predictor for greater household poverty, given the nature of rural labour markets and the returns provided to labour in these areas. Hence, the data shows that close to 92 percent of all farm worker households are in rural areas, while the corresponding figure for domestic workers is 49 percent. A second reason for this outcome was tested, namely that the probability of multiple earners is greater in domestic worker households, so increasing the total household income earned. The data illustrates however, that this is an unlikely source of the poverty differential, as the number of earners per household type is fairly equal. Farm worker households have on average 1.8 earners, while domestic worker households have about 2 earners each.

Another interesting facet of the individual and household differences, is comparing the unemployed as individuals to the households they live in. Hence, because the unemployed by definition earn no income, they are as individuals the poorest in the labour force. However, at the household level, the dynamic changes. While this sample of households therefore, clearly outnumber those of any other poor sub-group, the poverty measures tell a slightly different story. The poverty gap measure for households containing the unemployed is lower than that of domestics and farm workers. The household intra-group P_1 measure (again not shown in table 3), amongst the unemployed households is 0.16 while the headcount index is 40.50 –compared to 0.18 and 45.63 amongst domestics and amongst farm workers, 0.25 and 63.96. Put differently, while there are more unemployed households living in poverty, so generating the largest share of overall household poverty, the extent of poverty within this sample is lower than amongst domestic or farm worker households. It would appear then that farm workers come from the poorest households in the society, while the unemployed in fact live in households that are generally better off than the other two categories.

There are a few lessons in the above empirical experiments for policy prescriptions. Firstly, the data suggests that despite the very strict assumptions of zero transfer costs in the income transfer, the value of the financial commitment asked of the state for both individuals and households is fairly modest.

This is supported by comparisons with the relatively large expenditure outlays on other functions of government. Secondly, the markers of household and individual poverty, such as race, location and occupation, are important determinants of this expenditure. An extension here is that labour market poverty should not simply be expressed as a distinction between the employed and the unemployed, given that pockets of deep poverty do prevail amongst the employed. Thirdly, the choice of generic sub-groups in the form of individuals or households significantly alters the description of poverty, and therefore the magnitude of expenditure allocations. Finally it is evident that should the state opt to target those households with domestic workers, farm workers or the unemployed residing in them, a large proportion of poverty in the society will be captured. As such, a targeting of expenditure in this way involves a creative and effective manner in which to give credence to both the individual and

household dimensions of poverty.

The above estimates however suffer from a number of constraints, in relation to the specific income grant proposals that COSATU, the Department of Welfare and others have tabled. Firstly, we modelled the cost of reducing poverty to zero in the society, whereas the thinking has been primarily around a universal income grant set at a specific value. Secondly, the above has tried to identify the most vulnerable household- and individual-types in the society, and sought then to estimate the cost of eradicating poverty amongst these groups. This exercise is extremely illuminating in providing for a poverty gap analysis of the indigent, but does remain at an arm's length to the specific proposals of the Basic Income Grant (BIG). Given these limitations, the intention of the following section is to try to run a set of simulations that more closely match the current Basic Income Grant proposals being debated.

Simulations for a Universal Income Grant

As stated above, the simulations in this section are more closely linked to the specific proposals on a BIG tabled variously by the union movement and the Department of Welfare. We try here to look in a fair degree of detail at the relevant covariates that identify the national sample of households, in the event of a universal income grant. This is followed by more specific estimates of the poverty-reduction effects that may arise with a grant set at different levels. The section concludes with a tentative attempt at costing the grant under different assumptions.

Preliminary Descriptive Statistics

Unlike the previous segment of the paper, we utilise the Income and Expenditure Survey for 1999 (IES99) here. The IES99 is a simulated update of the Income and Expenditure Survey of 1995, which surveyed over 29,500 households that were randomly selected. The IES99 is thus based on the most comprehensive coverage of income and expenditure information in South Africa. The IES99 is simulated in the sense that a data company, Wefa Southern Africa, unofficially updated the 1995 IES on the basis of a number of different criteria including:

1. Re-weighting the population to reflect mid-1999 population totals;
2. Benchmarking total income earned by households on the 1999 estimate of total income in the national accounts;
3. Benchmarking expenditure on Bureau of Market Research estimates of expenditure by product type (from report no. 261, "Household Expenditure in South Africa by Province, Population Group and Product", 1999).

We can therefore be fairly confident that we have, in the IES99, a robust representation of household data, albeit an update on the raw data collected from the 1995 IES. Given the nature of the data, and the fact that it has remained fairly under-utilised within the South African research community, it may be useful to present a few basic descriptive statistics from the data particularly as they relate to the simulations that will follow.

Table 4 therefore firstly presents the weighted sample of households within the data set. One of the advantages of this data set is that the 1996 Census weights are used, as opposed to the 1991 weights

Table 4: Selected Descriptive Statistics of Sample

Race/Gender of HH head	African	Coloured	Asian	White	Male	Female	Total
Sample	19290	3764	1040	5485	20418	9161	29579
Weighted	*9224276*	*364799*	*118750*	*1726424*	*7680274*	*3753975*	*11434249*
Share	*80.67*	*3.19*	*1.04*	*15.1*	*67.17*	*32.83*	
HH Size (Mean)	4.78	4.53	4.18	2.88	4.39	4.68	4.49
Household Income							
Mean	31062	41626	91777	130976	56729	27447	47116
Median	17318	27488	60452	96233	25779	15165	21442
10th perc.	6355	8634	20842	24930	7259	6200	6484
90th perc.	67478	88405	173320	245385	134322	60194	110829

used in the IES95. This makes the universal income grant simulations here far more relevant, given that updated demographic figures are being used. In comparison with the 1991 Census-weighted figures provided in Table 3, it is clear that the number of households in the society is larger, at approximately 11.4 million clearly given that the 1996 Census weights were used. It needs to be remembered that the race and gender figures refer to the household head. The figures suggest as is well-known that 81 percent of all households in the society are African, followed by 15.1 percent for White-headed households.

Interestingly, the data suggests that very close to a third of all households in the society are female-headed. While the concept of the household head is a problematic one in and of itself, this result does suggest a fair degree of feminisation of household headship.

One of the important constraints in the data is that we have information at the household level, but limited individual-level information. The survey provides for the race, gender and age of each individual in the household only. So, drawing very detailed individual profiles at the household level to gain a better understanding of intra-household dynamics is not possible with the data. In addition, the weights used in the survey are household weights and not individual-level weights. As a result, we cannot work with a national sample of individuals in the society in an attempt at, for example, deriving an estimate of the total cost of a universal income grant scheme set at a particular level. Put simply, if we instituted a grant of R100 per individual, the survey cannot tell us the total cost, because the weights are at the household and not the individual level.

While not being able to cost the scheme accurately, the data does allow for the construction of a household size variable[4]. The household size variable of course then means that a hypothetical income grant can then be accurately applied to each household. Hence, a household with 4 members will get a grant twice as large as a household with 2 inhabitants. What this means of course is that we have information on the total income entering each household as a result of the income transfer. Based on this, as the next section will illustrate, fairly good household poverty-reduction indicators as a result of a grant can be simulated. Ultimately then, while the total cost of the scheme is not possible to derive from the data, we can derive household poverty reduction effects something that no other available

[4] If one knows the race, age and gender of each individual in the household, then a simple re-coding of one of these variables allows for the construction of a household size variable.

data set can in fact deliver as accurately as the one in use here.

Given the above introduction to the constraints of the data though, the household size variable becomes pivotal in gleaning interesting results from the data. Table 4 therefore also presents the mean household size, by race and gender of household head. In the first instance, the national mean household size is 4.49, while the median (not reported) is 4. It is evident, firstly, that the African mean household size, at 4.78, is above the national mean and indeed higher than other racial groups. While African, Asian and Coloured household size is clustered around the over-4 size range, the mean size for White-headed households is dramatically less at 2.88. In addition, in terms of the gender of the household head, note that the mean size for female-headed households is above the national mean, higher than the male-headed figure, but below the African household number. An important point about these figures, and one that needs to be kept in mind when thinking about a universal income grant, is that larger households are likely to yield lower monthly income. Indeed, a close look at the data reveals that while the average total annual income of a household with 4 individuals is about R63 000, the figure for a household with 10 members is about R35 000 per annum. Put differently, a 10 member household will be earning on average about 1.8 times less than their counterparts with a smaller number of members[5]. In terms of a national income grant, it means that a fixed grant value delivered to each household in the society will go disproportionately to larger households, and by extension more will enter poorer households.

In addition to household size though, the initial household income levels determine the possible impact of a grant on the poverty status of the household. The data provided above, suggests that the mean annual household income for South Africa stands at approximately R47 000, translating into a monthly income of R3 926. The more distributionally sensitive median measure suggests a lower income, of about R1 787 per month. The 10th and 90th percentile figures provide initial information on the skewness in the distribution of household income. For example, the 10th percentile household nationally is earning a mere R6484 per annum.

The race-based figures reinforce this picture of inequality, as the 10th percentile households for African- and Coloured-headed households are earning between R530 and R719 per month. A very similar 10th versus 90th percentile figures are evident for female-headed households. The upshot from the data is firstly that high levels of income inequality mean a significant number of households are stacked up at the bottom-end of the distribution. More importantly though, a glance at the 10th percentile figures in particular, suggest that a monthly universal income grant of say R100 could conceivably increase household income quite substantially. For example, a R100 transfer to the 10th percentile African household would, in the unlikely event that one individual only was resident in it, increase household income by about 20 percent.

There are two missing pieces of information in the above analysis in that we have no benchmark by which to measure the impact of a universal income grant. The most appropriate under the circumstances would of course be a measure of poverty at the household level. The income levels above therefore would need to be understood within the context of absolute and relative poverty levels, something we turn to in the next table. Secondly, though, it would be relevant to examine the

[5] In terms of per capita household income, a dwelling with 3 individuals in it has a mean annual per capita income of R19127.4,while the corresponding figure for a 10-member household is R3510.23. This represents a differential of 5.4: 1, reinforcing the strong correlation being household size and poverty and the implicit pro-poor emphasis of the universal income grant.

impact of the grant on income inequality, and thus the requisite benchmarks are also presented in Table 5 .

Table 5: Measures of Poverty and Inequality by Race and Gender of Household Head

Household Head	Headcount	Poverty Gap Ratio (%)	Gini	Coeff. Of Variation
African	38.22 (0.021)	14.2 (0.142)	0.53	1.80
Coloured	21.51 (0.022)	6.6 (0.066)	0.48	1.13
Asian	3.73 (0.006)	0.9 (0.009)	0.47	1.23
White	3.03 (0.030)	0.8 (0.008)	0.46	1.25
Male	26.39 (0.029)	9.2 (0.011)	0.60	1.81
Female	43.52 (0.027)	17.0 (0.012)	0.53	1.81
Total	32.02 (0.029)	11.8 (0.011)	0.60	1.91

Note: Standard Errors are in parenthesis, and are corrected for according to frequency weights, the primary sampling unit and sampling stratification.

Table 5 therefore calculates a set of poverty and inequality measures for households in the society, which serves for our purposes here, as the pre-transfer poverty and inequality measures for the society. The data shows that in 1999, just under a third of South African households were poor. Specifically, of the estimated 11.4 million households in the society, approximately 3.7 million were below the poverty line. The poverty line used here was an annual household income of R12982.50. This was based on the 1995 household poverty line of R903 per month, drawn from May et al (1995), and updated using the core inflation figures for the period 1995 to 1999. The racial breakdowns reveal the maldistribution of this poverty incidence.

Hence, in terms of the data above we find that while about 38 percent and 22 percent of African and Coloured households respectively are poor, only 3 percent of White households and 4 percent of Asian households are earning below the poverty line. Given that access to income is derived primarily through the labour market, the differing opportunities and options available to Africans and Coloureds in the labour market, remain key to understanding this differential poverty status (see Bhorat & Leibbrandt, 2001). Apart from the concentration of poverty amongst Coloured and African households, it is evident that female-headed households in addition bear the brunt of indigence. Hence, the highest intra-group poverty incidence result is for female-headed households, where close to 44 percent are in poverty.

The poverty gap measures suggest that the mean (z-proportionate) distance of poor households from the poverty line is again differentiated by race and gender of household head. While poor African-headed households have an income that is on average 14.2 percent below the poverty line, the corresponding figure for White-headed households is 0.8 percent. Note though that the highest level of relative intra-group poverty is amongst female-headed households, who on average are 17 percent below the designated poverty line.

Finally, we have included two standard measures of inequality, the Gini coefficient and the coefficient of variation, to serve as our inequality benchmarks for the simulations that are to follow. The results confirm the exceedingly high levels of inequality in South Africa, with a national Gini measure of 0.60 and a coefficient of variation of 1.91. The highest levels of income inequality are found amongst female-headed households. This maldistribution of income remains high for African-headed and male-headed households.

Universal Income Grant Simulation Results

The descriptive statistics have played an important part in laying out the various sub-components of the simulation exercise. Hence, from the above we know firstly that we cannot cost the scheme using the IES99 data. Given that household and not individual weights are available with the data, we are not able to determine according to a nationally weighted sample, how much such a scheme would cost. Secondly, the data does however allow for the creation of a size variable. This then becomes a perfect numerical axis around which the impact of a grant can be calculated. Simply put, if we have the total household income and the size of the household, we can then simulate the transfer of the grant to each individual in the household by the requisite factor, to arrive at a post-grant household income. In comparing the pre-grant income with the post-grant income (derived from an annual pre-grant household income), we easily estimate the household poverty reduction effects of a grant. Thirdly and finally, what we have gained here in terms of the poverty effect, we would have lost had we used for example the Census 1996 figures, where all households are present in the sample, but actual income data is not.

Table 6 presents the first attempt at simulating the poverty effect of a universal income grant set at different levels. Firstly, the table measures the impact on poverty according to the Headcount Index: simply the impact the grant has on the number of people below the designated poverty line. We have expressed the headcount as a percentage here. The grant is set at 4 different values, namely R50, R100, R200 and R300 per month per individual. It is in turn applied according to the race and gender covariates used in the above tables. Hence, in the simulation, every individual in the sample is provided with an annualised grant value. The grant values are arbitrary, except for the R100 value which is based on the original Basic Income Grant proposal from the Congress Of South African Trade Unions (COSATU), which suggested a R100 per month universal grant.

Table 6 thus measures the contrasting poverty outcomes from the different grants on selected segments of the populace. Nationally therefore, a R50 income grant per month to each individual in the society would result in the headcount index falling from 32.02 percent to 23.34 percent, translating into a 27 percent reduction in the number of households below the poverty line. With a R100 grant the

Table 6: Estimated Headcount Reduction Effects from Different Grant Values

Race/Gender of HH head	African	Coloured	Asian	White	Male	Female	Total
Pre-Transfer Headcount	**38.22**	**21.51**	3.73	**3.03**	26.39	**43.52**	**32.02**
Post-Transfer Headcount Ratio and Reduction							
R50 grant	28.00 (0.016)	14.43 (0.018)	2.12 (0.005)	2.19 (0.004)	18.77 (0.022)	32.86 (0.022)	23.34 (0.022)
% Change	*-26.74*	*-32.91*	*-43.16*	*-27.72*	*-28.87*	*-24.49*	*-27.11*
R100 grant	18.66 (0.010)	10.10 (0.012)	1.71 (0.005)	2.00 (0.004)	12.46 (0.014)	22.32 (0.013)	15.70 (0.014)
% Change	*-51.18*	*-53.05*	*-54.16*	*-33.99*	*-52. 79*	*-48.71*	*-50.97*
R200 grant	8.59 (0.005)	5.62 (0.008)	1.17 (0.004)	1.50 (0.003)	6.15 (0.008)	9.80 (0.005)	7.35 (0.060)
% Change	*-77.52*	*-73.87*	*-68.63*	*-50.50*	*-76.70*	*-77.48*	*-77.05*
R300 grant	5.32 (0.004)	3.68 (0.004)	0.59 (0.003)	1.12 (0.002)	4.10 (0.005)	5.58 (0.003)	4.59 (0.004)
% Change	*-86.08*	*-82.89*	*-84.18*	*-63.04*	*-84.46*	*-87.18*	*-85.67*

Note: Standard Errors are in parenthesis, and are corrected for according to frequency weights, the primary sampling unit and sampling stratification.

headcount index falls from 32.02 percent to 15.7 percent – which results in halving the number of poor households in the society. With the R200 and R300 grant, the headcount reaches into single-digits, with the R300 grant for example reducing the share of households in poverty to about 5 percent.

Interesting results emerge from the race-based data. Hence, we see that for African household poverty with a R50 grant would fall from 38.22 percent to 28 percent, while the African headcount would be about 5 percent with a R300 grant. In sum then, for African households, the poverty reduction effect on the basis of the headcount index falls by between 27 and 86 percent, depending on the value of the grant. On the specific grant proposal of R100, the results here suggest that half of the sample of poor households, would be placed above the poverty line after the grant is received. For female-headed households the headcount falls from 42.32 percent to about 22 percent with a R100 grant to every individual in these households, and 6 percent after a R300 grant. Hence, after the state has disbursed R100 to every individual in these households, close to a third remain in poverty.

The problem with the above figures however, is that they only measure whether a household moves from below the poverty line to above it. This is problematic of course, given that the depth of poverty of a household would have changed through such a transfer. Hence, a household with one individual in it earning for example R5 000 per annum, with a R100 grant would be earning R6 200 annually: the household may still be below the poverty line, but is clearly less poor than it was. As the analysis of the previous section illustrated, the FGT index makes allowance for calculating the poverty gap index. The formal derivation of this index has been provided above. Suffice to say that for our purposes here we examine the intra-group changes in relative poverty, thus not presenting the shares-analysis that would for example be useful in a costing exercise.

Table 7: Changes in Poverty Gap with Universal Income Grant Transfers[6]

Race/Gender of HH head	African	Coloured	Asian	White	Male	Female	Total
Pre-Transfer Poverty Gap (%)	**14.2**	**6.6**	**0.9**	**0.8**	**9.2**	**17.0**	**11.8**
Post-Transfer Poverty Gap Measures							
R50 grant	8.2 (0.005)	4.0 (0.005)	0.6 (0.002)	0.7 (0.001)	5.4	9.8	6.8 (0.006)
% Change	*-42.25*	*-39.39*	*-33.33*	*-12.50*	*-41.30*	*-42.35*	*-42.37*
R100 grant	4.7 (0.003)	2.5 (0.003)	0.4 (0.001)	0.6 (0.001)	3.2 (0.004)	5.4 (0.003)	3.9 (0.004)
% Change	*-66.90*	*-62.12*	*-55.56*	*-25.00*	*-65.22*	*-68.24*	*-66.95*
R200 grant	2.1 (0.001)	1.3 (0.002)	0.2 (0.00)	0.4 (0.00)	1.6 (0.002)	2.2 (0.001)	1.8 (0.002)
% Change	*-85.21*	*-80.30*	*-77.78*	*-50.00*	*-82.61*	*-87.06*	*-84.75*
R300 grant	1.2 (0.001)	0.7 (0.001)	0.1 (0.001)	0.2 (0.001)	1.0 (0.001)	1.2 (0.001)	1.0 (0.001)
% Change	*-91.55*	*-89.39*	*-88.89*	*-75.00*	*-89.13*	*-92.94*	*-91.53*

Note: Standard Errors are in parenthesis, and are corrected for according to frequency weights, the primary sampling unit and sampling stratification.

Table 7 therefore attempts a simulation of the relative poverty, or poverty gap changes that will result from the grant set at the same 4 levels as Table 6. The P_1 measures provided in the table are representative of the average poverty gap for the designated group, and are expressed as a percentage. For example, amongst African households, the pre-transfer poverty gap expressed as a percentage measure is 14.2. This means that for the sample of all African households, the average poor African household earns about 14 percent below the poverty line, z. Note that the relative poverty positions of the different households are thus also informative. Hence, the average poor White household is much better off than the average African household, as it earns only about 1 percent less than the z.

In terms of the impact of the grant then, the relative poverty effects are quite powerfully displayed. In terms of the national sample, a R100 grant to each individual will result in the mean poor household earning 4 percent below the poverty line, as opposed to 12 percent translating into a 67 percent reduction in the average poverty gap for the society as a whole[7]. When compared with the headcount measures in table 6, the percentage change effect is larger here, given that we are measuring relative as opposed to absolute changes in indigence. With a R300 grant, the national results show that the average household will be earning 1 percent below the poverty line, as opposed to 12 percent – translating into a 92 percent reduction in the relative poverty gap for all households in the sample.

The race data, when compared with the previous table, suggest similar trends. Hence, we see that the average African-headed household, from earning 14 percent below the poverty line, with a R100 grant will then earn on average 5 percent below the poverty line. Clearly, in the case of the poverty gap, the effect of the grant is magnified, particularly so in the case of African- and female-headed households.

[6] The poverty gap measure is reported according to at least five decimal points. As a result, the percentage figures often are not directly deduced from the P_1 measures in the table, which are only according to two decimal points.

[7] The report of the Taylor Committee of Inquiry into a Comprehensive System of Social Security for South Africa, reported that the poverty gap would decline by 74% with a basic income grant of R100 per individual in the society (RSA,2002:63)

Hence, we see that, with a R50 grant, the poverty gap for these household types is close to halved. Indeed, through a R300 grant, the poverty gap across all household types would be almost reduced to zero.

As stated above though, what is perhaps more relevant about the poverty gap simulations in Table 7 is that we do not simply measure whether households have moved above the poverty line as a result of the grant. Rather the data is able to impart information regarding how much closer poor households have moved to the poverty line as a result of the grant.

The final simulation is a not a direct universal income grant intervention, but rather an estimation of the poverty reduction effects that may occur in the event of the age for qualification of the state pension being reduced. This simulation is undertaken purely for comparative purposes, and indeed in the national debate on the income grant, this particular variant has not been seriously considered. The labour demand patterns noted in the introduction arguably means that a significant cohort of the older unemployed are in fact highly unlikely to find employment in their lifetime. In recognising that there is this cohort of 'unemployable' individuals, the simulation undertaken examines the impact on poverty as a result of reducing the qualifying pensionable age from 60 to 40 (for women) and 65 to 45 (for men). We did not make the pension means-tested, and hence every individual within the new age boundaries received the old pension of R540 per month. The idea of running this simulation is simply to examine what the potential poverty alleviation effects would be if a somewhat reduced version of a universal income grant was instituted. The table therefore provides the poverty reduction effects as measured by both the headcount index and the poverty gap for a purely hypothetical policy intervention.

Table 8 suggests that a reduction in the pensionable age for African-headed households, would witness a 38 percent decline in the headcount and a 46 percent drop in the poverty gap measure. In addition for female-headed households, the figures are 29 percent and 39 percent respectively. Interestingly,

Table 8: Reducing the Pensionable Age for Men and Women and assuming all get R540 p.m.

Race/gender	*Pre-transfer H*	Post-Transfer H	% Change	*Pre-transfer* P_1	Post-Transfer P_1	% Change
African	*38.22*	23.51 (0.013)	*-38.49*	*14.20*	7.65 (0.004)	*-46.13*
Coloured	*21.51*	12.49 (0.013)	*-41.93*	*6.60*	3.44 (0.004)	*-47.88*
Asian	*3.73*	1.58 (0.004)	*-57.64*	*0.90*	0.42 (0.002)	*-53.33*
White	*3.03*	2.41 (0.005)	*-20.46*	*0.80*	0.65 (0.001)	*-18.75*
Male	*26.39*	14.30 (0.016)	*-45.81*	*9.20*	4.41 (0.005)	*-52.07*
Female	*43.52*	30.88 (0.019)	*-29.04*	*17.00*	10.42 (0.007)	*-38.71*
Total	*32.02*	19.74 (0.018)	*-38.35*	*11.80*	6.39 (0.006)	*-45.85*

Note: Standard Errors in parenthesis are corrected for according to frequency weights, the primary sampling unit and sampling stratification.

after White-headed households, this reduction in poverty is the smallest amongst the household categories. This would suggest that female-headed households (along with White-headed households) have a relatively low representivity of adults over the age of 40 for men and 45 for women. Put differently, this means that the age profile of adults in female-headed households is not particularly favourable to an age-based income grant intervention such as the one tested here. Apart from the outlier results of female-headed households, the remaining results suggest broadly that a reduction in the pensionable age as modelled here, would have an impact that lies somewhere between the poverty reduction effects of a R50 versus R100 income grant.

The above section then has attempted a formal modelling of the possible poverty effects that may result from the institution of a national income grant. As we have seen, the last simulation examined the poverty effects from a reduction in the pensionable age purely as a hypothetical comparator to the national income grant scheme currently being debated. An important value-added in the above simulations, is that we have modelled the impact on absolute and relative household poverty a factor that is crucial for policy evaluation purposes. One important caveat is necessary here, namely that the implicit notion of an income grant has not been assessed here. Criticisms of income transfer schemes abound, with issues such as targeting, labour supply incentive effects and ancillary costs looming large. The paper has deliberately steered clear of these issues, but the above simulations cannot and should not be seen in isolation from the arguments that are often raised against such schemes.

Simple Cost Estimates of a Universal Income Grant

A very preliminary attempt is made here to estimate the possible cost of instituting a basic income grant, set at the proposed value of R100 per month. The exercise below is important in the sense that the official Taylor Commission Report does not allude to the total relative costs of such a grant scheme, and indeed makes little reference to the possible financing options in the official report (RSA, 2002). Hence, Table 9 examines the potential cost of the R1200 per annum universal grant, and applies it to the 1996-2001 period, anchored around the official population estimates for the period. We assume that in the multi-year period, that the R1200 per annum is provided in 1999, and the remaining years are inflated or deflated accordingly by the consumer price index. In addition, we assume that each grant would entail a 19 percent administrative fee attached to it, a figure that is currently applicable to other forms of social assistance provided by the provincial authorities[8]. We then tabulate the total cost of the grant (direct plus administrative costs) as a proportion firstly of total government expenditure and secondly as a percentage of total welfare expenditure.

Table 9: Basic Cost Estimates of Instituting a R100 Income Grant

Year	Population (millions)[a]	Grant value (Rands p.a.)[b]	Total cost (R billion s)[c]	% of Total Expenditure[d]	% of Total Welfare Expenditure[d]
1996	40342	984	47 239	30.26	224.95
1997	41227	1068	52 396	29.52	221.64
1998	42131	1140	57 155	30.13	223.36
1999	43054	1200	61 481	30.13	226.12
2000	43686	1260	65 503	30.27	221.69
2001	44561	1332	70 633	30.22	207.25

[a]: Population figures are estimates based on registry of births and deaths, with the Census 1996 estimate as a base.
[b]: Grant value of R100 per annum assumed for 1999, and in(de)flated for years after (before) 1999.
[c]: Total Cost assumes a R19 per capita administrative cost
[d]: Based on Budget Review Estimates (National Treasury) for various years.

It is clear from the above estimates that the scheme would be expensive. For 1999 for example, the scheme would have cost about R61 billion, amounting to 39 percent of government's total expenditure commitments in that year, and more than double the Department of Social Development's budget in that year. Given the overview in table 9 of the state's social assistance commitments, within the context of other social service outlays, the Medium Term Expenditure Framework and indeed the debt burden, this is clearly a notion with highly significant fiscal implications. The size of the scheme is quite powerfully indicated through the fact that the operational cost only constitutes about 4 percent of total government expenditure and over the period an average of about 35 percent of total welfare expenditure. Indeed, in 1999 this operational outlay amounts to about R9.8 billion per annum. Note also though that these administrative costs do not include the additional staff costs that would be required to manage and run the scheme (van der Berg, 2002).

[8]This figure has been provided by a senior official of the National Treasury, through a personal communication.

The revenue options that have been unofficially mooted for the universal income grant include utilising the VAT system to fund the scheme, increasing personal income tax at the upper-end of the distribution, a tax on company profits and finally simply increasing the budget deficit (van der Berg, 2002). Whilst we do not intend to consider each of these financing options at length, it is clear that each of them pose significant problems. For example, financing through the VAT system would mean, using the 1999 figures, that the VAT system would need to generate an additional R61 billion in revenue, which ultimately requires increasing the VAT rate from its current 14 percent to 32 percent[9]. If the deficit-financing route was taken, the budget deficit for 1999 would balloon from its current 2 percent of Gross Domestic Product (GDP) to about 9 percent of GDP an increase from about R17 billion to R78 billion per annum. The suggestions for using the personal income tax or company tax system are equally onerous on the national revenue system. In 1999, total personal income tax revenue stood at about R86 billion, while the cost of the grant stands at over two-thirds of this personal income tax receipts in 1999. Finally, company tax receipts (including secondary tax on companies) constituted some R24 billion in 1999. The proposed grant cost in 1999 would be three times this revenue intake from companies[10].

Conclusion

This paper offers a number of important lessons about poverty and public policy. As a first approximation the analysis has yielded detailed baseline estimates of what, free of all additional costs, is required of the state to reduce poverty in the society. While these estimates do abstract from the real obstacles faced in such schemes, it is a first step in outlining the expenditure parameters of the poverty problem. In addition, the results show that a creative combination of individual and household level data can be very informative in the formulation of appropriate policy interventions. Relatedly, the centrality of the labour market and individual earnings in understanding poverty is displayed, and comes closer to providing some tools for policy-making. In combining these two units of analysis, we see that poverty in South Africa is readily condensed into three, labour market defined, household types.

The paper then proceeded to analyse the possible poverty effects that could be discerned through the institution of a national income grant system. It was made amply clear that while the poverty effects were possible to derive from one had to be clear about differentiating between the headcount and poverty gap measures. Hence, the results indicated that while absolute poverty shifts were witnessed through a grant scheme, shifts in the poverty gap were probably more important as an evaluation tool. Results indicate that according to the headcount index and depending on the value of the grant, household poverty would decline by between 27 and 80 percent nationally. When using the poverty gap measure, the figures are 42 and 92 percent. On the back of labour market reasoning, the simulation of the poverty effects when the pensionable age was reduced, reveals that the poverty effects are similar to the institution of a universal grant set between R50 and R100 per month. We closed off the discussion with a brief consideration of the potential costs of such a scheme, together with an extremely tentative review of the potential financing options of the scheme. On both these counts, it is evident that the pressures on the fiscus, either through the expenditure or revenue system,

[9] More realistically, if we assume that the scheme could be partly funded through reclaiming on VAT-related expenditure then even at the maximum reclaim value (which assumes an MPC of 1 for all individuals as well as no consumption of zero-rated commodities), then the contribution from VAT receipts still results in the grant costing some 26% of government's total expenditure and over 190 percent of total welfare expenditure.

[10] All these revenue estimates are derived from the 2002 Budget Review estimates (RSA,2002a)

would be enormous. It is precisely these type of hard costing exercises that cannot be seen in isolation from the obvious welfare enhancing effects of a universal income grant.

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