

# Poverty, inequality and human development in a post-apartheid South Africa\*

Vusi Gumede, PhD

Associate Professor: Development Studies, University of Johannesburg

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## *Abstract*

Although income poverty appears to have declined in the recent past, it remains high (Gumede 2008). Calculations based on the National Income Dynamics Study (NIDS) dataset suggest that 47% of South Africans live below the poverty line: 56% of blacks live in poverty compared to 2% of whites, using an arbitrary income poverty line of R502 per capita. This is taking place in a context of very high economic inequality in South Africa; the Gini Coefficient is estimated to be 0.69 (Bhorat and Van der Westhuisen 2010) – the economic inequality in SA differs from that of many African countries, because the South African one is largely along racial fault-lines. Pleasantly surprising though, is that the trend of the Human Development Index (HDI) for South Africa (SA) has generally been rising; in 1980 it was at 0.65 and it rose to 0.68 in 2007, as per the 2009 Human Development Report. Estimations based on NIDS depict a small further improvement of the HDI at 0.69 in 2008. Not surprising, the black population group has the lowest HDI at 0.63, compared to that of whites of 0.91. Similarly, the Human Poverty Index (HPI-1) for the black population group is too high (31.2) – the HPI-1 combines measures of life expectancy, child nutrition status, access to improved water sources, and income. Findings imply that inter-racial differences in human development are larger than differences across the richest and the poorest 20%. The other important issue is that human development and human poverty differs significantly by location: predominantly rural provinces have lower human development indices and higher human poverty indices. Given this and dynamics around poverty and inequality in the post-apartheid SA, there is a sense that the possible answer to these challenges is in the further restructuring of the economy – probably the most complex task.

*Key Words: Human development, South Africa, poverty, inequality, life expectancy, education, health, economy*

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\* First draft – not to be quoted without the author's permission: [vgumede@uj.ac.za](mailto:vgumede@uj.ac.za) & [gumede.vusi@gmail.com](mailto:gumede.vusi@gmail.com)

## 1. INTRODUCTION

This paper presents and analyses the estimated indices of human development and poverty in a democratic South Africa (SA). Given the history and the socio-economic realities, as part of the legacy of the political history of SA, it is necessary to examine the HDI and the Human Poverty Index (HPI-1) by population groups and provinces for SA. This paper starts by describing the data used to estimate the indices. It then explains the methodology applied to estimate the various standard human development indices, which is then followed by a detailed review of all the estimates used to calculate the indices for South Africa in particular. Then the composite estimates of the indices and the findings are discussed. Prior to concluding remarks, tentative views on policy responses are presented.

In the 2009 issue of the Human Development Report, South Africa's HDI is quantified by the United Nation Development Programme (UNDP), to have risen from 0.658 to 0.683, between 1980 and 2007 respectively. This places South Africa at the medium human development category with a ranking of 128 out of 182 countries. Moreover, estimates presented in this paper confirm this upward trend by further suggesting a marginal improvement of 0.01 of the 2007 HDI to 0.069 in 2008. Of note is that the black population group comes out with the lowest HDI at 0.63, compared to that of whites of 0.91. A Provincial analysis shows that Gauteng has the highest average HDI (0.81) whilst KwaZulu-Natal has the lowest HDI (0.60). Inter-racial differences in human development are larger than differences across the richest 20% and the poorest 20%.

The various indicators and indices presented confirm that race, gender and spatiality have not been sufficiently redressed. Indeed, as argued by some, little progress has been made in South Africa in so far as eradicating household poverty is concerned (see for instance, Gumede 2009). For example, the black population are still worse in all the measures of human development, and in relation to the human poverty index. Further, women come out worse than men. Rural areas continue to have lower human development and higher human poverty indices, which is reminiscent of apartheid South Africa. This suggests that the political history of South Africa, with its formal systemic discrimination of the majority black population group by the white minority, must have been deeply entrenched such that its legacy is still very much alive, sixteen years since attainment of democracy. Also, the findings imply that government has not succeeded in ensuring a more egalitarian society – the South African economic inequality, as measured by the Gini Coefficient, is

said to be the highest in the world. Whilst it may seem that growing economic inequalities are a global phenomenon, the challenge with the South African economic inequality situation is scale and racially related: it is too high and is mainly concentrated between the majority blacks and minority whites<sup>1</sup>.

## 2. DATA AND METHODOLOGY

### *Data*

The National Incomes Dynamics Study (NIDS) dataset is the primary data used to estimate the gender-, race- and province-specific human development indices for South Africa. The NIDS is an integrated dataset which permits estimating comparative HDIs across subgroups, and calculation of relative human development at different points in the income distribution – something that has not been done, at least for South Africa, before.

The NIDS is a nationally representative household survey collected in 2008 by Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town's School of Economics. It was commissioned by the South African government through The Presidency's Policy Coordination and Advisory Service, working with all the relevant government departments including Statistics South Africa (the official statistical agency of the government). The NIDS is intended to become a longitudinal dataset with revisits to the sampled households every 2 years – the households visited in 2008 are being visited again this year (i.e. 2010) and will be visited in 2012 and so on and so forth. The NIDS allows various other important estimates that other datasets do not readily allow. For instance, for the first time ever, South Africa would have human development indices by income quintiles<sup>2</sup>.

However, the benefit of having a single and coherent dataset that contains information on myriad socio-economic household issues can come at the expense of a smaller and less representative dataset. In particular, the Indian subsample is relatively small and likely to be imprecise for any inference specifically focused on this population group, hence the focus of this analysis is largely on the black and white population groups.

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<sup>1</sup> This point is shared by a number of South African scholars, including Servaas van der Berg and Haroon Borhat.

<sup>2</sup> The NIDS dataset contains information on more than 28 000 individuals in 7 305 households across South Africa, and has detailed information on expenditure, income, employment, schooling, health, social cohesion, etc (<http://www.nids.uct.ac.za/home>).

The Income and Expenditure Survey (IES) 2005/06 dataset, of Statistics South Africa, is used because the comparison of its results with the preliminary results from NIDS suggests that income data across provinces and population groups are consistent across these datasets (Argent, 2009). However, also important to highlight at this very outset is that the NIDS dataset has been reported to underreport male mortality by approximately 10 percent while exaggerating female deaths by about 10 percent, with an excess in the 15-59 age range and a shortfall in numbers above that range (Moultrie, 2009). However, as Moultrie (2009) evince the age specific mortality rates in the NIDS dataset are consistent with the SA's Actuarial Society's 2003 AIDS and Demographic Model, thus giving some confidence in the aggregate life expectancy calculations in the NIDS. In the main, it is the Indian sub-sample that is insufficient to enable reliable estimates of child mortality rates (which in turn affects estimates of life expectancies for the Indian population group). In fact, not a single Indian mother reported a death of a child in the past 24 months.

For education, as hinted above, the 2005/6 Income and Expenditure Survey (IES) of Statistics South Africa is used to estimate the correlation coefficient between educational attainment and an indicator variable on whether a person can read. The NIDS survey did not collect data on whether children within the household can read. Instead, it asked parents what the educational attainment of a child was. Given that reading and writing skills are the predominant indicators that help determine a child's progress through the early school years there is a fairly direct correlation between educational attainment (in grade 0, 1 and 2) and the ability to read with some variation across gender, race and localities. It is expected that this relationship remains fairly stable within a time frame of a few years and therefore use the 2005/06 IES survey data to estimate a proxy for reading ability (on a nominal scale of 0 for cannot read, 1 for able read) that adjusts for gender, race and locality. The findings of Argent et al (2009) that income data across provinces and population groups are consistent across both the NIDS and IES datasets should also give comfort to the estimations used regarding education.

### *Methodology*

Human development is the process of enlarging people's choices as well as raising their levels of wellbeing. The human development process in South Africa, therefore, is about an overall improvement in the quality of life of the people. Conventional poverty indicators focus narrowly on household income or consumption data. There are three most common (money-metric) measures of poverty: headcount ( $P_0$ ), poverty gap ( $P_1$ ) and squared poverty gap ( $P_2$ ). On the same token, however,

there are many convincing reasons, both conceptual and practical, for examining poverty through these measures. One reason is that such measures, taken together, are comprehensive enough, as each one of them makes it possible to be more specific on the nature, scope and magnitude of poverty being dealt with and thus allowing targeted policy and programmatic responses.

The headcount index (hereinafter termed  $P_0$ , generally simply denoted by  $HC$ ) measures the proportion of the population whose consumption (or other measures of standard of living) is less than the poverty line. Formally, that can be expressed as:

$$HC = \frac{1}{N} \sum_{i=1}^q 1 = \frac{N_q}{N} \dots\dots\dots 1$$

where  $N$  = total population and  $N_q$  = number of the poor in the population.

It is clear from reading equation 1 above that the headcount index is relatively easy to construct and to understand. However, it has the problem of assuming homogeneity in situations amongst those people under the poverty line. For example, an inherent ignorance towards the differences in wellbeing between different poor households is also visible. That is, it assumes all poor people are in the same situation. In other words, it does not cover the depth of poverty of the poor. By implication,  $P_0$  does not account for changes that occur below the poverty line. For example,  $P_0$  does not change regardless of whether the poor became poorer or ‘richer’, as long as they remain below the line.

The poverty gap index ( $P_1$ , denoted as  $PGI$ ) is the average, over all people, of the gaps between poor peoples’ living standards and the poverty line. It indicates the average extent to which individuals fall below the poverty line (if they do). In simple mathematical terms,  $P_1$  measures the poverty gap as a percentage of the poverty line, as shown in equation 2 below.

$$PGI = \frac{1}{N} \sum_{i=1}^q \left( \frac{z - y_i}{z} \right) \dots\dots\dots 2$$

where  $z$  = poverty line;  $y_1$  = consumption or expenditure of household 1 and  $y_1, \dots, y_q < z < y_{q+1} \dots y_n$ .  $P_1$  can be interpreted as a measure of how much (income) would have to be transferred to the poor to bring their expenditure up to the poverty line. Unlike  $P_0$ ,  $P_1$  does not imply that there is a discontinuity at the poverty line. However, both  $P_0$  and  $P_1$  cannot capture differences in the severity

of poverty amongst the poor.  $P_0$  and  $P_1$  do not consider possible inequalities among the poor.

The third and the last common poverty measure is the squared poverty gap index ( $P_2$ , simply denoted as *SPGI*). It is a weighted sum of poverty gaps (as a proportion of the poverty line), where the weights are the proportionate poverty gaps themselves, as indicated in equation 3.

$$SPGI = \frac{1}{N} \sum_{i=1}^q \left( \frac{z - y_i}{z} \right)^2 \dots\dots\dots 3$$

As equation 3 demonstrates,  $P_2$  takes inequalities among the poor into account. For instance, a (cash) transfer from a poor person to an even poorer person would reduce the index and a transfer from a very poor person to a less poor person would increase the index. However, it has been argued that  $P_2$  is very difficult to read and interpret. As such, policy making for addressing  $P_2$  can be cumbersome. As a result, in policy terms, it is advisable that the three poverty measures presented above are dealt with in totality. Each one of the poverty measures described above has merits and demerits. They are however very useful in simplifying the poverty problem being addressed at a particular point in time. As such, the three measures of poverty are better calculated and responded to in total, with the clear aim of either alleviating or eradicating poverty.

In literature, the poverty measures presented above are known as the Foster-Greer-Thorbecke (FGT) family of poverty measures.

FGT measures of poverty can be expressed as<sup>3</sup>:

$$FGTPI = \frac{1}{N} \sum_{i=1}^q \left( \frac{z - y_i}{z} \right)^\alpha \dots\dots\dots 4$$

These measures can, always, be defined for  $\alpha \geq 0$ .  $\alpha$  is a measure of the sensitivity of the index to poverty. As equation 4 shows, if  $\alpha=0$  is used it implies the headcount index; if we use  $\alpha =1$  we have the poverty gap index and if we use  $\alpha =2$  we have the squared poverty gap index. So, by varying the value of parameter  $\alpha$  FGT measures take into account the prevalence, intensity and most importantly reflect the degree of inequality among the poor. However, it is important to note that all the poverty measures presented above rely on  $z$  (poverty line), without which it would be impossible

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<sup>3</sup> Refer to Gumede (2008)

to calculate these poverty measures. As a result, many researchers and scholars researching poverty in South Africa have assumed or rather predetermined their own poverty lines (because South Africa does not yet have a formal poverty line).

It may be worth highlighting that there have been many variations of the FGT family of poverty measures, especially those aimed at capturing the extent of inequality. Also, some scholars have come up with other measures that are equally gaining prominence in poverty dynamics literature. For instance, Kanbur and Mukherjee (2007) developed and estimated an index (i.e. *Index of Poverty Reduction Failure*) that captures the extent of poverty relative to the resources available in a particular society to eradicate poverty. Also, there is (Amartya) *Sen Poverty Index* which captures dynamics in wellbeing of those below the poverty line.

On indices, there are four human development indices. These are: human development index (HDI), human poverty index (HPI), gender-related human development index (GDI) and gender empowerment measure (GEM). The HDI is a synopsis of a country’s human development and combines statistics on life expectancy, education and income. Global HDI estimates range from 0.34 (in Niger) to 0.97 (in Norway); higher values represent higher levels of human development (Human Development Report, 2009). The HDI is calculated by first creating an index of all the three (life expectancy, education and income) dimensions. This is done by taking each dimension and apportioning its performance to a value between 0 and 1 by using equation 5 below (Human Development Report, 2009):

$$\text{Dimension index} = (\text{actual value} - \text{minimum value}) / (\text{maximum value} - \text{minimum value}) \dots\dots\dots 5$$

where the actual value is the real observed quantity for that particular dimension and minimum value represents the minimum possible quantity that can be observed (e.g. in the case of life expectancy it would be the average life expectancy in South Africa, whereas on income it would be the minimum value of the adjusted GDP per capita<sup>4</sup>). The HDI is then computed by averaging the three dimensions as shown in equation 6 below (Human Development Report, 2009):

$$\text{HDI} = (\text{life expectancy index} + \text{education index} + \text{GDP index}) / 3 \dots\dots\dots 6$$

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<sup>4</sup> For a detailed analysis of how to calculate the various dimensions and indices, see the Human Development Report (2009). Also, Fakuda-Parr and Shiva Kumar (2003) contain essays on original thinking and methodologies regarding human development and human poverty.

The Human Poverty Index (HPI), introduced in 1997, is an attempt to bring together in a composite index the different features of deprivation in the quality of life to arrive at an aggregate judgment on the extent of poverty in a community. The HPI is, however, only estimated for developing countries. A more applicable HPI for developing countries is called the HPI-1. Since the HPI can also be looked at as a measure of “deprivations in the three basic dimensions of human development captured in the HDI” (Human Development Report 2009) it is widely used in developing countries. Global HPI-1 estimates range from a high of 59.8 (in Afghanistan) to a low of 1.5 (in the Czech Republic). The Human Poverty Index for developing countries (HPI-1) combines measures of life expectancy, child nutrition status and access to improved water sources, and income. Hence to calculate HPI-1, the following equation is used:

$$\text{HPI-1} = \left[ \frac{1}{3} (P_1^\alpha + P_{21}^\alpha + P_3^\alpha) \right]^{\frac{1}{\alpha}} \dots\dots\dots 7$$

where  $P_1^\alpha$  = Probability at birth of not surviving to age 40 (times 100),  $P_2^\alpha$  = Adult illiteracy rate,  $P_3^\alpha$  = Unweighted average of population not using an improved water source and children under the weight-for-age,  $\alpha = 3$ .

The Gender-related Human Development Index (GDI) reflects differences in HDI for women compared to men. Like the HDI, the calculation of the GDI is a three step process. The first involves using equation 5 to calculate female and male life expectancy indices and then combining them in a way that penalises any differences in achievements amongst the two groups. The second step involves a computation of the equally distributed education index for each cohort and then combined in a way that penalises any differences amongst the two. In the third step, the equally distributed income index is calculated for both sexes, after which the male and female indices are combined to create the equally distributed income index. The GDI is simply the unweighted average of the three indices above (i.e. equally distributed: life expectancy, education and income indices) and is calculated as shown in equation 8 below (Human Development Report, 2009):

$$\text{GDI} = 1/3 (\text{life expectancy index}) + 1/3 (\text{education index}) + 1/3 (\text{income index}) \dots\dots\dots 8$$

The Gender Empowerment Measure (GEM) focuses on the opportunities given to women than what they can do themselves. It combines measures of equality in political, economic power and power over resources for men and women. Global GDI estimates range from 0.31 (in Sierra Leone) to 9.99 (in Sweden). To calculate the GEM, first an equally distributed equivalent percentage (EDEP) is calculated. This is then followed by an introduction of a variable that necessitates the



penalisation of any inequalities is introduced, which is lastly followed by a careful indexing of the EDEP value by 50 (for a 50% representation between sexes in an ideal society). This three step process is repeated to calculate all the EDEPs for all the three dimensions namely: parliamentary representation, economic participation and income. The GEM is then calculated by averaging the three indexed EDEPs by following equation 9 below:

$$\text{GEM} = (\text{indexed EDEP for parliamentary representation} + \text{Indexed EDEP for economic participation} + \text{Indexed EDEP for income}) / 3 \dots\dots\dots 9$$

### 3. DESCRIPTION OF ESTIMATES

1). *The life expectancy measure* is an estimate of the average number of years to be lived by a group of people born in the same year, if mortality at each age remains constant in the future. As a (crude) example, if 10% of a cohort dies before age 1 year, 40% dies between age 50 and 51 years, and 50% of the population dies between age 75 and 76 years, the life expectancy for that cohort would be a simple weighted average of 57.6 years (or  $10\% * 1 + 40\% * 50 + 50\% * 75$ ). Globally, life expectancy estimates in 2008 range from 32 years in Swaziland to 84 years in Macau.

In this paper, life expectancy is reached by calculating the average change of dying at each age, based on age specific mortality rates, and then aggregate these age specific mortality rates to expected years of living. As an example, if 10% of all one year olds were reported to have died in a particular year, the age specific mortality rate is 10%. If, in addition to that, 5% of all 2 year olds and 5% of all 3 year olds died, there is 18.8% chance of dying by the age of 3 years. Based on similar calculations for all age groups, average life expectancies are estimated.

NIDS collected information on the number of deaths in the household over the past 2 years and the gender and age distribution of the deceased. The calculations here only include deaths that occurred within one year of the survey time. There were a total of 913 deaths reported in the NIDS data. In 136 of these cases, households reported that they did not know when the death had taken place. In these cases, a 50% chance that the death had actually occurred within the last year was ascribed. This, however risks the possibility of overestimating the mortality rates as households are more likely to forget a date of a death that occurred 2 years earlier than one that happened within the last year. Hence, it is plausible to assume that less than 50% of the death had in actual fact occurred within the last year regardless of the fact that some might even have occurred more than 2 years

earlier, which would bring back issues of reliability of the mortality rates. There is, however, no other better method available.

The estimated life expectancy rates and probabilities of living to age 3 years, 40 years and 60 years are reported in Table 1 below. The estimates suggest that South Africans live an average life of 50 years. Women live, on average, 3 years longer than men and have average life expectancies of 51 years compared to 48 years for men. This can be ascribed to the fact that women live much healthier lifestyles than men. For example, women are less likely to engage in life threatening habits (smoking, crime etc) than do men. Further, other causes of this might lie in the role of the women in the average South African family. Women continue to be, by and large, the bread winners in most families in South Africa. The data further suggests that males are also almost twice as likely to die within the first year of their lives, than their female counterparts.

Blacks have the lowest life expectancy rate of all population groups. On average, Blacks live for 45 years, while Coloureds live for 62 and 74 years, respectively. The estimate for Indians is imprecise as it relies on too few observations, as argued above.

Table 1: Estimates of life expectancy: national, gender-, race- and province-specific estimates, in years.

	<b>Life expectancy [years]</b>	<b>Prob (not 3) [%]</b>	<b>Prob(not 40) [%]</b>	<b>Prob(not 60) [%]</b>	<b>N</b>
Total	49.5	7.9	38.8	65.8	28845
Male	47.8	10.3	37.1	69.1	13311
Female	51.1	5.6	40.2	63.3	15534
Black	45.2	9.0	44.7	73.4	22318
Coloured	62.4	1.6	14.6	44.7	4519
India	76.5	0.0	0.0	28.6	495
White	74.1	0.0	14.5	16.7	1513
Western Cape (WC)	59.1	2.4	20.7	41.9	3680
Eastern Cape (EC)	50.1	2.9	31.7	69.4	3711
Northern Cape (NC)	53.0	2.6	38.7	61.7	1972
Free State (FS)	38.8	17.8	53.7	75.9	1694
Kwa-Zulu Natal (KZN)	37.2	9.1	69.1	88.8	8155
North West (NW)	51.2	11.9	36.3	60.7	2374
Gauteng (GP)	62.5	5.6	14.5	49.4	2638
Mpumalanga (MP)	45.1	16.0	58.2	65.3	1915
Limpopo (LIM)	52.9	8.0	26.2	54.4	2706
Poorest 20%	39.6	7.7	57.2	84.2	5652
20-40% poorest	45.8	5.4	51.87	74.5	5650
40-60% poorest	44.5	7.0	46.25	77.8	5653
20-40% richest	51.2	12.6	29.33	60.4	5653
20% richest	64.9	11.1	24.05	39.9	5647

Source: Own calculations, based on NIDS 2008

As Table 1 shows, Gauteng (GP) province has the highest life expectancy followed by the Western Cape (WC) of approximately 63 and 59 years respectively. There is substantial variation across provinces in life expectancy rates. The lowest life expectancy rates are in KwaZulu-Natal (KZN) and the Free States (FS) with 37 and 39 years, respectively. The Free State province has the highest child mortality rate, followed by Mpumalanga with 18% and 16 % of children not living beyond the age of 3 years, in that order. KwaZulu-Natal has relatively lower child mortality rates, but 70% of the population do not live beyond the age of 40 years. For KwaZulu-Natal and Free State, it has been argued that there are higher HIV and AIDS prevalence and infection rates, hence lower than average life expectancy rates.

2). *Education* is measured by two statistics: adult literacy rates and gross school enrolment for primary, secondary and tertiary education. The NIDS survey did not collect information on adult literacy but asked all participants about their highest level of educational attainment. While a small number of people may learn to read without formal education, attainment of at least grade 2 educational level is a good predictor of reading levels. Statistics South Africa’s data from the 2005/6 Income and Expenditure Survey (IES) is used to estimate correlation coefficients between educational attainment and an indicator variable on whether a person can read, including age and gender variables. The derived correlation coefficients are used to predict literacy levels in the NIDS dataset, based on observations on educational attainment, as shown in Table 2 below.

*Table 2: Estimated Adult Literacy and Illiteracy Rates for all Adults*

	<b>Adult literacy rates</b> [%]	<b>Adult illiteracy rates</b> [%]	<b>N</b>
Total	90.6	9.4	18630
Male	91.9	8.1	8124
Female	89.4	10.6	10506
Black	88.8	11.2	13988
Coloured	92.6	7.4	3048
India	93.8	6.2	366
White	99.7	0.3	1228
WC	95.7	4.3	2657
EC	87.1	12.9	2287
NC	87.6	12.4	1317
FS	93.4	6.6	1141
KZN	85.6	14.4	4861
NW	87.3	12.7	1556
GP	96.5	3.5	1928
MP	90.9	9.1	1234
LIM	85.5	14.5	1649
Poorest 20%	86.9	13.1	3273
20-40% poorest	86.0	14.0	4059
40-60% poorest	87.6	12.4	4310
20-40% richest	91.2	8.8	4073
20% richest	98.5	1.5	2915

*Source: Own calculations, based on NIDS 2008*

Almost 10% of South African adults cannot read. Women are more than 2 percentage points more likely to be illiterate than men, and Blacks are more likely than other population groups to be

illiterate. Limpopo (LIM) and KwaZulu-Natal (KZN) have the highest illiteracy rates followed by the Eastern Cape (EC), Northern Cape (NC) and North West (NW). Only 3.5% of adults in Gauteng (GP) cannot read, and 4.3% in the Western Cape (WC).

As indicated above, the second statistic used to calculate the education index is gross enrolment rates. Gross enrolment rates are constructed by dividing the number of pupils who attend a specific grade level with the number of children who are appropriately aged for that grade level. The ratio can exceed 100, even if not all pupils attend school, if older students remain enrolled in a lower level grade. The NIDS data on enrolment in a particular grade is used and that number is compared with the number of children who should be enrolled in that particular grade given their age.

As Table 3 below shows, gross enrolment rates are very high in South Africa, especially for primary and secondary education. The overall average for primary, secondary and tertiary education is 87%. Males have higher overall enrolment rates but this can be attributed to higher gross enrolment rates in primary and secondary education and may be explained by high levels of grade repetition. Hence, it should be stressed that higher gross enrolment rates are not uniformly an indication of schooling throughputs but may instead reflect inability to complete schooling within a prescribed timeframe. In those cases, higher gross enrolment rates falsely inflate HDI estimates and a better alternative estimate is warranted.

Only 10% of females and 7% of males are enrolled in tertiary education. Coloureds have higher gross enrolment rates in primary school and lower enrolment rates than other population groups in secondary and tertiary levels. Geographically, the lowest gross enrolment rates are in the Western Cape (WC) and the North West (NW). Again, this may be for two different reasons: improved access to schooling in the WC and higher repetition rates in the NW. The North West is the only province with less than 100% gross enrolment in primary education.

Table 3: Enrolment rates for different levels of education

	<b>Primary education enrolment rate</b>	<b>Secondary education enrolment rate</b>	<b>Tertiary education enrolment rate</b>	<b>Total enrolment rates</b>
Total	125	113	9	87
Male	138	113	7	91
Female	113	115	10	83
Black	123	118	8	88
Coloured	132	79	5	79
India	115	106	19	82
White	100	101	18	72
WC	126	82	7	76
EC	126	98	5	85
NC	119	106	7	86
FS	115	109	12	84
KZN	127	109	6	88
NW	93	126	12	79
GP	143	127	15	91
MP	111	128	10	87
LIM	118	134	12	94
Poorest 20%	128	104	2	86
20-40% poorest	120	102	6	85
40-60% poorest	113	110	8	81
20-40% richest	111	123	11	80
20% richest	119	125	25	88

Source: Own calculations, based on NIDS 2008

3). *Living standards* are captured through the income measure using GDP per capita. Based on Statistics South Africa national income and mid-year population estimates and World Bank Purchasing Power Parity (PPP) conversion rates GDP per capita in 2008 was \$10,109. This level of income is adjusted to variations across gender, race and provinces using household income averages. The results are presented in Table 4 below.

Table 4: Average household income per capita, GDP per capita in PPP US\$, and share living in poverty

	Income per capita [Rand]	Converted to GDP per capita	Share living below poverty line [%]
Total	1722	10109	47
Male	1856	10897	46
Female	1597	9372	51
Black	935	5489	56
Coloured	1536	9016	27
India	3776	22164	9
White	7607	44657	2
WC	2325	13648	23
EC	869	5102	64
NC	1501	8811	33
FS	1599	9387	46
KZN	1360	7982	63
NW	1501	8808	43
GP	2688	15782	30
MP	2029	11908	44
LIM	1012	5942	64
Poorest 20%	143	842	100
20-40% poorest	313	1839	100
40-60% poorest	554	3255	38.9
20-40% richest	1209	7095	0
20% richest	6395	37538	0

Source: Own calculations, based on NIDS 2008

For the poverty line, income poverty line of R502 per capita in 2008 is used –the Fifteen Year Review (2008) makes use of this figure, hence the calculations used this poverty line<sup>5</sup>. About 47% of South Africans live below this income poverty line. 56% of all Blacks live in poverty, compared to 2% of Whites. Limpopo (LIM), the Eastern Cape (EC) and KwaZulu-Natal (KZN) have the highest poverty rates with more than 2 in 3 households living below the income poverty line. 1 in 3 households is poor in Gauteng (GP) and 23% in the Western Cape (WC).

4). *Gender specific earnings data*: To calculate the Gender-related Human Development Index, a measure of the share of income earned by women compared to the share earned by men is

<sup>5</sup>The Fifteen Year Review (2008) is a report of government on the performance of government since 1994. It is a synthesis document drawing from numerous studies done on South Africa since 1994.

needed. Individual earnings data from non-agricultural income sources are used. This includes all formal, secondary, private enterprises and casual jobs that are non-agricultural. Social grants make up about 10% of women’s income. While social grants (i.e. cash transfers) are usually not included in these calculations, South Africa’s social grant system currently reaches 13.6 million people. Therefore, excluding these state transfers (28% of the population receiving social grants) would provide an incomplete picture of gender-related earnings.

Table 5: Monthly earnings in Rand for all adults from all non-agricultural income sources

	<b>All income, except social grants</b>	<b>Social grants All adults</b>	<b>Total income All adults</b>
All	1797	81	1878
Male	2734	11	2745
Female	1091	133	1224
Black	1112	94	1206
Coloured	1735	55	1790
Indian	4728	48	4776
White	6293	13	6305
WC	2383	37	2420
EC	837	104	941
NC	1403	69	1472
FS	2249	66	2314
KZN	1410	119	1529
NW	1731	76	1807
GP	2383	54	2437
MP	2410	76	2486
LIM	1001	115	1116

Source: Own calculations, based on NIDS 2008

Men earn, on average, R2,745 per month or more than twice the average female non-agricultural earnings. The black population earn R1,200 or less than a sixth of the average monthly non-agricultural earnings of the white population group. The Eastern Cape (EC) and Limpopo (LIM) have the lowest average non-agricultural earnings per month, while the Western Cape (WC), Gauteng (GP) and Mpumalanga (MP) have the highest average monthly earnings. These findings are consistent with those found by other researchers regarding labour market participation and remuneration. On average, women are less likely to participate in the formal labour market, fewer women than men are self-employed and women work fewer hours on average than men and are more likely to be in casual and less well paid jobs.



5). *Safe, clean water*: Data on lack of access to improved sources of water is collected directly in the NIDS. Missing values are imputed based on geographical areas, household income and type of dwelling. As Table 6 below indicates, about 7% of all South Africans rely on springs, streams, pools or dams for household water. Blacks are the only population group to lack access to improved water sources. The backlog is severe in the Eastern Cape (EC) where 23% of South Africans live without improved water and KwaZulu-Natal (14%).

5). *Underweight children below age 5 years*: NIDS fieldworkers measured weight and heights for all children under the age of 15 years. That information is used to construct a Body Mass Index (BMI) measure and categorize children who are underweight using international age specific standards. As Table 6 below shows, underweight in children below the age of 5 years is a particular problem for Coloureds (14%). Black and White children are less at risk with 8% and 7% measured to be underweight. Girls are more than twice as likely to be underweight than boys. Northern Cape (NC) and Mpumalanga (MP) have the highest rate of underweight children, while KwaZulu-Natal (KZN) has the lowest rate, at just 5%.

Table 6: Access to safe improved water and child nutritional status

	Share of population who lack access to clean drinking water [%]	Share of under-5 who are underweight [%]
Total	6.7	8.2
Male	6.3	4.7
Female	7.1	11.5
Black	8.4	7.7
Coloured	0.7	13.5
India	0.0	10.0
White	0.0	6.7
WC	0.2	8.8
EC	23.1	9.4
NC	0.2	12.6
FS	0.0	6.8
KZN	13.7	4.9
NW	0.3	9.4
GP	0.0	9.0
MP	0.4	12.5
LIM	6.0	8.5
Poorest 20%	14.0	9.3
20-40% poorest	11.9	9.1
40-60% poorest	4.4	7.1
20-40% richest	2.3	8.3
20% richest	0.9	5.2

#### 4. INDICES: HUMAN DEVELOPMENT AND HUMAN POVERTY

The aggregate national HDI for 2008 is 0.69 – incidentally the same figure for the Gini Coefficient. There is no substantial difference in the HDI for women and men separately. Blacks have the lowest HDI at 0.63, compared to that of Whites at 0.91. As such, the black population group in South Africa has comparable human development estimates to those of Bhutan, whereas White South Africans are at the level of Cyprus and Portugal. Table 7 below shows estimates of HDI and those of HPI-1.

Table 7: Estimates of the Human Development Index and the Human Poverty Index

	<b>HDI</b>	<b>HPI-1</b>
Total	0.691	27.1
Male	0.693	25.8
Female	0.689	28.2
Black	0.630	31.2
Coloured	0.752	10.9
Indian	0.886	5.0
White	0.914	10.1
WC	0.760	14.4
EC	0.646	23.4
NC	0.695	27.2
FS	0.630	37.3
KZN	0.599	48.1
NW	0.677	25.5
GP	0.806	10.2
MP	0.676	40.4
LIM	0.677	19.3
Poorest 20%	0.488	40.0
20-40% poorest	0.563	36.3
40-60% poorest	0.586	32.9
20-40% richest	0.675	22.2
20% richest	0.868	17.3

Source: Own calculations, based on NIDS 2008

Gauteng has the highest average HDI and KwaZulu-Natal the lowest. At 0.60, Gauteng can be compared to countries like Turkey and Mauritius, while KwaZulu-Natal with 0.60 would rank next to Congo and just below India. It would seem that the HDI estimates for KZN and the FS have primarily driven the low average life expectancy rates in those provinces.

It appears that income poverty is not the only cause of human poverty. As shown in Table 7, the HPI-1 is higher on average in KwaZulu-Natal than the average for the poorest 20% of households, which suggests that households in KwaZulu-Natal have worse human development on average than can be attributed to their income status. Whites and Indians also have better human development indices than the average for the richest 20% of all South Africans, which suggests that there are additional factors than household income that determine inter-racial differences in human

development and is captured in much lower life expectancy rates for non-white population groups. It is in this context that an argument is made that the legacy of apartheid remains profound and/or that government has not succeeded in racial redress.

The other index calculated is the Gender-related Human Development Index. It is a measure of the human development of women in relation to that of men. It is at 99.84, one of the highest in the world and suggests that South Africa has fairly equal levels of human development for women and men. This however ignores stark differences in some sub-components such as income (where men fare much better) and life expectancy (where women do better).

## 5. WHAT IS TO BE DONE?

As argued by some, the catalyst to (structural) poverty and inequality is employment along with the further improvement of human capital. In this context, it is perhaps understandable that poverty and inequality remains this high in South Africa. Many proposals have been made on how to create more jobs in SA (see Natrass and Seekings 2006, as an example). The recent proposals include a wage subsidy, along other active labour market interventions. The wage subsidy, if conceptualized and implemented in a sound manner, is one of the possible solutions.

There is a set of ‘general’ interventions that any country that is serious about expanding human capabilities should pursue: the set includes broadening economic participation, growing the economy and ensuring that benefits of economic growth are shared equitably, ensuring access to basic services, protecting the most vulnerable, and so on and so forth. Examining SA’s state of human development and socio-economic transformation, a question remains as to whether the country is making sufficient inroads to the successful implementation of the set of ‘general’ interventions. Given this, an argument can be made that SA should be better applying the ‘general’ interventions such as those highlighted here.

Besides issues related to the labour market and the set of ‘general’ interventions, it is hard to think of other interventions that SA should pursue to further address poverty and inequality. In particular, SA’s social protection mechanisms appear to be at the scale and level of other comparable countries – such as Brazil, India, Mexico and possibly China – which appear to have reduced poverty and inequality better than SA.

It could be that the fundamental challenge with SA is the economy – and this is the complex challenge to address. It implies that there should be careful rethinking around redistributive policies.

The further restructuring of the economy in order that it benefits every South African could be the answer. The compounding challenge is that there are trade-offs that have to be made. In addition, as argued by some, there may be different sets of policy interventions for poverty on one hand and for inequality on the other hand. Lastly, historically or at least in economic theory, speedier economic growth may in the short to medium term worsen inequality.

## 6. CONCLUDING REMARKS

In summary, the South African HDI for 2008 equates Botswana's 2007 HDI and would have ranked South Africa in place 125 rather than South Africa's 2007 ranking of 129. At 0.63, the black population group in South Africa has comparable human development estimates to those of Bhutan, while those of white South Africans are at the level of Cyprus and Portugal. Gauteng has the highest average HDI and KwaZulu-Natal the lowest. On average, the poorest 20% of South African households have similar human development as in Zambia and Malawi, while the richest 20% of households on average are at the same level of human development as Argentina and Latvia. Inequalities in human development across population groups in South Africa are larger than between the rich and the poor – this mirrors a very high Gini Coefficient. The rich non-white population groups have benefitted from improved income but that has not translated into higher life expectancy and longevity, as an example. Regarding (human) poverty and economic inequality, the numbers are still very high.

In terms of policy matters, Habib and Bentley (2008) provide pointers on the main challenge confronting SA: that racial redress has not gone far enough. The same can be said regarding gender redress and spatial redress, hence the skewed income distribution and relatively high human poverty. It would seem that the issue is fundamentally with the economy. The other policy issues requiring attention pertain to redistributive policies – the policies themselves and their implementation. In the short-term to medium term, something could be done about the labour market in order that it can absorb more entrants along further improvements in human capital.

## SELECTED REFERENCES

- Argent, J (2009). Household Income: Report on NIDS Wave 1 – Technical Report No. 3, SALDRU, Cape Town
- Bhorat, H & Van der Westhuizen, C (2010). *Poverty, Inequality and the Nature of Economic Growth in South Africa*. In: Misra-Dexter, N & February, J. Testing Democracy: Which way is South Africa going? IDASA: Cape Town
- Fakuda-Parr, S and Shiva Kumar, AK (eds) (2003). *Readings in Human Development*, Oxford: Oxford University Press
- Gumede, V (2008). Poverty and Second Economy Dynamics in South Africa: An attempt to measure the extent of the problem and clarify concepts. Development Policy Research Unit Working Paper 08/133. University of Cape Town, Cape Town
- Gumede, V (2009). Attempts to include the excluded: Anti-poverty Strategy for South Africa, In: *2009 Transformation Audit*, Institute of Justice and Reconciliation, IJR: Cape Town
- Habib, A and Bentley, K (2008). *Racial Redress and Citizenship in South Africa*. Cape Town: HSRC Press
- Kanbur, R and Mukherjee, D (2007). Poverty, Relative to the Ability to Eradicate it: An Index of Poverty Reduction Failure. Department of Applied Economics and Management, Cornell University, Working Paper 02
- Moultrie, T (2009). Questions on Demography for the NIDS, Background Paper, SALDRU, University of Cape Town, Cape Town
- Nattrass, N and Seekings, J (2006). *Class, Race, and Inequality in South Africa*. Durban: UKZN Press
- Policy Coordination and Advisory Services (2008). *Towards Fifteen Year Review*. The Presidency: Pretoria
- United Nations Development Programme (2009). *Human Development Report 2009*. Palgrave Macmillan, New York.