Workshop on Measuring Deprivation in order to Promote Human Development in South Africa

PROCEEDINGS REPORT

Misty Hills, Muldersdift
9 - 10 June 2015

science & technology
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

ASSAf
ACADEMY OF SCIENCE OF SOUTH AFRICA

© Academy of Science of South Africa
January 2016

ISBN 978-0-9946852-2-3

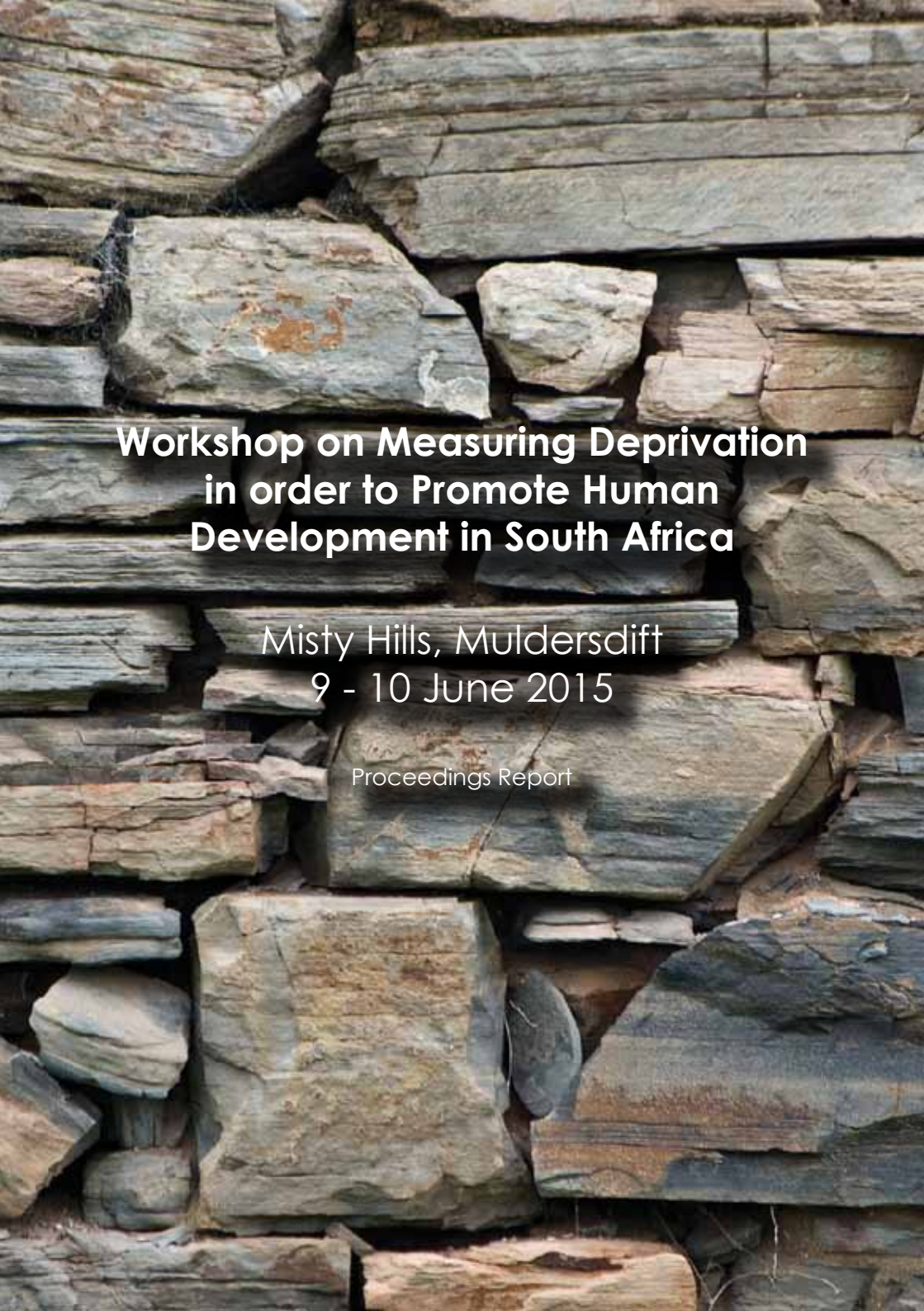
Published by:
Academy of Science of South Africa (ASSAf)
PO Box 72135, Lynnwood Ridge, Pretoria, South Africa, 0040
Tel: +27 12 349 6600 • Fax: +27 86 576 9520
E-mail: admin@assaf.org.za

Reproduction is permitted, provided the source and publisher are appropriately acknowledged.

The Academy of Science of South Africa (ASSAf) was inaugurated in May 1996. It was formed in response to the need for an Academy of Science consonant with the dawn of democracy in South Africa: activist in its mission of using science and scholarship for the benefit of society, with a mandate encompassing all scholarly disciplines that use an open-minded and evidence-based approach to build knowledge. ASSAf thus adopted in its name the term 'science' in the singular as reflecting a common way of enquiring rather than an aggregation of different disciplines. Its Members are elected on the basis of a combination of two principal criteria, academic excellence and significant contributions to society.

The Parliament of South Africa passed the Academy of Science of South Africa Act (Act 67 of 2001), which came into force on 15 May 2002. This made ASSAf the only academy of science in South Africa officially recognised by government and representing the country in the international community of science academies and elsewhere.

This report reflects the proceedings of the Workshop on Measuring Deprivation in order to Promote Human Development in South Africa held on 9 and 10 June 2015 at Misty Hills, Muldersdrift, South Africa. Views expressed are those of the individuals and not necessarily those of the Academy nor a consensus view of the Academy based on an in-depth evidence-based study.



Workshop on Measuring Deprivation in order to Promote Human Development in South Africa

Misty Hills, Muldersdift
9 - 10 June 2015

Proceedings Report

CONTENTS

DAY 1

Welcome 5

Purpose and Introductions 5

Opening Remarks 6

Session One: Money-metric Measurement 8
- The South African National Poverty Lines 8
- Subjective Poverty Lines: Measuring Deprivation in order to Promote Human Development in South Africa 14
- Income Inequality and Relative Poverty Lines: A "Weakly Relative" Poverty Line for South Africa 19

Session Two: Multi-dimensional Poverty 26
- Measuring Multiple Deprivation at the Small Area Level 26
- Service Delivery Measurement 30
- Attitudinal Approaches to Measuring Poverty in South Africa 35

Closure And Announcements for Day 2 44

DAY 2

Keynote Address: Measuring Poverty in Middle-income Countries 45

Session Three: Measuring Human Development 51
- Health-related Deprivation Measures 51
- Education Measures: Inequality Traps and Human Capital Accumulation in South Africa 59
- Demographic Indicators on South Africa with a Special Focus on Gauteng and Limpopo Provinces 65

Session Four: Disaggregating Poverty 72
- Gendered Poverty 72
- Poverty and Old Age 80
- Child Poverty and Deprivations – Measurement, Trends and Policy Directions 84

What Have We Learnt About the Science and Sorcery of Poverty Measurement? 90
Closure 94
References 97
Acknowledgements 98
Appendix A: Acronyms 100
Appendix B: Attendance List 102

DAY 1

WELCOME

Prof Roseanne Diab, Executive Officer, Academy of Science of South Africa (ASSAf)

Prof Diab extended a warm welcome to all the workshop participants on behalf of ASSAf.

The main role of the Academy was to give evidence-based science advice to government through consensus studies and a number of convening activities such as this workshop, an initiative of ASSAf's Standing Committee on Science for the Reduction of Poverty and Inequality (SCSfRPI). The topic of the workshop was clearly related to one of the triple challenges of the National Development Plan (NDP).

Prof Diab thanked Prof Leibbrandt and Prof May who had been instrumental in assisting ASSAf in putting together the workshop programme.

PURPOSE AND INTRODUCTIONS

Prof Murray Leibbrandt, SCSfRPI Chair

The SCSfRPI recognised that there was strong academic work in the area of measuring, monitoring and evaluating poverty and a strong policy interest in this issue, substantiated by Statistics South Africa (Stats SA) directing attention to relevant statistics, and the National Development Plan (NDP) and government departments' focus on poverty eradication.

The workshop provided an opportunity for academics and policymakers to interact and communicate around evidence-informed policymaking and the dynamics that undergird policy within the context of the current discussion about a national poverty line and poverty as a multi-dimensional phenomenon.

The aims and objectives of the workshop were:

- To enhance understanding of poverty and its different dimensions.
- To enhance understanding of the debates over the types of measures required to monitor the different dimensions of poverty and the levels at which poverty thresholds should be set and by whom.
- To document the phases and substance of the poverty measurement debate in post-apartheid South Africa.

OPENING REMARKS

Mr Gana Fofang, United Nations (UN) Resident Coordinator and United Nations Development Programme (UNDP) Resident Representative in South Africa

The workshop took place against the backdrop of an evolving global development agenda and the Millennium Development Goals (MDGs) championed by the UN. The emerging consensus in the international community was that the eradication of poverty was possible for all people everywhere in our lifetime, and emerged as the first of eight MDGs. There was an urgent need to address the root causes of poverty and identify solutions through fully integrated and coordinated strategies at all levels. Since the adoption of the MDGs, the number of people in the world living on less than 1.25 United States dollars (USD) a day has decreased and approximately 700 million people have been lifted out of poverty. Nonetheless, around one billion people, representing over 14% of the global population, still live in poverty and most are African.

The workshop provided a platform to address threats to human development and the challenges facing South Africa in addressing poverty and inequality. Rapid and sustained growth in South Africa and in other countries over the past two decades has had a limited impact on poverty and inequality. Although South Africa has made substantial progress in human development in the last 20 years, unemployment and poverty levels are high and it continues to be one of the most unequal societies in the world

today. Inclusive and sustainable growth is essential to ensure the creation of livelihoods and employment opportunities for the poor. Figures on maternal and infant mortality in South Africa presented in the UNDP's Human Development Report 2014 compared poorly with national targets, and indicated severe stunting arising from malnutrition, calling for urgent remedial action. More people in South Africa will fall below the poverty lines and into poverty traps if urgent action is not taken to address these issues.

Processes of social exclusion driven by multiple economic, political, social and cultural factors play a major role in entrenching inequalities. Social exclusion denies everybody, including the urban and rural poor, the opportunities and capabilities they require to improve their livelihoods.

South Africa, thus far the most technologically advanced economy in Africa, continues to play an important role in regional and global affairs. Promoting human development in South Africa requires an exploration of the linkages between different dimensions of poverty, growth, inequality and equity as eliminating income poverty will not guarantee poverty eradication in all its dimensions. To end extreme poverty in this country, it would be necessary to leverage political will, development capacities, innovative solutions and finance to simultaneously bolster economic growth, promote child survival, expand access to renewable energy, improve education and increase food security, among others. The UNDP's vision is to help countries achieve the simultaneous eradication of poverty and a significant reduction of inequity and exclusion. The UNDP is well positioned to offer expertise in development thinking and practice, and hopes to connect South Africa to the knowledge and resources it needs to address the triple challenge of poverty, inequality and human development.

In the run-up to the MDG deadline of 2015, the MDG progress acceleration framework remained at the centre of the UN's work on poverty reduction. Through this framework, the UNDP has supported countries in systematically identifying and analysing bottlenecks that slowed down progress towards achieving the fifth MDG (i.e. to improve maternal health) by developing action plans that form the post-2015 development agenda. The UNDP

would continue to facilitate knowledge exchanges and develop tools for capacity development to address poverty, inequality, social exclusion and marginalisation in South Africa. Mr Fofang anticipated that the workshop would generate offshoots for the UNDP to consider as it focused on setting up comprehensive poverty monitoring and assessment systems that would generate the data needed to inform the design and targets of effective poverty reduction and human development policies.

SESSION ONE: MONEY-METRIC MEASUREMENT

Chair: Prof Murray Leibbrandt, SCSfRPI

The South African National Poverty Lines

Dr Sandile Simelane, Stats SA

Stats SA released its report titled *Rebasing of National Poverty Lines and Development of Pilot Provincial Poverty Lines for South Africa* early in 2015. The report had two objectives: to re-benchmark the current poverty lines using the income and expenditure survey (IES) of 2010/11 – which updates and reweights the basket of goods and services required for the compilation of the consumer price index (CPI) – and to produce poverty lines for the provinces.

Poverty lines are important tools that allow for statistical reporting of poverty levels and patterns, and for planning for poverty reduction in any population. Stats SA produces three poverty lines: food poverty lines (FPL), lower-bound poverty lines (LBPL) and upper-bound poverty lines (UBPL). There is no universal definition of poverty. Poverty is a complex issue and manifests itself in economic, social and political ways. Stats SA attempts to cover as many dimensions as possible and applies and measures the following facets of poverty:

- Money-metric poverty (lack of income).
- Multi-dimensional poverty (lack of basic services, education, etc.).
- Subjective poverty (self-perceived).
- Inequality (Gini coefficient, share of expenditure, etc.).

The policy context of the work done by Stats SA in respect of poverty lines includes the MDGs, the Medium-term Strategic Framework (MTSF) and the NDP.

The poverty lines that have been rebased were developed based on IES 2000. Since then, the baseline estimates have been adjusted annually using the CPI. The CPI-based poverty lines were used extensively, for example, in reporting on the MDGs and in the NDP. However, the poverty lines had to be rebased because of changing spending patterns and consumption levels, and to take advantage of improvements in sampling frames and data collection methods. The rationale behind the production of pilot provincial poverty lines was driven by user requests. Stats SA aims to produce rural/urban poverty lines in the future.

Poverty is conceptualised in three main ways:

- Absolute (established minimum socially acceptable threshold for a predetermined welfare indicator to separate the poor from the non-poor).
- Relative (a comparative status of an individual/group relative to the position of others in society).
- Subjective (based on individual perceptions of poverty status).

The household income and consumption elements of the IES provide important information for profiling relative income inequality and poverty in the country. The IES 2010/11 used a combination of recall and diary methods to collect data. The consumption aggregate derived from the dataset comprised 753 different goods and services and 329 different food items. The multiplicity of possible food bundles that can be consumed by South African households to satisfy the minimum food-energy intake requirements necessitated the construction of a reference food basket that is representative of overall consumption patterns while remaining anchored in representative levels. The cost-of-basic-needs approach, which conceptualises welfare as comprising consumption or fulfilment of food and non-food basic needs, was used in determining the reference food basket and the poverty lines.

The minimum daily energy requirement of 2 100 kilocalories (Kcal) per person was adopted in line with international standards and the value of the food basket providing these calories per person per day was determined at R335 per person per month at 2011 prices.

The LBPL and UBPL were derived by adding an allowance for consumption of non-food basic necessities to the FPL. However, unlike food consumption, there is no universal standard for consumption of non-food basic needs. The LBPL was obtained by adding the average non-food expenditure of households whose total expenditure was close to the FPL and the UBPL was obtained by adding non-food expenditure of households where food expenditure was equivalent to the FPL.

The rebasing resulted in an increase in the LBPL from R443 to R501 per person per month, the UBPL from R620 to R770 per person per month and the FPL from R321 to R335 per person per month. In terms of the revised thresholds in relation to the FPL the percentage of persons living below the poverty line increased from 20.2% to 21.7%, in terms of the LBPL the poverty line headcount increased from 32.3% to 37% and in terms of the UBPL the poverty line headcount increased from 45.5 % to 53.8%. There were no changes in the poverty level trends in the country between 2006 and 2011. The FPL, when translated to purchasing power parity (PPP), was above 1.25 USD and the LBPL was above the 2.50 USD threshold.

The same methodology used to rebase the national poverty lines was applied in the determination of poverty lines at the provincial level, the only difference being that the national reference food basket was subjected to province-specific prices for food items. The FPL had a narrow range across the provinces, broadening in the LBPL and UBPL.

Comment

Unknown: Given the importance of food expenditure in working out the FPL, the issue of the data on food should be tabled by this workshop. There are several problems associated with the total food expenditure as captured in the IES, such as the much higher

actual food expenditure in the input/output tables and the South African Reserve Bank (SARB) figures.

Discussant: Mr Josh Budlender, Southern Africa Labour and Development Research Unit (SALDRU), University of Cape Town (UCT)

SALDRU has conducted a review of the South African poverty lines and has gained insight into the Stats SA methodology. Mr Budlender's comments on the Stats SA report focused on three issues:

The minimum caloric requirement

The Stats SA report used 2 100 Kcal per person per day, which was lower than the requirement of 2 261 Kcal in 2008. Both these measures come from tables of recommended caloric intake, but are not measures of minimum caloric intake. The tables gave different amounts per gender and age, which were used to create averages. The 2008 measure came from the Food and Nutrition Board of the United States National Research Council in 1989, and using IES 2000, it was attributed to different people in the population to arrive at a per capita average calorie requirement of 2 261 Kcal. The 2 100 Kcal measure came from the World Health Organisation (WHO) and is widely used. It is preferable to do what Stats SA has done and use the 2 100 Kcal because, although it was as defensible as the 2 261 Kcal and differed only slightly in terms of the poverty estimates, it enjoyed much wider international usage.

The methodology used to create the food basket

Converting the IES expenditure into calories was a difficult process. Once it was assumed that expenditure equalled consumption, there were two approaches to arriving at the cost of 2 100 Kcal:

- Calculate the caloric intake from all foods, get the cost of the intake and scale it up to arrive at the cost of 2 100 Kcal.

- Take a representative basket of food items and scale-up the consumption of those items to get the cost of a food basket that provided 2 100 Kcal. Stats SA relied on this approach.

The decision to use the food basket approach was justified on the grounds of it being more representative, but it raised some potential issues that could affect the results. In constructing the basket, the foods had to be nationally representative. This created a problem in that foods that some poor people consumed a lot of were excluded from the basket because they were not consumed nationally and the poverty line became vulnerable to this classification of food. Despite this, there were very slight differences in the FPL derived by Stats SA and the FPL derived as part of the work done by SALDRU. The Stats SA food basket arrived at a FPL of R335 per month and SALDRU's research using all foods consumption to track people's consumption arrived at a FPL of R309 per month, with very similar costs per calorie.

The creation of the UBPL and the implications for the truncations of the UBPL

Stats SA arrived at a FPL of R335 per month but had initially calculated an UBPL of R959 per month, which was reduced by only looking at the non-food consumption of certain households to reach the new UBPL of R779 per month. The question is whether the original UBPL was too high and what the poverty lines implied about the share spent on food. The unadjusted UBPL of R959 and the FPL of R335 suggested that poor people spent about 35% of their income on food whereas the adjusted UBPL suggested that poor people spent about 43% of their income on food. It was found that the adjusted measure possibly attributed more to the expenditure on food than what people actually spent and it appeared that the unadjusted measure was a better representation of people's consumption patterns. The original UBPL was possibly not enforceable given the FPL and what people spent on non-food items.

Comparisons between the Stats SA poverty lines and SALDRU estimates showed that even though different methods were used, there were strong similarities in terms of the FPL and LBPL. Differences in the UBPL were mainly due to the truncation. Using the larger

amount of calories made some difference to the FPL and LBPL but not a great deal of difference to the UBPL. This pattern was also evident in the headcount ratios.

The Stats SA poverty lines generated substantial interest and various critiques, some of which were unfair. SALDRU's work found that most methodological decisions and controversial issues, apart from the UBPL truncation, had no impact on the outcome.

Discussant: Mr John Kruger, The Presidency, Department Planning Monitoring and Evaluation (DPME)

Substantial progress had been made in terms of poverty measurement and data in South Africa over the last two decades, but should an attempt be made to take the money-metric approach further, to make it more relevant?

A range of poverty measures has been established: absolute or minimalist income lines, indices of multiple deprivation, subjective poverty and the South African Social Policy Research Institute's (SASPRI) socially perceived necessities approach. Reference budgets (minimum income standards) go beyond these to identify and cost more accurately what are perceived as social necessities by members in a community. This approach has never been implemented fully in South Africa and is a potential next step in expanding the money-metric approach.

The NDP suggested that more needed to be done on defining and measuring poverty and deprivation. Because human beings need more than income it is part of the ongoing work of the National Planning Commission to define a minimum decent standard of living. The NDP also suggested that the approach going forward, in moving beyond aggregate income as an indicator, should focus on the various elements of the decent standards of living (nutrition, household services, health services, social services, environmental services and employment).

Some arguments for more to be done – to estimate more realistic budgets that provided a better detailed sense of the life of the poor – included the view that poverty lines were not realistic and

did not reflect how people wanted to live or a decent standard of living, and were not an appropriate target in terms of poverty eradication. Some argued that a social consensus on the current poverty lines would not be achieved. Other concerns included the potential political biases behind the income poverty lines, which focused attention on nominal income, and the focus on the passive citizen instead of the space for citizens to create their own livelihoods. Factors against going the reference budget route included the high cost of these measures and the possibility that they would provide little additional information about the extent of poverty and the location of poverty, and they might not affect policy conclusions or strategies much. There is a wealth of unexplored data related to poverty that should probably be explored in greater detail before coming up with alternative or additional indices for poverty and deprivation.

Subjective Poverty Lines: Measuring Deprivation in order to Promote Human Development in South Africa

Ms Isobel Frye, Studies in Poverty and Inequality Institute (SPII)

The choice of appropriate measures should come down to the question of how poverty is viewed and how the state's response to poverty is viewed.

There are three types of poverty:

- Material needs (survivalist).
- Economic circumstances (the lack of resources).
- Social relationships (exclusion, dependency and lack of entitlement).

Objective approaches to poverty claim to be more 'scientific' and more trustworthy. In South Africa, the poverty lines that had historic links back to Batson's Poverty Datum Line of 1938/9 and objective poverty measures were often seen as survivalist. Subjective measures speak more to the visceral needs and aspirations of ordinary people. Poverty is seen increasingly as multi-dimensional and goes beyond the money-metric view of poverty. The definition

of poverty with the operational measurement of that definition should not be conflated. It is necessary to move towards a greater understanding of basic needs and the subjective understanding of well-being.

The aim of subjective poverty measures is to ask people themselves to rate their poverty levels or levels of well-being rather than developing an external, 'expert'-led, 'scientific' or 'objective' measure. In general, subjective measures of poverty tend to include more non-money-metric indicators of well-being than objective indicators. Subjective measures of well-being also tend to include a relative component as people rank their well-being in relation to levels of well-being enjoyed by others around them.

The 2008/09 Stats SA Living Conditions Survey (LCS) identified the following factors that influenced how people rated their well-being: access to services, land, income, employment, basic needs (housing, food, clothing) and poor health. The three main approaches used to measure subjective poverty include:

- Perceived wealth.
- Minimum income levels.
- The economic ladder, rank income and other thresholds.

A comparison of subjective and objective poverty measures as reflected in the LCS found that the subjective poverty lines are somewhat higher than the objective poverty lines (FPL, LBPL and UBPL) as individuals are more likely to self-define themselves as poor.

In moving beyond poverty towards constructing a decent standard of living (a concept also introduced by the NDP) it is necessary to have a more embracing concept of well-being in order to build social consensus.

Alternative methodologies of measuring poverty should draw on the work done by the Southern African Social Policy Research Institute, work on socially perceived necessities done by the Centre for the Analysis of South African Social Policy (CASASP) and Loughborough University's work on minimum household budgets, to construct democratically derived standards of living below which nobody should fall.

The broad consensus within Germany that certain levels of poverty should not be reached facilitated the relatively seamless adoption of a national minimum wage (NMW) in Germany on 1 January 2015. South Africa ought to concentrate on identifying such a yardstick and on moving away from the survivalist concept of poverty linked to the objective poverty lines used in South Africa. If there was to be a debate about the NMW in South Africa, a mechanism for upward pressure to ensure the implementation of a NMW would be essential. The narrative would have to be changed to one that promoted equality in South Africa.

Discussant: Prof Julian May, University of the Western Cape (UWC)

Some of the concerns about adopting a subjective poverty measure relate to the following:

- When comparing subjective measures to the absolute measures, people are often classified as poor by one and not by the other measure. What are the explanations for this?
- Some of the other measures of poverty used in South Africa, such as self-reported hunger in the Stats SA study and the South African National Health and Nutrition Examination Survey (SANHANES), produce different levels. How can the differences between self-reported hunger, subjective measures and absolute measures be accounted for?
- A puzzle can also be found in the data for self-reported health status, as the wealthy often reports themselves as having a poorer health status than those who are poor. What are the reasons for this?

- In studying dietary diversity and its relation to self-reported hunger, it was found that people who had low dietary diversity reported low levels of hunger. How does the multi-dimensional poverty index tie up with the measures of absolute poverty and is there a correlation between them?
- In large-scale surveys, respondents were asked how poor they thought they were. How do the responses differ in terms of gender?
- How do children's perceptions of poverty compare with the perceptions of adults?

The above research questions should be addressed.

Based on SALDRU's research presented by Mr Budlender, an alternative should be found for the Stats SA method for the UBPL, if it is deemed necessary to have a UBPL.

Sanitising the poverty line is problematic. If the FPL and the LBPL are accepted as having some useful statistical properties, perhaps the UBPL should be used when engaging with policymakers. Good poverty researchers would not argue that the money-metric approach was scientifically better than other approaches, but other ways also need to be found.

Discussant: Prof Dori Posel, University of KwaZulu-Natal (UKZN)

Prof Posel addressed the comparison between subjective and money-metric measures of poverty. In particular, she considered what we could learn about money-metric measures of poverty when these do not overlap with subjective assessments. She used the 2008/2009 LCS data to illustrate this comparison. In the LCS, respondents were asked to assess the economic status of their household, from very poor to wealthy. Households were classified as being subjectively poor if they self-assessed the economic status of their household as being poor or very poor. This subjective poverty was then compared to an objective or money-metric measure of poverty, where individuals were measured as expenditure poor if they lived in a household where average per capita household expenditure was below a poverty line of R577 (in 2008 prices).

Three sets of comparisons were highlighted in the discussion:

- How subjective and money-metric measures of poverty compare as household size increases. Money-metric poverty rates are very low among single-person households but rise dramatically as households become larger. In contrast, the share of households which are subjectively poor is initially high, but declines as household size increases (to four members), and then rises as household size increases further, although far less steeply than objective poverty rates. Therefore, when money-metric and subjective measures of poverty are compared, subjective measures of poverty are higher than money-metric measures for people living in small households, but they are lower than money-metric measures when people live in larger households. One possible explanation for this divergence is that per capita measures of expenditure under-estimate economic resources particularly in larger households, because they do not recognise the possibility of economies of scale in the household. Economies of scale may exist in consumption and through individuals being able to share fixed costs (for example, for accommodation and services) when they live together. The costs of maintaining a given standard of living therefore may fall when people live together rather than apart. Because per capita measures of household expenditure do not make any adjustments for these economies of scale, they may be underestimating economic resources in larger households.
- A similar relationship was identified when money-metric and subjective rates of poverty were compared according to the share of children in the household. Households with no children are more likely to be self-assessed as poor than to be measured as expenditure poor. As the share of children in the increases, both subjective and money-metric poverty rates increase, but again this is far more marked for the expenditure measure. As a result, a much larger share of households with children are expenditure poor than subjectively poor. These differences may also reflect the under-estimation of economic resources in per capita measures of household expenditure. This is because per capita adjustments do not allow for the possibility that children consume less than adults.

The above points raised issues of equivalence scales in measuring poverty in South Africa. Far more attention should be paid to equivalence scales because of the large variation in household size and composition and because this variation is correlated with economic resources. The per capita poverty threshold and a poverty threshold that could be adjusted for adult equivalence should be considered. Although it is uncertain whether these equivalent adjustments would make a big difference to the poverty rates, it is clear that they made a big difference to the measure of inequality in South Africa.

- Subjective and money-metric measures of poverty also differ according to whether households have access to land for farming. Households with access to land for farming are far more likely than other households to be both subjectively poor and expenditure poor. This is because the land is typically used for small-scale or own-account farming and not for market production. However, households with farming land are much less likely to be self-assessed as poor than to be measured as expenditure poor. This difference between the poverty measures might reflect perceptions of security from farming land but it might also reflect problems in how subsistence production is measured in money-metric terms, and in particular, the possible underestimation of the returns from subsistence production.

Income Inequality and Relative Poverty Lines: A "Weakly Relative" Poverty Line for South Africa

Mr Josh Budlender, SALDRU, UCT

Applying Chen and Ravallion (2012) to the South African Case

Mr Budlender's presentation proposed a relative poverty line for South Africa, applying the methodology for the new measure for relative poverty lines by Chen and Ravallion (2012).

In general, developing countries have absolute poverty lines. At a global level, the World Bank has an absolute line that was meant to represent similar purchasing power in different countries. However, relative poverty lines are common practice in the developed world where the poverty line is seen as the constant proportion of mean income. Chen and Ravallion defined these as 'strongly relative' poverty lines, which increased proportionally as mean income increased.

There are two justifications for relative poverty lines:

- The Welfarist argument that people gain utility from their income relative to the mean or median income of their country. Relative income is a source of utility, so poverty lines will have to be responsive to mean income (or another prevailing standard of living).
- The Capabilities argument, based on the idea that poverty is about a lack of capabilities, particularly that of 'social inclusion'. It is assumed that in richer societies social inclusion requires a higher level of material wealth.

Chen and Ravallion are opposed to the 'strong relative' poverty lines because these lines do not allow for poverty reduction from distribution-neutral growth, and neither the Welfarist nor the Capabilities approach justify strongly relative lines. Elasticity of the relative poverty line to mean income was a key concern for Chen and Ravallion and they therefore developed the weak relativity axiom (WRA), which is satisfied for standard poverty measures so long as the elasticity of the poverty lines to mean income is <1. It allows for relative deprivation (RD) and social inclusion costs, but imposes a limit on the weight attached to such effects.

The Atkinson and Bourguignon (AB) capabilities approach suggests that the cost of social inclusion is directly proportional to mean income, implying that the cost of social inclusion vanishes as mean income approaches zero. Chen and Ravallion argued that this was implausible as even people in very poor societies have social inclusion costs. They also argued that it was undesirable to have a poverty line that did not allow inequality-neutral growth to reduce poverty, and they created a generalised AB poverty

line, or minimum cost of social inclusion and a varying elasticity to mean income.

The Welfarist interpretation of the generalised AB poverty line shows that the richer the country, the more care there was about RD and less about absolute deprivation. Concerns about RD emerge only when mean income is above some critical value, and above that, the utility from own consumption is discounted according to the degree of RD.

Like AB, Chen and Ravallion set 1.25 USD a day as a lower bound for physical survival. There are two approaches when calibrating the weakly relative poverty line, namely:

- The national poverty line calibrated to private consumption expenditure per capita from the national accounts (NA) data.
- The national poverty line calibrated to mean per capita consumption calculated from survey data.

The calibration showed clearly that the NA poverty line was a good fit of the relationship between poverty lines and mean income. When this method was applied to arrive at the relative poverty lines in South Africa, when using NA data, the weakly relative line increased by about 10% and when using survey data, the weakly relative poverty line increased by about 13%, indicating that the increase in the poverty line was less than the increase in mean income. The relative poverty lines closely matched the existing absolute poverty lines for South Africa. There were similarities between the 1.25 USD a day line, which was meant to represent survivalist needs, and the FPL that was calculated from the different cost of needs measures. If the relative poverty line had a physical survival component and a bigger component of what was seen as poverty, it would be similar to the absolute poverty lines (FPL, LBPL and UBPL) that are currently used.

There are very strong theoretical arguments for considering a relative poverty line for South Africa.

The relationship between mean income and national poverty lines is an appealing method for examining how perceptions of what

constitutes poverty are related to mean income. It is useful to have a relative poverty measure that allows distribution-neutral growth to reduce poverty, especially for South Africa. There appears to be little theoretical reason to accept the prevailing relative poverty lines' assumption of direct proportionality to income. The varying elasticity of relative poverty lines to mean income is perhaps appealing given some of the evidence showing that people in poorer societies care less about their relative position than people in richer societies. Relative poverty lines seem similar to local absolute lines, which implicitly contain ideas about what poverty means in South Africa. However, there are two theoretical concerns in this regard:

- The Chen and Ravallion argument for a minimum cost to social inclusion needs is not satisfying, and the Capabilities argument is misunderstood.
- The generalised AB line, when adding the 1.25 USD a day line before getting a relative poverty line, assumes that poor people do not care at all for either RD or social inclusion costs. There does not appear to be a theoretical explanation for this discontinuity.

Other concerns raised by Chen and Ravallion included:

- With the survey method, there could be a spurious relationship between poverty line level and mean consumption when the same survey is used to calculate poverty lines and mean income.
- With the NA method, there are differences between NA and survey estimates of consumption. It is possibly inappropriate to use NA data to set poverty lines and survey data to measure poverty using those lines.
- Empirical implementation assumes "that our global weakly relative poverty lines change over time consistently with the cross-sectional variation seen between countries".

Although there are some theoretical concerns, it is appealing to look at the way that poverty lines relate to mean income in order to get some idea of poverty measures.

Discussant: Prof Carel van Aardt, Bureau of Market Research (BMR), University of South Africa (Unisa)

Poverty lines and poverty measures have numerous definitions and differing figures on poverty are provided by the World Bank, Stats SA and the South African Institute for Race Relations, confusing policymakers. The introduction of the relative poverty line as yet another poverty measure adds further to the confusion. It is necessary to consider whether additional measures would add value. It would be preferable to take one measure that had a high level of consensus creating certainty in the policy space.

In terms of the approaches to poverty, the relative measures presented are money-metric driven, while the debate is shifting towards non-money-metric measures taking into account a broader range of issues. The proposed relative poverty lines only take income into account and do not take account of transfers to poorer households. Work done on trying to understand the financial dynamics of the poor has shown that much of their expenditure is incurred on their behalf by other households. Money-metric measures should not only focus on income and expenditure, but also on assets and liabilities, and understand the level to which there is an asset base in poor households. In South Africa, many households are income poor, but asset rich due to transfers. A multi-deprivation indicator is required in order to understand the complete situation and it is important to include subjective measures of poverty. Social inclusion has an important subjective component as people's needs are defined differently. A type of weakly relative measure would be supported in the sense that social inclusion aspects need to be taken into account.

In terms of absolute *versus* relative measurements, the latter could be seen as a strong indicator of how a specific household is fairing against other households. The problem is that this would take into account the relative position of a household against other households, influencing the mean income.

There is no clarity as to whether weakly relative measures address the shortcomings of relative measures. One of the drawbacks of relative measures is the fact that income distribution impacts on the

median income line and that goods are often purchased for their social inclusion value. Weakly relative measures take these aspects into account. Although social inclusion and the distributional factors are addressed, other problems were left unaddressed. The benefits of improving on current relative measures are unclear. Excellent econometrics are being spent on trying to improve some of the current measures without first addressing the basic problem of what poverty means, what it means to be poor and what the various facets of poverty are.

Discussant: Ms Mastoera Sadan, The Presidency

Mr Budlender presented a very interesting application of the relative poverty line to middle-income countries, not only South Africa. The NDP raised three main issues: unemployment, poverty and inequality, and used the Stats SA LBPL, which set poverty levels at about 40% of the population. The NDP objective to eradicate poverty and reduce inequality by 2030 seems to be an impossible target to achieve.

The relative poverty line, while it raises some complexities, is a useful addition and opens up the debate on poverty, in particular the discourse on poverty lines which has been largely minimalist. Discussions on poverty in policy circles generally use the LBPL. The relative poverty line brought in the social inclusion element and talks to a more inclusive society. This aspect is very important. There appears to be a disconnect between the intervention undertaken and the poverty rate. The relative poverty line debate introduces the nuances, moving beyond income and multiple deprivations to looking at social inclusion.

It is essential to find consensus about a decent living level. Working towards 2030 and beyond, South Africa should not be a place where people barely survive and are both socially and economically excluded. While the relative poverty line raises some complexities, it is a useful addition to measuring deprivation in this country.

Questions/Comments

Mr John Kruger, DPME, The Presidency: A relative focus is important. Thomas Piketty argues that inequality destroys both the labour market (by blunting incentives to work) and democracy (by allowing the wealthy to "buy" votes and politicians). In some ways this is the big problem: too much inequality destroys society. It is important that we introduce relative measures of poverty as more important measures.

Prof Vimal Ranchhod, SALDRU, UCT: It is interesting that relatively well-off people often see themselves as not rich. This will not change unless we can structurally change the big things that people care about. One of the interesting value judgements that poverty measurement makes in the poverty literature (even relative poverty measurement) is once the line is defined, any dimensions above the line do not count in doing the measure. This could be one of the redeeming features of a poverty analysis.

Prof Robert Mattes, UCT: Prof Van Aardt made a point about trying to get consensus and sending a clear message to policymakers, but a complex issue cannot be oversimplified. It would be helpful to use the different approaches and to highlight different aspects. To some extent we are reporting into international fora, but there is another aspect to the poverty line discussion in South Africa.

Prof Fiona Tregenna, University of Johannesburg (UJ): In terms of the Stats SA food basket (the cost of the minimum caloric intake), what about the inclusion of items such as fizzy drinks, which poor people buy? Would it not be better to put such items in the non-food essential basket? I struggle to find the poverty trends (presented by Dr Simelane) to be credible, raising the question of whether there are issues with the data. In terms of the caloric measures in Mr Budlender's presentation, the Department of Health has come up with similar measures. It might be helpful to bring these into the picture and disaggregate them.

Dr Tolullah Oni, UCT: It would be interesting to look at well-being and calculate the food basket in terms of the minimum fibre and fresh fruit and vegetable intake, and the maximum sugar intake.

This would reveal the higher cost of healthier foods and true food poverty rates.

Unknown: Prices reflect a complicated process. Non-food items, such as fuel, impact the cost of food items. How is this measured and brought into the cause and effect of non-food on food items?

Unknown: It has been said that the poor get lost in averages. Most of the data in the presentations gave national averages. There are so many variations in South Africa that one would want to look at the geographical differences and identify the depth of poverty below the poverty line.

SESSION TWO: MULTI-DIMENSIONAL POVERTY

Chair: Dr Tolullah Oni, School of Public Health and Family Medicine, UCT

Measuring Multiple Deprivation at the Small Area Level

Prof Michael Noble, South African Social Policy Research Institute (SASPRI)

Small area indices of multiple deprivation are defined as a relative measure of multiple deprivation expressed at small area level and covering an entire country. These indices are designed with a primary purpose in mind, specifically a policy purpose, to target anti-poverty initiatives at a small area level (sometimes called targeted neighbourhood initiatives) to complement mainstream policies. This family of indices is meant to be an amalgamation of separate domain indices with the different domains reflecting different policy challenges. The approach is now used in many developed and developing countries. 'Relative' in the sense of small area indices means geographically relative and the aim of the small area indices is to try to target the smallest possible area where the areas are fairly comparable to each other.

In terms of the methodological background, small area indices come from a sociological tradition as opposed to an economics tradition. The current methodology underwent a peer-review process, which included presentation at the Royal Statistical

Society. It is a domain-based approach, which allows moving away from census data where suitable administrative data are available. Small area indices can be constructed for the whole population or sub-sections of it. Theoretically, they are based on Townsend's concepts of relative deprivation. Townsend distinguished between poverty and deprivation and offered a definition of multi-dimensional deprivation which underpins these indices.

The index of multiple deprivation conceptualises multiple deprivation as a composite of different dimensions or domains of deprivation experienced by individuals or households and expressed at area level using relative measures. The model of multiple deprivation at small area level requires the following:

- Identification of the appropriate spatial scale.
- Clear definition of the dimensions of deprivation and collection of indicators to specifically measure that form of deprivation.
- Dealing with problems of unacceptable standard error.
- Standardisation of domain scores to give a relative picture of the specific form of deprivation and further combining those into an overall measure, taking into account weighting and cancellation.

The 2011 South African Index of Multiple Deprivation (SAIMD) at ward level applied material, employment, education and living environment domains of deprivation. Each domain score was standardised and transformed to a common distribution and then combined with equal weights to give the overall index. The ward level measures were ranked and could be expressed at provincial and municipal level, and mapped for each province. The highest levels of deprivation were found in the former homelands.

Income poverty levels set at a LBPL of R604 and an UBPL of R1 113 per capita per month in 2011 (Hoogeveen and Özler, 2006) showed that income poverty rates corresponded to levels of multiple deprivation at ward level.

It was concluded that deprivation (and income poverty) in the former homelands was significantly higher than in the rest of South Africa. Though there had been some absolute improvement across the country between 2001 and 2011, the rates remained unacceptably high. The SAIMD 2011 provided a useful tool to identify areas for policy prioritisation. However, it was essential to harness administrative data in order to capture small area deprivation more comprehensively and between censuses.

Discussant: Dr Michael Rogan, Rhodes University (RU)

Four broad points were made about multi-dimensional poverty:

- In attempting to collect and combine all the elements associated with poverty, the various measures become overly technical and tend to obscure more than they reveal. Small area indices of multiple deprivation allow the researcher to prioritise a certain area, simplifying the decomposition process.

  This is more useful (from a policy point of view) than having an estimate of the relative contribution of something to a number which was measured.
- In many methods, the step of identification of the poor is user-driven and involves unpacking when results are presented. A feature of the small area indices of multiple deprivation (because it is about a relative measure and there is no ultimate quest for a headcount) is that it allows for an intuitive, relative measure of deprivation, which does not make user-driven assumptions about who is and who is not poor. This is useful from a policy point of view.
- There is always a difference between what one would like to measure and what can be measured. One example is the domain of health where Charles Meth, in his critique of South Africa's Multi-dimensional Poverty Index (MPI), felt that measuring the MPI over time completely missed a health crisis that occurred in that same period of time. He argued that the changes in multi-dimensional poverty measures using the UNDP approach almost completely missed a human development crisis in the country. Small area indices of multiple deprivation, while it does not include health as a

domain, in its methodology it appears to be more sensitive to indicators of something such as a health crisis, as does the predecessor to the MPI, the Human Development Index (HDI).

- In terms of reading the results and constructing the indices, equal weights should be applied instead of the user having to make assumptions about the weights assigned to the various aspects. A number of approaches, including the MPI, started from the logical standpoint that unless there was convincing evidence that one was more or less important than another, equal weights should be applied. However, South Africa's MPI is fairly sensitive to adjustments of the weights and the deprivation cut-off points, and so there is uncertainty about what could happen if the assumptions of how to assign value to each domain are changed. Most of the methods have cumbersome processes to show the infinite combinations of weights and cut-off points and what that would yield.

Questions/Comments

Prof Julian May, UWC: Is there any sense of the differences between this approach and others that have been tried in South Africa? Poverty in all dimensions is associated with the former homelands. What else do we now know?

Response by Prof Noble: The issue of weights and sensitivity testing has been considered in the past. The higher the correlation between the domains, the less sensitivity there is. The indices to measure multiple deprivation at the small area level do not have any income poverty measure yet the people are still living in the same places. Although there is more nuance, the picture is one of the former homelands, in the spatial sense. The higher spatial aggregation of the wards loses the ability to discriminate within a ward. The health measure used last time involved running a comparative mortality ratio using individual census data. Potential life lost cannot be done at ward level, but could be done at municipality level.

Dr Emily Frame, SALDRU, UCT: 1) The index of multiple deprivation allows one to see who is experiencing different kinds of deprivation at the same time. Is there a way to do a further analysis, not only

of the single domains, but looking at which domains people tend to experience together? 2) In terms of identifying small areas, such as wards, what kind of political response would you get from those results?

Response by Prof Noble: 1) Our work is not about individuals experiencing more than one deprivation, but it is part of the MPI. More is best. 2) Wards are very popular among politicians and resonate as a geography, but are not without problems when there are big differences in the size of wards.

Dr Mark Collinson, University of the Witwatersrand (Wits)/Medical Research Council (MRC): My work is based in the rural north-east. Prof Posel raised an important matter of dividing the poverty measures by the per capita and the number of people in households, but the per capita division is least likely to be successful in the former homelands because bigger households are more important in the former homeland areas and have more efficiencies and use of the environment. Data using the poverty line to represent which households fall within the areas identified seems to be way-off because of the division per capita.

Response by Prof Noble: The per capita income relative to size of household has been a concern given the economies of scales and so forth. Empirical work should be done to determine equivalent scales. The bigger household issue is important. However, the very small levels of income in the former homelands would not make the spatial map look any different.

Service Delivery Measurement

Mr Morné Oosthuizen, Development Policy Unit, UCT

The use of asset measures comes from the view that money-metric measures (income, expenditure, consumption) do not and cannot tell the full story about poverty and inequality. Government poverty alleviation policies could promote asset accumulation or deliver in-kind benefits rather than trying to directly address income.

In-kind benefits include a broad range of aspects, such as housing, connections to electricity and water, free allocations, municipal services, healthcare and education.

Over the last 20 years there has been an increased effort dedicated to collecting data related to service delivery (public assets) at a nationally representative level, through the use of dedicated surveys focused on living conditions and assets and more detailed questions, and by probing new aspects. Data constraints for time comparisons limit the measures included in some of the analyses.

Data from the 1993, 1999, 2005 and 2011 surveys on household access to public assets show an improvement over time in the range of access to public assets, particularly in terms of access to electricity for cooking and lighting.

Although discerning the level of access to a particular service is straightforward, these separate measures of deprivation are not easily summarised in a single statistic. In addition, there is the issue of relative weightings of separate measures. One option is factor analysis, where weights are determined from the data and a household's ownership of an asset is linearly linked to a common factor, household welfare, but the independent variable and its coefficient are unobservable. Factor analysis allows direct estimation of the relationship, allowing construction of appropriate weights for the index.

The choice of public assets is aligned to the four key areas of service delivery: housing, energy, water and sanitation. Defining assets/services in the surveys involves classifying certain variables in each asset/service. Several of the differentiations are difficult to make. The data are used in the factor analysis to produce a set of weights, or scoring coefficients.

Public asset poverty has changed in South Africa. There has been a consistent improvement in the mean asset index over time, preliminary evidence of a decline in deprivation and non-linearity in service delivery improvement. Poverty lines to look at public asset poverty are defined relatively for asset values for 1993 taking the poorest 40% of households and the poorest 20% of households and

applying the index value at those cut-offs in an absolute sense in the following year. A decline in poverty rates between consecutive periods is evident and each decline on each measure for each set of periods is statistically significant.

In conclusion, asset poverty as measured by headcount ratio has shown a continuous decline over the period. There has been non-linearity in the decline with more rapid improvements in the 1993 – 1999 period and particular improvements for African and female-headed households, and households in the Free State and Limpopo provinces.

Discussant: Prof Fiona Tregenna, UJ

It is easier to measure actual service delivery than to measure how that service delivery affected poverty. Mr Oosthuizen touched on the elements of the complexity. However, it is crucial to find some way of quantifying these non-income dimensions of poverty. Part of the link to capabilities, well-being and deprivation would be lost if account is not taken of the assets, particularly in the South African context. It could be argued that many of the inroads that have been made into poverty have been stronger on the non-earning sources of income and non-income aspects because of the persistent very high unemployment. There has been a weaker contribution to poverty reduction from the earning side. Much of the reduction has come from the non-earning aspects of income, particularly social grants, and the roll-out of free basic services. There is an estimation of some of the progress that has been made in poverty reduction and policy interventions, not taking account of service delivery and improvement in publicly provided assets. For this reason, the kind of public asset poverty index presented by Mr Oosthuizen is interesting and an important and useful contribution to our understanding of poverty in South Africa.

There is a sense that there will be less international comparability of this index and that it will be more useful for comparing poverty rates geographically within South Africa and comparing trends over time.

One way of approaching the measurement issue is to look at the presence or absence of certain physical characteristics. The aspect of putting a monetary value of assets and services is a completely different component of the literature and methodologically from the one taken for the presentation. For example, in the IES people were asked questions about the value they put on the free water and electricity they were given. The responses to these questions raised the point about in-kind variables within the IES because a huge measurement error was likely. When combining these into an integrated measure of poverty, it is necessary to find some way of monetisation. The more ambitious project is building an integrated poverty index that combines monetary and non-monetary measures, but a way will have to be found to value these aspects. Finding a metric for the interviewer to monetise assets is preferable to self-evaluation.

Another challenge is how to factor in non-household specific service delivery, as well as household specific services that are not included in the survey checklist, such as free healthcare and education, and refuse removal as these factors have implications for the poverty status of households.

In terms of the construction of the index and the question of whether the weighting would be year specific, one of the limitations of using factor analysis to weight is that it would be based on patterns of variance in a specific data set. If the intention is to track changes over time, it will be necessary to construct a weighting for a median year and use this throughout in order to track the changes.

Discussant: Dr Ian Goldman, The Presidency, DPME

The idea that multi-dimensional approaches are giving a much more meaningful picture is clear.

Dr Goldman used the sustainable livelihoods approach, looking at five different types of assets: human, natural, financial, physical and social, all of which are important in terms of understanding people's lives and livelihoods. The physical assets are easier to measure and so provide a proxy for part of people's lives.

The downward trend that is shown matches other work and there is a correlation of the positive aspects.

The general area that is problematic concerns income as people's incomes have not improved in the way that multi-dimensional poverty has improved. This broader picture is important, but it would have to be recognised that more needs to be done on the income side as well.

Inequality (between different income groups and geography) remains a problematic area. These measurements have not touched on this aspect.

Any number of measures could be produced but it is important to focus on what the measures would be used for. Questions should be asked about how the measures could be useful for general national statistics and used on an ongoing basis, and if so, which ones should be used and how should the measures be used on a much more disaggregated level to inform change process.

Questions/Comments

Prof Imraan Valodia, Wits: In terms of the assets and the way they are used in South Africa, I am often struck that in many other countries access to a house or to electricity is more than just a service delivery issue; it becomes an issue of income generation, particularly in the informal sector. Is there a way to complicate the analysis in order to get a better feel for this aspect?

Response by Mr Oosthuizen: This could be thought of as a second-round effect in terms of the asset index. I agree with the comment about the year specificity of weights. The problem with using this kind of measure over time is that it would be necessary to recalculate weights every time because eventually the weights will no longer be representative. This is the one big challenge in terms of institutionalising the index.

Prof Murray Leibbrandt, UCT: Dr Goldman's point about thinking carefully about the use of the indices is accepted. It is correct to be clear on the role of information at different levels of an evidence-

based policy process. We are particularly weak at coming down to disaggregating levels. I want to defend the aggregate level measurement as something that is worth doing. It is clear that the non-monetary measures tell a much better story than monetary measures. Some, like Charles Meth, have been critical of this, but it is important to document that certain assets/services have been rolled out, while remembering that a decline in the indicators at the highest level will be an aggregate signal that focus has been lost. One has to be appropriately circumspect about the usefulness of aggregate indicators and do other things as well.

Response by Dr Goldman: The rollout of infrastructure is easier in a township than in a distant rural area. One would expect infrastructure rollout to be slower in the former homelands, but it has not slowed. Generally government is much better at dealing with the hard issues than the soft issues. It is one thing to roll out infrastructure and another to set up a maintenance system that involves training people and deploying them appropriately and so on. This is where many of the problems come from.

Dr Mark Collinson, Wits/MRC: Prof Noble's presentation mentioned that the four domains were each weighted with one. Have you tried such an approach and not put in factor weights? I can see the full value of having the factor analysis of the ranking for one year, but when comparing over time, the weights will be different in subsequent years. A more neutral weighting structure will produce more of how a particular sample is changing against its own previous value rather than against how it is ranked.

Attitudinal Approaches to Measuring Poverty in South Africa

Prof Daniel Plaatjies, Democracy, Governance and Service Delivery (DGSD) Research Programme, Human Sciences Research Council (HSRC)

The South African Social Attitudes Survey (SASAS) has been conducted by the HSRC on an annual basis since 2003 and is nationally representative of the population of 16 years of age and older living in private residence in the nine provinces. Its primary

sampling unit is 500 census enumeration areas (EAs), stratified by province, geography type and majority population group. Its secondary sampling units comprise seven household visiting points randomly selected per EA. In 2013, the realised sample size was 2 885. Responses to the survey are voluntary and confidential, and are collected by face-to-face interview.

Subjective poverty indicators have been introduced as SASAS core items since the inception of the series in 2003. Currently there are twelve years of quantitative data on subjective poverty deprivation available in the system. SASAS worked primarily on identifying a subjective deprivation cut-off for different domains of poverty and these cut-off points could be used to determine subjective poverty. The SASAS system has pushed the frontier on poverty analysis in the country and been partnered with a number of collaborators and SASAS measures have influenced several other studies.

Since 2003, poverty measures in SASAS were minimum income and income evaluation questions, consumption adequacy questions, and economic welfare questions focusing on self-rated questions, economic ladder questions, consensual poverty approach and subjective well-being poverty line questions.

Many of the dimensions in the SASAS system result from a number of partnerships, in particular with Stats SA, CASASP and SALDRU. SASAS administers the definitional component of consensual measures for adults and children and LCS focuses on the measurement component.

Other partnerships included:

- The merging of SAIMD derived variables into SASAS, as part of the partnership with the Economic and Social Research Council (ESRC).
- Interaction with the European Union's Presidency Programme to Support Pro-poor Development (EU-PSPPD).
- Ongoing discussions about refielding socially perceived necessities (SPNs) for adults in SASAS.

SASAS uses the consumption adequacy approach to measure subjective poverty. This approach addresses the issue of perceived consumption needs and does not look at income. About 26% of respondents (the majority of whom were black Africans from rural areas, previously homelands) reported deprivation in four or more areas in the 2013 survey.

SASAS takes a consensual approach to measure SPNs, asking ordinary people what they regard as an acceptable standard of living that all South Africans should enjoy in the present day. In SASAS 2006, respondents were asked which items (possessions, services or activities) were necessary for all South Africans to have or have access to in order to enjoy an 'acceptable' standard of living.

In terms of the SPNs, 36 of the 50 items were defined as essential by more than half the adult population and 27 items were defined as essential by two-thirds or more of the adult population. The main categories were in the areas of service provision/infrastructure, material possessions and social networks.

More survey-based research is required to better understand poverty and its extent in the country. SASAS provides an excellent tool to monitor and study perceived necessities and public definitions of poverty. Funding is required in order to undertake an analysis of existing data on poverty and basic needs through new collaborative partnerships.

Discussant: Dr Gemma Wright, SASPRI

The contribution made by SASAS alongside other important surveys must be acknowledged. It has shed light and yielded fascinating results on a host of issues around social attitudes. SASAS is a very important resource in South Africa and is connected to the International Social Survey Programme (www.isp.org), providing useful information on an annual basis.

SASPRI received funding to look at the SPNs as they relate to income data. This was possible because the 36 SPNs obtained through SASAS were taken by Stats SA and included in the 2008/09

LCS. The latter survey had detailed income data enabling SASPRI to look in more detail at how possession of SPNs related to income.

Using the LCS information about households and income, it was possible to explore in more depth the relationship between possession of the essential items and per capita income. The findings showed that there is a clear relationship between possession of the SPNs and income: as one might expect, as income increases so do the average number of SPNs possessed. The median per capita income of people who possess the socially perceived necessities is quite high. However, the relationship varies by item as some items are more prevalent among those who have most of the SPNs (e.g. paid employment), whereas other items can be common even for those who have very few (e.g. someone to look after you when you are very ill).

These findings show the power of SASAS to unpack some of the trends and highlight the importance of taking into account the ideological underpinnings when looking at the reasons for the existence of poverty and finding ways to eradicate poverty. Interesting social policy questions were raised in terms of how these SPNs were provided.

Discussant: Prof Robert Mattes, Centre for Social Science Research, UCT

The addition of 'experiential' to attitudinal approaches presents a slightly different form of attitudinal/subjective measure compared to just asking people to rate their own level of poverty or well-being. This approach asked people to describe their quality of life in interesting ways that complement money-metric income and expenditure, caloric intake or access to resource approaches.

Advantages of attitudinal/experiential approaches are:

- They offer the possibility of getting to the real business end of poverty, going beyond measuring the precursors of poverty (unemployment, income, access to services) or its consequences (literacy, health, longevity) and take the notion that 'poverty is in the living' seriously.

- People are best positioned to convey these experiences to researchers and are the best judge of own self-interest.
- Efficiency of questionnaire space due to a smaller number of questions.
- Affordability of regular large poverty, health or demographic surveys.

Disadvantages of attitudinal/experiential approaches include:

- Validity due to subjectivity as people might not recognise their deprivation, or report deprivation where it does not 'objectively' exist.
- Reliability of recall, as people might not have an accurate recollection of how long they have gone without basic necessities.
- Precision, as attitudinal data are often limited to ordinal scales. Measurement should be driven by 'methodological appropriateness'. Respondents should not be forced to levels of precision such that 'distinctions without difference' are measured.

A project called Afrobarometer involves surveys in 35 countries across Africa and has the characteristics of an attitudinal/experiential approach. The project aims to get an efficient measure of the experience of poverty based on the argument that poverty 'is in the living'. Afrobarometer started in 1999, has done five rounds of surveys and is currently busy with the sixth round of surveys. The surveys are done face-to-face in the language of the respondents' choice and with nationally representative samples.

Afrobarometer adopted the Lived Poverty Index (LPI) from a series of questions first asked in the New Russia Barometer (Rose, 1998). It focuses efficiently and directly on the central, core aspect of poverty, namely, the rate at which people actually exist without the basic necessities of life. It thus measures a portion of the central core of the concept of poverty that is not well captured by existing measures and is an important complement to official statistics on poverty and development.

Respondents were asked to indicate how often over the past year (if ever) they or anyone in their family had gone without:

- Enough food to eat.
- Enough clean water for home use.
- Medicines or medical treatment.
- Enough fuel to cook your food.
- A cash income.

Across the 35 countries, the most frequently experienced shortage was cash income and 50% and more respondents indicated that they went without medical care, food and water several times or always. Huge cross-continental and cross-regional variations were evident. Comparing National Wealth (gross national income per capita) and Lived Poverty revealed a strong fit although there was a range of differences that probably had to do with local access to social capital survival strategies. In terms of changes in Lived Poverty, it was expected that an increase would be seen in the 16 countries (where four rounds of surveys have been done), but hardly any change was observed due to the fact that four countries had made significant improvements and Lived Poverty in another four countries (including South Africa) had worsened. The South African figures relating to 'at least one shortage per year' in terms of food, water, medicine, fuel, cash income and electricity showed no overall trend in reduction. Rural/urban, race and provincial breakdowns revealed the expected. The only area where there had been any reduction related to the shortage of food reported by black South Africans. The Stats SA data also found a reduction in the same area.

Questions/Comments

Prof Julian May, UWC: The presentations give new areas that need to be opened up further. We also see similarities in the presentations, for example, the trends in the Afrobaromater and the Stats SA data. It was striking that the increase in self-reported poverty around the 2000 – 2012 period, which was defined, was not picked up in the Stats SA data. Colliding the different datasets together

is a fruitful area for our work. It is possibly time to stop wondering what the right money-metric poverty line is and perhaps do some tweaks, such as the adult equivalence. It is not that one method is right and the other wrong, but it is about taking what we can learn from each method/survey, and look at how to use data in a way that can anticipate a rise in unrest and strikes and the tragic consequences thereof.

Prof Murray Leibbrandt, UCT: What about the complementarities and the differences between SASAS and the exercises being undertaken by SASPRI, HSRC and SPII?

Response by Dr Wright: In terms of the complementarities there has been a concern around the question of poverty definition and the need to involve people in determining the thresholds of adequacy. The focus groups that were undertaken for the Department of Social Development had the component asking people whether they had those 50 items and whether they regarded them as essential, desirable but not essential, or neither. Stats SA included the 36 SPNs that had been obtained in the definitional component of SASAS, and included them in their LCS 2008/09 and in the current LCS, only measuring who has the items and personal preference. When SASAS had both components, most of the SPNs lacked, not because people could not afford them but rather by choice.

Response by Prof Plaatjies: The HSRC is having discussions with SPII about the complementarities. Part of the discussion deals with poverty, systems methodology, targets, sampling and content, all connected to the work that SPII has been doing and the work the HSRC has been doing on determining the nature of compliance of government institutions and the private sector with court judgements on socio-economic rights. The discussions will serve to push further components of provision of social and other infrastructural services to households and citizens. The key components have not yet been solidified but initial conversations suggest that at the structural level there needs to be a formalised way to move forward in the discussions on institutional approaches to deprivation.

This process could be used to formalise that the different institutions looking at this phenomenon get together and develop a policy discussion paper or position paper for consideration.

Unknown: One way to take the issue forward would be to continue along that line and update the SPNs in SASAS because attitudes about necessities change. Another way in which the work can be developed is by linking it to income and looking at the incomes for those who have the necessities and how this varies by item, and looking at where the national minimum wage sits along that spectrum.

Unknown: To take it one step further, there is a well-developed methodology for the minimum income standards approach that informs the living wage threshold in the UK. It has been applied in a host of different countries and is now championed at Loughborough University by Donald Hirsch, who was invited to South Africa to tell us more about the process. We discussed how that methodological approach could be used to fill in the gaps between the 36 items. The methodology involves bringing together people from diverse backgrounds and iteratively reaching an agreement about what is an acceptable standard of living. The practicalities of this are mind-stretching, particularly in the South African context.

Dr Ian Goldman, The Presidency, DPME: The evaluation system in South Africa was developed based on the experience in Mexico and Columbia. The unit in Mexico responsible for social evaluations is also responsible for the national measurement of poverty and uses a multi-dimensional indicator for poverty. Have you made any links with them, because they have an institutional position?

It would be interesting to link (from an institutional perspective) how they are using the national poverty indicators.

Ms Isobel Frye, SPII: We became involved around the question of setting the national minimum wage and trying to see whether there are linkages between the living wage campaign and the national minimum wage, and the question of a decent standard of living looking at the relationship between the people who are able to afford the SPNs and their income levels. We would like to go

back and undertake further work on this issue towards the budget methodology, building on some of the lessons taken in the EU-wide budget construction project. This is exciting work. The outcomes might not be what make us comfortable in terms of what people perceive to be a decent standard of living but they are held by people and need to be known.

Unknown: I was interested in Prof Mattes's reference to the term 'Lived Poverty'. He mentioned that participants are asked to define the assets they have rather than respond to a given list of assets. Did you consult people and if so, did you find that other studies that did not follow this methodology came up with different findings?

Response by Prof Mattes: A lot depends on the purpose of the survey. Afrobarometer is not intended to be solely a purpose built poverty of well-being survey and is not a survey of the household. A purpose built survey would want to do all the money-metric work as well as the attitudinal/experiential approaches. I would argue that many of those questions should be brought into the existing national instruments that are already doing a good job on the money-metric, caloric intake and access to services approaches. Just because we have access to services does not mean that we make use of them. In my view, one of the reasons why we are showing trendless variation is that all the gains in extending the social welfare net in South Africa have pushed against the opposite forces of the effects of AIDS and unemployment and also the fact that even if people have access to free water and electricity, they are still experiencing shortages. We did start asking about income and we found that people did not tell us their income and that the correlation between income and the poverty scale was only about 0.3. Even those who had an income were going without the SPNs for a wide range of reasons. Another thing we do is to verify whether infrastructure is in place and we find that where the state puts in development infrastructure, poverty rates are halved, and that poverty rates are strongly related to the individuals' own level of education and to the ability of the state to put in infrastructure in the area. In terms of the rest of the comparisons, it has been extremely difficult to look at a range of over time trends.

One useful publication would be the display over time trends and how they compare and how they differ.

Dr Gemma Wright, SPII: There is an important role for government to play in the construction of poverty data. There is also an important role for healthy and robust engagements such as this where we can critique some of the measures and for academics to further explore issues such as the one mentioned earlier of 'poverty makers', i.e. arrangements that perpetuate or increase the extent of poverty. In the UK the derivation of indices of multiple deprivation has been contracted out to academics by government.

CLOSURE AND ANNOUNCEMENTS FOR DAY 2

Dr Tolullah Oni and Prof Murray Leibbrandt

After a morning of money-metric measurements, the afternoon sessions addressed multi-dimensional poverty: from indices of multiple deprivation through the four domains, asset measurements and attitudinal approaches and the example of the SASAS and the Afrobarometer that looked at lived and experienced poverty across Africa and over time in South Africa.

The ultimate aim of this forum is to look at measuring deprivation to promote human development. The aspects of experienced poverty influence outcomes and human development, which would be dealt with during the following sessions.

DAY 2

KEYNOTE ADDRESS: MEASURING POVERTY IN MIDDLE-INCOME COUNTRIES

Dr Selim Jahan, Director: Global Human Development Report Office, UNDP, New York

When measuring poverty in middle-income countries (MICs), it is important to understand some of the salient characteristics of those countries as they relate to the issue of poverty. According to the World Bank's definition, MICs are those whose gross national income (GNI) per capita fell between 1 045 USD and 12 745 USD. The average per capita income of MICs was 4 168 USD. Five billion people, or 70% of the global population, lived in MICs, which include China and India. It is important to note the emergence of a middle class within the MICs and it is estimated that by 2016, 340 million people in China and 267 million people in India would form the middle class in those countries. This provides the context when dealing with the issue of poverty in MICs.

The extent of poverty is significant in MICs. The World Bank's Povcal calculated extreme poverty in MICs or people living below 1.25 USD per person per day (pppd) at about 10% (headcount ratio) or 500 million people. About 24% of the MICs population, or 1.2 billion people, lived on less than 2 USD pppd.

In Brazil, even though extreme poverty and inequality had decreased it was again on the increase. The share of the top quintile of the 10% was about 57 times more than the bottom quintile in the total income of the country. In China it was 28 times more, in India 25 times more and in Nigeria 23 times more. The relative poverty or inequality was important to these countries. Although China had been successful in reducing extreme poverty, the inequalities between the areas along the Shanghai line and the hinterland are mind-boggling. Similarly in India, the inequalities between centres such as Bangalore and the rest of the country are critical. In terms of the HDI, the shortfall in relation to the distance to be covered to reach the value of one is 0.324 in MICs.

The majority of the extreme poor live in the MICs. In terms of the MDGs, the post-2015 development agenda and the Sustainable Development Goals (SDGs), numerous countries have raised the question of the unfinished agenda as far as the MDGs are concerned and the move towards a different set of development goals, the SDGs. The fact is that the post-2015 development agenda and SDGs are more critical for MICs, and that they would have to be anchored in the whole issue of extreme poverty.

What has been seen thus far emphasises the point that both absolute and relative poverty are critical in the MICs. There was a time when absolute and relative poverty moved in the same direction, but this is no longer the case. Many countries have been able to reduce absolute poverty but the inequalities are increasing. Relative poverty is important, not only from an economic point of view, but also from a social and political point of view. There is a social and a political cost to ongoing and increasing inequality, particularly when the younger population is outside of the development process.

In MICs, poverty should be approached from a multi-dimensional perspective. Income is not the sum total of human life, and the lack of it cannot be the sum total of human deprivation. Income poverty is important but it is equally important to consider the deprivations in other aspects of human lives whether health, knowledge, participation or insecurity. The issue of gender equality will have to be addressed with the rigour it deserves. More equitable societies cannot become a reality if the gender aspect is neglected.

The following issues should be kept in mind when addressing poverty measures in MICs:

- Poverty measures in the MICs should be multi-dimensional, looking beyond income to other deprivations and these deprivations assessed in a comprehensive manner.
- Poverty measures in MICs should focus on both absolute and relative poverty.
- Any measurement of poverty has a focus measure and a breadth measure (a dashboard of poverty indicators).

Even though the breadth measure is robust, GDP per capita would be resorted to if there is no single number that could be used. The HDI is similar to GDP per capita but not as blind as GDP per capita to the broader dimensions of human wellbeing. A breadth measure should be used with the HDI.

Substantial research and other work has been done on poverty measures, and measures of inequality and deprivation. The following indices are suggested if a multi-dimensional approach is to be taken to poverty in MICs, if absolute as well as relative poverty are to be reflected and if there is a focus and a breadth measure:

- Inequality-adjusted HDI (IHDI): This is a distribution sensitive class of measures that looks at inequality in terms of life expectancy at birth, educational attainment and GNI per capita. The average changes in many countries when the HDI is adjusted to inequalities.
- Gender inequality index (GII): Discussions and research on this index are ongoing.
- MPI: This index uses a dashboard of deprivations and is gaining traction in many countries.

When poverty was measured using some of the suggested indices, the IHDI for MICs was 0.507 and the HDI was 0.676, showing how the average HDI changes as a result of adjustment to inequalities. The MPI for the MICs had been calculated at 24% (headcount), implying that approximately one million people were in multi-dimensional poverty.

In terms of the breadth measures on the dashboard, the deprivations in MICs are critical. A comparison of statistics relating to life expectancy and child mortality in MICs and in higher-income countries (HICs) clearly reflect the higher levels of in MICs.

If the growth process fails to be inclusive or equitable with pro-poor policies, growth itself would not resolve the poverty problem. The growth process will not be sustainable without active participation of the poor. An inclusive and equitable approach to growth is

absolutely essential and requires pro-poor policies. Access to productive resources and basic social services, and job creation in the areas where poor people live are essential in order to deal with poverty in MICs. The importance of redistribution policies cannot be underestimated. The policy option for social protection, for example conditional cash transfer programmes in Latin America, has been used in various countries to deal with the poverty issue.

Data and poverty mapping, as well as the disaggregation of data and mapping, are essential to provide guidance to policymakers because the average would give a general picture but would not show the pockets of deprivations or the nature of deprivations in terms of areas, regions and groups of people.

In conclusion, any concept is broader than its measures. Therefore, any kind of measure of poverty will not give the totality of the extent of the depth of poverty, whether multi-dimensional or in any aspects of human lives. Different options should be looked at and those that are able to robustly and pragmatically capture the kind of deprivation in a particular society should be chosen. The choices made in the coming years, whether in terms of measuring deprivations or the approach taken to deprivations in MICs, will determine the kind of world that is passed on to the future generations.

Questions/Comments

Prof Thenjiwe Meyiwa, Durban University of Technology (DUT): With respect to your point that SDGs should be considered rather than MDGs, why is this important and what would it entail?

Response by Dr Jahan: When the MDGs came out in 2000 the idea was to set goals globally to deal with the basic dimensions of poverty. Three things are happening in relation to the MDGs:

- There is tension between the environmental camp and the broader non-environmental camp as far as sustainability is concerned. Sustainability has to be defined and understood from a broader context and environmental sustainability must be taken into account. Unless sustainability is viewed and dealt

with from the broader perspective, I think there is a chance that it can move to either extreme by either camp.

- There is also an emphasis by numerous groups to ensure that poverty and inequality are at the core of the SDGs. The report of the high-level panel indicates that inequality has to be dealt with at the national level and that there cannot be discussions on inequality at the global level. There is a fear that if inequality is part of the global agenda, the developing countries would demand resources, equal opportunities and more to address inequality.
- The Rio Declaration on Environment and Development speaks of the three pillars of sustainability: social, environmental and economic, but this approach to sustainable development will not work.

Unless there is an entry point, such as inequality, to bring the three dimensions together, this pillarised approach will not work.

Mr Darlington Mushongesa, Gauteng City Regional Observatory, Wits: Dr Jahan highlighted the difficulties of obtaining data needed to do analyses. Is UNDP doing anything to assist countries to collect the necessary data?

Response by Dr Jahan: Countries are the owners of data and the capacities of countries vary in terms of data collection, quality and analyses. This is a reason for the UN Secretary-General's initiative on data revolution. Other entities are also producing data and there is also real-time data. In terms of the UNDP's support to data collection and capacity development at the country level there are other initiatives going on. At a global level, the UNDP is not a statistical organisation but a secondary user of data.

Dr Emily Frame, SALDRU, UCT: There is always a negative spin when we talk about poverty and deprivation. When the focus is on what is going wrong it could imply that poor people need help but there is another side to the story and there are positive points that might lead to focusing on people's agencies. Is the UNDP involved in any work that focuses on this aspect of poverty, and on how data can be developed to measure the positive attributes?

Response by Dr Jahan: You are correct. The agency of poor people and the initiatives that they are taking in many parts of the world to try and improve their lives are very important. The UNDP Human Development Reports (and other reports in the UN system) present the positive spin to poverty and talk about people's choices, enhancing their capabilities, extending opportunities in various areas of life, through individual as well as collective agency and action. The participatory research approach to poverty measures is used in various parts of the world and is coming up with very interesting results, which sometimes vindicate the macro results. The nature of the topic of measuring poverty brings out many negative aspects, but development should be a positive thing. You should not be in the development business if you are a pessimist.

Prof Julian May, UWC: As we look at poverty in MICs, it is interesting to note that other things are happening in MICs, such as demographic transitions, a change in the disease patterns and a shift towards non-communicable diseases (NCDs). What are your thoughts on this?

Response by Dr Jahan: NCDs are a major challenge: a health issue as well as a development issue. There is also a gender dimension to some of the NCDs. NCDs are no longer 'rich man's illnesses' or a matter of lifestyle but are also linked to poverty. Obesity is no longer only relevant to developed countries but also an issue in developing countries, where it is not only a matter of lifestyle but of what is consumed. For example, in the US the poor strata of society live on food and drinks that are full of sugar but are cheap. Healthy food is sometimes beyond the reach of poor people.

SESSION THREE: MEASURING HUMAN DEVELOPMENT

Chair: Ms Mastoera Sadan, The Presidency, Programme to Support Pro-poor Policy Development

Health-related Deprivation Measures

Prof Di McIntyre, Health Economics Unit, UCT

It is interesting that the work done around some of the earliest multi-dimensional deprivation indices relates to the health sector and the allocation of public health resources. In 1999/2000, UCT undertook a study at magisterial district level to look at geographic patterns of deprivation and health inequalities in South Africa (McIntyre *et al.*, 2002). The main index was developed using principle component analysis (PCA) and looked at which variables in the 1996 Census would be relevant from a health perspective. The variables were used to map deprivation and identify priority areas. It was felt that the PCA or a factor analysis (a black-box) where weights were given from the data would be difficult, particularly for policymakers, to grasp.

An alternative index, called a policy-perspective index, was developed. It included groups that are regarded by policymakers as particularly disadvantaged and prioritised in terms of social services and infrastructure. The groups were given an equal weighting. Interestingly, there was a high correlation between the PCA and the policy-perspective index.

Some of the key findings of the study were:

- Although mortality and health-related indicators were weak, there was a very strong correlation between the deprivation index and mortality indicators.
- When the deprivation index was mapped, it was found that the majority of districts in the most deprived quintile had the worst health service resources. Deprivation was concentrated in the former homelands. The deprivation index could be used as a tool to focus on the areas of need to ensure improved health service.

- Insights into social determinants were provided.

The most recent index, done by Okorafor (2008), showed that the same variables were important in relation to the general deprivation index and the index was used by the Health Systems Trust and was published each year in the District Health Barometer.

There is an assumption that there is a relationship between deprivation and ill health. A recent study (Ataguba *et al.*, 2015) used the National Income Dynamics Study (NIDS) dataset and the self-assessed health status, which, although it could be seen as subjective, was found internationally to have a strong correlation with morbidity. A concentration index analysis was done to look at inequality in self-assessed health status in South Africa. The social determinants that were significant in explaining the inequalities were social grants, employment, secondary education, housing and infrastructure. It was important that the income and poverty variables were not found to be significant in this analysis. The findings highlighted the importance of a range of factors (such as education and housing), and not simply income poverty, from a health perspective.

The health system also plays a crucial role in health. The goal of achieving universal health coverage was included in the health-related SDGs, which aim to provide access to health services of sufficient quality to be effective and financial risk protection when using health services to all. In measuring progress on the SDGs, countries are going to be expected to provide information on the utilisation rates, equity in utilisation and the type of health services. None of the household surveys conducted in South Africa allowed for accurate measurement of this aspect. This matter should be addressed urgently.

A study that looked at financial protection in terms of the use of health services and what people paid out of pocket to use health services in Ghana, showed that although people might have been above the poverty line, their households become impoverished when they had to pay for health services. The issue of financial protection is therefore critical.

There is a debate within the health community about whether the internationally accepted poverty lines or country-specific poverty lines should be used from a financial protection perspective.

The key issues from a health perspective are:

- There is a very strong correlation between deprivation and poor health.
- Other social services are critical (such as social grants and education).
- Infrastructure is absolutely critical.
- Children are particularly vulnerable.

There is a need for improved public funding of all social services and infrastructure, and equitable distribution of those.

Discussant: Dr Tolullah Oni, School of Public Health and Family Medicine, UCT

The following key points were raised in relation to measuring health:

- When talking about health, it is important to consider not only the absence of disease, but also the complete state of physical, social and mental well-being. This is particularly important in the context of the perception and experiences of well-being as significantly impacted by lived and experienced poverty and deprivation contributing to health status whether or not there is measured disease.
- In terms of the concept of population health transition, there is a danger of missing the changing epidemics in countries such as South Africa when the focus is only on deprivation. South Africa is undergoing epidemiological and demographic transition and experiences a quadruple burden of disease. The important issue is that many of those diseases co-occur and have shared risk factors, and increase with increasing poverty and deprivation. While some of these conditions are considered within the broader context, they are often neglected in the context of deprivation and poverty.

- In terms of population movement and the associated changing exposures and environments, South Africa has a high rate of urbanisation, which needs to be taken into account in human development. Urbanisation could improve access, but could also bring about changes in lifestyle associated with increasing, chronic NCDs. Measuring deprivation often focuses on the individual or the household level, but the changes brought about by urbanisation need to be measured alongside the household level data to reiterate health and well-being as a holistic concept.
- In the context of macro interventions to improve population health, and measuring deprivation to improve human development, it is important not to focus on absolute calories but to incorporate the nature of the calories taken into consideration in measures of the food basket and the FPL (for example, the amount of salt, fibre and sugar in processed foods).
- The importance of health status and its strong correlation with health has been seen time and time again. However, it does not reflect the change in patterns of diseases or enable monitoring of the change in patterns of disease in relation to increasing or decreasing levels of deprivation. Health profiles highlight the importance of thinking about how health is measured in household surveys.
- Health inequity needs to be measured alongside deprivation, as averages mask inequities within a defined area of interest, e.g. sub-district, district, city, etc.
- When considering deprivation measures to promote human development, it is important to explore and investigate the positive attributes of both and identify the positive aspects that should be measured, collect and measure data to look at discordance and disparities between particular levels of deprivation and expected and actual levels of human development, to come up with potential coping mechanisms and resilience at individual, household and community levels. This requires sufficiently disaggregated data, but has a positive instead of a negative focus.

If human development is to be significantly impacted, then these processes need to be carefully measured and sufficiently disaggregated in tandem with measuring the indices of deprivation and poverty.

Discussant: Dr Mark Collinson, Wits/MRC

Dr Collinson raised the following points:

- Epi-transition and disease pattern changes: The health system has to cope with infectious diseases and NCDs, but the key challenge concerns the idea that diseases are chronic. The need for chronic care was not anticipated when primary healthcare was conceptualised some decades ago. The health sector response to the challenge of infectious diseases and NCDs in underprivileged areas requires more attention to be paid to keeping track of patients and their care over a prolonged period.
- The purpose of the data collection that is being undertaken (highlighting two dimensions): Prof McIntyre's presentation reflected on health indicators alongside deprivation indicators. It is necessary to know how to target the health services and where the deprived areas are in order to focus health sector developments and reforms. Keeping people healthy becomes crucial when resources to intervene in these chronic complex problems are limited. Working health systems should be an important part of addressing these multi-dimensional deprivation issues. When looking at interventions it is important to focus on health and the financing of health at an individual and household level to allow people in impoverished situations to access health services.
- Migration dimension: Migration has fallen outside of datasets making it easy not to include the migration factor. When identifying impoverished households, the interconnection of households through the migration process is difficult to identify from databases. The interconnection is probably more profound than recognised. Data show that the key aspect is the remittances and when migration is not clear from the data, the importance of remittances for care and income for

households in rural and impoverished areas is underestimated. The continuity of care required in the chronic care regime is particularly compromised for the migrants that fall outside of the data systems. The continuity of care is a particular problem that requires more research in southern Africa to maintain the vitality of workers in the region.

- Triangulation of different data sources in order to look at some of the issues from different scales: An aspect such as migration would fall out less when looking at a different scale. At a sub-district level, the migrants stand out more than at a household survey level. Longitudinal data systems that are based at a smaller scale are not being adequately used and exploited to understand the full picture.

The International Network for the Demographic Evaluation of Populations and Their Health (INDEPTH) pledged to make more of a contribution in the region by making databases accessible for scholars. The demographic and health surveillance data involved going back to the same households, providing datasets that had more real-time interaction. When bringing in policies and test interventions, there is a chance to see the effects more directly on the smaller scale datasets. It was proposed that the way different datasets brought different aspects should be emphasised and worked on by the research community.

Questions/Comments

Prof Dori Posel, UKZN: Prof McIntyre made a point that the only reliable health data in the household surveys are self-assessed health status data. Why would you discount the other data that are collected on whether or not people have a particular chronic disease? One of the problems with self-rated health in that question is that it is well-correlated with the more so-called objective measures and there is also evidence that richer people are more likely to underestimate their health status and poorer people are more likely to overestimate their health status. This will compromise the relationship between self-reported health and income. When you said that income poverty was not a significant correlate of health outcomes, what about a non-linear relationship?

Response by Prof McIntyre: There are major problems with much of the self-reported data, but self-reporting on illness tends to be worse than self-assessment of health status. There is clear evidence of underestimation on reporting on illness by poorer groups. Illness is probably ignored as a coping strategy because poor people cannot afford to be ill, and because of undiagnosed illness. It is curious that in the international studies, the question of self-assessed health status seems to perform much better in relation to more objective measures. Some household surveys internationally are doing objective measures for individual chronic diseases. We cannot focus on one or two diseases and these kinds of surveys are very resource intensive and time consuming. The self-assessed health status measure is the best we have got but a lot more engagement is needed about what should be prioritised within household surveys.

Response by Dr Collinson: In respect of triangulation and using sub-district data where there are repeated measures and the contribution that this could make to a national system, when it comes to self-reported health, the cost and challenge of getting more refined morbidity measures at large scale datasets will always remain a problem. Although more work could be done to calibrate national datasets with more biologically related measures being taken in the small areas, when calibrating the self-reported measures using the more granular Health and Demographic Surveillance Systems (HDSS) data from INDEPTH centres (which are located in the most impoverished and deprived parts of countries), it will be found that this is happening in the most impoverished communities. This would be helpful to the national dialogue.

Response by Dr Oni: While the difference between higher and lower income in terms of self-reported health status is true, we see the same thing in terms of the proportion of prevalent disease that is diagnosed. The more deprived you are the less likely you are to have been diagnosed. This could impact the self-reported health status even in the absence of a diagnosis. We know that there is a huge discrepancy between the self-reported and actual measurements, such a blood pressure measurements.

We need to start thinking how to move towards actual measurement of the important chronic, infectious and non-communicable diseases instead of asking covert questions and making inferences.

Mr John Kruger, The Presidency, DPME: Government produces a lot of administrative data which is a large burden on civil servants such as hospital and health workers. How are those data assessed in the academic community? Are they used intensively and are they improving? Are the data sufficient to allow us to move beyond surveys? Administrative data are underutilised in South Africa.

Response by Prof McIntyre: I think we do still have major reporting problems. Access to the District Health Information System (DHIS) is impossible for researchers. One of the key points is that we do have a dual health system in South Africa. The DHIS only deals with the public sector and is not comprehensive as it does not include all public facilities and completely excludes people who use private sector facilities. This is an aspect that also needs to be understood.

Response by Dr Collinson: We are moving into an era of more data and there has been some improvement in the country's ability to record health and demographic events but this has a long way to go, especially in the most remote areas. Learning more about this through the longitudinal data systems can help us understand better.

Response by Dr Oni: Some of the challenges of the administrative data specifically relate to the morbidity measurements from the health facilities. Some of the data quality challenges come from not engaging healthcare workers in understanding why the data are collected, impacting significantly on the quality of the data collected. Patient identification and the avoidance of duplication is another challenge and relates to the broader health information system needs and priorities within the health system. In terms of data linkage, apart from the fact that the data come from the public and not the private sector, there are also different tiers (city, province) operating on different data systems that are not interoperable. This increases the challenge of data usability. When looking at health and deprivation it is necessary to consider the interceptual data as well, and interoperability between routine

data collected by the Department of Health and health systems as well as the other government departments. Routine data must be made more interoperable across the various sectors.

Education Measures: Inequality Traps and Human Capital Accumulation in South Africa

Prof Vimal Ranchhod, SALDRU, UCT

Poverty and inequality are inter-related. Although the focus has been on measurement, there is a secondary question: policy, dynamics or evaluation of poverty or inequality, what goes into generating poverty and inequality and what could be addressed in a fundamental or causal sense.

Two questions were addressed:

- Is South Africa in an inequality trap on the human capital dimension?
- If so, is it possible to differentiate between the various types of inequality traps?

Inequality in South Africa is among the highest of all the countries for which good data are available. There was some discussion that the Gini coefficient could be between 0.5 and 0.7. Even though the spread would differ depending on the datasets and methods used, the country would still have an exceptionally high inequality rate. South Africa has been an unequal society for many years and research suggests that inequality has increased since the transition to a democratic government in 1994. Inequality was now recognised as a core strategic area of national government and there were both normative and efficiency concerns.

An inequality trap is a situation of high inequality, where the poor are unable to participate in profitable investments due to income and credit constraints and the small group of rich people could and did invest. This scarcity of investments means the poor stay poor and the rich stay rich, resulting in persistence of the high inequality. Inequality results in a particular grouping being able to

access education and because of the scarce skills constraint, the few that manage to become highly skilled earn rent, reinforcing the inequality cycle.

New literature has been published in the last 15 to 20 years on why inequality seems to be a persistent and difficult phenomenon to address. Focusing on the human capital aspect, there are three hypotheses: perfect credit markets (no trap), or imperfect credit markets (trap due to market failures), and social externalities (trap due to neighbourhood and peer effects). The study focused particularly on tertiary schooling, but applied to any form of human capital investment. Two datasets, NIDS 2008 and the Cape Area Panel Study (CAPS) 2002, were used to look at returns to education, who studied and reasons for not continuing to study, as well as role models, educational expectations, career aspirations, and some evidence on the differences in the rate of learning by income group.

The following conclusions were reached in terms of educational attainment and returns to education:

- Returns to education were very high (high for matriculants but especially high for those with a tertiary education).
- Attainment was strongly correlated with socio-economic status.
- Credit markets or financial reasons for not continuing to study mattered for most people.
- The perfect credit markets hypothesis was rejected in favour of the imperfect credit markets hypothesis.

In terms of respondents' expectation to complete a tertiary qualification, it was concluded that there were no large differences in expectations of achieving a tertiary education or career aspirations. However, large differences in scholastic aptitude manifested by income group at early ages and became more pronounced with time, possibly as a result of resources or social externalities, or both.

When looking at career aspirations in CAPS, it was found that fewer than 10 respondents out of approximately 4 800 planned to be teachers (in primary or secondary schools) by the age of 30.

Policy implications for consideration included:

- Taxes and redistribution that could take the form of provision of local public goods, for example investment in schools and/or teacher incentives, as well as efficient use of the budget.
- Intervention in the credit market for higher education, for example, by providing subsidies, application fees and cheap loans.
- Making teaching an attractive career choice for bright young students.

Discussant: Prof Imraan Valodia, Wits

Prof Ranchhod's presentation made three indisputable key points:

- The data suggested that the returns to education were high.
- There was a strong relationship between income and tertiary education.
- The costs of higher education were a significant barrier for the poor.

A question was raised about whether the credit markets framework was useful in considering education measures of poverty. Education in schools in South Africa should be free and should not be a matter of income and therefore not a problem of credit. The issue should be thought about less in terms of income inequality and more in terms of some form of other inequality. Spatial, rural and urban dimensions were of much more importance.

A few things were happening that could be of interest in terms of the concerns about the social and network dimensions. Model C schools brought together a mixture of children from low to high-income households and taxes and redistribution were taking place as wealthier parents were effectively paying the fees for the

children from low-income households. Another development was the move of the private sector to provide education for children from middle-income households.

It was puzzling that many more people were not interested in becoming teachers. Government had been doing a lot in this area and wages of teachers in the public sector had increased substantially in recent times. More should be asked about the responsibility of teachers to do the work they were paid to do.

The amount of money put into the National Student Financial Aid Scheme (NSFAS) had quadrupled in the last few years, but little attention had been paid to the political aspect of student financing. Decisions about the allocation of NSFAS funds were taken by the universities and as the students had a say in the allocation, funding tended to be skewed towards those inside the system with less and less funding being made available for new entrants. This was a serious problem.

Any efforts by higher education management to improve through-put rates were believed to lead to a decrease in the quality of tertiary education. There were examples of resource wastage and unrealistic expectations from students. Such issues in the education system needed to be unpacked and studied closely.

Discussant: Mr John Kruger, The Presidency, DPME

The South African education system has clearly not helped much in the fight against poverty and inequality. However, increasing inequality has been identified, by Piketty and Atkinson among others, as a common trend in a range of market economies pointing that out that the poverty and inequality trap identified by Prof Ranchhod was a result also of global trends such as insufficient taxation or a too limited tax system.

The education component of the HDI is measured by mean years of schooling for adults aged 25 years and expected years of schooling for children of school-entering age.

These leave out key issues in education because there are no quality and output dimensions.

The NDP stated that "human beings needed more than income". Therefore, the ongoing work of the National Planning Commission is to define a 'minimum' or 'decent standard of living' and there is a need to focus on the different elements (domains) of a decent standard of living. To date, no answers have been provided by the Commission in this regard. The DPME has begun unpacking the elements of a decent standard of living, identifying the key characteristics and considering standardisation in relation to the legislative and policy framework.

The DPME used the literature about service delivery measurement, such as SPII's 2014 publication on monitoring the right to housing (Dawson & McClaren), which stated that in order to monitor the right to housing it was necessary to look at the policy effort, and resource allocation and expenditure, as well as the attainment of socio-economic rights. In many areas of service delivery there are no central commitments in government policy around these key characteristics, making it difficult for people to understand what they are entitled to in the various domains. The DPME then looked at the National Water Act (1998), arguably the most developed legislation in terms of guaranteeing South Africans their right, and came up with the following characteristics of service delivery, which could be applied to the different elements of a decent standard of living:

- Quantity (access).
- Quality (reliability).
- Quality (outcome/type).
- Quality (proximity).
- Price/cost.

A broader question, however, is whether we do not miss important things in formalising indicators and measurement.

Many of our quantity and quality indicators, in education for example, tend to bureaucratise while not capturing important things like the extent of creativity and playful learning in the system.

Questions/Comments

Response by Prof Ranchhod to Prof Valodia: Schooling should be free, if it can be funded. Should the focus be on income inequality or on other manifestations such as spatial inequality or health inequality? Theoretically and practically, these manifestations are intertwined. I looked at education and income inequality. Empirically, it is hard to speak to this because things cannot be identified in the strict sense. The cross-subsidisation in Model C schools will not change the national distribution. The point is taken that government has done a lot in terms of teachers' wages and the budget share. It is up to the university leadership to manage the NSFAS funding issue.

Response by Prof Ranchhod to Mr Kruger: It is useful to try to pin down which sub-components are more important and those that are relatively less important because when thinking of policy and the allocation of resources, then it is worth knowing that this particular inequality trap is much more important than another. There is value-add in understanding the problem better.

Mr Andrew Donaldson, National Treasury, Government Technical Advisory Centre: Prof Valodia raised a question in relation to Prof Ranchhod's presentation about the appropriateness of the capital market lens to look at the role of education in promoting ability or overcoming challenges in access to education. I was also concerned about this and was struck by the data on the occupation aspirations of young people. The results are extraordinary and signal very unrealistic expectations among large numbers of young people. There is a theoretical lens that can be applied to that kind of challenge. It is the lens that understands signalling: the role education in particular, but education associated with occupation advisory services and so on, plays in signalling opportunities appropriately. There is evidence of a huge signalling failure between school and work and this is an important kind of poverty. It might be useful to go back to the framework of signalling.

Response by Prof Ranchhod: There are two parts to the signalling: one is that these are low cost interventions and the other is an enabling component where students who want to do certain things can be helped to get the information of how they can do that and what is required. There is an informational breakdown in this area. One part is about managing expectations and the other is about enabling people to meet the expectations. I had a broad category called tertiary that included anything post-secondary. CAPS does contain the data required to get more work done. We know that more than half of the incoming cohort does not complete matric and only 15% or so get what used to be called a matric exemption. It is important that the bottleneck is reached for the majority way before getting into matric. There are many different points where interventions can be made but some cost much less than others.

Demographic Indicators on South Africa with a Special Focus on Gauteng and Limpopo Provinces

Prof Eric Udjo, BMR, Unisa

Improvement of the welfare of people is at the centre of all socio-economic development planning, as well as national and sub-national development plans. The South African government has embarked on many strategies to improve the welfare of its people and the relationship between population and development has been emphasised in various international population conferences. South Africa's population policy notes that "the human development situation in South Africa reveals that there are a number of major population issues that need to be dealt with as part of the numerous development programmes and strategies in the country". Indicators provide a tool for understanding the development context and for monitoring different dimensions of development progress.

Prof Udjo's presentation provided and described basic demographic indicators on South Africa that influence development. As national indicators mask important differences within a population, Gauteng and Limpopo were chosen for specific focus to provide insight, with Gauteng being the most economically devel-

oped province and Limpopo one of the poorest provinces in the country. The 2001 and 2011 Censuses constituted the data utilised and several methodologies were employed.

South Africa's population has increased from 44.8 million in 2001 to 51.7 million in 2011, implying a growth rate of 1.4% per annum during that period. Annual growth rates of 2.7% in Gauteng and 0.8% in Limpopo are driven by different patterns of migration. These figures are relevant in terms of service provision and prioritisation.

Age structure of the population is driven by past fertility and modified to a lesser or greater extent by mortality and migration. Future age structure is determined by current levels of fertility, mortality and migration. The current age structure is a reflection of past demographic processes but also a driver of future population growth.

The relative size of the population aged between 0 and 14 years is an important determinant of the future size of the labour market. The percentage of the national population that makes up the working age group (15 to 64 years) has remained constant. The relative size of this age group is bigger in Gauteng and smaller in Limpopo than the national average largely due to different patterns of migration. The percentage of elderly population has increased marginally, but is relatively small compared to developed countries, and higher for the white population than for other population groups. The growth rate of the elderly population nationally and in Gauteng and Limpopo is higher than the annual growth of the overall population.

The proportion of the elderly and the 0 to 14 age group provides the age dependency (the number of dependents for every 100 people in the working age group) which is a driver of poverty. The total fertility rate (the average number of children a woman will have at the end of her reproductive life) in 2011 in Limpopo was the second highest in South Africa, and is part of the reason for the high child dependency ratio in that province. The potential for growth in Limpopo is higher than in Gauteng, assuming that migration remains constant.

Mortality is symptomatic of certain morbid conditions and levels of morbidity, and is one of the drivers of population growth. One of the commonest measures of mortality is life expectancy at birth. Data from the 2011 Census show that life expectancy at birth in Limpopo is 57 years compared to a national average of 55 years.

Migration has two major components: immigration and emigration. The tendency is to focus on immigration, but the emigration of mostly highly skilled and semi-skilled professionals has implications for the quality of the country's labour force among others. According to the 2011 Census, 4.4% of the national population was foreign born.

The relationship between demographic factors and development is complex. However, some pertinent questions related to the improvement of welfare could include the following:

- Population size and growth: Given the competing allocation of scarce resources, could improvement in people's welfare be accelerated if present growth rates continue?
- In view of the declining trend in the size of the 0 to 14 age group with the accompanying increase in the working age group, what would be the implication for the education sector in absorbing the potential increase in entrants to tertiary institutions?
- What is the implication of the increase in the size of the working age group for employment, job creation, saving, capital formation and investment? There were more new entrants into the labour market than those that exited the labour market.
- At current growth rates, the elderly population in South Africa would double in about 32 years (from 2011). What would the implication be for resource allocations with regard to different forms of old age support by government?
- Gauteng's population growth is largely driven by in-migration and immigration. What would be the impact of migration (local and international) on Gauteng's environment and land use, and what would the impact be on the economy?

Discussant: Ms Nompumelelo Nzimande, School of Built Environment and Development Studies, UKZN

Ms Nzimande raised the following points:

- At the core of understanding the well-being of the nation and the levels of poverty is an understanding of the population structure and composition.
- When referring to poverty and demographic indicators, and the relationship between the two, the causal effect goes both ways, which means that the demographic indicators drive the level of poverty and these equally drive the level of demographic indicators of the population.
- In terms of how demographic indicators featured in the HDIs, they are mostly aggregated and there is insufficient disaggregation. For example, when looking at teenage pregnancy it is important to take into account the trajectory of the teenager as well as the child by looking at the aggregate measures, as well as the core measures that are relevant to the situation.
- Much has been done in terms of isolating generational change in poverty levels and demographic indicators, and to some extent the link between the two. However it has not been possible (particularly in developing countries) to articulate intergenerational transmission of poverty and the impact on intergenerational transmission of demographic events. It is necessary to fully understand these intergenerational phenomena in order to achieve sustainable development.

Discussant: Prof Philip Harrison, School of Architecture and Planning, Wits

Prof Harrison offered some thoughts about the indisputable importance of demography to the planning process. Almost invariably, the projections have been wrong and sometimes the baselines are also wrong but they have been corrected every ten years or so by the national census. There has also been a lot of dispute around projections and no certainty of their accuracy looking forward.

It is therefore necessary to plan with a considerable degree of uncertainty. Two cases were outlined where the demography was wrong; why it was wrong, to what extent did this matter and how to respond.

The first case was the City of Johannesburg (2006 to 2009). There had been caution around demographics but discipline in the use of estimates and projections was maintained. Demographers were employed and the results of their modelling confirmed the City's cautious approach. At the beginning of 2010, there was talk of a population of about 3.9 million for the City of Johannesburg, and this was expected to grow to about 4 million by 2011. Census 2011 indicated a population of 4.43 million and suggested that around 60% of the growth came from migration (since 1996), while the City believed that population growth from natural population growth exceeded growth from migration. The City had a sense that the rate of household formation was exceeding the rate of population increase, RDP housing, decompressing households and so on but did not grasp the speed of household formation. It was surprising to discover that Johannesburg's population had increased by 68.4% since 1996, but the number of households had increased by 96%. Another surprise came in relation to informal settlements. The City operated on the assumption that informal settlements were growing substantially and the narrative was the failure of the RDP housing scheme to keep pace with growth.

The Census told another story. There was some growth in informal settlements but the proportion of the City's population living in informal settlements dropped sharply between 1996 and 2011. There was proportional growth in the form of backyard shacks, but this was largely missed. According to the Census, two-thirds of the growth in shacks was in backyards and only one-third in informal settlements. This had a significant impact in the City and the proportion of people living in brick structures on separate stands (mainly in the affordable housing market) increased considerably.

The bottom line was that the City had been growing faster than anticipated, there were more migrants than expected, informal settlements were declining in significance, an increasing proportion of the urban poor was living in backyard shacks and the RDP housing programme was having more impact than anticipated. In effect, the City was becoming more formal.

A second confrontation with a 'demographic error' was on the National Planning Commission. The NDP was prepared from 2010 to 2012 before the release of the 2011 Census. The absence of updated data was a challenge. Demographers and actuaries came up with a baseline and projections for 2030 taking a conservative view of population growth. The NDP targets were based on those figures but there was a divergence with Census 2011. To get the exact figures, the NDP used a base population of 50.6 million for 2012 while the Census indicated a figure of 51.8 million. Although the difference seemed small, the problem came when projecting forward to 2030. The NDP used a projection of 58.2 million as the low end and 61.5 million as the high end, but after the Census, Stats SA issued a projection of 64.5 million. This was significant in terms of global figures but more significant in terms of the age cohorts, particularly those that were predicted to have been most affected by AIDS projected through to 2030.

Demographers ought to address the ten-year gap between the census years. Another issue is the tendency to do straight-line projections without understanding the actual dynamics and without the real analysis. More attention should be given to analysis, understanding the processes before projections are made. That analysis would help deal with assumptions in relation to issues of fertility, migration, death rates and so on. If they remain uncorrected, the errors would matter considerably in terms of policy and detailed planning. The point is that the errors in terms of the baseline are recognised because they are corrected periodically with the census. It is important to work the corrections into the planning. This was what the City of Johannesburg had done but the problem was that not all municipalities had this capacity and the errors remained uncorrected for most municipalities. Although the NDP was a high-level, long-term plan, the error would matter if uncorrected and would have implications for the projections, such as job creation, state pensions, education, which would have to be revised and targets adjusted.

Perhaps this is part of the ongoing process of projecting, planning, feedback and correcting and that planning on the basis of absolutely accurate data could not be expected. It is clear that work needs to be done on improving the accuracy and timeousness

of data provision, the sophistication of modelling and capacities to analyse. The reality is that there would always be a continued degree of uncertainty and risk and even the best demographer cannot deal with the multiple contingencies of real life.

In the 1960s there was the pretence that planning was a science and made use of accurate projections, and to some extent this was true, but uncertainty and volatility have become the norm since the 1970s. Planning has been forced to become more strategic, incremental and pragmatic, and the construction of scenarios, for example, become commonplace and more attention is being paid to feedback loops and so on. Capabilities for foresight remain important in strategic planning to understand trends rather than to predict outcomes in particular ways. It is necessary to push for better data, proceeding in a way that does not depend on the reliability of the data, except at local scale. It is necessary to plan pragmatically in the event that the data are not correct. An interesting discussion is to be had about the use of science (demography in this case) in this pragmatic process of policymaking and plan-making.

Questions/Comments

Response by Prof Udjo to Prof Harrison: You raise important points and I understand this frustration. Some important clarifications need to be made. When comparing Census 2011 results with any projections, people often make the mistake of just comparing the two numbers. The Census was taken in October 2011 and projections are usually mid-year, so you have to move the Census figure to the end of June and then make the comparison. The other issue is that no demographer can project the population accurately. The problem is that people who use the data are interpreting the projections as forecasts. No-one can accurately project the future. Projections are not linear and this is taken into account in the methods we use.

Mr Andrew Donaldson, National Treasury, Government Technical Advisory Centre: Signalling theory also tells us something about how to think about the challenges mentioned by Profs Udjo and Harrison, because statistics is ultimately a set of signals that

feeds into planning at a different level of decision-making in the economy.

Mr Bandile Ngidi, Corporate Strategy and Industrial Development, Wits: Does Prof Udjo have any further thoughts on how the labour market could respond to the trends in migration, given the context of growth rates?

Response by Prof Udjo: Work on the impact of population migration on the labour market was done about three years ago and it is in the BMR report that can be found on the BMR website.

SESSION FOUR: DISAGGREGATING POVERTY
Chair: Prof Julian May, UWC

Gendered Poverty

Prof Dori Posel, School of Development Studies, UKZN

The work presented drew from different projects and was a compilation of work using an amalgam of datasets. The presentation addressed three questions.

Were there gender differences in income and poverty in South Africa?

All poverty statistics and inequality statistics were generated using average per capita measures of income in the household (i.e. aggregating household income and dividing by the number of people in the household). An analysis of the NIDS data showed that women (16 years and older) are significantly more likely than men to live in households where average per capita income is lower (by 20% on average). This difference between men and women overall is driven specifically by differences among African men and women. Although average per capita household income is considerably higher than the poverty line for South Africa, the average measure is considerably inflated by outliers and a sizable share of both men and women live in poverty. However, women are significantly more likely than men to live in households that are poor.

This overall difference among men and women is again driven by differences in poverty rates among African men and women.

What explained these differences in poverty rates and in income?

Two broad sets of reasons were highlighted: economic (labour market) factors and demographic factors.

- Labour market factors: Women are less likely than men to be employed, but this is not because women are less likely to want to work. Rather, unemployment rates are far higher among women than men, particularly when using the broad measure of unemployment. In addition, when women find employment they typically earn significantly less than men. The gender gap in earnings among African men and women is more pronounced than among non-African men and women. Although over the post-apartheid period, the share of women in employment has increased, women remain under-represented amongst all the employed but are becoming increasingly over-represented amongst lower-income earners. Part of the reason for why men and women live in households with different average per capita household income is because men and women have different access to jobs and when they find employment, women on average earn significantly less than men.
- Demographic factors: Gender differences in income cannot be understood without also considering demographic factors. If substantial shares of men and women co-reside, then gender differences in the labour market will not be visible in measures of household income because these measures aggregate all resources in the household (including men's higher income and women's lower income) to generate an average per capita measure for the household. High rates of co-residency among non-African men and women help to explain why, despite gender differences in the labour market, non-African women do not live in households with significantly lower income than non-African men. However, rates of co-residence are far lower, and a larger share of men and women live in households without members of the opposite sex.

This means that the gender differences in the labour market are now also visible in the measure of household income, because households are more likely to be reliant only on the income generated by women.

The average size of households in which African women live is significantly bigger than the average size of households in which African men live. This is particularly because women are more likely than men to live in households with children. As a result, the share of children in the household is significantly larger in households in which African women live compared to households in which African men live. (In contrast, differences in household size and composition are not significant in the case of non-African men and women.)

The particular differences in household size and composition among African men and women are explained partly by continuing patterns of temporary labour migration, which remain male dominated (although female labour migration has increased), and also by low rates of union formation coupled with high rates of non-marital childbirth.

Figures showed that by 2011, white and Indian women are almost twice as likely as African women to be married. Declining marriage rates are not unique to South Africa and have been partially offset by rising rates of co-habitation. But among African women, rising cohabitation rates have not been large enough to offset falling marriage rates. Furthermore, large differences in union formation remain: African women are far less likely than other women to be married or cohabiting.

Low rates of union formation need to be seen in the context of childbirth. Census 2011 figures show a particularly large gap between the percentage of African (and Coloured) women ever married or in union and the percentage to have ever had a child. In the large majority of cases of women who had children outside of marriage, the children lived with them. Only 31% of African children lived in a household where the father was resident and 58% of children lived in a household where the father was alive but not co-resident in the household. In the latter instance, pov-

erty rates were over 80%. The implication is that women are sharing their lower income with more household members, particularly more children. NIDS data showed that 38% of children who had a father who was not part of the household, received financial support from the father and 31% of children never had any contact with the father. Mothers who were absent from the household were significantly more likely to contribute. Poverty rates among African children were very high, but substantially lower if the father was a resident member of the household.

Given the above, women and children were more likely to live in poverty. Social grants have made a significant difference and narrowed the gender gap in poverty incidence, but only in the case of extreme poverty.

How well were gender differences in income measured?

It is important to recognise two problems with the way that gender differences in income are calculated:

- The first is that per capita measures of household income ignore the intra-household distribution of resources. Rather, these measures assume that income in the household is equally shared, which may not be the case. If men retain a larger share of income than women, then gender differences in income will be under-estimated.
- The second problem is that per capita measures of income make no adjustments for possible economies of scale in the household, or for the lower consumption needs of children compared to adults. This is significant for measuring gender differences in income because African women in particular live in larger households and in households with more children than African men. Adjusting for economies of scale and the lower consumption needs of children therefore has a larger effect on women's income than men's income. In particular, it increases the income of households in which African women live by more than the income of households in which men live.

As a result, equivalence scale adjustments narrow the gender gap in income (although the gap remained sizeable and significant).

Moreover, inequality among Africans is reduced overall by adjusting for equivalent scales; using the NIDS 2008 data, the Gini coefficient measuring inequality in income among Africans fell from 0.602 with a per capita measure to 0.548 with the adjustments for economies of scale and the lower costs of children. Equivalent scale adjustments therefore have implications for the overall measure of inequality in South Africa.

It is important to recognise that neither per capita nor equivalence measures of income capture the significant indirect and non-monetary costs of children, which are typically borne by women.

Discussant: Prof Thenjiwe Meyiwa, DUT

The full story needs to be told and interpreted in order to provide a satisfactory response to the questions posed by Prof Posel. Are gender poverty and feminised poverty the same thing and is there a positive story to tell? Perhaps there should be a search for a different narrative: one that is cognisant of the soft issues as these are important but are rarely talked about by researchers because they are difficult to measure.

Prof Posel's work (over and above the work presented) highlighted that women's social inequality persists but is somehow ignored. It must be acknowledged that women pay a high cost to survive and encounter recurring social issues such as violence, reproductive concerns, a lack of education and susceptibility to diseases. The African woman is at the centre of the problem. It is necessary to look into the fundamental causes of African women's poverty and undertake more Black feminist-influenced studies to examine how intersections of race and gender influence the life, work and experiences of girls and women, and how this impacts on their income and employability.

It is doubtful that researchers, policymakers and others who should be affecting change understand these complexities. It was both a shocking and humbling experience when talking to respondents to realise how little was understood about the issues that affected young African girls and women. It is important to take cognisance of the reality that many girls become mothers when they are quite

young, they live in substandard housing, attend inferior schools and generally have to grow up quickly in order to survive. Despite the harshness of their environments, girls exhibit hopes and dreams of a bright and productive future. At the same time, the many success stories are not being heard.

In line with theorists such as Barbara Omolade (1994), Patricia Hill Collins (2000) and Pearl Sithole (2014), research narratives ought to reject negative images of black African womanhood that is prominent in analyses, without being oblivious to the challenges that exist, and account for racism, patriarchy and misogyny. All these factors impact on poverty escalation and the further marginalisation of African women in society.

More engagement of political leadership and policymakers to take account of what is happening on the ground is essential. Researchers and development programmes need to take cognisance of the complexities beyond datasets and analyses and listen to the stories told by respondents.

Discussant: Prof Charlene Africa, Deputy Dean (Gender and Equity) in the Faculty of Science and Professor/ Cluster Head for Medical Microbiology in the Department of Medical Biosciences, UWC

All the evidence of what defined poverty was made available in the various presentations. It is clear that whether looking at measures of poverty or deprivation, women consistently experience more negative effects. It has been said that 70% of the world's poor are women and the wealth and success of a nation could be determined by the health and well-being of its women. Taking this into account, the measuring of poverty is only the beginning. Poverty intervention programmes should start by asking the right questions in order to establish the causes and fill the gaps to inform and enable intervention measures.

Dr Jahan referred to poverty as multi-dimensional and said that it was necessary to look at both absolute and relative poverty. One of the speakers mentioned that there should be a greater focus on understanding the basic needs with particular emphasis

on maternal morbidity and mortality. It is necessary to unpack the many factors that impact heavily on the current situation in the country, which sometimes remain unmentioned. It is also necessary to take a closer look at the 'poverty-makers' and the meaning of 'an adequate standard of living', for example. Policymakers and 'poverty-makers' should hear the full story and take cognisance of the cries of the mother who sacrificed her own nutrition for the sake of feeding her children, and the girl child who was forced into a marriage and motherhood, for which she was neither physically nor psychologically prepared.

In terms of teenage pregnancies, it is important to look at the trajectory of both the mother and the infant. Very often these young women deliver pre-term infants, impacting on the morbidity of the neonate and manifesting either early or late. Mothers in rural areas are sometimes unable to access the medical treatment they require due to a lack of transport. Girls often have to assume the role of the mother in the home, interrupting their own lives in the process. Such women would find it difficult to be economically independent because they have been deprived of an education. Some women are in a constant state of pregnancy simply because they have no say over their own bodies. Women who are victims of polygamous marriages and mothers who are left to take care of many children whose fathers are absent also need to be considered.

Adequate water, sanitation and hygiene programmes have the potential to improve the health practices in developing countries. An estimated 760 000 children under the age of five die of diarrhoea each year because of a lack of adequate drinking water, and about 1.2 million children die annually as a result of acute respiratory infections. More attention ought to be paid to issues such as these.

The WHO definition of health education addresses the importance of knowledge of the prevention of sexually transmitted diseases and HIV, hygiene and hand-washing, and bodily and oral healthcare practices. Research has shown that an imbalance of normal oral and vaginal microflora may lead to endogenous infections which predispose the mother to pre-term delivery of low birth-rate infants.

In his keynote address, Dr Jahan said that any concept was broader than its measures. The need for a multi-disciplinary interactive engagement to fill the research and the policy gaps should be emphasised.

Not only is it necessary to acquire a deeper understanding of poverty in our country but also to integrate this understanding into research and planning in order to meet the goals that have been set.

Questions/Comments

Response by Prof Posel (to discussants): It is important that we recognise non-income dimensions of gender deprivation. Some work that I have done looks at levels of subjective well-being, or what is sometimes called happiness, and is one way of arriving at the indirect costs of children. The research shows for South Africa and every country in the world, that when women have children their happiness levels fall. The relationship between young children and men is not nearly as consistent or robust. Women are significantly more likely to report depression, anxiety and stress than men in South Africa.

Mr Josh Budlender, SALDRU, UCT: Gender deprivation that is related to issues other than income came across strongly from the discussants. Prof Posel's decomposition of deprivation in terms of gender dynamics was interesting. Has there been any work on decomposing multi-dimensional poverty into gender dynamics? This may require a different multi-dimensional poverty indicator that takes into account the gender forms of poverty that people face.

Prof Eric Udjo, HSRC: The analysis on marital status has to be interpreted with considerable caution as some women report different marital categories.

Response Prof Posel: I have done much work on this, comparing marriage rates by age cohort and there is still a very large gap among older women. The gap is partly because African women get married older but this is not the whole story. It is also that they do not get married at all.

This has been confirmed in extensive qualitative work that I have done, admittedly only in KwaZulu-Natal, showing that many women would like to get married but do not get married. The marriage categories include all forms of marriage.

Poverty and Old Age

Mr Morné Oosthuizen, Development Policy Research Unit, UCT

Generally, the elderly are at greater risk of poverty than any other age group apart from children, who in South Africa are more likely to be poor than the elderly. The U-shaped relationship between age and the incidence of poverty is particularly evident in relation to pre-transfer income. The elderly are also at a higher risk of chronic poverty. Location is important to non-money-metric poverty and there is therefore an expectation that the elderly in rural areas are more likely to be deprived of those assets.

Work being done on age in the National Transfer Accounts (NTA), stems from demographic research that ties into economics and looks at how consumption is being financed across the lifecycle. The net transfers were public transfers and private transfers, and the consumption was public consumption and private consumption. Spending on education or on health, for example, was counted as part of consumption. Once all the profiles were estimated, it was worked out how the consumption was financed.

In many countries, the elderly face challenges related to ineffective or changing support systems. Four sources of financing for consumption are identified within the NTA framework: labour income, assets, public transfers and private transfers. Familial support systems for the elderly around the world are under increasing pressure, possibly due to declining fertility, migration, unemployment and the impact of HIV/AIDS.

In terms of the profiles of the four main sources of financing globally, labour income declines rapidly as age increases (particularly strongly in South Africa), diminishing that source of financing for consumption for the elderly.

Consumption in South Africa, unlike most other countries, is very high in the working ages and falls relatively steeply for the elderly.

Changes in dependency can be estimated from the labour income and consumption profiles. South Africa is in the process of the demographic dividend and so dependency is currently falling (mainly due to child dependency) and 'old-age' (the group for 60+) dependency is expected to begin rising more rapidly. The increase in dependency among older cohorts would outweigh the declining dependency among younger cohorts to see the end of the demographic dividend for South Africa.

Different countries are funding the gap between consumption and labour income for elderly cohorts by financing their consumption through assets, public transfers (from the state, in kind or cash) or family transfers. Very few countries are financing consumption among the elderly through family transfers and many countries are financing consumption for the elderly through public transfers. Assets (such as housing) are important in financing consumption among the elderly overall in South Africa, but the extent of inequality within the elderly cohort means that differences in patterns of support between different groups are not discernible. In many countries the state has a very important role in terms of financing consumption of the elderly, as family transfers play a relatively insignificant role.

Labour income overall is the predominant source of financing consumption and assets account for approximately one-third of the financing of consumption. Over time there has been a decline in the importance of private transfers (within and between households) and an increase in public transfers. Among the elderly there has been an increase in financing consumption from assets over time and elderly cohorts are transferring resources out to younger cohorts. Patterns of public transfer are changing. These trends in relation to the NTAs could be used to find out how the state is intervening to finance consumption for the elderly.

When looking at poverty, the elderly are often regarded as a static group, without taking into account the compositional changes and therefore missing out on the dynamics. The South African pop-

ulation is ageing and future ageing would be concentrated within groups that are currently relatively poor. This has different policy implications than in countries where inequality is much lower. Feedback between poverty and how well people age has important implications for service provision. In terms of intergenerational transfer of poverty, there are new findings in epigenetics that claim that how well people age depends on the poverty status of their mothers and potentially their grandmothers.

The challenges of population ageing with respect to poverty and inequality has deep roots in the labour market for the elderly both now and in the future. There are limitations on the ability of the elderly to support themselves through engagement in the labour market. Poor labour market outcomes for the working age population could shift the burden of their support to the elderly and compromise the ability of working age individuals to accumulate assets for their own support in old age.

Discussant: Dr Sandile Simelane, Stats SA

Current literature problematises the issue of population ageing, particularly the increasing proportion of elderly people in the population. While policy reforms are necessary to address this increase, it is also necessary to find ways to invest in the future generations of elderly people in a manner that would attain the demographic dividend, which did not only concern the working age population, but the entire population.

With reference to Dr Jahan's keynote address, the bigger component of the elderly in the population should not be problematised but considered beneficial to society as the ageing population has a crucial role to play, for example, in fostering cultural sustainability and social cohesion. The skills, experience and expertise of the current ageing population should not be lost, but used to benefit future generations and society at large.

There is much to be gained by disaggregating the analysis of the elderly population into young old, old old, oldest old and so forth, instead of grouping everyone over a certain age together. This is necessary in order to understand more about the ageing

population. A median age of the elderly would be a helpful indicator for purposes of future planning and policy reforms to make provision for the increasing elderly population.

Questions/Comments

Prof Fiona Tregenna, UJ: I would have expected South Africa to be located closer to Brazil in the triangle (of assets, family transfers and public transfers) given that we know that pensions support large numbers of family members.

Response by Mr Oosthuizen: I was surprised about where South Africa showed on the triangle until more thought was given to the matter. We are working with means and, without inequality in the picture, the means are almost meaningless. In the case of Brazil, there are huge pension transfers coming from the state and this is leading to a crisis in this regard. For South Africa, if there was disaggregation by race or socio-economic status, very different pictures would be seen. One of the next steps for the project as a whole is to look at inequality and how to deal with it and understand our estimates in the presence of inequality.

Mr John Kruger, The Presidency, DPME: In South Africa there is the absence of a state-mandated retirement system. What do you describe as public transfers?

Response by Mr Oosthuizen: The public transfers will depend on the country's system. Pension contributions from one's own account will come through as an asset. If it is a pay-as-you-go or funded through general tax, it will come through as a transfer. In South Africa, all the grants come through as transfers. In-kind spending is also coming through as transfers. Non-specific transfers for anything that can be allocated by age (education, health and social grants) are allocated on a per capita basis.

Prof Thenjiwe Meyiwa, DUT: From your studies, could you recommend anything in terms of preparing for the elderly stage of life from the perspective of the elderly individual as well as the children and grandchildren? Could there be a form of education that we should be exposed to in order to be better prepared for deal-

ing with the elderly (and becoming older ourselves) that would have a positive spin-off for society and the economy?

Response by Mr Oosthuizen: This has not been addressed in our research, but needs to be considered going forward. Societies need to prepare themselves for population ageing. There is the tendency in many societies of casting the elderly in a negative light and of not valuing the elderly but it is important to focus on the contributions that the elderly can make in society. There is also the health issue. If poverty and health status are improved in working ages, there is less incidence of intense caring required as people get older.

Child Poverty and Deprivations – Measurement, Trends and Policy Directions

Ms Katharine Hall, Children's Institute, UCT

It is important to distinguish poverty rates for children across a range of dimensions partly because the child population is differently distributed to the adult population. Many of the deprivations for children become lost in the generalised analyses of household surveys. Children are particularly vulnerable to the effects of deprivations in childhood, which has long-lasting affects. It is therefore important to interrupt the cycles of poverty from the early years.

There is a case for continuous monitoring of single measurements of deprivation alongside multiple or composite indices so that those could be explored over time. A project of the Children's Institute, called Children Count, monitors trends across a range of deprivations for over ten years focusing on demography, care, income poverty, social grants, living conditions, nutrition and hunger, HIV and health, education and early childhood development. The work delves into some of the disaggregations and looks at interactions revealing patterns over time.

The work started with a clear rationale for selecting indicators by using a rights-based framework and a range of sources was referred to in defining the specific indicators.

All the definitions were able to articulate with policy promises, 'entitlements' and norms and standards and there was consultation with a reference group and experts, as well as reference to literature. Data availability issues were taken into consideration. One of the main sources of data was the General Household Survey.

In terms of the distribution curve of inequality in South Africa, the unequal distributions are national and the distinctions (spatial, racial, gender and intergenerational dynamics) in the distributions are all of particular relevance to children. Over 40% of children come from the poorest 20% of households. In terms of household structure and clustering, mixed-generation households (with children) are on average larger than adult-only households and 50% of households are mixed-generation households. Child poverty rates are far higher than adult poverty rates. There are numerous measures not subject to equivalent scales that illustrate how deprivations for children are much more pronounced because they live in larger households. As children are disproportionately rural in South Africa, they are over-represented in terms of inadequate housing with poor services and in unemployed households, contributing to higher poverty levels for children. There have been some changes in urban-rural transitions over time, but the child rate still lags behind that of the adult rate of urbanisation.

Household and family contexts and special arrangements are very important. These relate to shifts in the rural-urban economy, declining remittances to households, declining marriage rates and paternal support to children, women increasingly bearing economic, household and child-care responsibilities, impacts of migration, and the fact that large (and increasing) numbers of children do not have co-resident parents, resulting in a burden of care and financial support on the elderly. The burden of care for children with no parents and those without resident fathers is primarily in the poorest households. The living environment deprivations reveal that children's access to water, sanitation and electricity is far poorer than that of adults.

In urban settlements, children face different risks encapsulated in a rage of deprivations. For example, of the children under the age of six who live in informal settlements in urban areas, over 50% live

in overcrowded conditions; an important factor in terms of child health, safety and abuse. A positive trend is seen in the massive increase in the number of five to six-year olds with institutional access to early learning. The majority of children in the low socio-economic status group only have basic or low reading skills by Grade Six. Inequalities in education means that children who are better off progress quicker and have better outcomes. Huge inequalities across the income quintiles in terms of young people aged between 15 and 24 who are not in employment, education or training, have not reduced over time.

Trends in income poverty show declining child poverty rates when measured by income poverty headcount, depth and severity. Income poverty reduction (across all race groups and provinces of South Africa) is driven more by social grants than by changes in employment, noting that the child support grant (CSG) is not sufficient to bring a child out of poverty in the absence of other labour market income. Reduction in poverty is not paralleled by reduction of children in unemployed households, although there are declines in both.

A range of options was presented for scaling-up the CSG in light of established human development benefits, such as:

- Increasing the amount.
- Universalising and thereby getting around the areas of exclusion.
- Extending to older children/youth.
- Extending to pre-birth (pregnant women).
- Using the CSG mechanism rather than the foster care system to get social assistance to orphans living with kin.

Work that remains to be done includes bringing in all the available evidence, doing new research where there were gaps, looking closely at the options for scaling-up the CSG and doing the relevant budget work, engaging with researchers, civil society groups and policymakers to examine relative merits and trade-offs.

Discussant: Lauren Graham, Centre for Social Development in Africa, UJ

The Children Count work is really important to track the progress of all children in South Africa. There is agreement that one of the data gaps is around violence and abuse of children. Although this is important, a lot of research investigated challenges with the most vulnerable children in South Africa. It may be more important to focus on children, since most children in South Africa are vulnerable due to poverty. If this is the case, the most vulnerable children would also benefit and then targeted interventions could deal with particular issues of vulnerability such as abuse.

There is agreement that the realities of poverty for children are masked by looking at only household indicators. It is important to focus on the indicators of childhood poverty in particular. However, we do need to acknowledge that children grow up in households; it is therefore necessary to look at the interventions and policies required to ensure that the needs of children are being met by addressing the needs of households and investments made at the family level, as well as expanding and maximising the impact of the CSG within the household. Work is being done on how to effect maximum benefit of the CSG through investing small amounts of money into household livelihoods, as well as into savings. Research around the world is showing that investment in savings for children early on in life has a very good impact for young people as they transitioned out of the CSG and the natal home. This research should be leveraged into policy and programmatic implications in South Africa.

The statistics on education showing that the bulk of children in low socio-economic status households have very few critical reading skills by Grade Six, are shocking and has implications for the transition into adulthood. Research shows that despite policies and interventions in alleviating childhood poverty through the CSG and the National School Nutrition Programme (NSNP), for instance, the bulk of young people from poor economic backgrounds enter poorly resourced, under-performing schools, and in turn enter the labour market with very few skills and a lack of access to institutions of higher education. They are then vulnerable to cycling in

and out of unemployment or under-employment with numerous risk behaviour, health and mental health consequences. The education statistics for children should be understood in relation to the long-term implications for the transition to adulthood and the intergenerational transmission of poverty.

In terms of the proposed extension of the CSG to youth older than 18 years of age, as young people exit the CSG they also exit the secondary education system and, in turn, the NSNP and social support mechanisms. Research shows how young girls were able to demonstrate a lot more agency in terms of sexual and reproductive health while at school than once they leave school. There is a conversation to be had about what to do at the transition point. Extending the CSG is not necessarily the best option and there is perhaps a better use of resources to invest in support mechanisms for young people to make the transition to autonomous adulthood. They are missing not only the financial assets, but also the human capability and social assets. A South Africa Social Security Agency (SASSA)-administered system to capture young people as they exit the CSG, and investment in support services that help them make the transition could be considered.

Questions/Comments

Prof Charlene Africa, UWC: I agree with your options in terms of the CSG. Given that there is a policy on the table for early childhood development, what should we do?

Response by Ms Hall: It is becoming increasingly clear that we need to look at all the options together, in light of the available evidence, and consider the trade-offs between the various options and the budget implications. There are clear merits to all the options but we are not yet in a situation to say that one option is better than another and advocate for it to the exclusion of others. We do think that the amount of the grant is important and we hope to collaborate with SASPRI in researching the cost of raising a child. This could provide a basis for pegging the state's contribution through social grants, as the CSG is very small compared to all other grants.

Unknown: I take your point that the extension of the CSG offered to young people from the age of 18 needs to be in the form of more than just money. I think that young people who come from poor households continue to need actual money for a very long time, even those who enter the higher education system.

Response by Dr Graham: In terms of extending the CSG, I agree that young people need money but trade-offs will have to be made. Research is looking at community-based organisations (CBOs), non-government organisations (NGOs) and other programmes in the private sector and the state (employability programmes) that target young people who cannot access tertiary education institutions, investing in skills training and work readiness, and most of the programmes pay stipends. If these kinds of interventions are having an impact, there is a case to be made for scaling them up.

Prof Eric Udjo, BMR, Unisa: There is a debate about the adverse incentive of the CSG. In South Africa, the debate is about whether the CSG is leading to increased pregnancy or fertility among the recipients. If you are advocating for the extension of the CSG, have you taken into account such adverse consequences?

Response by Ms Hall: This concern is discussed endlessly in South Africa. There is no evidence in relation to the CSG to suggest that there are perverse incentives to obtain the CSG. This can be seen in few ways: teenage pregnancy rates are declining and young mothers are particularly slow in becoming grant recipients. The fact that there are delays in getting children onto the grant system is one of the biggest concerns in terms of exclusion errors.

Response by Dr Graham: Recent research has shown that when young women themselves are beneficiaries of the CSG there seems to be protective effects for them falling pregnant.

WHAT HAVE WE LEARNT ABOUT THE SCIENCE AND SORCERY OF POVERTY MEASUREMENT?

Prof Julian May, UWC

A British sociologist, Stanislav Andreski's book, *Social Sciences as Sorcery*, argued how social sciences could be used to obscure things and to confuse, and talked about the fact that confused thinking led nowhere in particular and could be indulged in indefinitely. It was clear from its mission statement that ASSAf is one of the ways to avoid confused thinking and interrogate science more carefully.

There was very little, if any, confused thinking at this workshop and several things have been striking, such as:

- The community of researchers who talk about poverty measurement has changed over the years and is now a refreshingly and demographically representative group of researchers. A new generation of researchers has come about.
- It seems from what was presented at this workshop that the experts on poverty are listening to one another. There was far more agreement than there was dispute and there was a lot of evidence that they were trying to work with one another. The number of collaborations reported was notable. When disagreements were raised, they came from colleagues in the policymaking world. Perhaps there is a space for the policymakers to work on fora where they could start to listen to one another and form more consensus.
- It was clear from all the presentations that no-one in this community was saying that poverty was just about income.
- There has been a tendency over the last 20 years to see income as the only solution to poverty in South Africa. It seems that while there were some contesting views and views on how to strengthen the use of money-metric poverty lines, there was also an agreement that a money-metric poverty line serves a purpose, although limited, that could be used for statistical analysis. Even though Prof McIntyre in her discussion on

the major contributors of the concentration index noted that income was not included as a contributor, surely employment and social protection were a way of getting income. It was clear that measures that reflected the importance of income in a country like South Africa were necessary. This group was clear that there were other factors that mattered beyond the provision of income.

- There was a sense that the Stats SA rebased poverty lines were the result of careful scrutiny and that they were able to do the job. The things that could be done to improve the poverty lines should be taken into account in future rebasing. It was no longer necessary to present five different poverty lines that came up more or less with the same result. Although more was possible, the work done by SALDRU suggested that it might not make much of a difference. It seemed that the route taken by Stats SA in terms of the UBPL did not lead to a result that was rigorous and it changed when other findings were adopted. Perhaps something else needed to be done to find what the UPBL was. It appeared that there were other initiatives that were more promising.
- It was clear that better account needed to be taken of household size as per capita was not working. Prof Posel's presentation, as well as other presentations, showed the need to relook at the work done on adult equivalence, which was largely done in the early 1990s, and come up with something that could deal with adult equivalence.
- Work done some years back took into account the asset poverty line using the KwaZulu-Natal panel study and came up with the idea of structural poverty. This work did not take root in South Africa at the time. How could this analysis be taken forward, particularly since there were multiple waves of NIDS, the demographic surveillance sites and other really good data that could take the analysis further? The poverty line that was ultimately the asset-based approach to thinking about poverty could perhaps be revisited.
- The multi-dimensional ideas signalled that it did not matter how poverty in South Africa was measured, it remained unacceptably high and was correlated with the spatial location of the former homelands. Given that there had been 20 years

of substantial population movement, it would be interesting to apply some of the logic and look at settlements that had grown since the end of apartheid. It could be concluded that poverty was associated with being in a homeland but what was the landscape of new poverty rather than the legacy of apartheid?

- Most government policy was trying to target things that were not income-based. Further work on these non-income measures of poverty was needed because this was where there was a demand from policymakers. If they were to trace the impact of the policies beyond the social grants, it would be necessary to think what was being achieved by delivering different kinds of services or providing access to different kinds of facilities.
- Different surveys with different methodologies came up often with somewhat similar patterns. Several studies came up with the 2008 spike in poverty, however it was measured, and with a spike in about 2012 where changes were seen in not only income poverty but also other dimensions of poverty. It was a useful idea to triangulate the different datasets to see where they matched and mismatched and look at what these said about poverty. This was an area of possible research.
- This group did not attempt to interpret surprising findings by trying to grope for an explanation. In some of the presentations, researchers were very clear that some of the reasons for unusual findings were due to measurement error or because missing data were not properly accounted for or non-response was not taken into account. The group was vigilant about not trying to stretch the interpretations of the data beyond what was able to be done and aware of the importance of measurement error. There was a need to engage more where data were poorly interpreted and false messages were put out. Perhaps there is a role for ASSAf in taking this point further.
- Some interesting methodological options were proposed concerning multi-dimensional poverty. More could be done to look at what has been done elsewhere in the world. Much was spoken about ways of grouping data, but there was a role for further methodological development and grouping indicators in respect of multi-disciplinary data.

- Elements that had come out of the human development discussion were:
  - The need for better morbidity indicators, recognising that morbidity gave a sense of the mortality data and these data were difficult to gather, by making use of the demographic surveillance sites, as well as studies that would involve the complex and costly business of gathering biometric data. This was an area of work where further development was possible.
  - In terms of nutrition, nutritional status and health status, there were indicators on the prevalence of certain illnesses but insufficient indicators on resilience and strategies of resilience. Thought should be given as to how such data could be gathered. This was an issue that Stats SA could be concerned about because the more complex the data, the more costly the data.
  - Most of the cross-sectional studies, as well as other studies, might not be addressing the issue of migration appropriately. Those who have done surveys had to work on the problem of defining the household and who was going to be researched, and accommodate the fact that there were different kinds of migrations and a very mobile population in South Africa.
  - In terms of how to attribute causation, the way the problem was being set up was unclear in a number of studies. This was another area that required attention.
  - Researchers tended to focus on aspects that were easy to measure, but how would they measure the hard things such as aspiration, agency or enthusiasm? This was an area for new work starting with qualitative anthropological research.
- The caution expressed by the demographers about the need to think about context, particularly the context of demographic structure, was extremely useful and played into the discussion on disaggregating poverty. The measurement of poverty was only the beginning when embarking on an analysis of disaggregation, and the categories used in this workshop might not be useful. There needs to be further thought about how to break down the ageing or the youth populations further into

different kinds of groups. It was also clear from the presentation on gendered poverty that there were different circumstances for different kinds of women. Compared to ten years ago, there was now a remarkable suite of tools available to do this kind of analysis, but further development was required in the capacity to analyse such complex datasets throughout South Africa. The ability to work with panel data was concentrated in a small pool of people.

- The implications of the dramatic change in household structure should be given some thought for whatever dimension was studied. For example, smaller households would certainly face very different conditions than larger households in the preparation and storage of food. This area should be studied further.
- The issue of women growing up quickly (early age of first pregnancy) presented an area of work that required further interrogation, focusing on research where the respondents were children or adolescents to better understand the issues.
- Sanitising poverty was a risk to whatever researchers addressed in the field of poverty. Perhaps researchers should ask themselves whether they were avoiding the difficult questions.

If the costs of inefficiencies of the current economic, social and political systems were not resolved, institutions would be challenged and potentially extremely disrupted. At some point, it might be necessary to think about whether what is being seen in South Africa is a signal that the country is on the road to disaster, or whether there is more challenging work to be done to redirect the country onto a more positive path.

CLOSURE

Prof Murray Leibbrandt, SCSfRPI

The discussion around pursuing particular work programmes on poverty and inequality would be taken further. In terms of leveraging money to do research in the areas where gaps had been identified during the workshop, large initiatives stimulated and funded

relevant work on poverty and inequality and the SCSfRPI was well connected to these networks.

Presenters, discussants and attendees were thanked for their contributions to and participation in the workshop and were invited to give further input on any key issues to be taken further by the SCSfRPI .

REFERENCES

Ataguba, J.E., Day, C. & McIntyre, D. (2015) Explaining the role of the social determinants of health on health inequality in South Africa. *Global Health Action* (In press).

Chen, S & Ravallion, M. (2012) More Relatively-poor People in a Less Absolutely Poor World. Policy Research Working Paper 6114, World Bank, Washington, DC.

Dawson, H. & McLaren, D. (2014) Monitoring the right of access to adequate housing in South Africa. Studies in Poverty and Inequality Institute, Working Paper 8.

Hill Collins, P. (2000) *Black Feminist Thought*. New York & London: Routledge, Revised 10th anniversary edition.

Hoogeveen, J. & Özler, B. (2006) Poverty and inequality in post-apartheid South Africa, in Bhorat & Kanbur (Eds.). *Poverty and Policy in Post-apartheid South Africa,* Pretoria: Human Sciences Research Council Press, pp. 59-94.

McIntyre, D., Muirhead, D. & Gilson, L. (2002) Geographic patterns of deprivation in South Africa: Informing health equity analyses and public resource allocation strategies. *Health Policy and Planning* 2002; 17 (Suppl 1): 30-39.

Okorafor, O. (2008) *Deprivation indices by health districts in South Africa: Technical Report for Health Systems Trust*. Cape Town: UCT.

Omolade, B. (1994) *The Rising Song of African American Women*. New York: Routledge.

Rose, R. (1998) Getting things done with social capital: New Russia Barometer VII. University of Strathclyde Studies in Public Policy No. 303. Glasgow.

Sithole, M.P. (2014) "Care and social cohesion in South Africa: Political engineering *versus* dealing with social discordance" in Reddy V, Meyer, S, Shefer, T & Meyiwa, T (Eds.). *Care in Context: Transnational Gender Perspectives*. Cape Town: Human Sciences Research Council, pp 86-97.

ACKNOWLEDGEMENTS

This workshop and subsequent publication was an initiative of the ASSAf Standing Committee on Science for the Reduction of Poverty and Inequality. It was a collective effort but I would like to thank specifically the following people and organisations:

- The Academy of Science of South Africa (ASSAf), the President of ASSAf, Prof Daya Reddy and the Council for their ongoing support of the activities of the committee.
- The members of the committee for their commitment and valuable contributions to the event.
- Dr Selim Jahan of the United Nations Development Programmme's Global Human Development Report Office for his keynote address.
- Mr Gana Fofang, the United Nations' Resident Coordinator and United Nations Development Programmme's Resident Representative in South Africa, for his opening remarks.
- All speakers and discussants who participated in the workshop.
- All individuals who attended the event and contributed to the discussions and debates.
- The international initiative, GenderInSITE, for the suggestions and financial support of the session on Gendered Poverty.
- The Department of Science and Technology for financial support.
- Heather Erasmus of Write Connection CC for her scribe services.
- The copy editor, Ms Patricia Scholtz for attention to detail and the production of the report.

- The staff of the Academy, in particular, Prof Roseanne Diab, Ms Henriette Wagener and Ms Nadia Algera, for their contribution and support throughout the planning and execution of the event and proceedings preparation. In addition, appreciation goes to Mr Ian Shendelana, Ms Annika Potgieter, Ms Constance Manyeli, Ms Thandi Badugela and Mrs Lynette du Plessis for their assistance and support during the workshop.
- Finally, the staff of Misty Hills Country Hotel in Muldersdrift for their never-ending support and professionalism.

Prof Murray Leibbrandt
Chair of the Standing Committee

APPENDIX A:
Acronyms

AB	Atkinson and Bourguignon
AIDS	Acquired immune deficiency syndrome
ASSAf	Academy of Science of South Africa
BMR	Bureau of Market Research
CAPS	Cape Area Panel Study
CASASP	Centre for the Analysis of South African Social Policy
CBO	Community-based organisation
CPI	Consumer price index
CSG	Child support grant
DGSD	Democracy, governance and service delivery
DHIS	District Health Information System
DPME	Department of Planning Monitoring and Evaluation
DUT	Durban University of Technology
EA	Enumeration area
ESRC	Economic and Social Research Council
EU-PSPPD	European Union Presidency Programme to Support Pro-poor Development
FPL	Food poverty line
GII	Gender inequality index
GNI	Gross national income
HDI	Human Development Index
HDSS	Health and Demographic Surveillance Systems
HICs	Higher-income countries
HIV	Human immunodeficiency virus
HSRC	Human Sciences Research Council
IES	Income and expenditure survey
IHDI	Inequality-adjusted Human Development Index
INDEPTH	International Network for the Demographic Evaluation of Populations and Their Health
Kcal	Kilocalories
LBPL	Lower-bound poverty line
LCS	Living Conditions Survey
LPI	Lived Poverty Index
MDG	Millennium Development Goal
MIC	Middle-income country
MPI	Multi-dimensional Poverty Index
MRC	Medical Research Council

MSTF	Medium-term Strategic Framework
NA	National accounts
NCD	Non-communicable disease
NDP	National Development Plan
NGO	Non-government organisation
NIDS	National Income Dynamics Study
NMW	National minimum wage
NSFAS	National Student Financial Aid Scheme
NSNP	National School Nutrition Programme
NTA	National Transfer Accounts
PCA	Principle component analysis
PPP	Purchasing power parity
pppd	Per person per day
RD	Relative deprivation
RU	Rhodes University
SAIMD	South African Index of Multiple Deprivation
SALDRU	Southern Africa Labour and Development Research Unit
SANHANES	South African National Health and Nutrition Examination Survey
SARB	South African Reserve Bank
SASAS	South African Social Attitudes Survey
SASPRI	Southern African Social Policy Research Institute
SASSA	South African Social Security Agency
SCSfRPI	Standing Committee for Science for the Reduction of Poverty and Inequality
SPII	Studies in Poverty and Inequality Institute
SPN	Socially perceived necessities
Stats SA	Statistics South Africa
UBPL	Upper-bound poverty line
UCT	University of Cape Town
UJ	University of Johannesburg
UKZN	University of KwaZulu-Natal
UN	United Nations
UNDP	United Nations Development Programme
Unisa	University of South Africa
USD	United States dollar
WHO	World Health Organisation
Wits	University of the Witwatersrand
WRA	Weak relativity axiom

APPENDIX B:

ATTENDANCE LIST

Name	Affiliation
Africa, Prof Charlene	UWC, Gender and Equity
Budlender, Mr Josh	UCT, SALDRU
Chulu, Oston	UNDP
Collinson, Dr Mark	Wits/MRC, Rural Public Health and Health Transitions Research Unit
De Lannoy, Ariane	UCT, SALDRU
Diab, Prof Roseanne	ASSAf
Donaldson, Mr Andrew	National Treasury, Government Technical Advisory Centre
Du Plessis, Ms Lynette	ASSAf
Erasmus, Ms Heather	Write Connection, Scribe
Fofang, Mr Gana	UNDP, Deputy Special Representative
Frame, Dr Emily	UCT, SALDRU
Frye, Ms Isobel	SPII
Goldman, Dr Ian	The Presidency, DPME
Graham, Dr Lauren	UJ, Centre for Social Development in Africa
Greyling, Lorraine	UJ, Department of Economics
Grinspan, Alajandro	Unicef
Hall, Ms Katharine	UCT, Children's Institute
Harrison, Prof Philip	Wits, School of Architecture and Planning
Huma, Ditiro	iKamvaYouth
Jahan, Dr Selim	UNDP, Human Development Report Office
Kgaphola, Hlali	Wits, School Of Governance
Kirsten, Marie	National Treasury
Kruger, Mr Johan	The Presidency, DPME

Leibbrandt, Prof Murray	UCT, SALDRU
Manyeli, Ms Constance	ASSAf
Maphosa, Mr Stanley	ASSAf
Mati, Dr Xola	ASSAf
Mattes, Prof Robert	UCT, Centre for Social Science Research
May, Prof Julian	UWC, Institute for Social Development
McIntyre, Prof Di	UCT, School of Public Health and Family Medicine
Meyiwa, Prof Thenjiwe	DUT, Registrar's Office
Mushongesa, Mr Darlington	Wits, Gauteng City Regional Observatory (GCRO)
Ngidi, Mr Bandile	Wits, Corporate Strategy and Industrial Development
Noble, Prof Michael	SASPRI
Nzimande, Ms Nom-pumelelo	UKZN, School of Built Environment and Development Studies
Oni, Dr Tolullah	UCT, School of Public Health and Family Medicine
Oosthuizen, Mr Morné	UCT, Development Policy Research Unit
Plaatjies, Prof Daniel	HSRC, Democracy, Governance and Service Delivery
Posel, Prof Dori	UKZN, School of Development Studies
Potgieter, Ms Annica	ASSAf
Ranchhod, Prof Vinmal	UCT, SALDRU
Rogan, Dr Michael	Rhodes University, Institute of Social and Economic Research
Sadan, Ms Mastoera	The Presidency, Programme to Support Pro-Poor Policy Development
Shendelana, Mr Ian	ASSAf

Simelane, Dr Sandile	Stats SA
Tregenna, Prof Fiona	UJ, Department of Economics and Econometrics
Udjo, Prof Eric	Unisa, BMR
Valodia, Prof Imraan	Wits, Commerce, Law and Management
Van Aardt, Prof Carel	Unisa, BMR
Van Wyk, Renay	UJ, Department of Environmental Health, Health Sciences
Walid, Badawi	UNDP
Weitz, Ms Nadia	ASSAf
Woolard, Prof Ingrid	UCT, School of Economics
Wright, Dr Gemma	SASPRI
Zembe, Wanga	MRC/South African Policy Research Institute
Zwane, Talent	UJ, Department of Economics

PO Box 72135, Lynnwood Ridge 0040
Pretoria, South Africa

Tel: +27 12 349 6600 | Fax: +27 86 576 9520
Email: admin@assaf.org.za

www.assaf.org.za