

OCCASIONAL PAPER 4

INEQUALITY IN SOUTH AFRICA

A TWO PART DOCUMENT ON THE CURRENT
UNDERSTANDING & DIMENSIONS OF INEQUALITY
IN HEALTH, GENDER AND LIVELIHOODS

RESEARCH COMMISSIONED BY OXFAM IN SOUTH AFRICA AND CONDUCTED BY HEALTH ECONOMICS
AND HIV AND AIDS RESEARCH DIVISION (HEARD)





CONTENTS

Abbreviations	2
Executive Summary	3
Part 1	
Inequality in South Africa: The Current Understanding	5
Part 2	
Inequality in South Africa: Dimensions of Inequality in Health, Gender and Livelihoods	20
Credits	40



UNIVERSITY OF
KWAZULU-NATALTM
INYUVESI
YAKWAZULU-NATALI

Research commissioned by Oxfam in South Africa and conducted by Health Economics and HIV and AIDS Research Division (HEARD), University of KwaZulu-Natal

ABBREVIATIONS

ANC	Antenatal Care	LFS	Labour Force Survey
ART	Anti Retroviral Therapy	MMR	Maternal Mortality Rate
ASSA	Actuarial Society of South Africa	NDoH	National Department of Health
DBE	Department of Basic Education	NFCS	National Food Consumption Survey
DHS	Demographic and Health Survey	NFCS-FB	National Food Consumption Survey – Fortified Baseline
DHIS	District Health Information System	NHI	National Health Insurance
DoH	Department of Health	NIDS	National Income Dynamics Study
GBV	Gender-based Violence	PHC	Public Health Care
GEI	Gender Equity Index	PMTCT	Prevention of Mother to Child Transmission
GHS	General Household Survey	SADC	Southern African Development Community
GII	Gender Inequality Index	SALDRU	Southern Africa Labour and Development Research Unit
HDI	Human Development Index	SANHANES	South African National Health and Nutrition Examination Survey
HEARD	Health Economics and HIV and AIDS Research Division	Stats SA	Statistics South Africa
HIV	Human Immunodeficiency Virus	U5MR	Under 5 Mortality Rate
IMR	Infant Mortality Rate	UN	United Nations
IPV	Intimate Partner Violence	WHO	World Health Organisation
KZN	KwaZulu-Natal		

EXECUTIVE SUMMARY

Recognising inequality is at the heart of the South African 'development problem', Oxfam commissioned the Health Economics and HIV and AIDS Research Division (HEARD) to produce this report, which is divided into two parts, to enable an understanding of the dimensions of inequality in South Africa and to provide Oxfam with a set of basic measures against which it could measure its success in dealing with inequality.

The objectives of **Part 1 of this report** are to:

1. Propose an overarching definition of inequality;
2. Outline the most common types of inequality discussed in the South African literature; and
3. Propose some appropriate inequality measures to be used in the Oxfam programme in South Africa.

South Africa is one of the most unequal countries in the world in terms of income distribution. This is largely a result of inequalities engineered by colonialism and apartheid. Measures undertaken since 1994 to address these disparities have been somewhat successful, but South Africa is still plagued by high levels of inequality.

The term 'inequality' refers to the differences that exist between various population groups and/or individuals. The term has been defined as "the state or quality of not being equal" and "social or economic disparity". Much literature on inequality in South Africa refers to 'economic inequality', which is inequality in standards of living within a country. Non-economic inequalities include gender inequality, education inequality, health inequality, social inequality and participation inequality.

This report examines inequality measures available in South Africa. It is recommended that the most straightforward way of measuring income inequality at the Oxfam programme level would be to compare the income or spending of the richest 20% of the population Oxfam is interested in examining with the poorest 20% of that population. In this simple comparison, an equal distribution of income would mean that the richest and poorest 20% of the population would each earn 20% of the total income. If the richest 20% earn or spend more than half of the total income, this is indicative of a highly unequal distribution.

In order to assess inequality within geographic areas, it is recommended that Oxfam employs one or more researchers to collate published district-level data on a regular basis. This information would include the District Health Barometer, education data, the community survey, household surveys and Census 2011.

To measure inequality between those Oxfam reaches within its programme and the general population in the districts within which it works, data would need to be collected for a sample of those receiving support from Oxfam. This data would need to be compared with socio-economic data for the comparator group, which could be the general population in the districts within which Oxfam works, a sample of households in the same district that do not receive Oxfam support, or the general population of the province.

In this regard, two decisions that need to be made by Oxfam are the following:

1. Is measuring inequality on a geographic basis most useful? Or does Oxfam wish to track inequalities on another basis, such as by gender or by income?
2. Does Oxfam wish to be able to compare indicators within its programme to these external measures?

The answers to the questions above should guide the choice of indicators from those suggested in Part 2 of this report.

HEARD believes that if inequality is measured on a geographic basis, it makes sense to do this on a district level. As the Oxfam programme works purely at the local level, measuring inequality at national or provincial level may not be particularly relevant. Tracking local level inequality would be ideal, but there is little data available to do this.

The following types of inequality are most relevant to Oxfam:

- Health inequality,
- Gender inequality,
- Social inequality (specifically, inequalities in access to public assets) and
- Participation inequality.

Education inequality and income inequality were not seen as directly relevant to the programme. However, both of these inequalities play an important role in evaluating inequality as it relates to livelihoods. More and more, researchers are using variables that are indicative of income levels and socio-economic status and are easier to measure. These include ownership of assets, main source of water, type of toilet, level of education and employment status. If Oxfam intends to collect data on income inequality (within its programme), we would recommend it use proxy variables instead.

As will be apparent from the above, collecting data on inequality is much more complex than collecting data on poverty alone. If Oxfam is to collect data on inequality, it will need to do so at baseline and then repeat at regular intervals, recognising that inequality may change very slowly over time.

In concluding Part 1 of this report, Heard recommends that Oxfam critically assesses the measures proposed in the entire report and decides whether inequality is the external metric most relevant to its programme, and gives consideration to measures of inequity and vulnerability as alternatives.

Part 2 of this report aims to:

1. Describe the dimensions of inequality in three of Oxfam's programming sectors (health, gender and livelihoods) based on current research in South Africa, and
2. Propose a set of inequality indicators for health, gender and livelihoods against which the progress of Oxfam's programmes can be tracked over time.

With regard to health, HEARD recommended the following:

1. Oxfam keeps its focus on inequalities in health and addresses inequalities in health care as secondary.
2. Oxfam tracks health inequalities without reference to health need, but that this be revisited when better data on health need becomes available.
3. Oxfam gives serious consideration to whether health inequality or health inequity is more applicable.
4. The concept of health equity and health be clearly defined if Oxfam decides health inequity is more relevant.
5. A detailed analysis of SANHANES and NIDS data on health-seeking, health care access and health care utilisation is conducted to address these areas in more depth.
6. An analysis of life expectancy between different population groups is conducted.
7. Oxfam assesses whether geographic inequalities, inequalities between public and private sector, gender inequalities or income inequalities in health are most critical to the organisation.

With regard to gender, HEARD recommended the following:

1. Oxfam should focus on those aspects of gender inequality where South Africa appears to be lagging. These include prevalence of intimate partner violence in the last 12 months, the maternal mortality rate, income inequality in women and female headed households.
2. More in-depth analysis is needed with regard to levels of joint decision-making and levels of participation among women at a community level.

With regard to livelihoods, HEARD recommended the following:

1. Identifying the population groups with the poorest access to the five capitals – human capital, physical capital, natural capital, social capital and financial capital – will show which groups are most vulnerable.
2. It would be ideal to track local level inequality because the Oxfam programme operates at the local level, but the limitation is that there is little data available.
3. Oxfam should consider whether measuring inequality is appropriate or whether measuring vulnerability would be more useful.

There are a number of overlaps between the indicators suggested in the sections on health, gender and livelihoods. For example, inequality in access to public assets, health and health care inequality measures, the maternal mortality rate and inequality in educational attainment. It may be useful, as a starting point, for Oxfam to begin to track these variables.

In conclusion, this report recommends that more information is needed about how measures of inequality will be used and the purpose of using inequality as an external measure in order to make final recommendations regarding the most appropriate measures. The way in which the measures will be used will determine which indicators are recommended.

HEARD suggests Oxfam reviews the recommended measures of inequality within health and gender and decides whether these measures will suit its purposes. It should be noted that inequality cannot identify who is vulnerable or most in need of intervention. As Oxfam works at the local level, inequality may not be the appropriate measure for tracking social change over time. Inequality measures changes in distribution at population level – be it by gender or between geographic areas. As such it is unlikely to be sensitive enough for Oxfam's purposes. However, it is more useful to track inequality than to track average access to resources and average health and health care utilisation.

In conclusion, Oxfam needs to decide whether to measure inequality in these variables or whether to track these variables in population groups identified as poor or as the most vulnerable. Oxfam has the potential to change the living conditions of the poor and vulnerable through its programme, but has little power to change inequality – which must involve redistribution from rich to poor.

PART 1

INEQUALITY IN SOUTH AFRICA: THE CURRENT UNDERSTANDING

REPORT COMPILED BY:

NICOLA DEGHAYE AND TAMLYN MCKENZIE FROM HEARD

REPORT COMPLETED:

22 NOVEMBER 2012

PART 1: INEQUALITY IN SOUTH AFRICA: THE CURRENT UNDERSTANDING

CONTENTS (PART 1)

1. Background	7
2. Introduction	7
3. Defining inequality	7
3.1 Inequity versus inequality	8
3.2 Inequality, poverty and economic growth	8
4. Types of inequality	8
4.1 Income and wealth inequality	9
4.2 Gender inequality	9
4.3 Education inequality	9
4.4 Health inequality	10
4.5 Social inequality	10
4.6 Participation inequality	10
5. Measures of inequality	11
5.1 Measuring inequality at programme or district level	12
6. The extent of inequality in South Africa	13
7. Proposed set of inequality measures for Oxfam in South Africa	16
8. Recommendations	18
References (Part 1)	18
Appendix 1 (Part 1): Details of household surveys	19

LIST OF TABLES AND FIGURES (PART 1)

Table 1	Post-transition trends in poverty and income distribution, by approximate time period	13
Table 2	Shifts in inequality by province, 1995 – 2005	14
Table 3	Comparing pupil-teacher ratios by province, 2007 – 2010	15
Table 4	National senior certificate examination results, by province and gender, 2010	16
Figure 1	Market share of income groups in total household expenditure, 2004	13
Figure 2	A comparison of spending between the poorest 20% and the richest 20% of the population, 2004	14

1. BACKGROUND

Oxfam recognises inequality is at the heart of the South African ‘development problem’. It is critical that Oxfam addresses inequality if it is to achieve the development outcomes needed to improve the lives of all people living and working in South Africa. Inequality manifests in many different ways and in a multitude of sectors. As a result, it is important for programming purposes that Oxfam defines the types of inequality its programme seeks to address.

Oxfam commissioned this report to help it understand the dimensions of inequality in South Africa and to provide it with a set of basic measures against which it could measure its success in dealing with inequality. The objectives of this report are to: propose an overarching definition of inequality, outline the most common types of inequality discussed in the South African literature and propose some appropriate inequality measures to be used in the Oxfam programme in South Africa. Inequality is defined in Section 2. Types of inequality are outlined in Section 3. Measures of inequality are explained in Section 4.

2. INTRODUCTION

South Africa is a middle income country but is one of the most unequal countries in the world in terms of income distribution ([1], [2], [3] and [4]). This is largely a result of the inequalities that were engineered by colonialism and apartheid ([2], [5] and [6]). Apartheid created an unequal society by favouring the white minority in terms of employment, education and health care [3]. While measures undertaken since 1994 to address these disparities have been somewhat successful, the country is still plagued by high levels of inequality. South Africa has been identified as a country of severe contrasts where the very wealthy live right next to the destitute [3]. High levels of income inequality are generally seen as being bad for economic growth and as having a negative impact on social cohesion.

3. DEFINING INEQUALITY

This section will attempt to define inequality as it relates to Oxfam in South Africa. In addition, it will explain the difference between inequality and inequity (two commonly confused concepts) and will explain how economic inequality relates to poverty.

Inequality is a term that is used differently in varying disciplines – mathematics, economics and law, to name a few. Inequality is multidimensional and refers to the differences that exist between various population groups and/or individuals. The *Oxford English Dictionary* defines inequality as “difference in size, degree, circumstance, etc; lack of equality”. The *Collins English Dictionary* defines inequality as “the state or quality of not being equal; social or economic disparity”. Other definitions include the following aspects: “inequality concerns variations in living standards across a whole population” [6] and the identification of inequality as a process because it tends to be persistent and inter-generational [7].

Much of the literature on inequality in South Africa refers to ‘economic inequality’. Economic inequality is inequality in standards of living within a country. These are mainly measured through income and wealth disparities ([6] and [8]).

Common non-economic inequalities include gender inequality, education inequality, health inequality, social inequality and participation inequality.

Gender inequality refers to disparities that exist between individuals as a result of their gender.

Education inequality refers to differing levels of educational attainment, education quality and access to education between various population groups ([7], [9] and [10]).

Health inequality refers to differences in health status or access to or utilisation of health care ([11] and [12]) between individuals or groups of people.

Social inequality implies differing social class, status or circumstance. These can include voting rights, freedom of speech, access to quality housing and other public assets¹ ([13], [14], [15] and [16]).

Participation inequality is the difference in the levels of participation of various groups in activities such as democracy and elections ([17] and [18]) and participation in decision-making structures at national, provincial, district and local level.

1 Public assets include formal dwellings, piped water, electricity and flushing toilets.

3.1 INEQUITY VERSUS INEQUALITY

The terms inequality and inequity are often used interchangeably even though they are quite different concepts. Inequality, as mentioned above, implies variations or differences and can be economic (income and wealth) and non-economic. Inequity is a concept that can be observed because it can be measured; that is, it is based on fact. Inequity concerns whether something (for example, income or education) is equally distributed between groups.

The *Collins English Dictionary* defines inequity as: "1. Lack of equity; unfairness; 2. favouritism or bias, an unfair circumstance or proceeding". Inequity is concerned about whether the distribution (for example, income or education) is fair. The individuals concerned, as well as policy makers, may have differing views on this issue. That is, when one asserts that something is inequitable, one has a concept in mind of what is the ideal or fair distribution of income. The notion of inequity thus involves a value judgement.

This report aims to examine the various types of *inequality* present in South Africa.

3.2 INEQUALITY, POVERTY AND ECONOMIC GROWTH

In order to understand economic inequality clearly, it is important to understand how inequality links to poverty, and also to economic growth. There is a clear link between poverty and inequality. Increased inequality in areas of income, education and land ownership often implies higher levels of deprivation in the same areas [6]. That is, high income inequality often implies high levels of income poverty. There are two ways of defining poverty:

- **Absolute poverty:** where a poverty line is defined. The poverty line is usually measured by a level of income that is deemed enough to meet a household's basic needs. Any household whose income falls below this poverty line is categorised as poor [19].
- **Relative poverty:** where a household's income level is compared to a given proportion of the average national income [19]. This is specific to each country. For example, if in South Africa the relative poverty line is set at 40% of the average national income all households that fall below this level would be considered poor.

Poverty can decline and inequality can grow at the same time [20]. This happens when the incomes of the poor increase relative to the poverty line, but the incomes of the rich grow faster than the incomes of the poor. Under these circumstances, the number of people classified as poor (below the poverty line) will decline, but the gap between the rich and the poor (that is, income inequality) will widen.

Countries with higher levels of inequality, particularly wealth inequality, achieve lower levels of economic growth on average [6]. Inequality hinders economic growth because:

- A country with a high degree of inequality has fewer people who are able to spend on the goods and services that are produced within the country [21].
- The wealthy are more likely to spend on imported goods rather than on locally produced goods [21]. Spending on imported goods does not contribute to a nation's economic growth.

4. TYPES OF INEQUALITY

Inequality is a very broad concept and applies to a number of areas. Below we have summarised the types of inequality that are most commonly discussed in the literature and which we view to be key in the South African context.

The household provides a good starting point for an analysis of inequality since an individual's life chances are critically affected by the material resources at the disposal of the household and the decisions made within the household about distribution of resources [14]. A household is defined as "a group of individuals who live together under one roof and share a common kitchen or cooking pot" [14]. In addition, non-resident members (migrant labourers) may influence household decision-making [14]. The decisions made within the household include those about:

- Food
- Grant income
- Productive assets
- Fertility
- Wages
- Credit
- Education
- Time

The household will be the unit of measurement throughout this report unless otherwise mentioned.

4.1 INCOME AND WEALTH INEQUALITY

Income and/or wealth inequality are the most commonly discussed types of inequality, and are generally what is referred to when people mention “inequality”.

Poverty and income inequality are strongly rooted in the labour market [26]. The labour market refers to jobs, workers and issues of unemployment and earnings. In South Africa there are large groups of people whose earnings are far below the average and a few whose incomes are dramatically higher than average. Income disparities are wider in South Africa than in many other countries. There are a number of reasons for this. The high levels of unemployment and the shortage of skilled labour in South Africa could be factors influencing these high levels of inequality. In South Africa, differences in income occur between race groups and by location (particularly urban/rural), educational status and gender.

Wealth inequality refers to inequality in asset ownership – including property, land, financial assets and ownership of publicly listed companies. Economic research throughout the world shows wealth is more unequally distributed than income.

4.2 GENDER INEQUALITY

Poverty and inequality have an important gender dynamic. Gender inequality refers both to economic inequality between the genders, but also to social inequality and inequality in power between men and women. Economic gender inequalities refer to differences in income and employment by gender and to economic inequality within the household ([3] and [22]).

The Gender Inequality Index (GII) for South Africa is 0.49 [23]. This is very similar to the world average for the GII (0.492). The GII is based on various socio-economic factors and is a figure between 0 and 1, where 0 indicates that men and women are completely equal. South Africa therefore has a relatively high degree of inequality between men and women. More details on this index are given in the second part of this report.

In South Africa and most other countries women tend to participate in the labour market less than men ([4] and [24]). That is, fewer women than men are actively looking for employment or are employed in South Africa [24]. Women’s wages tend to be lower than men’s for two reasons:

- Women tend to be over-represented in low skilled, low paying jobs.
- Women generally earn less than men, even within this category of low to semi-skilled occupations [24].

At a household level, female headed households tend to fare worse than male headed households. For example:

- Female headed households tend to have access to fewer assets compared to their male counterparts.
- More than one third of all female headed households indicated that their main source of income was from remittances (money sent home by migrant workers), pensions and grants rather than salaries or wages [24]. This figure was only 17.7% for male headed households.

In addition, women are affected by inequality within the household. Women, in particular, tend to have less of a voice than men in terms of household decision making and tend to give up their own consumption in favour of children or other household members [21]. As a result, within poor households, women tend to be worse-off. Even within households that would not be classified as poor, women may receive an unequal share of resources, have poor access to services and be living in poverty.

4.3 EDUCATION INEQUALITY

There is a strong correlation between educational attainment and standards of living [3]. Education is widely recognised as a key factor providing better employment and earnings opportunities ([7], [20], [25] and [26]). For this reason, inequality in education is a driver of inequality in other spheres. Parents who were denied opportunities for education will have children who are also unable to access education [7]. Inequality in education in South Africa refers to two distinct problems:

- Unequal access to education and inequality in overall educational attainment between different groups.
- Differences in the quality of education available to different groups.

It is critically important to note that educational disparities persist across generations. Individuals who are better educated tend to obtain better jobs with higher earnings. This enables their children to be better educated as well. Children born into poor families may not have access to the same educational opportunities ([20] and [27]).

4.4 HEALTH INEQUALITY

Health inequality refers to inequalities in both health status and health care between groups. Like education, inequality in health leads to inequality in other spheres as health affects people's ability to be productive in work and to participate in other areas of life.

Inequality in health care between groups is related to inequalities in access to health care between different population groups (can people use health care when needed?) and differences in usage (do people actually use health care when needed?). Access may be related to income and to physical or acceptability barriers to accessing health care. For example, those living in informal rural areas have difficulty accessing health care due to the distance to the nearest health care facility [11]. Usage is related to access and to a number of other factors, which may include education levels, perceived quality of care, cultural understandings of illness, stigma, gender and the manner in which patients are treated by health care workers. All of these factors impact on whether people use health care when needed.

Within the health economics literature, inequity in health and health care is seen as much more important than inequality. It has been shown that some inequality of health care may be required if one is to achieve equality in health outcomes. That is, health care may need to be concentrated in those groups that have the greatest need of health care. Inequality in health care is very often reported in relation to need. Strictly speaking, when health inequality is measured in relation to need, it is a measure of health inequity.

4.5 SOCIAL INEQUALITY

Many studies refer to inter-household inequalities (differences that exist between households) and show the differences by race group or location. In South Africa, however, there is a growing concern regarding intra-household inequality. Intra-household inequality refers to inequality within a particular household. It is not enough to identify a household as being poor or not, it is necessary to examine each person's welfare within that particular household. Each household member may not have equal access to resources or equal opportunities within the household [3].

Another form of social inequality is inequality in access to various resources or 'public assets'. These include:

1. Access to formal dwelling
2. Piped water
3. Electricity for cooking
4. Electricity for lighting
5. Chemical or flush toilets

Data show that black households and female headed households remained relatively worse off in terms of access to public assets and services in 2008 compared to other population groups and male headed households. For all five public assets identified above, blacks' access ranged between 51% and 77% in 2008. For whites, access ranged between 94% and 100% [13]. Provincially, KwaZulu-Natal (KZN) stands out as the only province in which all the access rates were lower in 2008 than 2007. The biggest decline was in access to a chemical or flush toilet (17% decline could be due to population growth or poor maintenance of existing toilets). Households in the Western Cape, Gauteng and the Free State generally experienced the highest access rates in 2008, whilst those in Limpopo, KZN and the Eastern Cape had lower rates of access for both 2007 and 2008. Gauteng, the Free State and Mpumalanga had increases in access to all public assets between 2007 and 2008. In total, the use of electricity in cooking increased from 2006 to 2008 suggesting a possible change in household expenditure patterns.

Energy inequality is a relatively new concept. It is a type of social inequality that has been written about in recent years. Energy inequality refers to any variance in the use of, or access to, the different types of energy sources available in South Africa [15]. Only 79% of the country is connected to the main electricity grid and access to electricity tends to be higher in urban areas. As income increases, there is an increase in the use of modern energy sources (electricity, solar) compared to traditional ones (dung, wood, candles) and modern sources of energy are more widely available in urban areas [15].

4.6 PARTICIPATION INEQUALITY

As explained earlier, participation inequality refers to differences in the levels of participation of various groups in activities such as democracy and elections². In South Africa, citizen participation in democratic activities is low compared to other democratic nations [17]. Here, democratic activities include political discussions and engagement with members of

² Following on from a workshop with Oxfam staff in September 2012, the definition of participation inequality was broadened to include participation in decision-making structures at national, provincial, district and local level. The discussion on participation inequality by gender in Part 2 of this report uses the broader definition.

parliament [17]. There also appears to be an overall decline in participation in voting, particularly among males [18]. However, on the whole, male voter participation is substantially higher than female participation. Limpopo, KZN and the Western Cape were the three provinces that had a decline in voter participation whilst the Eastern Cape and Mpumalanga had a slight increase in voter turnout. The Indian/Asian population group had the largest decrease in participation, followed by Africans. It is interesting to note that there was an increase in overall participation from the younger voter cohort. Access to voting stations was not identified as being an issue [18].

5. MEASURES OF INEQUALITY

The literature is dominated by measures of economic (income and wealth) inequality. There are several measures available. We have focused on those measures that are most commonly used in South Africa and internationally.

The Gini coefficient is the international standard for measuring the distribution of income and wealth in a country ([6] and [28]). The Gini coefficient is calculated as follows:

- The population is ranked from poorest to richest (based on data on income earned or assets owned or on household spending).
- The population is then divided into five equal groups ranging from the poorest 20% of the population to the richest 20% of the population.
- The cumulative percentage of income (or wealth or spending) is then calculated for the poorest 20%, 40%, 60%, 80% and 100% of households in order to plot the distribution of income (a Lorenz curve).
- The distribution of income (the Lorenz curve) is then compared with the 'line of equality' (a representation of equality where each 20% of the population earns 20% of the income).
- The distance between the 'line of equality' and the Lorenz curve indicates the extent of the inequality in a country.
- The Gini coefficient is then calculated by dividing the area of inequality (the gap between the line of equality and the Lorenz curve) by the total area underneath the line of equality.

The Gini coefficient is a number between 0 and 1 and is interpreted as follows:

- A value of 0 indicates a perfectly equal distribution of income.
- A value of 1 indicates that one person earns 100% of the income.
- The closer the Gini coefficient is to 1, the more unequal the income distribution.

The Gini coefficient can be calculated using income, wealth or consumption data. As a result of the variety in methods and the varying quality of data available, it is difficult to compare Gini coefficients across countries [29]. The Gini coefficient does not tell us anything about which groups of people make up the poorest and richest 20% of the population [28]. For example; it does not tell us whether:

- there are more women in the poorest 20%,
- the poorest 20% is made up predominantly of one race group,
- the poorest 20% is made up of people from a particular province or from rural areas.

Interestingly, the Gini coefficient has been modified and applied to measure social inequalities in some settings (for example, inequality in access to water) and to measure inequalities in health care utilisation.

Given the complex nature of the Gini coefficient calculation, a simplified approach is often used:

- The population is ranked from poorest to richest (based on data on income earned or assets owned or on household spending).
- The population is then divided into five equal groups ranging from the poorest 20% of the population to the richest 20% of the population.
- The income earned by the richest 20% of the population is compared to that of the poorest 20%. The larger the gap, the greater the inequality.

The alternative measure of inequality is the Theil Index. The Theil Index breaks down the inequality into its various subcomponents. It is more complex to calculate and more difficult to interpret than the Gini coefficient ([6] and [28]). The advantage of the Theil Index is that it provides information on both between-group and within-group inequality. Between-group inequality refers to inequality between race groups or between provinces. The within-group inequality component measures inequality within a specific race group, for example, inequality amongst Africans.

3 Census 2011 should provide reliable data on these at district level, but the results had not been released when the first version of this report was finalised.

Martins [16], however, identifies the use of household budgets as an indicator of wealth inequality. Identifying the areas in which households spend the majority of their income is a good indicator of poverty. For example, if a household spends the majority of its income on food, it is considered poor ([16]). The extent of inequality within a country or province can be identified through comparison between the spending patterns of the poorest 20% of the population and the richest 20% of the population.

Data on income, consumption and asset ownership that is needed to calculate the Gini coefficient is available through various household surveys conducted in South Africa. Statistics South Africa (Stats SA) conducts the General Household Survey (GHS) annually, the Labour Force Survey (LFS) quarterly and conducted the Community Survey in 2007. The Southern Africa Labour and Development Research Unit (SALDRU) initiated the National Income Dynamics Study (NIDS) in 2008. This survey will be repeated every two to three years, keeping track of the same individuals and households. Some of the details of these household surveys are included in Appendix 1 (Part 1). The GHS and NIDS survey data would provide the necessary data to identify household budgets, outlined above as an alternative indicator of wealth inequality.

Inequality in health is generally measured by inequalities in life expectancy or in self-reported health between population groups. Data on morbidity (illness levels) in South Africa is poor. There is not enough data on self-reported health to form a full picture of inequalities in health.

Inequality in health care is often measured by differences in doctor-patient ratios. Inequality in health care utilisation (usage) is measured by concentration curves, which is based on the concept of the Gini coefficient. The concentration curve reports health care utilisation rates by income or socio-economic status quintiles (20% groupings). Inequality in health care utilisation is often reported in relation to measures of health care need (such as burden of disease). While expenditure per capita on health care is measured, it is seen as less important than inequality in health outcomes.

5.1 MEASURING INEQUALITY AT PROGRAMME OR DISTRICT LEVEL

Stats SA conducted the 2007 Community Survey which captured data at district level. This is the most recent survey to have done so. The information available includes:

- Type of dwelling,
- Access to water,
- Refuse removal,
- Toilet facilities and
- Use of electricity for lighting, cooking and heating

This data falls beyond the scope of this review, and, as such, has not been analysed as part of this report³.

Every year the Department of Basic Education (DBE) provides information on the number of students and educators in each district. This information could be used to calculate inequality in education indicators between districts, following a similar approach to the Gini.

The District Health Barometer measures health care utilisation by district and provinces (primary health care utilisation rate, immunisation utilisation rates, hospital bed utilisation rates), as well as mortality rates (by facility, district, province and socio-economic status). Stats SA reports mortality rates by age, sex, district and cause. These have been further analysed to form data on burden of disease (a measure of health need) by district.

6. THE EXTENT OF INEQUALITY IN SOUTH AFRICA

Whilst poverty has declined over the period 2000 to 2006; inequality has not. It is interesting to note that income inequality between race groups is declining but income inequality within race groups is on the rise.

Table 1. Post-transition trends in poverty and income distribution by approximate time period.

	1994 - 2000	2000 - 2006
AGGREGATE INEQUALITY	Rising strongly	Little change
INEQUALITY BETWEEN RACE GROUPS	Declining	Declining
INEQUALITY WITHIN RACE GROUPS	Rising strongly	Rising
POVERTY HEADCOUNT	Rising moderately	Declining strongly

Source: [20]

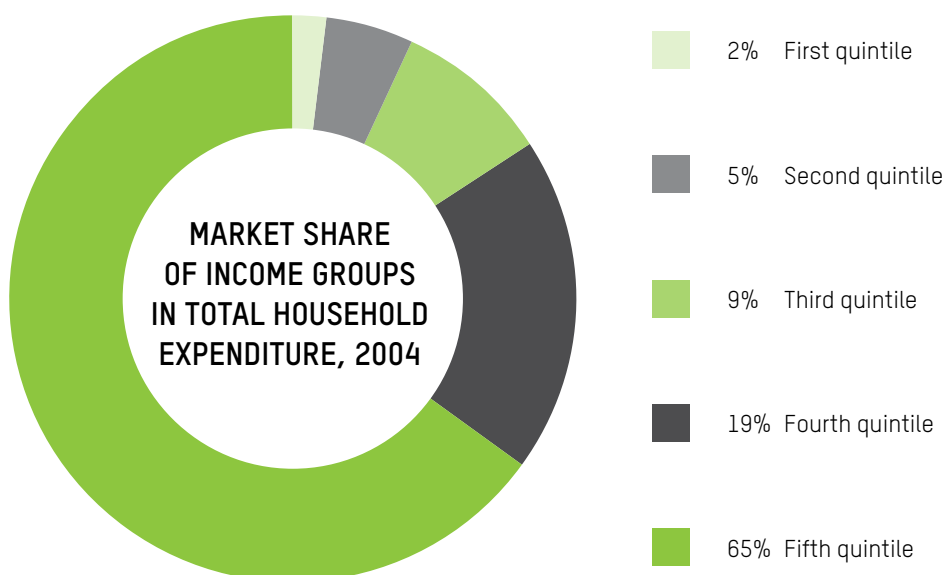
World Bank data shows that income inequality rose from 2000 to 2006 and then fell slightly from 2006 to 2009.

- In 2000, the Gini coefficient for South Africa was 0.58.
- It rose to 0.67 in 2006.
- It fell again slightly to 0.63 in 2009.

0.63 is close to 1, indicating a very unequal distribution of income. According to the World Bank, the richest 20% of the population earned 68.2% of total income in South Africa in 2009. The poorest 20% of the population only earned 2.7% of total income in 2009.

The following two charts illustrate the variation in household expenditure by quintile (20% of the population) in South Africa. Figure 1 shows that the richest 20% (the fifth quintile) of the population makes up 65% of total expenditure (spending) in South Africa, whilst the poorest 20% (the first quintile) only contributes to 2% of total expenditure (spending) in the economy.

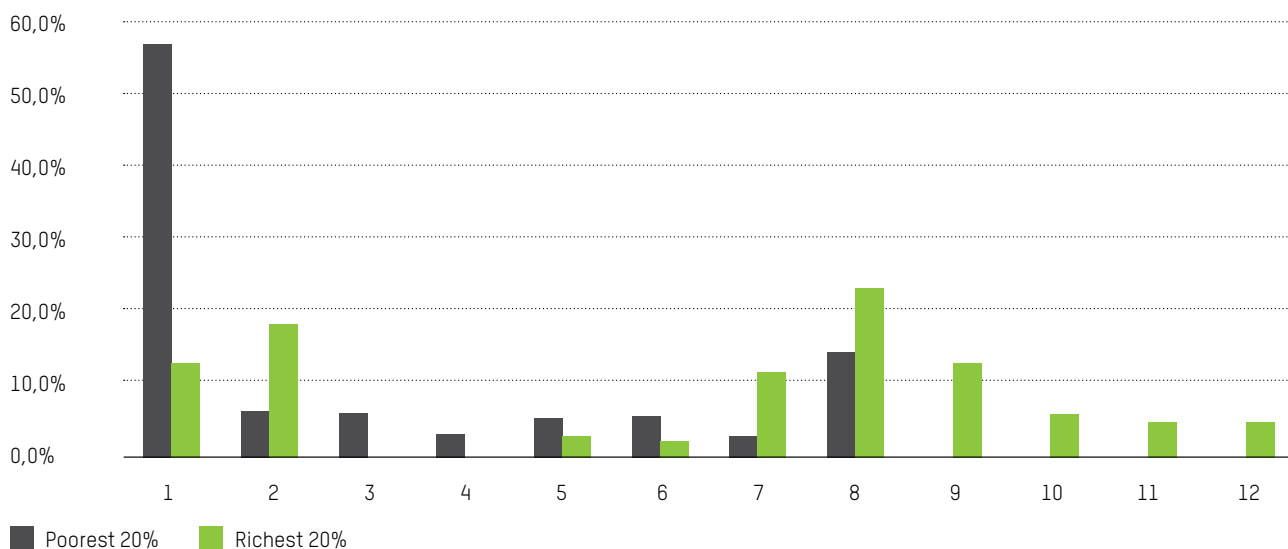
Figure 1. Market share of income groups in total household expenditure, 2004.



Source: [16]

Figure 2 breaks down the expenditure areas of the richest 20% and poorest 20% of the population. The poorest 20% spend the majority of its income on food (57%). The richest 20% of the population, on the other hand, spend much of its income on housing, electricity and transport.

Figure 2. A comparison of spending between the poorest 20% and the richest 20% of the population, 2004.



1 - Food 2 - Housing & electricity 3 - Fuel & light 4 - Washing & cleaning materials 5 - Clothing & footwear 6 - Personal 7 - Transport 8 - Other 9 - Income tax 10 - Insurance & funds 11 - Medical & dental 12 - Savings

Source: [16]

Location has also been identified as a driver of wage, employment and earnings differences in South Africa. It has long been thought that inequality is mainly a racial issue in South Africa. However, the racial dimension of inequality has been reduced and now location differences, disparities in education and intra-household inequality seem to be the largest contributing factors to current inequality [20]. Location, particularly the distinction between urban and rural, is a significant determinant of wage differences in South Africa [25].

Table 2 illustrates that in four of the nine provinces inequality within the province increased from 1995 to 2005. The Western Cape, Gauteng and Mpumalanga saw the largest increases in their respective Gini coefficients. The province with the highest Gini coefficient in 2005 was the Western Cape (0.69).

Table 2. Shifts in inequality by province, 1995 – 2005.

PROVINCE	GINI COEFFICIENT		DIRECTION OF CHANGE:
	1995	2005	
SOUTH AFRICA	0.64	0.69	^
GAUTENG	0.54	0.65	^
WESTERN CAPE	0.58	0.69	^
KWAZULU-NATAL	0.63	0.67	^
FREE STATE	0.66	0.65	Little change
EASTERN CAPE	0.65	0.64	Little change
NORTHERN CAPE	0.65	0.62	v
NORTH WEST	0.63	0.64	Little change
MPUMALANGA	0.58	0.67	^
LIMPOPO	0.63	0.58	v

Source: [5]

v - shows that inequality decreased from 1995 to 2005
 ^ - shows that inequality increased from 1995 to 2005

The Human Development Index (HDI) measures human development based on income, education and health factors and can serve as an indicator of inequality between various population groups (provincial groups, in this case). The HDI ranges between 0 and 1; the closer the HDI is to 1, the higher the level of human development. The most recent HDI for South Africa is 0.619 in 2011 [1], which is slightly lower than the figure from 1996 (0.628). This indicates a decline in human development in South Africa over the period. HDI data for 1996 shows there is inequality in human development between the provinces in South Africa. The provinces with the highest HDI were Gauteng and the Western Cape and the provinces with the lowest HDI were KZN, the Eastern Cape and Limpopo. Unfortunately no recent data on HDI by province could be found.

During apartheid, vast disparities existed between race groups in terms of access to education and the number of years of schooling obtained. Today, the inequalities in number of years of schooling between blacks and whites have declined, but what remains is a stark contrast in the quality of education received ([7], [9], [20] and [26]). The quality of education can be measured by pupil-teacher ratios, the number of matriculants enrolled, matric pass rates and subjects pass rates. The pupil-teacher ratio calculates the number of pupils per teacher; a higher number of pupils per teacher means less individual attention per student and thus a lower quality of education [7].

Table 3 below provides pupil-teacher ratios by province. Provinces that had pupil-teacher ratios higher than the national average of 29.3 in 2010 are highlighted in bold in the table and include KZN, Eastern Cape and Northern Cape. Gauteng, Western Cape and the Free State had pupil-teacher ratios below the national average. The difference between the province with the lowest ratio (Free State) and the provinces with the highest pupil-teacher ratio (KZN and Northern Cape) is three pupils per teacher thus illustrating a relatively small variance amongst provinces. On the whole, the national pupil-teacher ratio declined over the period from 2007 to 2010. Ratios have, however, increased from 2009 to 2010 in some provinces (Northern Cape, North West and Mpumalanga). The largest decline was experienced in KZN. This is a good indicator of improved quality; however, in each province the decline in this ratio has been very slight. Pupil-teacher ratios tend to be much higher in black schools compared to other mixed race schools [7].

Table 3. Comparing pupil-teacher ratios by province, 2007 – 2010.

PROVINCE	PUPIL-TEACHER RATIO			
	2007	2008	2009	2010
SOUTH AFRICA	31.5	30.5	29.6	29.3
GAUTENG	29.8	29.5	28.7	28.1
WESTERN CAPE	30.3	28.8	28.5	28.3
KWAZULU-NATAL	32.4	31.9	31.6	30.5
FREE STATE	28.9	28.7	27.5	27.5
EASTERN CAPE	32.3	31.3	29.8	29.7
NORTHERN CAPE	31.0	29.5	29.4	30.5
NORTH WEST	29.1	29.3	29.1	29.2
MPUMALANGA	32.7	31.3	29.4	30.0
LIMPOPO	33.2	30.9	29.2	29.3

Source: [30]

Note: The provinces with higher than average pupil-teacher ratios are highlighted in bold.

As shown in Table 4, the number of candidates who wrote matric in each of the provinces was very evenly split between males and females. The DBE reports on the percentage of matric candidates who failed every year. In South Africa, there are no vast differences in matric failure rates for males and females (30.7% and 33.5% respectively). Gender inequality within education does not appear to be a serious problem. On the whole, Limpopo, Mpumalanga and the Eastern Cape had the highest number of matric failures (lowest pass rates) compared to the other provinces. Gauteng had the lowest overall failure rate (highest pass rate).

Table 4. National senior certificate examination results, by province and gender, 2010.

PROVINCE	GENDER BREAKDOWN OF CANDIDATES WHO WROTE			% OF CANDIDATES WHO FAILED		
	MALE (%)	FEMALE (%)	TOTAL (%)	MALE (%)	FEMALE (%)	TOTAL (%)
SOUTH AFRICA	45.5	54.5	100	30.7	33.5	32.2
GAUTENG	45	55	100	21.6	21.1	21.4
WESTERN CAPE	43.2	56.8	100	21.7	24.4	23.2
KWAZULU-NATAL	46.1	53.9	100	28.9	29.7	29.3
FREE STATE	48.1	51.9	100	27.8	30.7	29.3
EASTERN CAPE	44	56	100	40.4	42.7	41.7
NORTHERN CAPE	45.1	54.9	100	27	28.2	27.7
NORTH WEST	46.4	53.6	100	22.2	26.1	24.3
MPUMALANGA	46.6	53.4	100	40.7	45.3	43.2
LIMPOPO	45.5	54.5	100	37.7	45.8	42.1

Source: [30]

Matriculation with mathematics and science is indicative of a good quality of education. Most predominantly black schools are lacking in this area [7]. Disadvantaged schools (which are generally black schools based in rural areas) are faced with many factors that reduce the quality of education that they offer. These include overcrowding, lack of text books and learning materials, unqualified and under-qualified teachers and the lack of access to basic resources such as electricity and clean water [31]. On the whole the decline in the number of matriculants writing mathematics and science is indicative of declining educational quality in South Africa. Concerns have been raised in recent years that the improvement in pass rates may in fact be due to lowering of examination standards.

The issue of access to education has changed in that most children in South Africa are able to attend a school, but only some children, whose families have the financial means to pay higher school fees or to cover travel expenses to attend better schools further from home, are able to attend good, better equipped schools. The reduction in the between-race educational inequality is, to a large extent, a result of the influx of blacks into previously white schools. These schools still tend to perform better than the previously disadvantaged black schools [9].

Large inequalities in access to health care (and usage of health care) exist between those who have access to private sector medical care (through medical aids) and those who rely on the public sector. Within the public sector, there are important geographic inequalities in health care, by province and district. Inequality in health and in health care are discussed in more detail in Part 2 of this report.

7. PROPOSED SET OF INEQUALITY MEASURES FOR OXFAM IN SOUTH AFRICA

We examined all of the inequality measures available in South Africa and highlighted the most commonly used ones in the earlier section on inequality measures. From these measures we attempted to identify the most appropriate measures for Oxfam.

As explained in the section on inequality, the Gini coefficient is the most widely used measure of economic inequality, but it is very difficult to calculate. The most straightforward way of measuring income inequality at the Oxfam programme level, therefore, would be to compare the income or spending of the richest 20% of the population Oxfam is interested in examining

with the poorest 20% of that population. In this simple comparison, an equal distribution of income would mean that both the richest and poorest 20% of the population would each earn 20% of the total income. If the richest 20% earn or spend more than half of the total income, this is indicative of a highly unequal distribution.

If Oxfam is interested in assessing inequality within the geographic areas in which it works, we would recommend it employs one or more researchers to collate the various published district-level data for these specific districts on a regular basis.

- The District Health Barometer is published annually by the Health Systems Trust. This data would provide some description of health and health care inequalities across districts.
- Education data is published annually by the Department of Basic Education. It could be used to provide indications of inequality in education and education quality between districts.
- The Community Survey (which contains district level data on access to public assets) was only published in 2007 and it is not clear when Stats SA will conduct another survey of this kind. However, this provides a rich source of (rather old) data on economic and social inequality.
- The other household surveys (LFS, GHS and NIDS) provide provincial level data on an annual basis which Oxfam could use to provide a broader picture of inequality within the provinces that it operates.
- Census 2011 should provide a wealth of information at district level.

On the other hand, if Oxfam aims to measure inequality between those it reaches with its programme and the general population in the districts within which it works, data would need to be collected for a sample of those receiving support from Oxfam and this data would need to be compared with socio-economic data for the comparator group (be it the general population in the districts within which Oxfam works, a sample of households in the same district who do not receive Oxfam support, or even the general population of the province).

Initial feedback from Oxfam Australia staff on 25 September 2012 and discussions with Country Director Allan Moolman have shown that the organisation wishes to track external measures of inequality over a long time period to pick up any long term changes. Two decisions that need to be made relate to the following:

1. Is measuring inequality on a geographic basis most useful? Or does Oxfam wish to track inequalities on another basis, such as by gender or by income?
2. Does Oxfam wish to be able to compare indicators within its programme to these external measures?

The answers to the questions above should guide the choice of indicators from those suggested in Part 2 of this report.

The Health Economics and HIV and AIDS Research Division (HEARD) believes that if inequality is measured on a geographic basis, district level makes sense. As the Oxfam programme works purely at the local level, measuring inequality at national or provincial level may not be particularly relevant. Tracking local level inequality would be ideal, but there is little data available to do this.

At the Oxfam staff workshop on 25 September 2012, it became clear that the following types of inequality are most relevant to Oxfam:

- Health inequality,
- Gender inequality,
- Social inequality (specifically, inequalities in access to public assets), and
- Participation inequality.

Education inequality and income inequality were not seen as directly relevant to the programme. However, both of these inequalities play an important role in evaluating inequality as it relates to livelihoods, as explained in Part 2 of this report. While income inequality may be best measured by income or spending data, accurate data on these variables are often not available at a district or sub-district level. Income data is notoriously difficult to collect, as people are reluctant to give this type of information and are often suspicious about how it will be used. More and more, researchers are using proxy variables – variables that are indicative of income levels and socio-economic status – which are easier to measure. These include ownership of assets (for example, fridge, television, cellular phone), main source of water, type of toilet, level of education and employment status [32]. If Oxfam intends to collect data on income inequality (within its programme), we would recommend it use proxy variables.

It is important to note that measuring inequality will provide a good indication of the existence of disparities, but will not identify who is poor or vulnerable. An indicator such as a Gini coefficient will not assist Oxfam in identifying the characteristics of the poorest or most vulnerable groups. Data on the characteristics of households would need to be collected alongside the income proxy data and analysed separately. As will be apparent from the above, collecting data on inequality is much more complex than collecting data on poverty alone. If Oxfam is to collect data on inequality, it will need to do so at baseline and then repeat at regular intervals, recognising that inequality may change very slowly over time.

8. RECOMMENDATIONS

We have defined inequality, outlined the major types of inequality and the commonly used measures. We have proposed a measure of income inequality in this report and several approaches to measuring inequality. Proposed measures of health and gender inequality, as well as measures of inequality appropriate to Oxfam's livelihoods work, are made in Part 2 of this report.

We believe that Oxfam needs to critically assess the measures proposed in Part 1 and Part 2 of this report and needs to decide whether inequality is indeed the external metric which is most relevant to its programme. Measures of inequity and vulnerability need to be considered as alternative metrics.

REFERENCES (PART 1)

1. United Nations Development Program (UNDP). 2011a. Human Development Report. Available from: http://hdr.undp.org/en/media/HDR_2011_EN_Table1.pdf [Accessed 17-07-2012]
2. Leibbrandt, M, Woolard, I, Finn, A and Argent, J. 2010, "Trends in South African Income Distribution and Poverty since the Fall of Apartheid", *OECD Social, Employment and Migration Working Papers*, No. 101, OECD Publishing
3. Woolard, I. 2002. An Overview of Poverty and Inequality in South Africa. *Working Paper for DFID (SA)*
4. World Bank. 2011. World Bank Data Available from: <http://data.worldbank.org/indicator/SI.POV.GINI> [Accessed 16-07-2012]
5. Bhorat, H and Van der Westhuizen, C. 2008. Economic Growth, Poverty and Inequality in South Africa: The First Decade of Democracy. *Unpublished Manuscript, Development Policy Research Unit*, University of Cape Town
6. McKay, A. 2002. Defining and measuring inequality. *Inequality Briefing 1*, London: Overseas Development Institute (ODI)
7. Van der Berg, S. 2007. Apartheid's Enduring Legacy: Inequalities in Education. *Journal of African Economies* 16(5):849-880
8. Orton, M and Rowlingson K. 2007. Public Attitudes to Economic Inequality. Layerthorpe, York: Joseph Rowntree Foundation
9. Van der Berg, S. 2008. How effective are poor schools? Poverty and Educational Outcomes in South Africa. *CEGE Discussion Paper No. 69*
10. Van der Berg, S, Wood, L and Le Roux, N. 2002. Differentiation in black education. *Development Southern Africa* 19(2): 289-306
11. McIntyre, D and Zere, E. 2003. Equity in Self-Reported Adult Illness and Use of Health Service in South Africa: Inter-Temporal Comparison. *Journal of Health, Population and Nutrition*, 21(3):205-215
12. World Health Organisation (WHO). 2012. Glossary of Terms. Available from: <http://www.who.int/hia/about/glos/en/index1.html> [Accessed 17-07-2012]
13. Bhorat, H, Van der Westhuizen, C and Jacobs, T. 2009b. Access to Household Services and Assets: Analysis using the NIDS Wave 1 Data set. Discussion Paper no. 4
14. Burns, J and Keswell, M. 2006. Intra-Household Decision-Making and Resource Allocation, Social Networks and Social Cohesion. *An Input Study in Preparation of the National Income Dynamics Study*
15. Kholer, M, Rhodes, B and Vermaak, C. 2009. Developing Energy-Based Poverty Indicators for South Africa. *The Journal of Interdisciplinary Economics*, 21:163-195
16. Martins, J.H. 2007. Household Budgets as a Social Indicator of Poverty and Inequality in South Africa. *Social Indicators Research* 81(2): 203-221
17. Mattes, R. 2002. South Africa: Democracy Without the People? *Journal of Democracy*, 13(1): 23-36
18. Human Sciences Research Council (HSRC). 2005. Survey on South African Voter Participation in Elections
19. Triegaardt, J. 2006. Reflections on Poverty and Inequality in South Africa: Policy Considerations in an Emerging Democracy. Available from: http://sarpn.org/documents/d0002618/Poverty_Inequality_SA_Sept2006.pdf [Accessed 20-08-2012]
20. Van der Berg, S. 2010. Current Poverty and Income Distribution in the Context of South African History. *Stellenbosch Economic Working Papers: 22/10*
21. Frye, I, Farred, G and Nojekwa, L. 2011. 'Inequality in South Africa' in Jauch, H and Muchena, D. ed. 2011. *Tearing Us Apart: Inequalities in Southern Africa*. Johannesburg: Open Society for Southern Africa
22. Cyba, E. 2005. Social Inequality and Gender. *Journal of Social Sciences Education*. Available from: http://www.jsse.org/2005-2/inequality_cyba.htm [Accessed 16-07-2012]
23. United Nations Development Program (UNDP). 2011b. Human Development Report. Available from: http://hdr.undp.org/en/media/HDR_2011_EN_Table4.pdf [Accessed 17-07-2012]

24. Statistics South Africa (Stats SA). 2011. Social Profile of Vulnerable Groups in South Africa, 2002 – 2010. Pretoria: Statistics South Africa
25. Borat, H. 2000. Wage Premia and Wage Differentials in the South African Labour Market. TIPS annual forum 2000
26. Van der Berg, S. 2002. Education, poverty and inequality in South Africa. *Paper to the conference of the Centre for the Study of African Economies on Economic growth and poverty in Africa*, Oxford March 2002
27. Louw, M, Van der Berg, S and Yu, D. 2009. Educational Attainment and Intergenerational Social Mobility in South Africa. *Stellenbosch Economic Working Papers: 09/06*
28. Borat, H, Van der Westhuizen, C and Jacobs, T. 2009a. Income and Non-Income Inequality in Post-apartheid South Africa: What are the Drivers and Possible Policy Interventions? Development Policy Research Unit Working Paper 09/138
29. Bosch, A, Rossouw, J, Claassens, T and Du Plessis, B. 2010. A second look at measuring inequality in South Africa: A modified Gini coefficient. *UKZN, School of Development Studies Working Paper no. 58*
30. The Department of Basic Education. 2012. Education Statistics in South Africa 2010. Pretoria: Department of Basic Education
31. Sedebi, M. 2011. Inequality of Access to Resources in Previously Disadvantaged South African High Schools. *Journal of Social Sciences* 28(2):129-135
32. Cleary, S *et al.* 2011. Equity in the use of antiretroviral treatment in the public health care system in urban South Africa. *Health Policy* 99 (3): 261-6

APPENDIX 1 (PART 1): DETAILS OF HOUSEHOLD SURVEYS

Statistics South Africa (Stats SA) conducts:

1. The General Household Survey (GHS), annually
2. The Labour Force Survey (LFS), quarterly.
3. The Community Survey (2007)

The Southern Africa Labour and Development Research Unit (SALDRU) based at the University of Cape Town initiated: The National Income Dynamics Study (NIDS) in 2008. This survey will be repeated every two to three years, keeping track of the same individuals and households.

The GHS collects information on:

- Demographic factors such as age, race, gender, location etc.
- Economic factors such as income, education, employment
- Health
- Food security
- The household; size of household, type of dwelling, access to water, quality of water and toilet facilities.

The LFS collects a variety of data on:

- Employment
- Earnings
- Education of individuals.

The Community Survey was used to gather demographic and socio-economic data at a municipal level.

The NIDS survey is designed to gather information on:

- Income
- Consumption
- Expenditure
- Household structure
- Health
- Education
- Food security
- Access to water and electricity.

PART 2

INEQUALITY IN SOUTH AFRICA: DIMENSIONS OF INEQUALITY IN HEALTH, GENDER AND LIVELIHOODS

REPORT COMPILED BY:

NICOLA DEGHAJE AND TAMLYN MCKENZIE AND PETRONELLA
CHIRAWU FROM HEARD

REPORT COMPLETED:

30 NOVEMBER 2012

PART 2: INEQUALITY IN SOUTH AFRICA: DIMENSIONS OF INEQUALITY IN HEALTH, GENDER AND LIVELIHOODS

CONTENTS (PART 2)

1. Introduction	22
2. Inequality in health in South Africa	23
2.1 Measures of health and health care inequality	24
2.1.1 Measures of health inequality	25
2.1.2 Measures of health care inequality	26
3. Gender inequality in South Africa	27
3.1 Dimensions of gender inequality in South Africa	27
3.2 Measures of gender inequality	29
4. Inequality, livelihoods and food security	32
4.1 Income inequality and livelihoods	32
4.2 Inequality of access and livelihoods	33
4.3 Measures of food security	35
5. Conclusions	36
6. Recommendations	36
References (Part 2)	37
Appendix 1 (Part 2): Brief description of household surveys	39

1. INTRODUCTION

The report entitled *The Current Understanding of Inequality in South Africa*, which is Part 1 of this document, defined inequality, explained the various types of inequality and inequality measures and discussed the present state of inequality in South Africa.

Part 2 of this document aims to:

- Describe the dimensions of inequality in three of Oxfam's programming sectors (health, gender and livelihoods) based on current research in South Africa; and
- Propose a set of inequality indicators for health, gender and livelihoods against which the progress of Oxfam's programmes can be tracked over time.

The section on livelihoods includes a discussion on food security, which is an important aspect of livelihoods, and an area that the Oxfam programme addresses. Initial feedback from Oxfam staff has shown that measuring inequality within its programme is not useful. Oxfam wishes to track external measures of inequality over a long time period to detect changes over time. With this in mind, this report proposes measures of inequality which are currently being used in South Africa.

As discussed in Part 1, inequality implies variations or differences between individuals or population groups. Inequality can be observed because it can be measured. Inequality concerns whether something (for example, income or education) is equally distributed between groups. As outlined in Part 1 of this report, the types of inequality discussed are defined as follows:

Economic inequality is inequality in standards of living within a country. These are mainly measured through income and wealth inequality.

Gender inequality results when disparities exist between individuals as a result of their gender.

Health inequality refers to differences in health status or access to or utilisation of health care [1] between individuals or groups of people.

Income inequality refers to disparities in income or earnings between different population groups.

Intra-household inequality refers to inequality within a particular household.

Social inequality implies differing social class, status or circumstance. These can include voting rights, freedom of speech and access to quality housing and other public assets. [2], [3], [4] and [5].

Participation inequality is the difference in the levels of participation of various groups in activities such as democracy and elections [6] and [7] and participation in decision-making structures at national, provincial, district and local level.

Wealth inequality refers to inequality in asset ownership, including property, land, financial assets and ownership of publicly listed companies.

As mentioned in Part 1, it became clear at the Oxfam staff workshop on 25 September 2012 that health inequality, gender inequality, social inequality (specifically, inequalities in access to public assets⁴) and participation inequality are most relevant to Oxfam. As a result this report will focus on these types of inequality.

From discussions with Oxfam staff it became apparent to the researchers that other measures within health, gender and livelihoods may be more relevant than inequality measures *per se*. These concerns were raised with Oxfam prior to starting this phase of the project. However, the researchers were briefed to continue to examine inequality measures. In the livelihoods section some measures which are not inequality related, but which are regarded as relevant, are presented.

We understand that tracking gender inequality is important to Oxfam, given the programme's focus on women. In deciding on the most appropriate measures from those provided in this report, Oxfam should consider the following questions:

4 Public assets include formal dwellings, piped water, electricity and flushing toilets.

1. How relevant is geographic inequality to Oxfam? Is it as important as gender inequality, or less so?
2. If geographic inequalities are relevant to Oxfam, should inequality be measured at a district or provincial level? Or by area type? At which level is geographic inequality relevant to Oxfam's programme?
3. What is the purpose of tracking these indicators? How will these indicators be used in the Oxfam programme? To what end?

To assist in guiding the decision of which measures of inequality to use, this report indicates, where possible, at what level the data needed to estimate each measure is available.

2. INEQUALITY IN HEALTH IN SOUTH AFRICA

Discussions with Oxfam staff have shown that health is central to the Oxfam programme in South Africa. The broad definition of health used by Oxfam is similar to the view of health in the health economics literature: that health is something which is necessary for people to "flourish" [8]. It also matches the generally accepted World Health Organisation (WHO) definition of health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" [9].

Inequality in health refers to inequalities in health status and in health care between groups. Inequality in health leads to (or exacerbates) inequality in other spheres as people's health affects their ability to be productive and to participate in other activities.

There are marked inequalities in health in South Africa on a geographic basis. There is persistent geographic variation in infant mortality rates and under-five mortality rates ([10] and [12]). HIV prevalence differs between geographic areas ([11] and [12]). Antenatal HIV prevalence has been shown to be higher in the most deprived districts, which include: uThukela, Chris Hani, Ugu, Sisonke, Greater Sekhukhune, Zululand, Alfred Nzo, O.R. Tambo, uMkhanyakude and uMzinyathi [10].

Health inequalities among children are particularly important as poor health in childhood has lifelong consequences. Health and health care inequalities among children are worse than among adults in South Africa because of the concentration of children in the rural areas of South Africa and, in particular, in the former homelands [13]. These areas lag behind the rest of South Africa in terms of access to quality education, water and sanitation, housing and health care.

Analysis of data from the National Income Dynamics Study (NIDS)⁵ show that, on average, women, blacks, those with greater limitations in activities of daily living, and those with lower education levels were more likely to report worse health. Interestingly, those in urban areas were more likely to report poor health.

Inequality in health care between groups is related to inequalities in access to health care between different population groups (can people use health care when needed?) and differences in usage (do people actually use health care when needed?). Access may be related to income and to physical or acceptability barriers to accessing health care. For example, those living in informal rural areas have difficulty accessing health care due to the distance to the nearest health care facility [1]. Usage is related to access and to a number of other factors: education levels, perceived quality of care, cultural understandings of illness, stigma, gender and the manner in which patients have been treated by health care workers in the past. All of these factors impact on whether people use health care when needed. In 2008, research showed that blacks and coloureds were more likely to go without medical care in the last 12 months than whites or Indians [14].

In South Africa, inequalities in access to health care are closely related to income and employment status. Large health care inequalities exist between those who have access to private sector medical care (through medical aids) and those who rely on the public sector. Income and access to medical aid are two of the main factors in the decision of whether to access health care from the private or public sector ([15] and [16]). Access to medical aid is largely determined by employment status. There are still inequalities in health care by race, again largely driven by access to private sector health care as formal employment and medical aid membership is predominantly enjoyed by whites, coloureds and Indians. The SA Living Conditions Survey 2008/2009 shows that 63.9% of South Africans seek care in the public sector and 36.1% seek care in the private sector. The surveys showed 71.9% of blacks; 52.8% of coloureds; 49.4% of Indians and 16.1% of whites sought care in the public sector the last time they consulted a health care worker.

⁵ Described in Appendix 1 (Part 2).

Spending on health care per capita in the private sector is much higher than that in the public sector, but the gap has narrowed somewhat over time (six times higher in 2005/2006 and 5.4 times higher in 2009/2010) [17]. The proposed National Health Insurance (NHI) seeks to address the inequalities between the private and public sector, through: 1) higher spending on health care in the public sector, and 2) mechanisms that will allow for everyone to access certain categories of care in the private sector.

There are substantial inequalities in health care on a geographic basis, between the provinces, between rural and urban areas and between districts [10]. There are differences in the number of hospitals and doctors per 100 000 population between provinces [17]. A study has shown that, post-1994, health finances were channelled to those provinces and sites that had a higher ability to spend funds rather than a higher need for health care. As a result, provinces and rural sites that struggled to spend funds allocated to them, received less funding in subsequent budgets. This situation has worsened the geographic disparities in health care that existed pre-1994 ([18] and [19]'26). Intra-provincial inequity⁶ in spending remains a problem. The average per capita non-hospital primary health care expenditure in South Africa was R514 in 2010/2011. Per capita spending in the 20% of least deprived districts was R584, but spending in the 20% of most deprived districts was only R404⁷[10]. This points to a continued skewing of spending towards the districts with less need, within the public sector, although there has been some reduction in this inequality since 2001 [17]. In 2010/2011, average public health care (PHC) expenditure (non-hospital) per capita was R631 in the Western Cape; but only R430 in the Free State and KwaZulu-Natal (KZN) [10]. It is hoped that new methods of spending allocation, based on health need, will be implemented in the NHI, although this will require much improved data on burden of disease at a district (or even ward) level.

Health and gender inequalities are interlinked in many countries. Potential sources of information on health-seeking behaviour, access to health care and utilisation of health care are examined in the section on health care measures. When examining inequality in health care utilisation between men and women we need to be clear about whether equal use of health care between genders is the desired outcome or whether women have a greater need for health care than men due to child-bearing.

A similar question arises when examining geographic inequalities. Is it equitable to allocate health resources equally between districts? If we want to achieve equality in health outcomes in South Africa, some inequality of health care between districts may be necessary. That is, more may need to be spent on health care in those districts that have the greatest need. Because resources are limited, this may mean intentionally prioritising some groups of people. These ethical questions are beyond the scope of this review, but they need to be borne in mind when examining statistics and when setting up health care inequality indicators.

There are a number of vulnerable groups that may have unequal access to health care: the disabled, non-citizens, and possibly the elderly ([20] and [21]). The extent of inequality in these vulnerable groups cannot be assessed in the space available here. Comparing health inequalities between such groups also raises some important ethical questions. For example, is it equitable to spend the same amount per capita on the elderly and on children? Or should we be prioritising spending on children?

2.1 MEASURES OF HEALTH AND HEALTH CARE INEQUALITY

Discussions with Oxfam staff showed that inequality of access and utilisation of health care by location (rural/urban) and gender were seen as most important. However, health care is only important in so far as it produces better health. Health care should always be seen as secondary to health. The health economics literature is very clear that when examining equality, it is inequality of health which is most important [22]. Measuring inequality of access and utilisation of health care should always be secondary to measuring inequality in health.

Most interventions to reduce health inequalities lie outside of health care: in better food security, more equal access to clean water and adequate sanitation, housing and quality education [13]. Hence, the measures suggested in the sections on livelihoods and gender also have relevance to health.

6 As explained in Part 1 of this report, inequity is concerned with whether the distribution (for example, income or education) is fair. The notion of inequity involves a value judgment. Inequality merely describes whether the distribution is equal or unequal.

7 Districts were classified according to the Deprivation index, based on 2007 Community Survey data. The use of a different index – the SA Index of Multiple Deprivation – provides a fairly different ranking. Census 2011 data should allow for a more up-to-date ranking of districts.

8 Health also has a psycho-social aspect.

2.1.1 MEASURES OF HEALTH INEQUALITY

When examining health inequalities it should be remembered that because health has a biological aspect⁹, it is naturally variable. In every society there is a degree of health inequality which cannot be explained and will always exist for reasons of genetics, and so on. Inequality in health is generally measured by inequalities in life expectancy or in self-reported health between population groups.

Data on **self-reported health** among adults has been collected as part of several studies in South Africa. It is collected as part of NIDS by race group, rural/urban location, income quintile (20% grouping), education level, age and gender. Self-reported health data is collected annually in the General Household Survey (GHS) and will be collected annually in the South African National Health and Nutrition Examination Survey (SANHANES)⁹ [23].

Some studies show high correlations between self-reported health and objective health measures, including mortality. There is some evidence of lower recognition of poor health in poorer households, with the poor tending to regard only severe ill health as such. Household surveys in South Africa in the 1990s found lower levels of poor health in poorer households than in richer households [24]. As a result of this phenomenon, current surveys may be underestimating health inequality between rich and poor households in South Africa.

For this reason some studies instead suggest using a **measure of chronic illness or disability** [1]. Limitation in activities of daily living as a measure of disability is collected in NIDS and SANHANES. There are many, quite different definitions of disability, and a clear decision needs to be taken on which definition to use if health is to be tracked using this measure [17].

Differences in life expectancy at birth is another common measure of health inequality, which definitely needs to be included in any examination of health inequality. Trends in life expectancy at birth over time can be analysed by geographic area, gender and race to provide an estimate of inequalities in health across these groups. Annually, Statistics South Africa (Stats SA) provides a five year moving average life expectancy at birth for males and females [25]. Again, this indicator rests on vital registration data and many choose to use modelled 2008 data from the Actuarial Society of South Africa (ASSA) instead.

Internationally, research has examined **differences in age at death** between population groups [22].

Many other health indicators are used internationally and in South Africa. We believe that the indicators discussed below are the most appropriate to Oxfam. These indicators can be transformed into simple indicators of health inequality – by geographic area, income quintile and (in some cases) gender. Several of these indicators are available from multiple data sources. They are:

- Infant mortality rate (IMR)¹⁰
- Under 5 mortality rate (U5MR)¹¹
- Maternal mortality rate (MMR) – discussed under the gender section
- HIV prevalence rate.

The IMR and U5MR are available from several data sources and are regularly summarised by several research organisations ([12] and [17]). Both will be used to measure health system service delivery in the future [26]. Both these measures and the MMR are plagued by data problems. At times quite different estimates emerge from different surveys. Birth and death registration data are not seen as adequate to estimate this measure accurately. Some researchers believe that the last reliable estimate of IMR was in the 1998 South Africa Demographic and Health Survey (DHS) [12]. Others ([12] and [26]) rely on modelled data from ASSA. Still other researchers have used the Community Survey 2007, although it is accepted as underestimating IMR and U5MR [11].

IMR is presented by income quintiles (for the poorest 20% and richest 20% of the population) [12]. NIDS data allows the U5MR to be presented by income quintiles and by geographic areas. In the future IMR, U5MR and MMR will be estimated from the Rapid Mortality Survey. Whether this will allow disaggregation by district, sub-district and income quintile remains to be seen. Tracking these indicators will require tracking of all sources of data.

9 All of these surveys are described in Appendix 1 (Part 2).

10 Number of children that die in the first year of life per 1 000 live births.

11 Number of children that die before fifth birthday per 1 000 live births.

Because of the poor quality of death registration, which plagues IMR, MMR, U5MR and life expectancy and burden of disease data, the **HIV prevalence rate** is a good proxy variable for health. Prevalence is more appropriate than incidence as it portrays the full burden of new and existing cases of HIV. There is annual surveillance of antenatal HIV prevalence among women aged 15 to 49 years [27] and frequent surveillance of prevalence in the general population [28]. The District Health Barometer reports antenatal HIV prevalence rates by district, with districts ranked from most deprived to least deprived districts¹².

2.1.2 MEASURES OF HEALTH CARE INEQUALITIES

Ideally, inequality in health care utilisation should be reported relative to measures of health care need. There is a good deal of debate in the literature on how to measure health need. Some authors argue that current health is a good measure of health need, and others point out that this ignores the need for preventative health care. Others view health need as the potential to benefit from health care [22].

Measuring health need (based on current health) is complex and requires good data on burden of disease, causes of mortality and the age-structure of a population in an area. Data on illness levels and burden of disease in South Africa is poor, particularly at sub-national level [19]. Reporting of deaths and accuracy of death certificates is worse in more deprived districts [10]. Much research is still based on work done in 2000 [29]. Updated burden of disease estimates should be available in the next few years. Hopefully, the SANHANES study will provide more accurate estimates of the prevalence of cardiovascular disease, hypertension, diabetes, obesity, nutritional deficiencies, diarrhoea in under five year olds and disability at provincial level by 2014.

Until newer burden of disease data is released, we would not recommend that Oxfam track health care inequality relative to need. We suggest that Oxfam begins by monitoring health inequalities, by gender, by province and type of geographic area; by district and income quintile (whichever Oxfam decides is most important for its purposes). When new data on burden of diseases is released, the quality of the data at provincial and district level and by income quintile will need to be assessed before it can be used to track health need at these levels. Oxfam would have to clearly define its own concept of health need and health equity before measuring health care relative to need.

Internationally, inequality in health care utilisation is measured by **concentration curves** or a **concentration index**, which is based on the concept of the Gini coefficient. The concentration curve reports health care utilisation rates by income or socio-economic status quintiles (20% groupings) [22]. The advantage of the concentration index is that relative contributions to the health inequality can be evaluated mathematically. The disadvantage is that it is difficult to calculate and to interpret.

Instead of using the concentration index approach, we recommend health care utilisation be reported by the richest 20% and poorest 20%. While such an approach does not reflect the experience of the whole population (as the concentration index does), these statistics are much easier to interpret. The following measures of health care inequality can be calculated by income quintile:

- **Number and proportion of children (or total population) living more than 30 minutes from a health care facility** is estimated annually in the Child Gauge. Similar data could be calculated for the whole population, from the annual GHS. This data is available at provincial level.
- **Distance to the nearest health care facility** will be provided in SANHANES at the provincial level.

Several aspects of health-seeking and health care utilisation will be provided in SANHANES such as:

- Where do respondents usually get health care from or where did they get health care the last time they needed it and why?
- Did respondents receive health care the last time they needed it? Reasons why not.
- In the past 12 months, have respondents put off getting the health care they needed?
- Frequency of receiving care for specific conditions (such as diabetes, hypertension)¹³.

There are many available measures of geographic health care inequalities. For any of the measures below, a simple measure of inequality is to calculate the ratio between the highest and lowest spending district or province [17]¹⁴. Alternatively, districts could be ranked from the least to most deprived, as is done in the District Health Barometer. These indicators could be compared between the 20% of least deprived and 20% of most deprived districts. The most commonly used measures of geographic inequalities in health care are described below.

¹² Census 2011 data may enable more updated rankings of these districts.

¹³ The Demographic and Health Survey (DHS) has not been done since 2003. There are concerns with the quality of data collected in the 2003 survey, with many models still relying on the 1998. It appears that the DHS will be replaced by SANHANES.

¹⁴ The District Health Barometer estimates this indicator, ranked by the most deprived to least deprived district (socio-economically), which could also be tracked.

Useable public sector hospital beds per 1 000 (uninsured population) are available annually from 2007, at provincial level [17].

The **number of public sector medical practitioners per 100 000 uninsured population** are estimated annually by Health Systems Trust (from National Department of Health (NDoH) and Stats SA data). This is available nationally and provincially from 2007 [17]. The **number of private sector medical practitioners per 100 000 people with health insurance** can also be estimated, to show the contrast in resources between the private and public sector, at provincial level.

The **utilisation rate for primary health care** is available annually from the NDoH's District Health Information System (DHIS) [17]. A target of 3.5 primary health care visits per person per annum has been set by NDoH for 2010 to 2014. Currently average PHC utilisation is 2.5 visits per person per annum. These data are available at a district level and could possibly be disaggregated in other ways.

Expenditure per capita on health care is estimated annually at national and provincial level [17]. The most useful measure is **per capita expenditure on non-hospital primary health care** at provincial level [17], which is available from 2008, and at a district level [10] since 2001/2002. This indicator shows how much each province and district spends per person without medical insurance. It excludes spending on hospitals and on specific programmes (such as HIV, nutrition and coroner services).

3. GENDER INEQUALITY IN SOUTH AFRICA

3.1 DIMENSIONS OF GENDER INEQUALITY IN SOUTH AFRICA

Gender inequality refers both to economic inequality, social inequality and inequality in power between men and women. Economic gender inequalities refer to differences in income and employment by gender and to inequality within the household ([12] and [30]). Achieving gender equality requires women's active participation and involvement in decision-making at all levels, starting in the home and extending to the highest levels of government [31].

The Gender Inequality Index (GII) for South Africa (0.49) is in line with the world average (0.492). South Africa's GI is similar to Brazil and Mexico, but better than its neighbouring countries. South Africa was ranked higher on the GI (94th in the world) than the HDI (123rd in the world) in 2011. South Africa is ranked 15th in the world on the Gender Equality Index, which is outlined in the next section [32].

Women tend to participate less in the paid labour market compared to men in South Africa as in most other countries ([33] and [34]). That is, fewer women than men in South Africa are actively looking for employment or are employed [34]. There are still sharp disparities in wages by race, gender, location and union status [33]. Women's wages tend to be lower than men's as women tend to be over-represented in low-skilled, low paying jobs. Within this category of low to semi-skilled occupations, women generally earn less than men, even when working in similar roles [34]. Women tend to participate in unpaid (and frequently unrecognised) labour in the household (child care, housework and caring for the sick) and within the community (care work and volunteer work) because of the gender norms that exist.

As was outlined in Part 1, female headed households in South Africa tend to fare worse than male headed households in terms of access to financial assets, and access to public assets and services [3]. Public assets include:

- Access to formal dwelling
- Piped water
- Electricity for cooking
- Electricity for lighting
- Chemical or flush toilets
- Transport
- Communications¹⁵.

In addition, female headed households rely more heavily on remittances (money sent home by migrant workers), pensions and grants than salaries or wages. More than one third of all female headed households rely on the above as their main source of income, compared with 17.7% for male headed households [34].

15 This information is largely available in the national household surveys, particularly the GHS and NIDS. District level and enumerator level data for most of these public assets should be available from Census 2011.

Women are also affected by inequality within the household. Women tend to have less 'say' in household decision-making such as how money is spent. In addition, women tend to give up their own consumption in favour of children or other household members [35]. As a result, within poor households, women tend to be worse off. Even within households that would not be classified as poor¹⁶, women may not receive an equal share of resources, may have poorer access to services and to opportunities [36] and may have less decision-making power.

Women's participation in decisions being made in their own households is widely accepted as a universal indicator of women's empowerment. Low levels of joint decision-making are indicative of gender inequality. The extent of joint decision-making within the household can be difficult to measure. It often requires qualitative research, which is not easily useable as an indicator. Such research should aim to determine the extent of joint decision-making within the household and also the type of decisions that are made jointly.

Intimate partner violence (IPV) is seen as a good indicator of gender inequality. IPV has been defined to include physical and sexual violence, threats of violence, and psychological, emotional and financial abuse [37]. Where there are high levels of gender inequality this is likely to play itself out in some form of IPV. IPV in a past 12 month period is generally considered a better indicator of gender inequality than rape or gender-based violence (GBV), which could be perpetrated by a stranger or by an intimate partner as it reflects inequalities within relationships rather than levels of violence within society and is widely measured in surveys¹⁷.

While low levels of reporting of IPV and GBV make it difficult to ascertain prevalence accurately, several studies show high rates of IPV in South Africa. A 2001 study of three South African provinces found that 19% to 27% of women reported IPV [38]. A nationally representative study found a 19% lifetime prevalence of victimisation among female respondents [39] and a study on physical violence among South African men found that 27.5% reported perpetration in their current or most recent partnership [40]. Over half of female homicide victims are killed by their intimate partners [41]. In a 2001 study by Jewkes *et al* [38], of 1 229 South African men aged between 18 and 49 in three districts in Eastern Cape and KZN, 29.6% of men disclosed rape perpetration; 5.2% (63/1208) had raped in the past year and 30.7% of men who had ever had a partner disclosed they had been physically violent towards an intimate partner on more than one occasion. The GBV Indicators Research conducted by Gender Links in South Africa (four provinces), Mauritius and Botswana established that at least one in four women (Mauritius) and up to two in three women (Botswana) have experienced GBV at some time in their life [42]. The predominant form of GBV experienced by women and perpetrated by men in the three countries was IPV. Sixty percent of women in Botswana, 51% of women in Gauteng, 44% of women in Western Cape, 29% of women in KZN and 23% of women in Mauritius reported experiencing IPV in their lifetime. Because studies differ in the populations they cover, it is difficult to track changes in IPV over time.

In any setting it is important to assess gender inequality in education and access to health care. In South Africa, there is little evidence of education inequality by gender, as measured by national senior certificate pass rates and enrollment or in levels of functional literacy among younger women ([43] and [44]). Failure rate was slightly higher for females (33.5%) than for males (30.7%) nationally, and across most provinces. The difference in pass rates between boys and girls is greater in maths and physical science. This is despite high levels of female enrollment in these subjects at Grade 12 level [43]. This suggests that there may be some inequality within the education system. However, it would need to be explored further before making definitive comments. Women aged between 20 and 39 are less likely to be functionally illiterate than their male peers (6,5% compared to 8,6%) [44]. A recent study by the World Bank concluded that gender plays a role in inequality in only one education indicator – the rate of completing primary education by age 13 to 15 years [33].

As gender equality requires women's active participation at all levels [31], any assessment of gender equality must address the issue of participation inequality. Participation inequality includes participation in democratic activities, voter participation and also participation in community decision-making structures, such as ward councils or traditional structures. While an earlier study found that male voter participation is substantially higher than female participation [7], a survey of the 2009 elections¹⁸ found similar levels of voting among female and male respondents [45]. Available voter registration data is often not disaggregated by gender. However, research has shown that women constituted the majority of those registered to vote in the 2011 elections [42].

Participation equality also includes women's political representation at national, provincial and municipal level. According to the 2012 Southern African Development Community (SADC) Gender Protocol Barometer, women made up 42.3% of the national parliament in 2012. Following the 2011 elections, the proportion of women in local government dropped from 40% to 38% [42].

.....
¹⁶ As explained in Part 1 of this report, poverty can be defined absolutely – with someone defined as poor if they fall below a defined "poverty line" – or relatively – with someone defined as poor if their income falls below a relative poverty line, which is set equal to a certain percentage of the average national income.

¹⁷ Personal communication with HEARD Gender Programme Manager, Samantha Willan.

¹⁸ Afrobarometer results rely on self-reporting of voter behaviour in the 2009 elections and could be subject to respondent bias. This may be problematic if women are more likely than men to provide the answers they feel the interviewer wants to hear.

These statistics point to the conclusion that, in terms of political participation, there does not seem to be much inequality between men and women in South Africa. However, we do not have data on participation in traditional structures and it is likely that women's participation in these structures would be limited. Traditional structures tend to be very patriarchal systems. They have significant political and community power, particularly in rural South Africa.

In many countries, gender inequality has a legal dimension. Women are afforded different land rights and different rights in terms of inheritance. In South Africa this is not the case. While there are differences in women's inheritance rights under customary law, we have not addressed these here due to space constraints.

Overall, gender equality in South Africa appears to be good, in terms of education, voter participation and political representation by women. Women's access to social grants appears to be good, according to data from the Department of Social Development (2009). Women's economic inequality continues. High levels of IPV indicate that gender inequality is still a challenge in South Africa. More in-depth analysis of women's participation in community-level decision-making is needed, especially as concerns traditional structures. Data on levels of joint decision-making could not be analysed in the time permitted for this initial research. This question requires more analysis, as it may be an area of remaining gender inequality in South Africa. Unlike global trends, South Africa has seen an increase in MMR recent years. This needs to be closely monitored.

3.2 MEASURES OF GENDER INEQUALITY

In this section we outline a number of possible measures of gender inequality and give details of where this data is available, including where it is published and at what level (national, provincial or district) the data is available. A number of composite indices of gender inequality are used internationally. We begin this section by reviewing some of these.

The **Gender Inequality Index (GII)** is based on various socio-economic factors and is a figure between 0 and 1, where 0 indicates that men and women are completely equal [46]. The GII is a composite index made up of the following aspects:

- Reproductive health,
- Empowerment and
- Labour force participation rate of women.

Reproductive health is measured by the maternal mortality ratio and the teenage pregnancy rate. The empowerment dimension is measured by the share of parliamentary seats held by each sex and by secondary and tertiary education attainment levels [46]. The GII replaces the Gender Empowerment Index and Gender Development Index, as well as the HDI, as a measure of gender inequality.

The GII has some limitations. It excludes measures of participation at the local government level and elsewhere in community, public life and traditional structures. This limits its usefulness to Oxfam. In South Africa the index is probably biased upwards by the high level of female representation in national parliament. The GII does not include information on incomes, employment and unpaid work by women [46]. The index has been criticised for not including data on time use. Many women have the additional burden of caregiving and housekeeping, which cuts into leisure and studying time and increases stress and exhaustion. The index also does not capture asset ownership or IPV due to limited availability of data in these areas [46].

The **Gender Equity Index (GEI)** was introduced in 2004 to measure inequities by measuring women's relative economic activity, education and empowerment in 157 countries. The GEI includes three dimensions:

- Economic activity (gender gaps in income, % of economically active women¹⁹)
- Empowerment (% of women in technical positions, % of women in management and government positions, % of women in parliament, % of women in ministerial level positions)
- Education (literacy rate, enrollment rate in primary, secondary and tertiary education).

The index's range of values is from 0 to 100, with lower values indicating greater inequity and higher values greater equity [32]. The index is an average of the inequalities in the three dimensions. Disaggregated scores for each of the three dimensions are also available.

The GEI is designed to measure the degree of gender equity in different countries without any connection to the average level of socio-economic development of the population. The GEI addresses empowerment and economic activity more broadly than the GII. As a result of its broader approach the GEI is preferable to the GII for Oxfam's purpose. Other composite indices include the Global Gender Gap Index, the Women's Economic Opportunity Index and the African Gender Status Index.

19 Excluding the agriculture sector.

The United Nations (UN) Commission on Information and Accountability for Women's and Children's Health recently proposed a composite women's health index which would include:

1. MMR
2. Met need for contraception (% of 15 to 49 year old women in a relationship who have met their need for family planning)
3. Prevention of Mother to Child Transmission (PMTCT) for HIV-positive pregnant women and anti retroviral therapy (ART) for women eligible for treatment
4. Skilled attendant at birth
5. Antenatal care (ANC) coverage
6. Postnatal care for mothers and babies.

There has been criticism that this focuses on reproductive health indicators alone, while neglecting other aspects of women's health [47].

Composite indices are useful as they provide a single metric, which can be easily compared across countries. The disadvantage is that they are only available at national level and that the composite index can hide weaknesses in one particular area and/or geographic variances within the country. For Oxfam, it may be more useful to track each of the components of these indices.

Most elements of these composite indices are available in South Africa. We will start by discussing the health components. Women's health inequality can be measured in the same way as health inequalities for the general population: by measuring inequalities in life expectancy, self-reported health, measures of disability and HIV prevalence.

We agree that measures of health and health care inequalities faced by women should not focus solely on pregnancy and childbirth. However, the **MMR** remains a useful indicator of gender inequality as -- everything else being equal -- in a society with high levels of gender equality, resources should be channelled into good antenatal and perinatal care for mother and child. The population MMR is available from several sources [17]. Data problems are similar to those experienced in infant mortality rates and under-five mortality rates. Because of the large discrepancies by source, all sources of MMR data would need to be monitored by Oxfam. When analysing trends in MMR one needs to be mindful of the broader context of a weak and overburdened health system in South Africa. MMR reflects on gender inequality and the quality of the health care system in general and is heavily influenced by the high HIV prevalence rate. HIV related infections were the largest single cause of MMR in health care institutions in South Africa from 2008 to 2011 [48]. In turn, women's increased risk of HIV infection is both a cause and consequence of gender inequality.

Utilisation of women's health care has been suggested as a measure of gender inequality for the same reasons as MMR. Statistics of **births assisted by trained health personnel** are available for 2008 [17]. The **antenatal care coverage rate** and **delivery rate in facility** has been collected in the DHIS at district level from 2009 onwards [17]. Coverage of **postnatal care for mothers and babies** is available. Indicators of **PMTCT coverage** are available at district level [10]. Some of the measures of inequality of health care utilisation suggested in the health section can be estimated for women. For example: **proportion of women living more than 30 minutes from a health care facility**. Health utilisation data collected in NIDS and SANHANES can be analysed by gender.

The extent of joint decision-making: although this often requires qualitative research, there is some data available at a national level. SANHANES is collecting data on who makes decisions about how much is spent on food within the household. This data is currently available from the NIDS at the national and provincial level.

Data is available on **citizen participation in public activities** and also on **voter participation** [45]. Afrobarometer has collected information from large, nationally representative samples of citizens since 1991. Data is available by gender, urban/rural location and province. Data of interest to Oxfam include:

- Whether the respondent is an official leader, active member or inactive member of any community organisation
- The likelihood of attending a community meeting (in the past year)
- The likelihood of getting together with others to raise an issue (in the past year)
- The likelihood of contacting a government department to raise an issue (in the past year)
- The likelihood of contacting the media (TV, radio or newspaper) to complain (in the past year)
- How often the respondent has contacted a local government councillor, member of parliament, government agency official or political party official in the past year.

Data on **women's representation on ward councils** is in the public domain, and should be available, although we could not locate it within the timeframe for this research project. **Women's representation on and participation in tribal councils** is very important. This data could not be located. However, given the male-dominated nature of these councils, and their authority in many communities, this is a critical area to consider. Women's participation in traditional structures could be gathered with qualitative research.

Gender wage gaps and **income inequality** between men and women are good indicators of changes in gender inequality. This data is available in household surveys and Census 2011. Data can be tracked on:

- Overall difference in earnings between men and women
- Occupation-specific differences in earnings between men and women
- Earnings differences between men and women for the same educational attainment level
- Household income in female-headed households compared to male-headed
- Labour Force Participation Rates for women.

Women's access to public goods, compared to men or to the total population, is an important indicator of inequality. This information is largely available in the national household surveys, particularly the GHS, and in Census 2011 and is available by gender and for female-headed households.

Available indicators of women's empowerment include:

- **Percentage of women in technical positions and managerial positions.** This data on women's occupations is available in household surveys and in Census 2011, as well as in employment equity data (although this will be limited to larger businesses)
- **Number of women in top political leadership positions** is reported annually by Gender Links
- Data on **overall educational attainment** is available, **by gender**, in all of the household surveys and Census 2011. Overall educational attainment is the best indicator of gender inequalities in education
- **Representation of women in municipal government** is available, annually, in the SADC Gender Protocol Barometer.

A measure of the **prevalence of IPV in the last 12 months** is critical as an indicator. However, this data is not routinely collected and is difficult to ascertain from current crime and GBV statistics. Statistics²⁰ often cover physical and sexual assault, but do not disaggregate GBV into other forms such as femicide²¹, marital rape, emotional and economic violence [42]. The South African Police Service has a category for rape or attempted rape of wife by own husband which helps to ascertain marital rape from the domestic violence data, but does not identify other forms of IPV [42]. Tracking the Gauteng GBV Indicator may be useful once it is released. Tracking IPV prevalence would require regular review of the literature. An increasing number of studies is expected in this field.

Changes in gender norms can be indicative of changes in gender inequality, as norms drive inequality. A number of studies measure changing attitudes to gender norms and these could be routinely reviewed. One example is the Afrobarometer, which asks respondents to rate their agreement with statements such as:

- Men make better political leaders than women
- Women should have the same chance of being elected to political office as men
- Women should have equal rights and receive the same treatment
- Women have always been subject to traditional laws and customs and should remain so
- If funding for schooling is limited, a boy should receive education in school before a girl.

We do not recommend that Oxfam use women's access to social grants as a measure of gender inequality, due to concerns about the quality of data and because the appropriate split between men and women in old age pensions is difficult to establish²² [49]. Prevalence of teenage pregnancy is often used as an indicator of gender inequality. We do not recommend that it is used by Oxfam due to some serious concerns about the quality of this data.

20 From police, non-governmental organisations, health and counselling services.

21 The murder of a woman by her intimate partner.

22 Women become eligible at a slightly younger age than men, are more likely to be eligible since they are less likely to have private employer-based pensions and have a longer life expectancy than men.

4. INEQUALITY, LIVELIHOODS AND FOOD SECURITY

The high levels of income inequality and other non-economic inequalities in South Africa has played a role in creating a large sector of the population that have limited livelihoods and are vulnerable to food insecurity. Livelihoods are impacted by income but also by gender inequality, health inequality and social inequality (mainly inequalities of access to resources). The various forms of inequality impact on livelihoods in a complex and, at times, indirect way. Before discussing inequality as it relates to livelihoods in South Africa, we have defined the various concepts that will be covered.

‘Livelihoods’ is a broad concept that focuses on access to, and the use and sustainability of, various resources. A ‘livelihood system’ consists of the capabilities, resources and activities required for a means of living [50]. Resources refer to human capital, physical capital, natural capital, social capital and financial capital commonly known as the five capitals [50]. The way in which a household combines these resources and activities is referred to as a ‘livelihood strategy’ [50]. A ‘livelihood system’ is deemed to be sustainable when it has the ability to handle any shocks or stresses and is able to recover, in a way that it can maintain or enhance its capabilities (now and in the future) while not undermining the natural resource base [50]. A livelihood system is applicable to all population groups. However, poorer (largely rural) individuals or households tend to be the focus of livelihoods research. This is because they have poorer access to resources and are generally classified as vulnerable. This implies that in order to address livelihoods, one must acknowledge vulnerability.

Vulnerability refers to the exposure and sensitivity to livelihood shocks and indicates the likelihood of an adverse reaction to various risks or to a disastrous event [51].

Food security is one aspect of ‘livelihoods’ and is strongly linked to vulnerability. The South African Constitution identifies food security as a right for all citizens. The Integrated Food Security Strategy for South Africa defines food security as the “physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times to meet their dietary and food preferences for an active and healthy life” [52].

4.1 INCOME INEQUALITY AND LIVELIHOODS

Income inequality is important for livelihoods. Income itself is a resource (which forms part of financial capital). Income also facilitates access to the other four capitals outlined below. Income inequality, its relevance and extent in South Africa and the various measures of income inequality were discussed in detail in Part 1 of this report.

As mentioned previously, resources refer to the five capitals which are outlined below:

- **Financial capital** includes income, any form of savings (in cash or liquid assets), access to credit (informally or formally) and any state transfers (grants) [53].
- **Human capital** concerns anything that improves the productive capacity of an individual such as education, work experience and health status ([54], [55] and [56]).
- **Physical capital** includes any tangible assets such as agricultural equipment, infrastructure (roads, buildings and shelter) or services (water and sanitation, energy and technology or communications). It also includes activities such as transportation [53].
- **Natural capital** refers to the availability of natural resources such as land, water, forests, marine resources, air quality, erosion protection and biodiversity [53].
- **Social capital** deals with the community and their (formal and informal) interactions in the social and political environment [57]. ‘Bonding’ social capital has to do with the close relationships between family and friends and ‘bridging’ social capital refers to the more distant relationships and can include links to formal external institutions. This could be membership to a church or stokvel or could even mean that a member of the family or community has some kind of link to government [57] or to a potential employer.

The most appropriate way of **measuring income inequality** is to rank individuals according to their income²³, then divide the population into five equal groups (quintiles) ranging from the richest 20% to the poorest 20% of the population. A large difference in income between the richest and poorest 20% of the population is evidence of a high degree of inequality. Income data available from household surveys and Census 2011, allow income inequality specific to rural areas, and specifically in informal rural settlements and formal rural areas. We believe that income inequalities in these populations may be more relevant to Oxfam than overall income inequality. Household survey data also allows income inequality to be assessed by province. Income inequality at district level or in an enumeration area should be calculable from Census 2011 data.

23 As estimated in the various household surveys described in Appendix 1 (Part 2).

The relationship between income inequality and food security is an indirect one. Historically high levels of income inequality have contributed to the problem of food security in South Africa. Income inequality may be a measure of future vulnerability to food security at national level. But measuring current income inequality will not illustrate the extent of food insecurity. Measures of income levels among specific groups are more relevant to food security than measures of income inequality. It is the income of a particular household, rather than the distribution of income in the country, that affects food security within that household. Poorer households tend to be more vulnerable to food insecurity as they have limited disposable income for food [58].

However, measuring income levels alone will not predict food security. Amongst the poor, having access to income does not automatically imply food security. Income is an input to food security, but how this income is used is also important. Food security is determined by individual or household decisions of how much to spend on food, what foods to purchase and methods of food preparation. It is also impacted by food availability. Food availability, in turn, is determined by how well markets for food and food products function (in an economic sense), the adequacy of local and regional agricultural supply, and food chain issues, such as storage. Income poverty may not always determine food insecurity since some households are able to grow their own food, work for food, or have a social system that provides food.

The most appropriate way of **measuring income inequality** is to rank individuals according to their income²⁴, then divide the population into five equal groups (quintiles) ranging from the richest 20% to the poorest 20% of the population. A large difference in income between the richest and poorest 20% of the population is evidence of a high degree of inequality. Income data available from household surveys and Census 2011, allow income inequality specific to rural areas, and specifically in informal rural settlements and formal rural areas. We believe that income inequalities in these populations may be more relevant to Oxfam than overall income inequality. Household survey data also allows income inequality to be assessed by province. Income inequality at district level or in an enumeration area should be calculable from Census 2011 data.

The relationship between income inequality and food security is an indirect one. Historically high levels of income inequality have contributed to the problem of food security in South Africa. Income inequality may be a measure of future vulnerability to food security at national level. But measuring current income inequality will not illustrate the extent of food insecurity. Measures of income levels among specific groups are more relevant to food security than measures of income inequality. It is the income of a particular household, rather than the distribution of income in the country, that affects food security within that household. Poorer households tend to be more vulnerable to food insecurity as they have limited disposable income for food [58].

However, measuring income levels alone will not predict food security. Amongst the poor, having access to income does not automatically imply food security. Income is an input to food security, but how this income is used is also important. Food security is determined by individual or household decisions of how much to spend on food, what foods to purchase and methods of food preparation. It is also impacted by food availability. Food availability, in turn, is determined by how well markets for food and food products function (in an economic sense), the adequacy of local and regional agricultural supply, and food chain issues, such as storage. Income poverty may not always determine food insecurity since some households are able to grow their own food, work for food, or have a social system that provides food.

Measures of food security need to examine dietary diversity, nutrient intake and access to resources rather than just the ability to spend on food [59]. These additional direct measures of food security are outlined in section 4.3.

4.2 INEQUALITY OF ACCESS AND LIVELIHOODS

When one examines inequality in the context of livelihoods, it is important to examine income inequality and inequality of access to the five capitals outlined in section 4.1. In South Africa income inequality, education inequality, and health and gender inequality cause large inequalities in the access to the five capitals. Participation inequality may impact on levels of social capital. Poor access to the five capitals causes vulnerability in livelihoods.

Measures of inequality can be applied to determine the extent of the variation in access to the five capitals between the rich and the poor or between those living in informal (tribal) rural areas and those in more formal rural areas. Inequality of access can be assessed by gender in rural areas given that women in rural areas are identified as more vulnerable.

24 As estimated in the various household surveys described in Appendix 1 (Part 2).

In this section, we outline how inequality measures could be used to track inequalities in:

- Human capital
- Physical capital
- Natural capital
- Social capital
- Financial capital

Human capital

Assessing inequality in education and health would provide some indication of inequalities in human capital. As discussed in the gender section, levels of educational attainment are the most relevant measure of inequality in education. As discussed in Part 1 of this report, inequality in the quality of education received can be measured by pupil-teacher ratios, matric pass rates and subjects pass rates. This data is available from the Department of Basic Education (DBE) and is collected annually at district, provincial and national levels, and by gender.

Measures of inequality in health and health care are discussed in section 2.2 and would be appropriate for measuring inequality in human capital.

Physical capital

Inequality in access to physical capital can be measured by comparing the richest 20% with the poorest 20%. This can be applied to various resources or 'public assets' and to various population groups. These are tracked in household surveys and include:

1. Access to formal dwelling
2. Main water source (piped water)
3. Electricity for cooking
4. Electricity for lighting
5. Chemical or flush toilets
6. Transport
7. Communications

The same measures have been recommended as measures of gender inequality.

Social capital

Social capital is largely unobservable and difficult to measure. Social capital functions in highly variable and unpredictable ways in different settings and cultures. Accepted measures of social capital include:

- Membership of any social group (NIDS, Afrobarometer)²⁵
- Communications between individuals and households
- Reciprocal behavior such as lending and borrowing
- The number of parents to the number of children (GHS, NIDS, LFS)

While some of these are measured in broader surveys, they are usually measured with dedicated social capital orientated surveys. Disparities in these measures could be assessed to give some indication of inequality in social capital between income quintiles or race groups.

Natural capital

Inequality measures can be used to track some aspects of access to natural capital. There is enormous variation in access to natural capital between households or between communities. For rural communities, one might look at the degree of access to cultivable farm land, irrigation water, and measures of rainfall, soil quality, drainage, disease prevalence among livestock, slope and extreme events (drought, flood), among others²⁶. There are large differences in the level of dependence on natural resources for livelihood between population groups. While inequality measures could assess differences in access to natural capital, this measure would need to be coupled with a measure of levels of dependence on natural capital for livelihoods. It would be more relevant to identify those people who are dependent on natural resources for their livelihood and who have poor access to natural capital given the areas in which they live, than to track inequality of access to natural capital at a population level. That is, measuring vulnerability in the area of natural capital may be more relevant than measuring inequality.

²⁵ Potential sources of the data are given in brackets.

²⁶ Personal communication with HEARD Senior Researcher, Alison Misselhorn.

Financial capital

Financial capital is largely addressed through measures of income and income inequality. Tracking inequality of access to formal and informal credit may be useful, although this is largely determined by income levels and asset (financial and property) ownership.

The five capitals discussed above have an impact on whether or not someone is food insecure. For example, a combination of a lack of physical, financial and natural capital would imply vulnerability to food insecurity. This is because individuals may not have sufficient access to income, water, agricultural equipment or land. Human capital is also an important consideration in the context of food security. Food security affects nutrition outcomes, which then impacts on people's health status and their ability to access education. A lack of education and poor health influences the productivity of individuals, which can limit their income possibilities. At the same time, better income and human capital provide opportunities for individuals to improve their food security ([51] and [59]). "The choice, preparation and intake of food is influenced not only by food access and availability, but also by education, culture, food preparation and food preferences. It necessitates access to clean water, and is also highly influenced by access to refrigeration, sanitation and other resources" [51].

Food usage may be impacted by gender inequality and intra-household inequality. Intra-household inequality and inequality between female and male headed households tend to cause women and children to be more vulnerable [58]. As a result, the adequacy and diversity of diet may differ quite substantially between household members. Food security needs to be assessed on an individual – rather than a household – level.

The livelihoods and food security literature emphasises that communities need more than just access to the five capitals to build a livelihood or be food secure. Their 'livelihood system' (which includes food security) also involves how they use these capitals, and if they use them in a sustainable way. Showing that there is unequal access to the five capitals between population groups does not highlight how people are actually using the resources available to them. That is, a group may have good access to all five capitals, but may be using these capitals inefficiently or unsustainably and may then remain vulnerable.

In addition to the measures proposed above, evaluating inequality in the following indicators may be useful. These indicators have been used previously as indicators of household livelihood strategies [57]. Inequality in these indicators could be assessed by comparing the richest and poorest 20% of the population or by comparing those living in informal (tribal) rural areas to those living in more formal rural areas.

- Gender of household head (LFS, GHS, NIDS)²⁷
- Family size (LFS, GHS, NIDS)
- Crop volume (NIDS)
- Crop diversity (NIDS)
- Availability of assets like fridges (NIDS)
- Household decision-making (NIDS).

4.3 MEASURES OF FOOD SECURITY

While tracking inequality and access to resources may show potential vulnerability to food security, tracking input and outcome measures of food security is even more important. While there is a wide variety of these measures, some of the most commonly used and most appropriate are outlined in this section. Input measures of food security are largely covered within the measures of inequality of access to physical capital, but also include ownership of certain goods (fridge/freezer to keep food preserved).

Measures of food security assess the availability of food, access to food, the use of food and the stability of the food [51]. Both quantity and quality of food should be tracked at an individual and household level. The most common outcome measures are:

1. Adequacy of daily energy intake (calories 2 000kcal/day) (National Food Consumption Survey (NFCS) 1999, NFCS-Fortified Baseline (NFCS-FB) 2005 and SANHANES)²⁸
2. Anthropometric measures (NIDS, NFCS 1999, NFCS-FB 2005 and SANHANES)
3. Food consumption and dietary diversity (NIDS expenditure on food – total and by food type)
4. Agricultural activities – for income or subsistence (LFS, GHS, NIDS and SANHANES)
5. The hunger scale – a series of questions to assess vulnerability to food insecurity (GHS, NIDS, Oxfam nutrition survey, possibly SANHANES).

²⁷ Potential sources of data are given in brackets.

²⁸ Potential data sources are given in brackets.

These measures cannot be used to predict who will become food insecure; only who is already food insecure and therefore likely to be food insecure in the future. These are not inequality measures *per se*, but they should be used to show who or how many people are food insecure. We would argue that it is more important to show who and how many people are food insecure than to show that there is a great disparity in food security between rich and poor (which is all that a measure of inequality in food security would show).

5. CONCLUSIONS

South Africa suffers from large inequalities in health and health care. We have recommended that Oxfam keeps its focus on inequalities in health and addresses inequalities in health care as secondary. As health has many determinants outside of the health care sector, it is important to track gender and social inequalities at the same time as health inequalities. We have recommended that Oxfam tracks health inequalities, without reference to health need. However, when better data on health need becomes available this question should be revisited. At this point, Oxfam should give some serious consideration to the question of whether health inequality or health inequity is more applicable. If Oxfam decides health inequity is more relevant, it should clearly define its concept of health equity and health need.

A detailed analysis of SANHANES and NIDS data on health-seeking, health care access and health care utilisation is needed to address these areas in more depth. Analysis of life expectancy between different population groups is also needed. Oxfam should assess whether geographic inequalities, inequalities between public and private sector, gender inequalities or income inequalities in health are most critical to the organisation, as each of these entails tracking different indicators.

South Africa performs very well on a number of the gender inequality measures presented. In selecting indicators of gender inequality, we believe that Oxfam should focus on those aspects of gender inequality where South Africa appears to be lagging. These include prevalence of IPV in the last 12 months, the MMR, and income inequality of women and female headed households. More in-depth analysis is needed with regard to levels of joint decision-making and levels of participation among women at community level.

We believe that tracking inequality as it relates to livelihoods is less useful than tracking inequality in health and gender. We suggest that identifying the population groups with the poorest access to the five capitals will show which groups are most vulnerable. This may be more relevant to Oxfam than tracking inequality in human capital, physical capital and financial capital. The indicators described in the section above could be used to measure access to each of the five capitals. Small level analysis of access to these capitals from the various household surveys (where possible) and/or Census 2011 may be more relevant to Oxfam Australia's work in South Africa than tracking inequality *per se*. This type of analysis would be similar to work done by Alison Misselhorn for Oxfam in 2008.

In estimating geographic inequality, we suggest measuring inequality at the district level or between area types (urban – formal, urban – informal, peri-urban, tribal settlements and farming areas). Some studies have shown that merely looking at urban/rural differences hides some inequality [12]. As the Oxfam programme operates at the local level, tracking local level inequality would be ideal, but there is little data available.

There are a number of overlaps between the indicators suggested in the sections on health, gender and livelihoods. For example, inequality in access to public assets, health and health care inequality measures, the MMR and inequality in educational attainment. It may be useful, as a starting point, for Oxfam to begin to track these variables.

6. RECOMMENDATIONS

This report has briefly examined inequality in the areas of health, gender and livelihoods in South Africa. This study was designed as the first stage of a three year process to identify measures against which Oxfam can measure its programme in South Africa. We have outlined a number of relevant measures of inequality for three of the Oxfam focus areas. We have made some recommendations about which measures may be more appropriate. However, before making final recommendations regarding the most appropriate measures of inequality, we need more information about how the measures will be used. The way in which the measures will be used will determine which indicators are recommended. We understand that Oxfam plans to use a small number of selected inequality measures against which to measure its programme. We understand that these measures will not be used to evaluate the programme or the work of partners, as such. We recommend that, as a next step, Oxfam clearly defines the details of how these measures will be used to gauge its programme. Oxfam should also clearly define the purpose of using inequality as an external measure.

Within livelihoods, it is important for Oxfam to consider whether measuring inequality is appropriate or whether measuring vulnerability would be more useful.

We suggest that Oxfam reviews the recommended measures of inequality within health and gender and decides whether these measures will suit its purposes. As we mentioned in Part 1 and in the staff workshop, inequality cannot identify who is vulnerable or most in need of intervention. As Oxfam works at the local level, inequality may not be the appropriate measure for tracking social change over time. Inequality measures changes in distribution at population level – be it by gender or between geographic areas. As such it is unlikely to be sensitive enough to measure social change for Oxfam’s purposes. It is certainly more useful to track inequality, than to track average access to resources, average health and health care utilisation. However, Oxfam needs to decide whether to measure inequality in these variables or whether to track these variables in population groups identified as poor or as the most vulnerable. Oxfam has the potential to change the living conditions of the poor and vulnerable, through its programme, but has little power to change inequality – which must involve redistribution from rich to poor.

REFERENCES (PART 2)

1. Zere, E and McIntyre, D. 2003. Equity in self-reported adult illness and use of health service in South Africa: Inter-temporal comparison. *Journal of Health, Population and Nutrition* 21(3):205-215
2. Burns J and Keswell M. 2006. Intra-Household Decision-Making and Resource Allocation, Social Networks and Social Cohesion. An Input Document in Preparation of the National Income Dynamics Study. Cape Town
3. Borat H, Van der Westhuizen C and Cassim A. 2009. Access to Household Services and Assets: Analysis using the NIDS Wave 1 Dataset. National Income Dynamics Study (NIDS) Discussion Paper No. 04
4. Kholer M, Rhodes B and Vermaak C. 2009. Developing Energy-Based Poverty Indicators for South Africa. *The Journal of Interdisciplinary Economics* 21:163-195.
5. Martins JH. 2007. Household Budgets as a Social Indicator of Poverty and Inequality in South Africa. *Social Indicators Research* (2007) 81:203-221
6. Mattes RB. 2002. South Africa: Democracy Without the People? *Journal of Democracy* 13.1:23-36
7. Kivulu wa M, Davids Y, Langa Z, Maphunye K, Mncwango B, Sedumedi S and Struwig J. 2005. Survey on South African voter participation in elections. Human Sciences Research Council (HSRC)
8. Culyer, AJ and Wagstaff, A. 1993. Equity and equality in health and healthcare. *Journal of Health Economics*. 12:431-458
9. World Health Organisation (WHO). 2006. Constitution of the World Health Organisation
10. Day C, Barron P, Massyn N, Padarath A and English R (eds). 2011. District Health Barometer 2010/2011. Durban: Health Systems Trust
11. Sartorius BKD, Sartorius K, Chirwa TF and Fonn S. 2011 Infant mortality in South Africa – distribution, associations and policy implications, 2007: an ecological spatial analysis. *International Journal of Health Geographics* 10:61
12. Hall K, Woolard I, Lake L and Smith C (eds). 2012. South African Child Gauge 2012. Children’s Institute, University of Cape Town
13. Hall K and Woolard I. 2012. “Children and inequality: An introduction and overview” in South African Child Gauge 2012. Edited by Hall K, Woolard I, Lake L and Smith C. Children’s Institute, University of Cape Town
14. Kon ZR and Lackan N. 2008. Ethnic disparities in access to care in post-apartheid South Africa. *American Journal of Public Health* 98(12):2272-2277
15. Booysen FIR and Visser M. 2010. Health facility choice in HIV- and AIDS-affected households in two South African communities. *South African Journal of Economics* 78:89-106
16. Knight L and Maharaj P. 2009. Use of public and private health services in KwaZulu-Natal, South Africa. *Development Southern Africa* 26:17-28
17. Day C, Gray A and Budgell E. 2011. “Health and Related Indicators” in South African Health Review 2011. Edited by Padarath A and English R. Durban: Health Systems Trust
18. Scott VE, Chopra M, Conrad L and Ntuli A. 2005. How equitable is the scaling up of HIV service provision in South Africa? *South African Medical Journal* 95(2):109-113
19. Stuckler D, Basu S and McKee M. 2011. Health care capacity and allocations among South Africa’s provinces: Infrastructure-inequality traps after the end of apartheid. *American Journal of Public Health* 101:165
20. Vearey J. 2008. Migration, access to ART, and survivalist livelihood strategies in Johannesburg. *African Journal of AIDS Research* 7(3):361-374
21. Hanass-Hancock J. 2009. Interweaving conceptualisations of gender and disability in the context of vulnerability to HIV/ AIDS in KwaZulu-Natal, South Africa. *Sexuality & Disability* 27(1):35-47
22. Wagstaff A, and Van Doorslaer E. 2000. Equity in health care finance and delivery. *North-Holland Handbook of Health Economics*. Edited by Culyer AJ and Newhouse JP. Elsevier
23. Human Sciences Research Council (HSRC). 2011. The first South African National Health and Nutrition Examination Survey 2011/2012 – An operations manual for field staff

24. Gilson L and McIntyre D. 2007. Post-apartheid challenges: Household access and use of health care. *International Journal of Health Services* 37(4):673-691
25. Statistics South Africa (Stats SA). 2011. Mid-year population estimates (P0302). Pretoria: Statistics South Africa
26. National Department of Health (NDoH). 2011. Negotiated service delivery agreement 2010-2014 for outcome 2: A long and healthy life for all South Africans. Pretoria: NDoH
27. Department of Health. 2010. National Antenatal Sentinel HIV and Syphilis Prevalence Survey in South Africa, 2009. Department of Health
28. Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S & the SABSSM III Implementation Team. 2009. South African National HIV Prevalence, Incidence, Behaviour and Communication Survey, 2008: A turning tide among teenagers? Cape Town: HSRC Press
29. Bradshaw D, Groenewald P, Laubscher R, Nannan N, Nojilana B, Norman R, Pieterse D, Schneider M, Bourne DE, Timaeus IM, Dorrington R and Johnson L. 2003. Initial Burden of Disease Estimates for South Africa, 2000. *South African Medical Journal* 93(9):682-8
30. Cyba E. 2005. Social Inequality and Gender. *Journal of Social Sciences Education* 2005(2)
31. United Nations (UN). 2011. UN Women Annual Report 2010-2011. New York: UN Women
32. Social Watch. Comparing GEI and GII. Available from: <http://www.socialwatch.org/node/14370> [Accessed 26-10-2012]
33. World Bank. 2012. South Africa Economic Update: Focus on Inequality of Opportunity. Washington DC: World Bank
34. Statistics South Africa (Stats SA). 2011. Social Profile of Vulnerable Groups in South Africa, 2002-2010. Pretoria: Statistics South Africa
35. Frye I, Farred G and Nojekwa L. 2011. Inequality in South Africa. *Tearing us Apart: Inequalities in Southern Africa*. Edited by Jauch H and Muchena D. Johannesburg: Open Society for Southern Africa
36. Woolard I. 2002. An Overview of Poverty and Inequality in South Africa. *Working Paper for DFID*. Cape Town
37. World Health Organisation (WHO). 2002. World report on violence and health. Geneva: World Health Organisation
38. Jewkes RK, Penn-Kekana L, Levin J, Ratsaka M and Schriber M. 2001. Prevalence of emotional, physical and sexual abuse of women in three South African provinces. *South African Medical Journal* 91:421-428
39. Seedat S, Stein DJ, Jackson PB, Heeringa SG, Williams DR and Myer L. 2009. Life stress and Mental Disorders in the South African Stress and Health Study. *South African Medical Journal* 99(5):375-382
40. Gupta J, Silverman JG, Hemenway D, Acevedo-Garcia D, Stein DJ and Williams DR. 2008. Physical violence among intimate partners and related exposures to violence among South African men. *Canadian Medical Association Journal* 179(6):535-541
41. Seedat M, Van Niekerk A, Jewkes R, Suffla S and Ratele K. 2009. Violence and injuries in South Africa: prioritising an agenda for prevention. *The Lancet* 374(9694):1011-1022
42. Southern African Development Community (SADC). 2012. SADC Gender Protocol 2012 Barometer. Edited by Nyakujarah LJ and Morna C. Southern Africa Gender Protocol Alliance
43. Department of Basic Education. 2012. Education Statistics in South Africa 2010. Pretoria: Department of Basic Education; 2012
44. Statistics South Africa (Stats SA). 2011. General Household Survey Statistical Release 2011. Pretoria: Statistics South Africa
45. Citizen Surveys. Afrobarometer Summary of results: A Round 5 survey in South Africa. *Afrobarometer*. Cape Town: IDASA
46. Gender Inequality. Index. Available from: <http://hdr.undp.org/en/statistics/gii/> [Accessed 02-10-2012]
47. Psaki SR and Olorun F. 2012. More than mothers: aligning indicators with women's lives. *The Lancet* 380:711-712
48. National Department of Health (NDoH). 2012. Saving Mothers: Confidential enquiries into maternal deaths in South Africa: 2008-2011. Pretoria: National Department of Health
49. Leibbrandt M, Woolard I, Finn A and Argent J. 2010. Trends in South African Income Distribution and Poverty since the Fall of Apartheid. *OECD Social, Employment and Migration Working Papers No. 101*
50. Sallu SM, Twyman C and Stringer LC. 2010. Resilient or Vulnerable Livelihoods? Assessing Livelihood Dynamics and Trajectories in Rural Botswana. *Ecology and Society* 15(4):3
51. Misselhorn A. 2008. Vulnerability to climate change in Umkhanyakude District Municipality, KwaZulu-Natal. *Report to Oxfam Australia*
52. Department of Agriculture South Africa. 2002. The Integrated Food Security Strategy for South Africa. Department of Agriculture South Africa
53. Adato M and Meinzen-Dick R. 2002. Assessing the Impact of Agricultural Research on Poverty using the Sustainable Livelihoods Framework. Washington DC: International Food Policy Research Unit
54. Becker GS. 1962. Investment in Human Capital: A Theoretical Analysis. *The Journal of Political Economy* 70:9-49
55. Chiswick BR. 2008. The Economics of Language: An Introduction and Overview. *Discussion paper no. 3568*

56. Chiswick BR and Miller PW. 1995. The endogeneity between language and earnings: International analyses. *Journal of Labor Economics* 13:246-288
57. Misselhorn A. 2009. Is a focus on social capital useful in considering food security interventions? Insights from KwaZulu-Natal. *Development Southern Africa* 26(2):189-208
58. Reddy V and Moletsane R. 2009. The Gendered Dimensions of Food Security in South Africa: A review of the literature. Cape Town: Human Sciences Research Council
59. United Nations Development Programme (UNDP). 2012. Towards a Food Secure Future. *Africa Human Development Report 2012*. New York: United Nations Development Programme

APPENDIX 1 (PART 2): BRIEF DESCRIPTION OF HOUSEHOLD SURVEYS

SURVEY	SAMPLE SIZE	CONDUCTED BY	FREQUENCY	LEVEL OF DATA	LATEST PUBLICATION
LABOUR FORCE SURVEY (LFS)	30 000 households (dwellings)	Statistics South Africa (Stats SA)	Bi-Annual (2000 – 2007) Quarterly (2008 – 2012)	National and provincial	3 rd Quarter 2012 (released 1 November 2012)
GENERAL HOUSEHOLD SURVEY (GHS)	30 000 households (dwellings)	Statistics South Africa (Stats SA)	Annually	National and provincial	GHS 2011 (released May 2012)
NATIONAL INCOME DYNAMICS SURVEY (NIDS)	7 300 households	Southern Africa Labour and Development Research Unit (SALDRU)	Every 2 years	National and provincial	Wave 2 released 2012
SOUTH AFRICAN NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (SANHANES)	10 000 households	MRC and HSRC in conjunction with NDoH	Annual	National and provincial	First publication due in 2013/2014

CREDITS

TITLE	Occasional Paper 4 Inequality in South Africa: A Two Part Document on the Current Understanding & Dimensions of Inequality in Health, Gender and Livelihoods
PUBLISHED	June 2014 by Oxfam Australia
AUTHORS	Nicola Deghaye, Tamlyn McKenzie and Petronella Chirawu from Health Economics and HIV and AIDS Research Division (HEARD)
EDITOR & EXECUTIVE SUMMARY	Cheryl Goodenough
PROOFREADER	Eva Jackson
DESIGN	LUM0 design & illustration (www.lumo.co.za)
COPYRIGHT	Oxfam gives permission for excerpts from this book to be photocopied or reproduced provided that the source is clearly and properly acknowledged.
DISCLAIMER	The views in this publication are those of the respective authors and do not necessarily represent those of Oxfam or any funding agency.
CONTACT DETAILS	Oxfam Suite 1, Strathway Building Strathmore Park, 305 Musgrave Road, Berea, Durban, 4001 South Africa Tel: +27 (0) 31 201 0865 infosouthafrica@oxfam.org.au www.oxfam.org.au





OXFAM