

## **Measuring poverty in Limpopo: An analysis of the different measures of poverty and the multiple deprivation index.**

### **Introduction**

The triple challenge of poverty, inequality and unemployment has been highlighted in various national government policy documents as the key strategic economic targets for South Africa (NDP, 2012).

The Limpopo Growth and Development Strategy (2009) and the Limpopo Development Plan (2014) links to the national development plan in settings targets to reduce the level of poverty in Limpopo. The target that has been set was reduce the level of poverty by 2014 to halve of that in 2009. The National Development plan wants to reduce the number of people living under R418 per day from the current 40% of the populations to 0%.

In the process to develop policy to address the challenges of poverty and inequality it is firstly important to be able to measure the current extent of poverty and inequality in Limpopo.

### **Theoretical Approaches to measuring poverty**

A literature survey identified various measures of poverty that will be discussed in the first part of the paper.

The most commonly used indicator is income poverty. In terms of this measure the level of poverty is measured linked to a specific poverty line that has been calculated. Examples is this approach the dollar and two dollar a day from the World Bank, the calculation of the Minimum Living Level (MLL) and the calculating of the national poverty line for South Africa.

Some other economists use the access to basic services as another indication of poverty in a particular area.

A different approach that is based on the premise that poverty can be defined as the lack of control over the opportunities that will change you live, is the capabilities approach. In terms of the approach no preconceived perceptions enter the measurement of poverty and the development of policy to curb poverty. It also deals with agency. The actual choices that people make and who/what they rely on to help them make their decisions are referred to as agency. Agency relates to people's belief that they are indeed the master of their own destinies or whether they believe that development is outside of their own realm of power/decision making (Mostert and Prinsloo, 2012).

The last approach that will be discussed in the paper is the calculation of a multiple deprivation index. The approach was developed by Townsend (1987) and focusses on various measures of poverty that is integrated to calculate and index of multiple deprivation. Prof Noble of Oxford was appointed the Limpopo province to calculate and Multiple Deprivation Index for Limpopo.

## **Measuring poverty in Limpopo**

In the last part of the paper an overview of the poverty in Limpopo will be provided by measuring the level of poverty using the different approaches.

An evaluation will then be performed on the correlations between the different measures of poverty and the reasons for the differences. A comparison will also be made in the relative change in the poverty situation in the province between 2001 and 2011. These two year has been chosen based on the fact that the multiple deprivation index is calculated based on census data.

The aim of the paper is too evaluate whether the definition or approach that is used to measure poverty makes a significant difference in the outcome of the measurement of poverty.

## **Definitions of poverty**

It is important that the different definitions of poverty be identified and evaluated before the measurement of poverty can be discussed, because of the implications that the different definition of poverty have for the measurement of poverty.

### **General Definition**

According to Wikipedia (2014) poverty can be defined as “Poverty is general scarcity or dearth, or the state of one who lacks a certain amount of material possessions or

money.[1] Absolute poverty or destitution refers to the deprivation of basic human needs, which commonly includes food, water, sanitation, clothing, shelter, health care and education. Relative poverty is defined contextually as economic inequality in the location or society in which people live”

### **Poverty and consumption**

The World Bank identified a target to reduce World poverty from 14,5% to under 3% in 2030. The measure of poverty that will be used is the per capita consumption in different countries. Despite that the World Bank is to the agrees that, although a comprehensive consumption aggregate captures many important economic dimensions of well-being, it agrees that, although it will not be included in the poverty target for 2030, that other critical dimensions of well-being like as health, education, social inclusion, empowerment do matters in the measuring of poverty.

### **Poverty line**

The poverty line, is the minimum level of income deemed adequate in a particular country. (Wikipedia, 2014 (b)) The poverty line could be calculated on monetary (e.g. a certain level of consumption) or non-monetary (e.g. a certain level of literacy) variables (World bank, 2014).

It is also important to distinguish between absolute and relative poverty lines. The World Bank defined a relative poverty line in relation to the overall distribution of income or consumption in a country.. Absolute poverty lines are anchored in some absolute standard of what households should be able to count on in order to meet their basic needs. For monetary measures, these absolute poverty lines are often based on estimates of the cost of basic food needs (i.e., the cost a nutritional basket considered minimal for the healthy survival of a typical family), to which a provision is added for

non-food needs. The absolute poverty line is calculated in South Africa as the minimum level of income needed to provide in the basic needs for a family of particular size. The minimum living level has been calculated by the Bureau for market research at UNISA. Statistics SA<sup>1</sup> defined a third poverty line called the subjective poverty line.

The subjective poverty approach differs from the previous two in that it considers that people's perception of what constitutes the minimum necessary household budget is the best standard of comparison for actual incomes or expenditures. In this approach, a survey of a representative sample of the population is carried out to gauge the opinion of the population in order to define the poverty line. In the National Development plan the MLL is set R480 per person per month.

The World bank traditionally had a poverty line of roughly \$1 a day. This level was increased to \$1.25 at 2005 purchasing-power parity (PPP) in 2008.

Statistics SA launched a three national poverty lines in 2012.

Inflation adjusted poverty line ( per capita per month in Rands)

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Year*	Food poverty line	Lower-bound poverty line	Upper-bound poverty line
2000	141	209	308
2001 (September)	148	219	323
2002	166	241	352
2003	197	280	401
2004	199	282	403
2005	202	288	413
2006 (March)	210	300	431
2007	227	321	458
2008	259	360	507
2009 (March)	305	416	577
2010 (March)	307	424	594
2011 (March)	321	443	620

\* Unless otherwise indicated, the values are linked to January prices

## Poverty Gap

Poverty gap is defined as the mean shortfall from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence (World bank, 2014)<sup>2</sup>.

The fact that the depth of poverty is measured because a community's poverty level can improve but still be below the poverty line. The normal poverty indicators will however not measure any improvement in poverty.

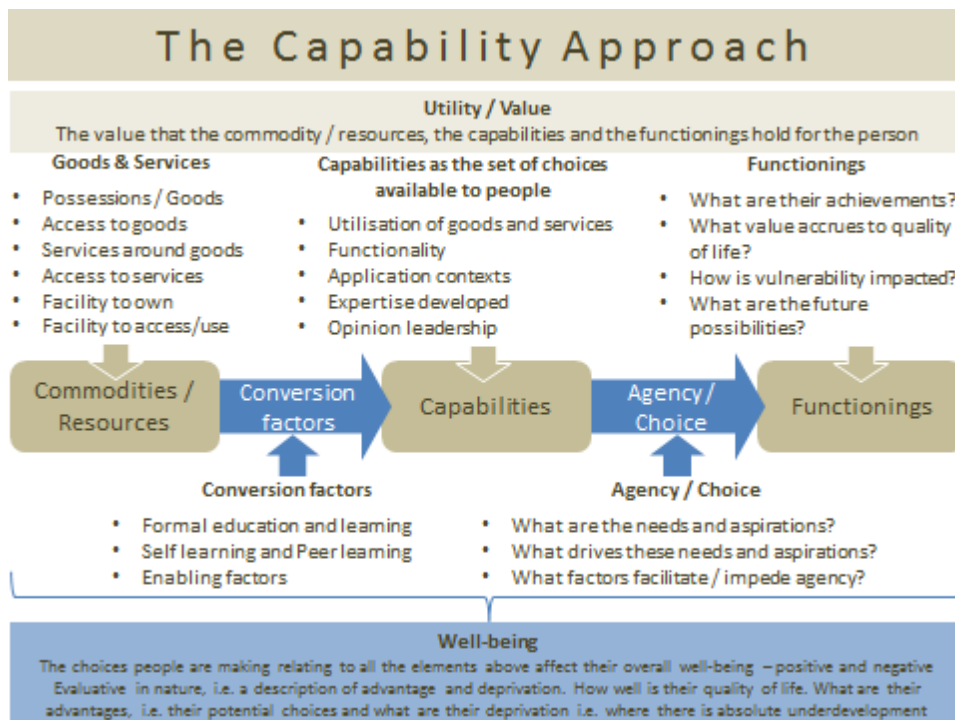
## The capability approach

According to Mostert and Prinsloo (2012) "the Capability Approach emphasises the centrality of functionings– defined as that which people are able to be and to do – in development. In other words development or well-being of individuals should be

<sup>2</sup> <http://data.worldbank.org/indicator/SI.POV.GAPS>

measured by their functionings or what they have achieved. It holds that people are poor or disadvantaged or deprived because their opportunities for being and doing what they reason to value i.e. their capabilities are limited or constrained by circumstances and events in their environment, be these personal, social, cultural, economic, political, etc. Hence the Capability Approach argues that people and their freedom to choose what they value should be the centre of development. Consequently it is people who are the primary motive force for their own development and/or lifting themselves out of poverty. To do so, people have to develop the capabilities that lead to functionings that they value (being a breadwinner, a good parent, a champion athlete, a scholar, etc.). The extent to which people succeed in developing their capabilities and transforming these into functionings is determined by a range of conversion factors, which may be personal, environmental or social. The prevalence and impact of these conversion factors shapes the specific manner in which particular capabilities are transformed into specific functionings.”

Figure 4:



Source: Mostert and Prinsloo (2012)

## Multiple deprivation index

According to [Wikipedia \(??\)](#) the Index of Multiple Deprivation is a UK government qualitative study of deprived areas in English local councils.

The first study (released in 2007) covers seven aspects of deprivation. The statistics described by the Neighbourhood Renewal Unit are:

Income

Employment

Health deprivation and Disability

Education Skills and Training



Barriers to Housing and Services

Crime

Living Environmentpedia (2014b)

According to Noble, Dibben and Wright (2010) multiple deprivation can be calculated as a weighted combination of dimensions or 'domains' of deprivation. The domain of deprivation that was utilized in their 2007 study included the following:

- Income and Material Deprivation
- Employment Deprivation
- Education Deprivation
- Living Environment Deprivation

In terms of this study multiple deprivation is viewed as an alternative approach of definition of poverty. Key conclusions on the poverty definitions

The [World bank](#) () studied the different definitions of poverty, especially from poor people, and came to the following conclusion:

“There are five main findings. First, many factors converge to make poverty a complex, multidimensional phenomenon. Second, as expected, poverty is routinely defined as the lack of what is necessary for material well-being — especially food but also housing, land, and other assets. Poverty is the lack of multiple resources leading to physical deprivation. Third, poor people’s definitions reveal important psychological aspects of poverty. Poor people are acutely aware of their lack of voice, power, and

independence, which subject them to exploitation. Their poverty also leaves them vulnerable to rudeness, humiliation, and inhumane treatment by both private and public agents of the state from whom they seek help. Poor people also speak about the pain brought about by their unavoidable violation of social norms and their inability to maintain cultural identity through participating in traditions, festivals, and rituals. Their inability to fully participate in community life leads to a breakdown of social relations. Fourth, the absence of basic infrastructure — particularly roads, transport, water, and health facilities emerged as critical. While literacy is viewed as important, schooling receives mixed reviews, occasionally highly valued but often notably irrelevant in the lives of poor people. Finally, poor people focus on assets rather than income and link their lack of physical, human, social, and environmental assets to their vulnerability and exposure to risk.”

### **Methodology of the study**

The first step in the research was to identify the towns that will be used in the study. Various approaches was considered. The first option was to identify the relatively poorest district in 1996 and then compare then 2011 to see the difference. The multiple deprivation index that was calculated by Noble provides this information.

The notion of urban versus rural could also be investigated. The question is could be asked on whether the levels of poverty is in general higher in more remote rural settings than in the bigger urban towns. The problem with this question was the criteria that could be used to define urban and rural.

The second option was to try and limit the number of towns to approximately ten to make the study more manageable by evaluating the top ten towns in terms of their relative contribution to GDP. This was the approach that finally followed.

Table 1 shows the real GDP values per town in 2013.

<b>Mopani District Municipality</b>	
Greater Giyani	4 777 534
Greater Tzaneen	6 646 031
Ba-Phalaborwa	13 794 486
<b>Vhembe District Municipality</b>	
Thulamela	7 839 590
Makhado	8 078 347
<b>DC35: Capricorn District Municipality</b>	
Molemole	4 011 804
Polokwane	20 067 569
<b>DC36: Waterberg District Municipality</b>	
Thabazimbi	16 700 340
Lephalale	2 786 803
Mogalakwena	4 372 841
<b>DC47: Greater Sekhukhune District Municipality</b>	
Elias Motsoaledi	4 636 218
Greater Tubatse	3 384 543

Source Global Insight

The top twelve municipalities that was selected contributes 80,5% to the GDP of the Limpopo Province. It should be noted that 75% of the population is living in rural areas.

One limitation of the methodology is the fact the Global Insight data that is used in the study is modelled data that have not been collected in a household survey data. In

the follow research the results will be compared if the Census 2011 values is used in the research. The multiple deprivation index of Noble has been estimated using the Statistics SA data for 2001 and 2011.

Different value for the identified poverty indicators for the years 1996, 2005 and 2013 has been obtained from Global Insight. The three years were chosen arbitrarily to obtain an indication of the trend in the indicators. The different towns will then be ranked in terms of each indicator. In the last part of the paper all the ratings will be combined into one table and the final results will then compared with multiple deprivation index calculated by Noble in 1996 and 2011 for the Limpopo Province.

In the next section the different poverty indicators for Limpopo will be evaluated.

### **Human Development index and Gini coefficient**

The Human Development index<sup>3</sup> and Gini coefficient<sup>4</sup> is not necessarily measures of poverty but rather measures of development. It could however be argued that there is a link between underdevelopment poverty and inequality.

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	HDI		
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<sup>3</sup> HDI is a comparative measure of life expectancy, literacy, education, and standards of living of a country. The value varies between 0 and 1. The level will be 1 in countries with high levels of economic development.

<sup>4</sup> The Gini Coefficient is a measure of the distribution of income in a country. If the income distribution is perfectly skew the value will be 1. If the income distribution is perfectly equal the Gini coefficient will be 0

	1996	2005	2013
<b>Mopani District Municipality</b>			
Greater Giyani	0.45	0.45	0.57
Greater Tzaneen	0.48	0.48	0.6
Ba-Phalaborwa	0.56	0.55	0.64
<b>Vhembe District Municipality</b>			
Thulamela	0.48	0.47	0.59
Makhado	0.48	0.48	0.59
<b>DC35: Capricorn District Municipality</b>			
Molemole	0.47	0.47	0.59
Polokwane	0.56	0.58	0.68
<b>DC36: Waterberg District Municipality</b>			
Thabazimbi	0.55	0.58	0.67
Lephalale	0.51	0.54	0.64
Mogalakwena	0.48	0.5	0.6
<b>DC47: Greater Sekhukhune District Municipality</b>			
Elias Motsoaledi	0.45	0.43	0.57
Greater Tubatse	0.43	0.46	0.61

The HDI values for the different years were ranked and the following results was obtained:

		Rank		
		1996	2013	
H475	Greater Tubatse	0.43	1	4
H331	Greater Giyani	0.45	2	1

H472 Elias Motsoaledi	0.45	2	1	
H353 Molemole	0.47	3	2	
H333 Greater Tzaneen	0.48	4	3	
H343 Thulamela	0.48	4	2	
H344 Makhado	0.48	4	2	
H367 Mogalakwena	0.48	4		
H362 Lephhalale	0.51	5	5	
H361 Thabazimbi	0.55	6	7	
H334 Ba- Phalaborwa	0.56	7	5	
H354 Polokwane	0.56	7	7	

H331 Greater Giyani	0.57	7	
H472 Elias Motsoaledi	0.57	7	
H343 Thulamela	0.59	6	
H344 Makhado	0.59	6	
H353 Molemole	0.59	6	
H333 Greater Tzaneen	0.6	5	
H367 Mogalakwena	0.6	5	
H475 Greater Tubatse	0.61	4	
H334 Ba- Phalaborwa	0.64	3	
H362 Lephhalale	0.64	3	
H361 Thabazimbi	0.67	2	
H354 Polokwane	0.68	1	

The values for HDI corresponds with the GDP contributions of the different towns the towns that is currently experiencing the highest growth and development is also the highest in terms of economic development

## The Gini coefficient

The Gini coefficient is an measure of the skewness of the distribution of income. If the coefficient is equal to 0 you have perfect distribution of income. If it is 1 only one person receives all the incomes.

The following in the Gini coefficients in the different towns:

<b>Mopani District Municipality</b>	1996	2005	2013
Greater Giyani	0.58	0.61	0.56
Greater Tzaneen	0.58	0.63	0.6
Ba-Phalaborwa	0.61	0.65	0.61
<b>Vhembe District Municipality</b>			
Thulamela	0.57	0.61	0.56
Makhado	0.58	0.63	0.57
<b>DC35: Capricorn District Municipality</b>			
Molemole	0.55	0.6	0.55
Polokwane	0.61	0.68	0.64
<b>DC36: Waterberg District Municipality</b>			
Thabazimbi	0.57	0.63	0.6
Lephalale	0.61	0.67	0.61
Mogalakwena	0.58	0.64	0.58
<b>DC47: Greater Sekhukhune District Municipality</b>			
Elias Motsoaledi	0.59	0.6	0.56

Greater Tubatse	0.56	0.64	0.58
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	1996	Rank
H353 Molemole	0.55	1
H475 Greater Tubatse	0.56	2
H343 Thulamela	0.57	3
H361 Thabazimbi	0.57	3
H331 Greater Giyani	0.58	4
H344 Makhado	0.58	4
H367 Mogalakwena	0.58	4
H333 Greater Tzaneen	0.58	4
H472 Elias Motsoaledi	0.59	5
H334 Ba-Phalaborwa	0.61	6
H362 Lephalale	0.61	6
H354 Polokwane	0.61	6

	2013	Rank
H353 Molemole	0.55	1
H343 Thulamela	0.56	2
H331 Greater Giyani	0.56	2
H472 Elias Motsoaledi	0.56	2
H344 Makhado	0.57	3
H475 Greater Tubatse	0.58	4
H367 Mogalakwena	0.58	4
H361 Thabazimbi	0.6	5
H333 Greater Tzaneen	0.6	5
H334 Ba-Phalaborwa	0.61	6
H362 Lephalale	0.61	6
H354 Polokwane	0.64	7

The Gini coefficients shows the fact that a low Gini coefficient is not necessarily good. The towns with the lowest levels of economic development and growth has the lowest Gini coefficient. This is an indication that although the distribution of income is not very skewed the population is all relatively poor.

### Poverty Line

As indicated earlier in the paper various poverty lines has been developed to measure poverty.

Table xx shows the poverty levels according to this approach in Limpopo.



Percentage below the food poverty line

<b>Provinces (2011 boundaries)</b>				
HP09	Limpopo	50.2 %	48.0 %	30.2 %
<b>DC33: Mopani District Municipality</b>				
H331	H331 Greater Giyani	52.9 %	53.1 %	36.0 %
H333	H333 Greater Tzaneen	48.3 %	46.3 %	28.2 %
H334	H334 Ba- Phalaborwa	31.2 %	35.4 %	23.2 %
<b>DC34: Vhembe District Municipality</b>				
H343	H343 Thulamela	50.2 %	50.6 %	34.1 %
H344	H344 Makhado	49.9 %	49.1 %	31.2 %
<b>DC35: Capricorn District Municipality</b>				
H353	H353 Molemole	49.1 %	47.0 %	30.1 %
H354	H354 Polokwane	40.7 %	37.2 %	21.9 %
<b>DC36: Waterberg District Municipality</b>				
H361	H361 Thabazimbi	28.9 %	22.0 %	14.6 %
H362	H362 Lephalale	41.6 %	37.1 %	21.1 %
H367	H367 Mogalakwena	49.1 %	46.3 %	30.6 %
<b>DC47: Greater Sekhukhune District Municipality</b>				
H472	H472 Elias Motsoaledi	55.3 %	54.5 %	33.4 %
H475	H475 Greater Tubatse	63.5 %	55.2 %	30.5 %

Rank in respective years

2013

H361 Thabazimbi				14.6%
H362 Lephale				21.1%
H354 Polokwane				21.9%
H334 Ba- Phalaborwa				23.2%
H333 Greater Tzaneen				28.2%
H353 Molemole				30.1%
Limpopo				30.2%
H475 Greater Tubatse				30.5%
H367 Mogalakwena				30.6%
H344 Makhado				31.2%
H472 Elias Motsoaledi				33.4%
H343 Thulamela				34.1%
H331 Greater Giyani				36.0%

	2006	2006	2013
Limpopo	50.2%		
H361 Thabazimbi	28.9%	1	1
H334 Ba-Phalaborwa	31.2%	2	4
H354 Polokwane	40.7%	3	3
H362 Lephale	41.6%	4	2
H333 Greater Tzaneen	48.3%	5	5
H367 Mogalakwena	49.1%	6	8
H353 Molemole	49.1%	7	6
H344 Makhado	49.9%	8	9
H343 Thulamela	50.2%	9	11
H331 Greater Giyani	52.9%	10	12
H472 Elias Motsoaledi	55.3%	11	10
H475 Greater Tubatse	63.5%	12	7

A general observation is that the % of people below the food poverty line declined in all the towns. The two towns with the biggest improvements were Greater Thubatse

that moved from 12 th to 7 th and Lephalale, which moved from 4 th to 2 nd. In both cases the towns experienced huge growth in the mining industry.

### Percentage below the lower poverty line

<b>Provinces (2011 boundaries)</b>				
HP09	Limpopo	67.2 %	62.8 %	44.3 %
<b>DC33: Mopani District Municipality</b>				
H331	H331 Greater Giyani	69.5 %	68.1 %	50.4 %
H333	H333 Greater Tzaneen	65.9 %	61.6 %	42.3 %
H334	H334 Ba- Phalaborwa	45.6 %	49.0 %	36.1 %
<b>DC34: Vhembe District Municipality</b>				
H343	H343 Thulamela	67.4 %	66.1 %	48.7 %
H344	H344 Makhado	67.5 %	64.4 %	46.9 %
<b>DC35: Capricorn District Municipality</b>				
H353	H353 Molemole	68.1 %	62.8 %	44.3 %
H354	H354 Polokwane	57.6 %	50.8 %	33.0 %
<b>DC36: Waterberg District Municipality</b>				
H361	H361 Thabazimbi	43.0 %	32.3 %	24.2 %
H362	H362 Lephalale	58.0 %	50.1 %	35.0 %
H367	H367 Mogalakwena	66.6 %	61.1 %	45.0 %
<b>DC47: Greater Sekhukhune District Municipality</b>				

H472	H472 Elias Motsoaledi	71.9 %	69.6 %	49.2 %
H475	H475 Greater Tubatse	79.1 %	69.0 %	43.8 %

The towns ranked like follows in 1996 and 2013

<b>Provinces (2011 boundaries)</b>		2013	
HP09	Limpopo	44.3%	
<b>DC33: Mopani District Municipality</b>			
H331	H361 Thabazimbi	24.2%	1
H333	H354 Polokwane	33.0%	2
H334	H362 Lephhalale	35.0%	3
	H334 Ba-Phalaborwa	36.1%	4
<b>DC34: Vhembe District Municipality</b>			
	H333 Greater Tzaneen	42.3%	5
H343	H475 Greater Tubatse	43.8%	6
H344	H353 Molemole	44.3%	7
	H367 Mogalakwena	45.0%	8
<b>DC35: Capricorn District Municipality</b>			
	H344 Makhado	46.9%	9
H353	H343 Thulamela	48.7%	10
H354	H472 Elias Motsoaledi	49.2%	11
	H331 Greater Giyani	50.4%	12

<b>Provinces (2011 boundaries)</b>		2006	2006	2013
HP09	Limpopo	67.2%		
<b>DC33: Mopani District Municipality</b>				
H331	H361 Thabazimbi	43.0%	1	1
H333	H334 Ba-Phalaborwa	45.6%	2	4
H334	H354 Polokwane	57.6%	3	2
	H362 Lephhalale	58.0%	4	3
<b>DC34: Vhembe District Municipality</b>				
	H333 Greater Tzaneen	65.9%	5	5
H343	H367 Mogalakwena	66.6%	6	8
H344	H343 Thulamela	67.4%	7	10

	H344 Makhado	67.5%	8	9
<b>DC35: Capricorn District Municipality</b>	H353 Molemole	68.1%	9	7
H353	H331 Greater Giyani	69.5%	10	12
H354	H472 Elias Motsoaledi	71.9%	11	11
	H475 Greater Tubatse	79.1%	12	6

**% below upper poverty line**

<b>Provinces (2011 boundaries)</b>				
HP09	Limpopo	80.2%	74.6%	58.0%
<b>DC33: Mopani District Municipality</b>				
H331	H331 Greater Giyani	82.1%	79.6%	64.3%
H333	H333 Greater Tzaneen	79.6%	74.1%	56.5%
H334	H334 Ba-Phalaborwa	59.7%	61.1%	48.5%
<b>DC34: Vhembe District Municipality</b>				
H343	H343 Thulamela	80.8%	78.1%	62.7%
H344	H344 Makhado	80.7%	76.3%	61.0%
<b>DC35: Capricorn District Municipality</b>				
H353	H353 Molemole	82.2%	75.5%	59.0%
H354	H354 Polokwane	71.6%	62.6%	45.2%
<b>DC36: Waterberg District Municipality</b>				
H361	H361 Thabazimbi	56.0%	43.3%	34.7%
H362	H362 Lephalale	71.1%	61.5%	47.5%

H367	H367 Mogalakwena	80.2 %	72.9 %	58.9 %
<b>DC47: Greater Sekhukhune District Municipality</b>				
H472	H472 Elias Motsoaledi	84.0 %	81.1 %	63.5 %
H475	H475 Greater Tubatse	89.8 %	79.5 %	56.9 %

Ranks in different years

H361 Thabazimbi	1	1
H334 Ba-Phalaborwa	2	3
H362 Lephhalale	3	4
H354 Polokwane	4	2
H333 Greater Tzaneen	5	5
H367 Mogalakwena	6	7
H344 Makhado	7	9
H343 Thulamela	8	10
H331 Greater Giyani	9	12
H353 Molemole	10	8
H472 Elias Motsoaledi	11	11
H475 Greater Tubatse	12	6

### Poverty gap rate

“The poverty gap is used as an indicator to measure the depth of poverty. The gap measures the average distance of the population from the poverty line and is expressed as a percentage of the upper bound poverty line, as defined by StatsSA

The Poverty Gap deals with a major shortcoming of the poverty rate, which does not give any indication of the depth, of poverty.” Global Insight (2014)

The upper poverty line is defined by StatsSA as the level of consumption at which individuals are able to purchase both sufficient food and non-food items without sacrificing one for the other.

The following table represents the minimum monthly income for individuals over time, above which the individual's income will not be considered part of the poverty gap.

#### Upper Bound

1996 238

1997 252

1998 276

1999 297

2000 318

2001 333

2002 375

2003 404

2004 407

2005 414

2006 438

2007 474

2008 538

2009 581

2010 596

2011 633

2012 675

2013 719

2014 767

		1996	2013
Code		DPGRT96	DPGRT13
<b>Provinces (2011 boundaries)</b>			
HP09	Limpopo	34.6%	28.6%
<b>DC33: Mopani District Municipality</b>			
H331	H331 Greater Giyani	35.2%	29.4%
H333	H333 Greater Tzaneen	34.2%	28.0%
H334	H334 Ba-Phalaborwa	32.0%	27.9%
<b>DC34: Vhembe District Municipality</b>			
H343	H343 Thulamela	34.4%	28.9%
H344	H344 Makhado	34.4%	28.6%
<b>DC35: Capricorn District Municipality</b>			
H353	H353 Molemole	33.9%	28.1%
H354	H354 Polokwane	33.1%	27.6%



<b>DC36: Waterberg District Municipality</b>			
H361	H361 Thabazimbi	31.6%	26.7%
H362	H362 Lephalale	33.6%	27.6%
H367	H367 Mogalakwena	34.2%	28.5%
<b>DC47: Greater Sekhukhune District Municipality</b>			
H472	H472 Elias Motsoaledi	35.6%	28.9%
H475	H475 Greater Tubatse	36.9%	29.0%

### A combined picture of all the indicators in 2013

	HDI	Gini	Poverty Low	Poverty High	Average rating for first 4 indicators	Poverty Gap
Limpopo						
<b>Mopani District Municipality</b>						
H331 Greater Giyani	7	7	12	12	9.5	29.4%
H333 Greater Tzaneen	5	5	5	5	5	28.0%
H334 Ba-Phalaborwa	3	7	4	3	4.25	27.9%
<b>Vhembe District Municipality</b>						

H343 Thulamela	6	2	10	10	7	28.9%
H344 Makhado	6	3	9	9	6.75	28.6%
<b>Capricorn District Municipality</b>						
H353 Molemole	6	1	7	8	5.5	28.1%
H354 Polokwane	1	7	2	2	3	27.6%
<b>Waterberg District Municipality</b>						
H361 Thabazimbi	2	5	1	1	2.25	26.7%
H362 Lephalale	3	6	3	4	4	27.6%
H367 Mogalakwena	5	4	8	7	6	28.5%
<b>Sekhukhune</b>						
H472 Elias Motsoaledi	7	2	11	11	7.75	28.9%
H475 Greater Tubatse	4	4	6	6	5	29.0%

The average rank should be interpreted with caution because it was already indicated earlier in the paper that a low Gini coefficient is not necessarily an indication of higher levels of development. It should be noted that cities and towns like Thabazimbi, Polokwane and Lephalale continuously received higher ratings. Greater Thubatsi received an average score close to the middle of the group but showed huge improved in its level of development since 1996.

### **Multiple deprivation index**

Noble et al (2014) conducted a study to evaluate the levels of multiple deprivation in Limpopo. The study looked at 4 domains of multiple deprivation namely.

- 1) material deprivation
- 2) employment deprivation
- 3) education deprivation
- 4) living environment deprivation

The following is some of the criteria Noble Et al used to determine the indicators to be included in the study:

- They should be 'domain specific' and appropriate for the purpose (as direct as possible measures of that form of deprivation);
- They should measure major features of that deprivation (not conditions just experienced by a very small number of people or areas);
- They should be statistically robust
- Parsimony -the number of indicators should be as economical as possible

The following indicators were included under each domain:

1. material deprivation
  - Number of households who do not have access to a refrigerator; or
  - Number of households with neither a landline nor a cell phone; or
  - Number of households with neither a television nor a radio.
- 2) employment deprivation

- Number of people aged 15 to 64 inclusive who are unemployed (using official definition); plus
- Number of people aged 15 to 64 inclusive who are discouraged workers

### 3) education deprivation

- Number of 18-64 year olds (inclusive) with no schooling at secondary level or above.

### 4) living environment deprivation

- Number of people without an adequate water supply; or
- Number of people without access to an adequate toilet; or
- Number of people without use of electricity for lighting; or
- Number of people living in a house that is a shack

The four domains of deprivation will then be combined and weighted to create a index of multiple deprivation of the Limpopo province. Noble et al (2014) highlights the fact that multiple deprivation differs from poverty in the fact that poverty measure that lack of resources that create deprivation<sup>5</sup>

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<sup>5</sup> 'Deprivation' thus refers to people's unmet needs, whereas 'poverty' refers to the lack of resources required to meet those needs

	<b>Material Deprivation %</b>	<b>Employment Deprivation %</b>	<b>Education Deprivation %</b>	<b>Living Environment Deprivation %</b>
Western Cape	24.8	25.1	16.8	19.1
Eastern Cape	52.0	47.3	28.5	59.6
Northern Cape	39.5	34.1	30.0	32.1
Free State	33.3	38.9	23.4	32.9
KwaZulu-Natal	43.0	42.3	23.4	55.3
North West	41.7	37.9	28.7	55.4
Gauteng	30.8	29.8	12.6	21.5
Mpumalanga	34.9	38.2	24.4	54.5
Limpopo	40.2	46.4	24.3	71.9
South Africa	37.1	36.0	20.9	43.8

**Table 3: Population weighted average ward rank of the SAIMD 2011 for each district in Limpopo**

<b>District Municipality Code</b>	<b>District Municipality Name</b>	<b>Population weighted Average Rank</b>	<b>National Rank where 1=most deprived</b>
DC47	Greater Sekhukhune	1226	10
DC33	Mopani	1634	17
DC34	Vhembe	1858	19
DC35	Capricorn	1979	20
DC36	Waterberg	2314	27

<b>District Municipality Code</b>	<b>District Municipality Name</b>	<b>Material Deprivation %</b>	<b>Employment Deprivation %</b>	<b>Education Deprivation %</b>	<b>Living Environment Deprivation %</b>
DC33	Mopani	40.1	46.9	28.3	72.1
DC34	Vhembe	38.9	49.5	23.8	72.9
DC35	Capricorn	39.3	42.9	19.6	68.9
DC36	Waterberg	39.3	32.8	24.8	50.3
DC47	Greater Sekhukhune	43.6	57.9	26.0	87.8

<b>Local Municipality Code</b>	<b>Local Municipality Name</b>	<b>Population weighted Average Rank</b>	<b>National Rank where 1=most deprived</b>
985	Makhuduthamaga	978	42
969	Blouberg	1030	45
983	Ephraim Mogale	1194	57
986	Fetakgomo	1262	62
984	Elias Motsoaledi	1315	65
960	Greater Giyani	1328	67
987	Greater Tubatse	1366	69
961	Greater Letaba	1410	72
964	Maruleng	1469	77
965	Mutale	1530	79
970	Aganang	1621	85
962	Greater Tzaneen	1697	89
976	Lepele-Nkumpi	1702	90
966	Thulamela	1741	93
973	Molemole	1833	99
968	Makhado	1980	114
982	Mogalakwena	2021	120
979	Mookgopong	2308	148
980	Modimolle	2363	149
963	Ba-Phalaborwa	2391	153
967	Musina	2424	157
974	Polokwane	2426	158
978	Lephalale	2570	168
977	Thabazimbi	2589	172
981	Bela-Bela	2822	192

	Rank in SA where 1 means most deprived	Rank in Multiple Deprivation Index	Average rating on other poverty indicators (rounded)
<b>Mopani District Municipality</b>			
Greater Giyani	67	11	10
Greater Tzaneen	89	9	5
Ba-Phalaborwa	153	4	4
<b>Vhembe District Municipality</b>			
Thulamela	93	8	7
Makhado	114	6	7
<b>DC35: Capricorn District Municipality</b>			
Molemole	99	7	6
Polokwane	158	3	3
<b>DC36: Waterberg District Municipality</b>			
Thabazimbi	172	1	2
Lephalale	168	2	4
Mogalakwena	120	5	6
<b>DC47: Greater Sekhukhune District Municipality</b>			
Elias Motsoaledi	65	12	8
Greater Tubatse	69	10	5

From table xx it can be concluded that the rank in the multiple deprivation index corresponds fairly well with the average score for the four basic indicators. The biggest



outlier is Greater Thubatse who the third highest in term of poverty on national level and score 10 in the ratings and was on average a 5 on the other indicators. The research results of prof Noble indicate that Greater Thubatse scored 90,14% for the living environment which caused the low average score on the multiple deprivation index.

## **Conclusion**

Despite the fact that it could be argued that the levels of poverty is high and unacceptable measured by any definition, the various measures of poverty provides insight that is useful to feed into the process of developing anti-poverty strategies in the Limpopo Province.

The results provide ample opportunities for further research to analyse the results on a micro level. The multiple deprivation index has been calculated on ward level and provides the necessary information for such a study.

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